

Vol. XVI
Number-2

ISSN 2319-8265
January-December, 2021

EDUCATION TIMES

**A Multidisciplinary International
Peer Reviewed Journal**

APH PUBLISHING CORPORATION

CONTENTS

A Study on Instructional Strategies for Students with High Achievement in Oromia Special Boarding School, Ethiopia Dr. Pavan Kumar Yadavalli	1
Child Labour in India: Role of Judiciary Dr. Gulab Rai and Mukesh Kumar	14
A Study of Academic Anxiety and Institutional Climate of Student Teachers in Relation to their Residential Status Dr. P.F Mary	18
A Brief Analysis of Poverty Alleviation Initiatives in India Dr. Manoj Kumar Yadav	23
Relevance of Peer Tutoring As A Teaching Strategy: A Conceptual Focus Ms. Sarabjeet and Dr. Vipinder Nagra	27
Coping Strategies for Managing Stress Among Library and Information Science Professionals Mrs. Harvinder Kaur	30
Legal Perspective of Surrogacy in India Bipin Bihari Mishra, Sujit Kumar Mishra and Mita Rani	37
Moral and Ethical Issues Relating to Surrogacy: A Critical Analysis Bipin Bihari Mishra	41
Limited Liability Partnership in India Sujit Kumar Mishra and Lovely Sharma	55
Commercial Surrogacy is Legal in India Sujit Kumar Mishra and Lovely Sharma	59
Indo-Asahi Glass Company: Role of Mental Revolution in HRM Dr. Rudra Kinker Verma	62
Ceptualizing CCE in A Pedagogical Framework Dr. R.V. Anuradha	65
India's Intervention Regarding Access to Patented Drugs Nahid Hasan	70
Strategic Partnership as a Tool in Bilateral Relations Dr. Vijay Pratap Gaurav	74

(iv)

Managerial Effectiveness in Relation to Organizational Climate – A Study in Tirupati, Chittoor District Dr. G. Bhadramani and S.U.N. Radha Krishna	80
Significance of Advertisement in Rural Development Dr. Ritu Rani	90
Reading Habits Among Indians: A Systematic Review Roopinder Kaur Somal and Dr. Kiran Kathuria	93
Impact of Buddhism on Gross National Happiness in Bhutan Dr. Sandeep Kumar	99
Study of Anthropometric Measurements (Weight & Height) Amongst Early Adolescent Boys in Rural and Urban Areas of Kishtwar District of Jammu and Kashmir Dr. Nilesh A. Lohar	108
Old Age- A Lonely Phase Nisha Kirar	114
A Comparative Study on Impact of Organised Retail on Unorganised Retail in View of Indian Customers Swadesh Deepak	115
Educational Status of Schedule Caste in Bihar Dr. Meena Kumari	127
Effect on Migration After MGNREGA Madhurendra Singh	132
Environmental Protection: A Prime Need of Our Country Anish Kumar	139
Right to Information & Democracy: A Long Journey Anish Kumar	142
महात्मा गांधी और सत्याग्रह डॉ. तुंगनाथ मौआर	145
Assessing the Poverty Facets of Persons with Disability in India: A Capability Deprivation Approach Shaikh Mohammad Kaish Abdul Gafoor	152
India's Ascendancy in the Changing World Dynamics: Measuring the Nexus between Governance and Foreign Policy Imperatives Shaikh Mohammad Kaish Abdul Gafoor	162
ICT, Meta Cognition and Style of Learning & Thinking Dr. Santosh Sharma and Shinam Batra	169

Innovations in Learner Support Using ICT Dr. Santosh Sharma and Shinam Batra	173
Battling Burnout: How a Work-Life Balance can Help Dr. Vineeti Kumari	180
State Policy on Education in Bihar-A Progressive Step Towards Development Dr. Aparna Kumari	187
Access to Environmental Justice: A Critical Assessment of the Role of the National Green Tribunal in India Pankaj Kumar	196
Rural Health Care-Towards A Healthy Rural Bihar Ajay Kumar Sah	204
Effects of National Rural Health Mission on Maternal Health in Rural Bihar Ajay Kumar Sah	213
Women Empowerment Through Jeevika Programme in Bihar Sanjay Kumar Kushwaha	217
Women in Bihar Sanjay Kumar Kushwaha	222
Social and Psychological Causes of Criminal Behaviour Rambha Kumari	234
Psychoanalytic Approach of Personality Rambha Kumari	238
History of Women: Rights, Feminism and Renaissance Satyabhama Chandra	242
Role of Indian National Congress (INC) in Anti-Apartheid Struggle in South Africa Dr. Rajesh Kumar	247
Urbanisation and Tourism Induced Urban Waste in Jammu and Kashmir: A Case Study of Dal Lake and Vaishno Devi Watersheds Shokat Chowdhary	256
Independence of Judiciary in India: A Critical Analysis Minati Kalo	265
International Human Resource Management for Strategic Integration, Challenges and Solutions Dr. Sweta	274

Study the Properties of three Body System in Nuclear and Atomic Physics Using Hyperspherical Harmonics Expansion Method Kumari Priyanka and B. B. Prasad	283
History and Politics of Civil Code in India: A Way Out of the Impasse Sazid Equbal Akhtar	293
The Historical Role of Syed Ahmad Khan and Evolution of Muslim Women Issues Sazid Equbal Akhtar	301
Coordination Complex Ram Prabesh Bharti	306
Periodic Table (Block) Ram Prabesh Bharti	317
Bioinorganic Chemistry Ram Prabesh Bharti	320
Inorganic Chemistry Ram Prabesh Bharti	325
Study of Ultrasonic Interaction Between Thiophenol and Aliphatic and Aromatic Ketones Dr. Anirudh Kumar	332
Study of Non-Exponentiality in Electron Transfer Kinetics Dr. Bhupendra Prasad Yadav	335
Study of Transition Metal Chelates with A 2-Thiophenecarboxaldehyde-Derived Schiff Base Dr. Devendra Kumar Rai	337
Study of Physico-Chemical and Bacteriological Characteristics of Ground Water Assessment Dr. Jyoti Sharan	339
Study of Solution of Neutral Functional Integrodifferential Equation in Banach Spaces Dr. Niranjana kumar Nirala	341
Studies on Thermodynamic Properties of Some Binary Liquid Mixtures of Some Aromatic Compounds Dr. Rinki Kumari	343
Studies on the Effect of Air Resistance, Solar Pressure and Magnetic Force of the Earth on the Motion and Stability of two Artificial Satellites Connected By Light Flexible and Inextensible String Dr. Sunil Kumar	346

(vii)

Study of Antimicrobial Activity and Characterization of Some Schiff Base Metal Chelates Dr. Sumant Kumar	349
Impact of Photodissociation and Geminate Mechanism of I ₂ in Solution Alok	351
विद्यालय जाने वाले बच्चों के शारीरिक एवं मानसिक विकास में पोषण की भूमिका : एक अध्ययन डॉ. रैना कुमारी	353
मिथिला मैदान के कृषि विकास की समस्याएँ एवं संभावनाएँ डॉ. राकेश कुमार	357
नागार्जुन का वर्गीय दृष्टिकोण डॉ. सुमन सिंह	360
Effect of Familial Relationships on Emotional Development in Adolescence-A Psycho-Social Approach Md. Ehtashamul Hassan	364
रामचरितमानस में पर्यावरण के विविध रूप रानी सिंह	367
अरुण कमल के काव्य का सर्वेक्षण डॉ. बबीता त्यागी	372
हिन्दी की प्रगतिशील आलोचना डॉ. बबलू सिंह	377
States of Matter -Gases and Liquids Krishan Kumar	384
महिलाओं के सुरक्षा हेतु निर्मित प्रमुख कानूनी प्रावधान डॉ अनुराधा कुमारी	392
Modeling and Analysis of A Probe-Fed Stacked Patch Antenna Dr. Shankar Prasad Singh	396
Wide-Band Dual-Layer Patch Antenna Fed by a Modified L-Strip Dr. Shankar Prasad Singh	408
A Broadband Circularly Polarized Stacked Probe-Fed Patch Antenna for UHF RFID Applications Dr. Shankar Prasad Singh	420

(viii)

महात्मा गाँधी एवं श्री एम.एन.राय का मानवतावाद: एक तुलनात्मक अध्ययन डॉ. फरहा नाज	430
महात्मा गाँधी एवं एम.एन.राय के चिन्तन की सामाजिक, राजनीतिक एवं दार्शनिक पृष्ठभूमि डॉ. फरहा नाज	435
भारतीय प्रमाणमीमांसा: एक ऐतिहासिक विश्लेषण डॉ. सरिता कुमारी	440
डॉ. शत्रुघ्न प्रसाद के उपन्यासों के शिल्पगत सौंदर्य डॉ. ओंकार पासवान	444
A Study of Unit Family in Relation to Childrens Personality in Psychological Perspective Dr. Md. Firoj	448
Effect of Heavy Metals on the Ventilation and Operculer Movement in Heteropneustes Fossils Shaheen Talat	453
कृषि भूमि की समस्यायें : बलरामपुर जनपद (उ०प्र०) का प्रतीक अध्ययन डॉ. भूपेन्द्र कुमार मिश्र	457
संवेगात्मक बुद्धि का प्रत्यय और उसका महत्व डॉ. मनीष कुमार द्विवेदी	463
कौटिल्य का युद्धदर्शन डॉ. स्मिता पाण्डेय	468
प्राचीन भारतीय वाङ्मय में वर्णित दूतों (राजदूत) के व्यक्तित्व का मूल्यांकन डॉ. सुरेन्द्र कुमार पाण्डेय	479
नारी शिक्षा का संक्षिप्त इतिहास डॉ. विजय नारायण तिवारी	492
Applicability of Curriculum and Assessment in the Process of Education Priyadarshi Mishra	496
Guidelines for Contributors	509

CONTRIBUTORS

Ajay Kumar Sah, Research Scholar, Department of Economics, Jai Prakash University, Chapra (Bihar)

Alok, M.Sc. Chemistry At- Murli, Post-Rasalpur Dist-Saharsa Bihar.

Anirudh Kumar, M.Sc. Chemistry At- Bairia, Post-Ratouli Via-Tharbitta, P.S.-Pipra Dist-Supaul Bihar.

Anish Kumar, APO, Bihar Government

अनुराधा कुमारी, सहायक प्राध्यापक, इतिहास विभाग, ए० बी० एम० कॉलेज, जमशेदपुर, कोलहान विश्वविद्यालय ।

Aparna Kumari, +2 Teacher (Home Science) Rajkiyekrit Uchch Madhyamik +2 High School, Chhajan Mohini block, Khurhani, District Muzaffarpur(Bihar)

B. B. Prasad, Department of Physics, VKSU, Ara (Bihar)

बबलू सिंह, सहायक प्रोफेसर हिन्दी विभाग जे. एस. हिन्दू (पी.जी.) कॉलेज, अमरोहा ।

बबीता त्यागी, प्रधानाध्यापिका किसान पूर्व माध्यमिक विद्यालय जरौठी, हापुड़ ।

भूपेन्द्र कुमार मिश्र, असि०प्रो०-भूगोल विभाग श्रीमती जे० देवी महिला महाविद्यालय, बभनान-गोण्डा (उ०प्र०)

Bhupendra Prasad Yadav, M.Sc., Ph.D.Chemistry At + Post- Jankinagar, Via-Banmankhi Dist-Purnea Bihar.

Bipin Bihari Mishra, Assistant Professor, Maharaja Law College, Ara, Bihar

Devendra Kumar Rai, M.Sc. Ph.D. Chemistry Vidya Aashram, Red Cross Road Opposite of Co-operative Bank Adampur, Bhagalpur Bihar -812001

फरहा नाज, दर्शनशास्त्र अजहर कॉलोनी, आजाद नगर वार्ड नं०-12, मधेपुरा (बिहार) पिन- 852113 ।

G. Bhadramani, Associate Professor in Psychology SPW Degree & PG College Tirupati- 517502 Andhra Pradesh, INDIA E-Mail:gollabhama@gmail.com

Gulab Rai, Assistant Professor, Faculty of Law, DSMNRU, Lucknow

Harvinder Kaur, (Librarian) D.A.V. College of Education, Hoshiarpur (Punjab),
E-mail: harvinderdhanoa9@gmail.com

Jyoti Sharan, M.Sc., Ph.D.Chemistry Raja Bazar, Patna Dist-Patna Bihar.

Kiran Kathuria, Assistant Professor, Punjabi University, Patiala

Krishan Kumar, T.G.T (Science) Janta Inter College, Chhajjupur Dahana-Hapur.

Kumari Priyanka, Department of Physics, VKSU, Ara (Bihar)

Lovely Sharma, LL.M, Research Scholar

Madhurendra Singh, Assistant Professor, School of Education, Nalanda Open University, Patna

(x)

मनीष कुमार द्विवेदी, बी०एड० विभाग आ०न०दे० किसान पी०जी० कालेज बभनान गोण्डा (यू०पी)।

Manoj Kumar Yadav, Assistant Professor, L.N.M.C.B.M., Muzaffarpur (Bihar)

Md. Ehtashamul Hassan, Assistant Professor, Department of Psychology People's College, Araria [Bihar]-854311

Md. Firoj, I.D. College, Kanti, Muzaffarpur.

Meena Kumari, Assistant Professor, School of Education, Nalanda Open University, Patna

Minati Kalo, Ph.D Research Scholar, Centre for South Asian Studies (CSAS/ SIS), Jawaharlal Nehru University, New Delhi (India). E-mail: minati.jnu@gmail.com

Mita Rani, Assistant Professor, Department of Education, A.M.College, Gaya, Bihar

Mukesh Kumar, Research Scholar, Faculty of Law, DSMNRU, Lucknow.

Nahid Hasan, Department of Political Science, Guru Ghasidas Central University, Bilaspur, Chattisgarh, India. E-mail- hasannahid282@gmail.com

Nilesh A. Lohar, Assistant Professor, Department of Physical Education, University of Mumbai, E-mail : dr.nileshlohardpeum@gmail.com

Niranjan Kumar Nirala, M.Sc. Mathematics At + Post-Bhawanipur Via + P.S.-Singheshwar Dist-Madhepura Bihar.

Nisha Kirar, New Delhi

ऑंकार पासवान, शोधार्थी एम.ए., पी.एच.डी., म.वि.वि., बोधगया बी.एड.; इन्दिरा गाँधी राष्ट्रीय मुक्त वि.वि. न्यु दिल्ली हिन्दी शिक्षक; म.रा.ना.पुरी उ.वि. सकसोहरा, पटना।

P.F Mary, Principal, C.K Raghavan Memorial College of Teacher Education, Pulpally, Wayanad, Kerala.

Pankaj Kumar, Ph.D Scholar, Centre for the Study of Law and Governance, Jawaharlal Nehru University, Delhi E-mail – pankaj.roy21@yahoo.in

Pavan Kumar Yadavalli, Associate Professor, Department of Special Needs and Inclusive Education, Ambo University, Ambo, Ethiopia.

Priyadarshi Mishra, Research Scholar, Sanskriti University, Mathura.

R.V. Anuradha, Assistant Professor, Department of Education, English and Foreign Languages University, Hyderabad, Andhra Pradesh, India, E-mail: write2anuradha@gmail.com

रैना कुमारी, ग्राम पोस्ट-नवटोलिया जिला-मधेपुरा (बिहार)-852113।

Rajesh Kumar, Ph.D., JNU, E-mail: rajeshraj.jnu@gmail.com

राकेश कुमार, एम. ए., पी.एच.डी. (भूगोल) छत्रधारी बाजार, छपरा (बिहार)।

Rambha Kumari, Research Scholar E-mail: rambhakumari119@gmail.com

Ram Prabesh Bharti, M.P.T(+2) High School, Jhanjharpur (R.S.), Bihar.

(xi)

रानी सिंह, शोधार्थी (हिंदी विभाग), तिलकामाँझी भागलपुर विश्वविद्यालय, भागलपुर (बिहार)

Rinki Kumari, M.Sc., Ph.D.Chemistry Village-Bathnaha, Post-Golma Dist-Saharsa Bihar.

Ritu Rani, Ph.D. Commerce, B.N.Mandal University, Madhepura, Bihar

Roopinder Kaur Somal, Research Scholar, Punjabi University, Patiala

Rudra Kinker Verma, Assistant Professor, Department of Commerce, Madhepura College, Madhepura. Bihar

S.U.N. Radha Krishna, Assistant Administrative Officer. Commissionerate of Collegiate Education Vijayawada-521108

Sandeep Kumar, Assistant Teacher, (Faculty of Arts), RHS Gayghat, Inter College, Motihari, E-mail: sandeep.jnu07@gmail.com

Sanjay Kumar Kushwaha, Research Scholar, Department of Economics, Jai Prakash University, Chapra (Bihar)

Santosh Sharma, Director, Distance Education, Professor, Faculty of Education, S.V. Subharti University, Meerut.

Sarabjeet, Research Scholar, P.U., Chandigarh, E-mail:ssarabjeet.arora@gmail.com

सरिता कुमारी

Satyabhama Chandra, Department of Psychology, A.P.S.M. College, Barauni, Bihar, India E-Mail: schandra20287@gmail.com

Sazid Equbal Akhtar, PhD Candidate at Department of Political Science, Jamia Millia Islamia. New Delhi. E-mail: akhtarsazid283@gmail.com

Shaheen Talat, Research Scholar, Lecture R.K.H.S. Muzaffarpur.

Shaikh Mohammad Kaish Abdul Gafoor, Doctoral Research Scholar, Centre for Russian and Central Asian Studies, SIS, JNU, New Delhi-110067.

Shankar Prasad Singh, Assistant Professor (Physics) Laxminath College Bangaon, Saharsa/BNMU, Madhepura (Bihar).

Shinam Batra, Research Scholar "The illiterate of the 21st century will not be those who cannot read and write, but those who cannot learn, unlearn and relearn" (Toffler)

Shinam Batra, Research Scholar

Shokat Chowdhary, Ph.D Research Scholar, Centre for the Study of Regional Development (CSR/D/SSS), School of Social Sciences, Jawaharlal Nehru University, New Delhi, India. E-mail: Shokatjnu@gmail.com

स्मिता पाण्डेय, असिस्टेंट प्रोफेसर, सैन्य विज्ञान, आचार्य नरेन्द्र देव किसान पी0जी0 कालेज, बभनान-गोण्डा ।

Sujit Kumar Mishra, Assistant Professor, Nawada Vidhi Mahavidyalya Nawada Bihar

सुमन सिंह, असिस्टेंट प्रोफेसर (हिन्दी विभाग) जनहित पी0जी0 कॉलेज, जलालपुर, जौनपुर ।

(xii)

Sumant Kumar, M.Sc., Ph.D. Chemistry Ward No.-03, Madhepura Dist-Madhepura Bihar -852113

Sunil Kumar, M.Sc., Ph.D. Mathematics Maharshi Mehi Nagar, Ward No.-05, P.S+Dist-Madhepura Bihar -852113.

सुरेन्द्र कुमार पाण्डेय, अध्यक्ष, सैन्य विज्ञान विभाग आ0न0 देव किसान स्नातकोत्तर महाविद्यालय, बभनान-गोण्डा ।

Swadesh Deepak, Research Scholar, Faculty of Commerce, Uday Pratap Autonomous College, Varanasi. E-mail: swadeshdeepak@hotmail.com

Sweta, Assistant Professor, Department of Management, BIT, Mesra, Patna Campus, Patna. E-mail: sweta.tiwary@bitmesra.ac.in

तुंगनाथ मौआर, असिस्टेंट प्रोफेसर राजनीतिक विज्ञान विभाग आर्यभट्ट कॉलेज, नई दिल्ली विश्वविद्यालय नई दिल्ली

Vijay Pratap Gaurav, PhD, Centre for Russian and Central Asian Studies, School of International Studies, Jawaharlal Nehru University, New Delhi.

विजय नारायण तिवारी, असिस्टेंट प्रोफेसर, एम.एड. शिक्षा संकाय संत तुलसीदास पी.जी. कॉलेज, कादीपुर सुल्तानपुर, उत्तर प्रदेश, 228145 ।

Vineeti Kumari, +2 teacher (Psychology), +2 Bipin H/S School, Bettiah (West Champaran) Bihar

Vipinder Nagra, Associate Professor, D.A.V. College of Education, Hoshiarpur (Punjab)

Chief Advisory Board

Dr. H. S. Viramgami

*Principal, Smt. T. S. R. Commerce College,
Patan (Gujarat)*

Dr. E. Maanhvizhi,

*Lecturer,
District Institute of Education and Training,
Uthamacholapuram, Salem, Tamil Nadu.*

Dhiraj Sharma

*Officiating Principal,
S.B.H.S.M. Khalsa College of Education,
Mahilpur, Hoshiarpur (Punjab).*

Raghu Ananthula

*Department of Education (UCOE),
Kakatiya University, Warangal, Telangana State.*

C. Jangaiah

*Associate Professor, Department of Training,
Development and Education, The English and
Foreign Languages University,
Hyderabad Andhra Pradesh.*

G. Viswanathappa

*Associate Professor,
Regional Institute of Education
(RIE, NCERT), Manasagangothri, Mysore, Karnataka.*

Abdul Gafoor

*Associate Professor, Department of Education,
University of Calicut, Calicut University,
P. O., Malappuram, Kerala.*

E. R. Ekbote

*Professor and Dean, Department of P. G. Studies &
Research in Education, Gulberga University,
Gulberga, Karnataka.*

Smitha V. P.

*Principal, Calicut University,
Teacher Education Centre, Calicut, Kerala.*

Mr. Ismail Thamarasseri

*Assistant Professor, Department of Education,
Central University of Kashmir, Srinagar 190004, (J&K).*

KVSN Murti

*Professor and Head, School of Education,
SCSVMV University, Enathur,
Kancheepuram-631561, Tamil Nadu.*

Dr. Anil Kumar Sinha

*NET, Ph.D (History), M.Ed. Head Master
Govt. M.S. Dholi, Muzaffarpur (Bihar)*

Mr. Mahamood Shihab K. M.

*Principal, Farook B. Ed College, Parapur,
P. O., Kottakkal, Malappuram, Kerala.*

Mrs. Smitha P. R.

*Lecturer in Education, MCT Training College,
Melmuri, P. O., Malappuram, Kerala.*

Mr. Zubair P. P.

*Principal, Majma Training College,
Kavanur, Malappuram, Kerala.*

Mrs. Mary P. F.

*Lecturer in Social Science,
St. Gregorios Teachers' Training College,
Meenangadi, Wayanad, Dt, Kerala-673591.*

Balbir Singh Jamwal

*Principal, B. K. M. College of Education
Balachaur, District S. B. S. Nagarm, Punjab-144521.*

Brindhamani M.

*Vice-Principal, Vidhya Sagar, Women's College of Education,
Vedananarayanapurma, Chengalpattu, Tamil Nadu.*

S.K. Panneer Selvam,

*Assistant Professor, Department of Education,
Bharathidasan University, Tiruchirappalli (Tamil Nadu)*

S.D.V. Ramana

*Head, Department of Post Graduate Studies in Education,
Government I.A.S.E, Rajahmundry, Andhra Pradesh.*

P.K. Panda

Utkal University, Bhubaneshwar (Odisha)

Yudhisthir Mishra

*Assistant Professor, The Institute for Academic Excellence,
Paschim Medinipur (West Bengal).*

Dr. R.A. Khan

Al Habib Teacher Training College, Bokaro (Jharkhand).

Dr. Parth Sarthi Pandey

*Principal, Gandhi Vocational College, College of Education,
Kushmoda, A. B. Road, Guna, (Madhya Pradesh).*

Dr. Neeta Pandey

Assistant Teacher, P.S. Bheeti, Handia, Allahabad, U.P.

Mr. Ankit P. Rami

Ph.D., M.Phil, LLM, LLB, North Gujarat University

Dr. Anand Kumar

*NET, Ph.D (Modern History),
Assistant Professor (History),
Government Women College, Mohindergarh (Haryana)*

Editorial Office

APH Publishing Corporation

4435-36/7, Ansari Road, Darya Ganj, New Delhi-110002 (INDIA)
Phones: 011-23274050/09810136903, E-mail: aphbooks@gmail.com

A Study on Instructional Strategies for Students with High Achievement in Oromia Special Boarding School, Ethiopia

Dr. Pavan Kumar Yadavalli*

ABSTRACT

This research attempted to investigate the instructional strategies to teach for students with high achievement in Oromia Development Association School of Adama Branch. The main objective of this research was to investigate the instructional strategies employed to teach students with high achievement were facing in Oromia special boarding school. To this end, concurrent mixed methods research design was employed in which both quantitative and qualitative data were used in order to understand the issues under investigation in depth. The school was selected purposely and data were collected from 2 principals, 9 teachers, and 119 students learning in grade 9th-12th through questionnaire, unstructured interview and Focused Group Discussion. SPSS (version 23) was employed to analyze quantitative data and thematic analyses were made for qualitative data. Research evidence is clear that students who are gifted improve their performance when appropriate individualization is implemented.

Keywords: Boarding school, High achievement, Instructional Strategies, ODA

BACKGROUND OF THE STUDY

Terms such as “gifted” and “high achieving” are used interchangeably in literature to refer to those children who do very well academically at school compared to their peers. It has been commented that the definitions of these terms overlap with one another (Robinson, 1997). However, some studies have suggested that these terms are not identical and there are differences among students classified as gifted and high achieving (Dougherty, 2007; Kotinek, et al., 2010). Although high-achieving and gifted are two separate descriptors, this does not mean that they cannot occur together. Some students are both high-achieving and gifted learners. These students tend to do very well in school, receiving high grades and performing well on homework and exams. At the same time, they approach problems with innovation and complex reflection. Although their primary motivation is to learn, this desire tends to lend itself naturally toward strong performance and high achievement.

Research shows that well planned differentiated instruction is important for higher achievement of all students. Effective teachers differentiate by adjusting the pace, breadth, and depth of curriculum in ways that respect and capitalize on gifted students’ individual learning differences. Children with outstanding abilities, regardless of what these abilities may be, need supportive educational environments to help them to develop their potential into high performance (Endepohls-Ulpe, 2009). When the education of gifted and talented students are not with careful nurturing and appropriately successful, they may result lost academic growth, lost creative potential and sometimes lost enthusiasm for educational success and eventual professional achievements and substantial contributions to society (Davis & Rimm, 2004).

*Associate Professor, Department of Special Needs and Inclusive Education, Ambo University, Ambo, Ethiopia.

Nowadays in Ethiopia, students with high achievement or gifted students are learning in regular school, but these students are rarely learning in special schools. Gifted students have unique cognitive, affective and social needs compared to their non-gifted students. The schools and educators can play a significant role in exciting the learning of gifted and talented students (Kirk et al., 2009). Thus, all educators need to understand how to design and deliver appropriate educational experiences for these students. It is important that if the needs of gifted students education become improved. By conducting this type of research has an important role to understand how the educational practices and needs of high achiever students are being addressed in the special schools and may contribute for the improvement of their education in the study area. Finally, the researcher is inevitable in the field to indicate the concerned bodies the existed gaps through conducting a research.

Thus, this study is guided by the following a major research question.

- What are the instructional strategies used to teach students with high achievement?

SPECIFIC OBJECTIVE

- To examine the instructional strategies to teach the students with high achievement.

Significance of the Study

Primarily, this study contributes to investigate the instructional strategies to teach for students with high achievement in Oromia special boarding school. In addition, it will indicate the existing gap between teachers' training, and instructional strategies to the education for students with high achievement in this special school. Further, the study has vital role in indicating the instructional strategies of these high achiever students and it serves as an input to take appropriate solutions associated with the education of high achiever students in the special school. Finally, the study will be served as a benchmark for further investigation of other researchers in the field. It can also provide feedback to the concerned bodies (notably governmental and non-governmental institutions, school principals, teachers, researchers, and students themselves) to help them improve the teaching-learning practices in Oromia special boarding school.

DELIMITATION OF THE STUDY

This study was delimited to the instructional strategies for students with high achievement in Oromia special boarding school of Adama. Besides, the study would be delimited to Adama branch of Oromia special boarding school. Accordingly, every effort would be made to ensure that sampling used was adequate to collect information required for drawing conclusions. School principals, teachers, and students preferred by the researcher as the main respondents.

OPERATIONAL DEFINITION

Instructional strategies: is an exercise and activity which is done in teaching and learning process for students with high achievement in ODA School.

Gifted: describes learners who have the ability to excel academically in one or more subjects such as English, Drama and Technology.

Students with high achievement: students at special boarding school who have potential abilities that give evidence of high performance capability in areas such as intellectual, creative, specific academic, or leadership ability, or in the performing and visual arts, and who by reason thereof, require services or activities not ordinarily provided by the school (Exceptional lives, Special education in today's schools, 2013) cited in Kirk et al., 2009).

Oromia special boarding school: is a special place for a considerable number of students who might have merely a chance of receiving, at best and quality education.

High achievers: refer to outstanding students in terms of their academic abilities in Oromia special boarding school.

Talented: learners who have the ability to excel in practical skills such as sport, leadership, artistic performance, or in an applied skill.

RESEARCH DESIGN

The study was employed a concurrent mixed methods design to simultaneously collect both quantitative and qualitative data, merge the collected data and use the results to understand a research problem. In addition to this, a mixed method research design is a procedure for collecting, analyzing, and “mixing” both quantitative and qualitative methods in a single study or a series of studies to understand a research problem (Creswell & Plano Clark, 2011). Simple random sampling was used to determine 119 students and 9 teachers who participated in the study, while purposive sampling was used in the case of 2 school principals getting a total of 100% respondents that the principals expected as know better than others about the related issues.

SOURCE OF DATA

The primary sources of data were collected from students, teachers and school principals through questionnaires, interview, and focus group discussion. These sources would help the investigator to acquire first-hand information and draw valid inferences.

POPULATION, SAMPLE SIZE AND SAMPLING TECHNIQUES

A sample design is a definite plan for obtaining a sample from a given population. It refers to the technique or the procedure the researcher would adopt in selecting items for the sample. Sample design may as well lay down the number of items to be included in the sample, the size of the sample. There are many sample designs from which a researcher can choose. Some designs are relatively more precise and easier to apply than others. Researcher must select a sample design which should be reliable and appropriate to his/her research study (Kothari, 2004).

Population

The target population of this study were Oromia special boarding school 596 (408 males and 234 females) total students from grade (9-12), teachers who taught in ODA special boarding school 44 (40 males and 4 females), and 2 school principals (2 of them were males). Therefore, out of 642 total target populations of the study, 130 sample populations were selected. The target populations were students of grade 9th, 10th, 11th and 12th (596 total Students), 44 teachers, and 2 school principals were involved in providing primary information.

Sampling

Creswell (2012) stated that “in the process of collecting data, researcher needs to determine the number of participants to use in their studies... as to how many people are needed, such as 10% of the population”. But the researcher multiplied this ten percent by two (10%*2) which means (20%) to enhance the reliability and validity of this study. Based on this, from the total of 54 Males

and 32 females learning in grade 9th, 17 (20%) students, from 125 males and 70 females in grade 10th, 39 (20%) students, from 85 males and 64 females in grade 11th, 30 (20%) students and from 102 males and 64 females in grade 12th, 33 (20%) students in 2018/19 G.C (2011 E.C was taken as sample using simple random sampling.

In addition, 2 school principals were taken by using purposive sampling that the principals expected as know better than others about the related issues, 9 (i.e.20 %) teachers out of 44 (40 of them were males and 4 of them were females) were selected using simple random sampling. So, it was expected that they were the appropriate people to give appropriate suggestions on their position. Based on the above information, 130 study participants from Oromia Special Boarding School were selected specifically by using random sampling techniques.

By using simple random sampling techniques, 130 participants were selected from Oromia special Boarding School as respondents of the study.

PROCEDURES OF DATA COLLECTION AND INSTRUMENTS

Data Collection Instrument

Employing multiple instruments for data collection increases the validity of the research findings, and it minimizes the risks of erroneous conclusions. Therefore, 6 variables about participants' background data, 51 close-ended questions for both teachers and students and 4 open-ended questions, 16 open-ended questions for interview and 14 open-ended questions for Focus Group Discussion were employed to collect data on educational practices for students with high achievements. The questionnaires were prepared in English and translated into Afaan Oromoo for students as they understand more through their mother tongue. The questionnaires with five point Likert rating scale: 1- strongly disagree, 2- disagree, 3- not sure, 4- agree and 5- strongly agree alternatives were used for both teacher and student respondents.

Data gathering tools in English were developed by the researcher, and they had been translated into Afaan Oromoo by another person who had a legal permission on transition work.

Questionnaire

Both close ended and open questionnaires as a data collection instruments was chosen to produce quick result, offer greater assurance of ambiguity and to give considered and objective view of issue. Basically, the questionnaire was preferred for this study because it was the most appropriate means to collect adequate information from the respondents within the limited time given.

The questionnaires were intended to include many questions, various items, involve large sample population 119 students and 9 teachers that could enhance the possibility of gathering enough data that meet the requirements of the analysis, interpretation and conclusions based on the responses that had been given by the respondents. The questionnaires were designed to include both close-ended questions, suitable for short responses that allow responding precisely, and the open- ended questions were aimed at letting respondents express their ideas freely in details and responding in their own words and self-expressions.

Interview

Best (2005) suggests with a skillful interviewer, interview is often superior to other data gathering instruments for those who are confidential and reluctant to put his/her idea in writing. For this reason,

the researcher employed unstructured interview to support the data collected through the questionnaires and to obtain more information in great depth. The interview was conducted with 2 school principals' which took more than 2:00 hours (one hour for each of them) and the tool used to record interviews was by taking short notes and video recorder based on their permissions. The interviewees had permitted to describe the nature of the existing conditions and acquire respondent's beliefs and opinions based on their background and experiences. Moreover, unstructured interview with extended questions was employed based on the clues the researcher obtained from the verbal face-to-face interactions with the interviewees. Because, unstructured interview, which is more flexible, helped the researcher to find more detailed information about the educational practices and challenges in teaching students with high achievement in ODA special boarding school.

The thematic area of the interview was to assess the educational practice for students with high achievement and the challenges they faced.

Focus Group Discussion

In the research, a guideline with fourteen questions was prepared that helped to keep the discussion focused on the subject at hand (Appendix D). The participants of FGD were heterogeneous (9th, 10th, 11th and 12th grade students). Accordingly, 2, 2, 4, 2 students from 9th, 10th, 11th and 12th respectively were selected as participants of FGD. The participants were encouraged to be independent and free to express their views. Based on the respondents' permission, video recorder was used to record their discussion and agreement on the issues raised by the researcher.

Thus, the FGD was conducted with high achiever students from ODA School about their views, opinions towards to their educational practices.

Data Collection Procedures

At the beginning, relevant literature would be collected so as to get adequate information, and the objective of the study was explained to the selected boarding school principals through phone / contact to get their permission and cooperation. The data gathering instruments: closed ended questionnaires, open-ended unstructured interview guide questions and Focus Group Discussion were constructed on the basis of the reviewed literature and required data. Because the interview guides were not structured; the researcher would have the opportunity to generate other questions during interview. Next, the students' questionnaire were prepared and translated into their mother tongue (Afaan Oromoo) to minimize semantic misunderstanding during the administration of the questionnaire. Subsequently, the participants were informed in advance about the objective of the study to ensure their willingness and get the questionnaires back. Besides, the researcher along with his assistant gave orientation, distributed the questionnaires, administered and collected them within the given range of time from the selected respondents: students and teachers.

Variables

In this study, the educational practices for students with high achievement were the dependent variables. The sex, age, student grade level, teachers' educational level, subject that the teacher respondents were teaching and teachers' teaching experience were independent variables.

Demographic variables of the respondents

Table: Background information of respondents in ODA School

No	Variables		Teachers		Students		
			F (%)	mean	F (%)	mean	
1.	Sex Female Total	Male	8 (88.9)	48 (40.3) 119 (100)	71 (59.7)	-	
		1 (11.1)					
		9 (100)					
2.	Age	Teachers	20-30	2 (22.2)	1.89	-	2.45
			31-40	6 (66.7)		-	
			41-50	1 (11.1)		-	
			Total	9 (100)		-	
		Students	14-15	-	-	8 (6.7)	
			16-17	-	-	53 (44.5)	
			18-19	-	-	55 (46.2)	
			20 and above	-	-	3 (2.5)	
			Total	-	-	119 (100)	
3.	Students' grade level	9 th	-	-	17 (14.3)	-	
		10 th	-	-	39 (32.8)		
		11 th	-	-	30 (25.2)		
		12 th	-	-	33 (27.7)		
		Total	-	-	119 (100)		
4.	Teachers' educational level	BA/BSC	4 (44.4)	-	-	-	
		MA/MSC and above	5 (55.6)	-	-		
		Total	9 (100)	-	-		
5.	Subject that the teacher respondents teach	English	2 (22.2)	-	-	-	
		Biology	1 (11.1)	-	-		
		Chemistry	2 (22.2)	-	-		
		Physics	2 (22.2)	-	-		
		ICT	1 (11.1)	-	-		
		Mathematics	1 (11.1)	-	-		
		Total	9 (100)	-	-		
6.	Teachers' teaching experience	0-10	2 (22.2)	-	-	-	
		11-20	6 (66.7)	-	-		
		21-30	1 (11.1)	-	-		
		Total	9 (100)	-	-		

Source: - survey data from ODA School

Key: F represents Frequency and % represents Percentage

As it observed from the above table 3, both teacher participants and student participants were included for questionnaire part. Accordingly, the teacher participants of the study were 8 (88.9%) males and 1 (11.1%) female. The student participants for questionnaire were 71 (59.7%) males and 48 (40.3%) females. From this data, anyone can understand that the majority of the teachers were male participants and young adults (see table 3). Again, as the above table indicates, about 6 (66.7%) of teacher participants were in the age group of 31-40 years, in the age group of 20-30 years which accounted 2 (22.2%) and 1 (11.1%) of respondents were in the age group between 41-50 years. This implies that out of 9 teacher participants, 6 (66.7%) were in the age group between 31- 40 years. Here, we can show the age of student participants from the above table, 8 (6.7%) of the respondents were in the age group between 14-15 years, out of the total respondents 53 (44.5%) were between the age of 16 and 17 and those between age 18 and 19 were 55 (46.2%), whereas, the rest 3 (2.5%) of student participants were in the age 20 years and above. Regarding the students' grade level, 17 (14.3%) of them were grade 9th, 11(64.7%) were males, whereas, 6 (35.3%) were females. Student participants from grade 10th were 39 (32.8%), out of this, 25 (64.1%) were males and 14 (35.9%) females, again, student participants from grade 11th were 30 (25.2%), from this 17 (56.7%) males and 13 (43.3%) were females and whereas 33 (27.7%) of total student participants for questionnaire from grade 12th, were 20 (60.6%) males and 13 (39.4%) females.

The above table reflected about the educational level (qualification) of teacher respondents. Based on it, 4 (44.4%) of teachers were first degree holders and 5 (55.6%) of teachers were masters (second degree) holders. Hence, the majority of the respondents were master's degree holders. This implies that they are qualified to the position of secondary school to carryout education for students. Concerning to the subject matter that the teacher respondents teach, 2 (22.2%) of the respondents were teaching English, Chemistry and Physics subjects were equally participated and the number of the teachers who taught Biology, Mathematics and Information Technology subjects had 1 (11.1%) equal number of participation on teachers questionnaire. This shows us the majority of teacher participants were from natural science.

The above table also revealed that, teachers' work experience including teaching in ODA School. From the data obtained, 2 (22.2%) of teachers' reported that they had 0-10 years' work experiences, whereas 6 (66.7%) of teachers had 11-20 years' experience and 1 (11.1%) of the teachers' reported they had 21-30 years' work experience. Therefore, majority of the respondents had good working experience.

Based on the presented data

- Male teacher participants had higher percentage of 88.9% and female teacher participants' percentage was 11.1% and male student participants had higher percentage of 59.7% and female student participants had percentage of 40.3%.
- When we compare the percentage of the respondents' age, teacher respondents who were found between the ages of 31-40 years and student respondents who were found between the ages of 18-19 years were young and had good awareness about the educational practices and understood the benefit of the education given in the school.
- Regarding the student' grade level, 32.8% of majority student respondents were from 10th grade who were in the middle grade level of the respondents.
- According to the above data, about 55.6% of the school teachers' were MA/MSc holders, so they have good experiences and fit for the position to teach these students. About equal 22.2% of teacher respondents were English, Chemistry and Physics.

- The teacher respondents had about 66.7% of teaching experiences between 11-20 years and this has shown us that the ODA school teachers have good experiences in educating these students.

The instructional strategies employed to teach students with high achievement in ODA School

Item 1 of instructional strategies questionnaire depicted that teachers were asked whether the teachers have annual plan to teach students with high achievement or not. About 9 (100%) of teacher respondents showed 'agreement'. Again, on the same item, 105 (88.2%) of the student respondents favored to 'agree', 7 (5.9%) of the student respondents favored to 'not sure' and 7 (5.9%) of the student respondents favored to 'disagree'. This indicated that the majority of both teacher and student participants showed 'agreement' concerning the teachers use of annual plan to teach students (see table 5).

As item 2 of instructional strategies questionnaire showed us about the teachers' use of lesson plan to teach students with high achievement. About 9 (100%) of teacher respondents showed 'agreement'. Again, on this item, about 105 (88.2%) of the student respondents favored to 'agree', 11 (9.2%), of the student respondents reported to 'not sure' and 3 (2.5%) of the student respondents favored to 'disagree'. This indicated that the majority of both teachers and students confirmed to 'agree' towards teachers use lesson plan to teach students.

On item 3 of instructional strategies questionnaire, the respondents were requested about teachers' use of Individualized Educational Program/IEP to teach students with high achievement. Regarding, to this question, about 8 (88.9%) of teacher and 69 (58%) of student respondents reported to 'agree', 1 (11.1%) of teacher and 30 (25.2%) student respondents favored to 'not sure' and 20 (16.8%) of student respondents responded to 'disagree'. This showed the majority of both teacher and student respondents showed 'agreement' towards IEP teaching strategies for students.

Item 4 of instructional strategies questionnaire depicted that teachers were asked the question regarding that whether the teachers use variety of instructional strategies to address the educational needs of students with high achievement in the classroom or not. About 9 (100%) of teacher respondents were favored to 'agree'. Again on this the same item, 96 (80.6%) of the student respondents favored to 'agree', 10 (8.4%), of the student respondents favored to 'not sure' and 13 (10.9%) of the student respondents favored to 'disagree'. This indicated that the majority of both teachers and students were confirmed to 'agree' towards the teacher uses variety of instructional strategies to address the educational needs of students with high achievement.

In item 5 of instructional strategies questionnaire showed that, 7 (77.8%) of majority teachers responded to 'agree' and 2 (22.2%) of teachers responded to 'not sure' on teachers use of acceleration method to teach students. On this item, 83 (69.8%) of majority students 'agree', 16 (13.4%) of students responded to 'not sure' and 20 (16.8%) of students responded to 'disagree' on the teachers use of acceleration method to teach students. As it has been shown on the above data, the majority of both teachers and students showed 'agreement' on the teachers use of acceleration methods to teach students.

item 6 of instructional strategies questionnaire showed that, 8 (88.9%) of majority teachers responded to 'agree' and 1 (11.1%) of teachers responded to 'not sure' on teachers employ enrichment methods to teach students with high achievement. Again, on this item, 90 (75.6%) of majority students 'agree', 17 (14.3%) respond to 'not sure' and 12 (10.1%) respond to 'disagree' on teachers employ of enrichment method to teach students. This data showed us, the majority of both teacher and student respondents showed 'agreement' towards the teachers employ of enrichment method to teach students.

Item 7 of instructional strategies questionnaire is about whether the teachers use cooperative learning strategies to facilitate students learning from each other or not. According to the above data, about 9 (100%) of teacher respondents showed 'agreement'. About the same item, 91 (76.5%) of the student respondents favored to 'agree' 7 (5.9%) of the student respondents reported to 'not sure' 21 (17.7%), of the student respondents favored to 'disagree'. As indicated in the above data, the majority of both teachers and students showed 'agreement' towards the teachers of use cooperative learning strategies to facilitate the students learning from each other.

item 8 shows that, the majority 8 (88.9%) of teachers were responded to 'agree' and 1 (11.1%) of teachers responded to 'not sure' regarding the teachers use student-centered learning strategies to teach students. On this the same item, 88 (73.9%) of students responded to 'agree', 15 (12.6%) of students responded to 'not sure' and 16 (13.4%) of students responded to 'disagree' on that the teachers use of student-centered learning strategies to teach students. As shown on item 8, the majority of both teachers and students showed 'agreement' towards the teachers' use of student-centered learning strategies.

On item 9 of instructional strategies questionnaire, the respondents were asked about teachers adapt curriculum materials to address the educational needs of students with high achievement, the majority 7 (77.8%) of teachers responded to 'agree' and 2 (22.2%) of teacher respondents confirmed to 'not sure'. Related to this item, the majority 93 (78.2%) of students responded to 'agree', 16 (13.4%) responded to 'not sure' and 10 (8.4%) of student respondents favored to 'disagree' (see table 5). This indicated that the majority of both teacher and student respondents showed 'agreement' towards the teachers adapt to the curriculum materials to address the educational needs of students with high achievement.

Item 10 of instructional strategies questionnaire is about the teachers' use of instructional resource/ technology to enhance students' learning. About 9 (100%) of teacher respondents showed 'agreement'. About this same item, the majority 89 (74.8%) of the student respondents favored to 'agree', 11 (9.2%) of the student respondents favored to 'not sure' and 19 (16%) of the student respondents favored to 'disagree'. This showed us the majority of both teacher and student respondents showed 'agreement' towards teachers use instructional resource/ technology to enhance students learning.

In this regard, the interview employed with school principals stated on the issue of instructional strategies to teach the students were employed as active teaching methods, demonstrations, students' discussions and presentation, laboratory activities, furnished technologies such as plasma, Wi-Fi service that help the students to download materials etc. supportive, committed and attentive in all activities of the school.

FGD employed with students showed that the teachers had plan, student-centered learning, giving practical activities and portion enrichment.

Items related to the instructional strategies employed to teach students with high achievement in ODA School

Concerning the instructional strategies employed to teach students with high achievement, teachers had annual and lesson plan, they use IEP teaching strategy, use variety of instructional strategies to address the educational needs of students, acceleration method (rapid teaching and learning process), employ enrichment method, cooperative learning strategies, student-centered learning strategies, adapt the curriculum materials to address the educational needs of students and use instructional resource/ technology to enhance students learning (see table 4 under chapter 4). In relation to this, the interview employed with school principals and FGD of the students stated that, active learning and teaching methods, demonstrations, students' discussions and presentation,

laboratory activities, plasma lessons, Wi-Fi service, help the students to download learning materials, no missing classes, teachers' plans, student-centered learning activities, giving practical activities and portion enrichment with the supports of teachers commitments were employed in the school. This finding can be supported by the study reported by (Kaplan, 2005) Meaningful curriculum differentiation for gifted and talented students requires that educators recognize the individual strengths of these learners and acknowledge the inadequacy of the regular curriculum to meet those needs. Acceleration and enrichment are two fundamental strategies that respect and take advantage of gifted students' learning characteristics and strengths by differentiating curriculum in its pace, breadth, and depth. The NAGC (2004,) states that educational acceleration is one of the cornerstones of exemplary gifted education practices, with more research supporting this intervention than any other in the literature on gifted education. The most successful enrichment activities accomplish both process- and content-related goals (Davis et al., 2011). Research evidence is clear that students who are gifted improve their performance when appropriate individualization is implemented (Geisler et al., 2009 and Reis & Boeve, 2009).

CONCLUSIONS

This study attempted to investigate the educational practices for students with high achievement in ODA School of Adama branch. The data were collected from ODA School academic staff (School Principals, Teachers) and Students with high achievement through questionnaires, interview and focus group discussion. Accordingly, based on the major results and discussions, the following conclusions were drawn. The majorities of ODA school teachers were male 8 (88.9%), young, MA/ MSc holders, from natural streams and had eleven to twenty years of teaching experiences. So, that they had good experiences and awareness about the educational practices, understood the benefit of the education delivered for the students in the school.

The instructional strategies employed to teach students with high achievement were Teachers' had annual and lesson plan, they used IEP teaching strategy, variety of instructional strategies to address the educational needs of students, acceleration method (rapid teaching and learning process), enrichment method, cooperative learning strategies, student-centered learning strategies, adapt the curriculum materials to address the educational needs of students and instructional resource/ technology to enhance students learning. In relation to this, the interview employed with school principals and FGD of the students stated that active learning and teaching methods, demonstrations, students' discussions and presentations, laboratory activities, plasma lessons, student-centered learnings, giving practical activities and portion enrichment with the supports of teachers commitments were employed in the school.

The assessment methods used to teach students' with high achievement in ODA School were, the assessment techniques as per the instruction, Continuous assessment like class activities, quiz, tests, final exams, assignments, lab reports and project works and multi-dimensional assessment methods.

The supports given for students with high achievement in ODA School were guidance and counseling service, tutorial service, additional reading materials, life skill trainings, laboratory services, cafeteria services, dormitory services, health care services.

The school did not provide them with pocket money. In relation to this idea, the observed mean about 'pocket money' for students with high achievement has been less than expected from school. There was opposite responses between teacher and student in responding on the idea of 'science and technology program' and this might be because of difference in understanding 'science and technology program' for the education of students with high achievement in ODA School. On this

support issues, FGD and interview confirmed that the students get different materials like soap both for washing cloth and for body, pencil and modes for female students, soft.

Regarding to the challenges on the education of students with high achievement in this school, there were opposite responses between teacher and student in responding and this could be because of difference in understanding 'leadership problems' on the education for students with high achievement and budget allocation, psychological problems, social problems, students' longingness of their parents. Shortages of Afaan Oromoo books were the challenges for the education of students with high achievement in ODA School.

In addition to this related issues, FGD of students indicated the following challenges such as Lack of physics lab profession with enough materials, Shortages of medicines in school's clinic, difficulty of tests and questions, because the teachers assumed all the students as they worked everything equally in terms of their education, shortages of time for study because the school library give services up to 6:00 o'clock only, but the students' wanted full time library services for study in the school.

The data from questionnaire indicated, there was IEP program, but the results from interview and FGD shows that IEP program was not employed in the school. Acceleration and enrichment methods of instructional strategies were employed to teach students in the school. Since all the services are in the school, the absence of playground like football playground was not improved by the school and shortages of Afaan Oromoo books, since different individual of the students were from different cultures of Oromia region, the school is called small Oromia. So the students want to read different Afaan Oromoo books and develop their culture.

Regarding to the education of ODA School students, the school was collaboratively working with Oromia Education bureau, Adama Science and Technology University (ASTU) support with advanced laboratory training, Adama city administration (support with bus service during the students' field trip), and Oromia COC center, Ambo, Jima and Arsi Universities. The school had meeting three times (September, February and June) a year with students' parents regarding the issues of the students and they also communicated on phone to discuss on different students' issues. There were clubs in that school such as gender, HIV, environmental hygiene, voluntarism particularly; mini-media program by the name of GADSAO (Guddina Aadaa fi Dagaagina Seenaa Afaan Oromoo) and ideology, poem, and cultural speaking of Oromo with technologies was functioning well.

RECOMMENDATIONS

Based on the major findings and conclusion, the following recommendations have been made.

- ODA School should work on further improvement of the instructional strategies and assessment methods to address the educational needs of the students
- The school should plan to give the opportunity for students to visit different industries at all since they are natural stream students.
- The school should plan for employ physics laboratory profession/well trained person and with enough laboratory materials
- The school management, directors and teachers should discuss on the time of school library services should be improved since the students wanted to get full services even for 24 hours.
- Since different individuals of the students were from different cultures in Oromia region, the school is considered as small Oromia. So, the students wanted to read different Afaan Oromoo Books to develop their language and culture.
- Since ODA School students will be going to serve our country tomorrow, the government body and concerned body from all stakeholders should contribute their roles in terms of budget, further needed educational materials and supports.

- Most effectively, to understand, to teach and to challenge high achievers teachers, counselors, and other educators must be formally trained.
- ODA School should employ special needs experts to identify and support the unique needs of students based on their abilities and learning performances.
- The school should give attention and work on tackling the challenges such as leadership, social and longingness problems students are facing in the school.
- This study serves as a benchmark for further investigation of other researchers in the field and Provide feedback to the concerned bodies (government and non-governmental institutions).

REFERENCES

- Ann Turnbull, Rude Turnbull, Michael L. Wehmeyer Kanas University& Karre A. Shogren University of Illinois (2013). *Exceptional Lives, Special Education in Today's Schools* (7th ed.) Cited in Kirk et al., (2009).
- Beghetto, R. A. (2008). Creativity enhancement. In J. A. Plucker & C. M. Callahan (Eds.), *Critical issues and practices in gifted education: What the research says* (pp. 139–154). Waco, TX: Prufrock.
- Burke, Sims, Lazzara, & Salas, (2007) and “wisdom in spontaneity the ability to assess situations quickly and step forward or backward in taking direction for the benefit of the group” (Roach et al., 1999, p. 17).
- Clark, (2008). Critical issues in response-to intervention, comprehensive evaluation, and specific learning disabilities identification and intervention: An expert white paper consensus. *Learning Disability Quarterly*,
- Coleman (2005). Developing and Sustaining Professionalism with gifted education
- Creswell and Plano Clark (2011). *Best practices for mixed methods research*. Sage publication 2011
- Creswell, J. W. (2012). Collecting qualitative data. *Educational research: Planning, conducting, and evaluating quantitative and qualitative research*, 204-235.
- Davis, G. A., & Rimm, S. B. (2004). Characteristics of gifted students. *Education of the gifted and talented*, 5, 32-53.
- Davis. Rimm, S. & Siegle, D. (2011). *Education of the gifted and talented* (6thed.). New Jersey: Pearson Education, Inc.
- Dougherty, S. B. 2007. Academic advising for high-achieving college students. *Higher Education in Review*, 4: 63-82.
- Endepohls-Ulpe, (2009). Teaching gifted and talented children
- Federal Ministry of Education (FMOE), (2012). curriculum adaptation guideline prepared at national level to meet the educational needs of all learners.
- Ford, D. (2010). *Reversing underachievement among gifted Black students*. Sourcebooks, Inc...
- Ford, D. Y., Grantham, T. C., & Whiting, G. W. (2008). Culturally and linguistically diverse students in gifted education: Recruitment and retention issues. *Exceptional Children*, 74 (3), 289–306.
- Gagné, F. (2003). Transforming gifts into talents: The DMGT as a developmental theory. In N. Colangelo & G. A. Davis (Eds.), *Handbook of gifted education* (3rd ed.) (pp. 60-74). Boston: Pearson Education
- Geisler, J. L., Hessler, T., Gardner, R., & Lovelace, T. S. (2009). Differentiated writing interventions for high-achieving urban African American elementary students. *Journal of Advanced Academics*, 20(2), 214-247.
- Goodrum, D., Hackling, M., & Rennie, L. (2001). The status and quality of teaching and learning of science in Australian schools. Canberra: department of education, training and youth affairs.
- Hertberg-Davis, H. (2009). Myth 7: Differentiation in the regular classroom is equivalent to gifted programs and is sufficient. Classroom teachers have the time, the skill, and the will to differentiate adequately. *Gifted Child Quarterly*, 53 (4), 251–253.
- [http://Journal.sage.pub.com/doi/abs/vol=35, 10.11177/1076217511427511](http://Journal.sage.pub.com/doi/abs/vol=35,10.11177/1076217511427511). Retrieved on 2/12/2019
- <http://doi.org/10.1177/026142940301700211>. Retrieved on 2/12/2019
- <http://portal.org/education>.Retrived on 5/8/2019
- http://www.ehow.com/info_8747594_high-achiever-vs-gifted-student.html.Retrived on 15/11/2019

- Kaplan, S. N. (2005). Layering differentiated curricula for the gifted and talented. *Methods and materials for teaching the gifted*, 107-131.
- Kirk (2009). *Educating Exceptional Children (What's new in Education)* 13thed.
- Kirk, Gallagher, Coleman, & Anastasiow (2009). *Exceptional lives, Special education in Today's schools* 2013)
- Myers, R. & Pace, T. 1986. Counseling gifted and talented Students: Historical perspectives and contemporary issues. *Journal of Counseling and Development*, 66: 275-278.
- Kothari, C. R. (2004). *Research Methodology: Methods & Techniques*. New Delhi: Ansari Road, Daryaganj.
- Kotinek, J., Neuber, A., & Sindt, K. 2010. Gifted, High-Achieving, Honors: Is there a meaningful difference, **34th Annual NACADA National Conference**. Orlando, FL.
- Lee, S. Y., Olszewski-Kubilius, P., Donahue, R., & Weimholt, K. (2008). The civic leadership institute: A service-learning program for academically gifted youth. *Journal of Advanced Academics*, 19 (2), 272–308.
- McMillan, J. M. (2008). *Assessment essentials for student-based education* (2nd ed.). Thousand Oaks: Crown Press.
- Ministry of Education (MoE).(2012). *Education statistics annual abstract*. Addis Ababa, Ethiopia.
- National Association for Gifted Children. (2009). *2008 – 2009 state of the states in gifted education: National policy and practice data*. Washington, DC: Author.
- National Center for Education Statistics. (2010). *Digest of education statistics*. Washington, DC: U.S. Department of Education.
- Newsom, T. (2010). Developing African- American leaders in today's schools: Gifted leadership, the unfamiliar dimension in gifted education. *Black History Bulletin*, 73(1), 18–23.
- Reis, S. M., & Boeve, H. (2009). How academically gifted elementary, urban students respond to challenge in an enriched, differentiated reading program. *Journal for the Education of the Gifted*, 33(2), 203–240.
- Renzulli, J. S., & Reed, R. E. S. (2008). Intelligences outside the normal curve: Co-cognitive traits that contribute to giftedness. In J. A. Plucker & C. M. Callahan (Eds.), *Critical issues and practices in gifted education: What the research says* (pp. 303–320). Waco, TX: Prufrock.
- Reynolds, (2009). Assessment of behavior and personality in the neuropsychological diagnosis of children. *Handbook of clinical child neuropsychology* (3rd ed., pp. 349–382). New York: Springer.
- Rizza, M. G., & Gentry, M. (2001). A legacy of promise: Reflections, suggestions, and directions from contemporary leaders in the field of gifted education. *Teacher Education*, 36 (3), 167–184.
- Roach, A. A., Wyman, L. T., Brookes, H., Chavez, C., Heath, S. B., & Valdes, G. (1999). Leadership giftedness: Models revisited. *Gifted Child Quarterly*, 43 (1), 13–24.
- Robinson, N. M. 1997. The role of universities and colleges in educating gifted undergraduates. **Peabody Journal of Education**, 72(3&4): 217-236.
- Schroth, S. T., & Helfer, J. A. (2008). Identifying gifted students: Educator beliefs regarding various policies.
- Snyder, T. D., & Dillow, S. A. (2012). *Digest of education statistics 2011*. National Center for Education Statistics.
- The Education and Training Policy and Its Implementation (2002).thinking: Providing access for gifted African American students. *Roeper Review*, 24 (2), 52-58.
- Tomlinson, C. A. (2008). Differentiated instruction. In J. A. Plucker & C. M. Callahan (Eds.), *Critical issues and practices in gifted education: What the research says* (pp. 167–178). Waco, TX: Prufrock.
- Van Tassel-Baska, J. (2005). Gifted programs and services: What are the nonnegotiable? *Theory into Practice*, 44 (2), 90–99.
- VanTassel-Baska, J., & Stambaugh, T. (2006). *Comprehensive curriculum for gifted Learners* (3rded). USA: Pearson Education Inc.
- William L. (2009). *Exceptional Children an Intro* (BookZZ.org).

Child Labour in India: Role of Judiciary

Dr. Gulab Rai* and Mukesh Kumar**

ABSTRACT

Child labour issue is globalized and must be protection of every child. The judiciary provided protection every person's rights. Indian judiciary scope of the recent interpretation of remarked the situation of child labour and discussion of present time. Indian constitution protected rights citizen and non citizen. Indian constitution provided the fundamental rights every child. Article 14 of the constitution lay down equal protection of citizen non citizen. Article 24 of the constitution below the age 14 years prohibited the hazardous and non hazardous work. Article 51 of the constitution constructed the foreign policy and respect international obligation. Part VI of the constitution fundamental duties of the state to provided the safeguard nature. The child labour {Prohibition and Regulation} Act, 1986 lay down hazardous work and non hazardous work and prohibited the below the age of 14 years children and they are not permitted the work. ¹

INTRODUCTION

"The hallmark of culture and advance of civilization consists in the fulfillment of our obligation to the young generation by opening up all opportunities for every child to unfold its personality and rise to its full stature, physical, mental, moral and spiritual. It is the birth right of every child that cries for justice from the would as a whole" **Justice V. R. Krishna Iyer**²

The Indian judiciary will be proved the protection of every person rights. They are exploitation of and violation rights to protect every person include children. The court protects child labour issues. The court will be decided the exploitation of rights of child labour. There are court to direction and decided the cases from time to time. Indian judiciary is every person to protect of violation of rights. Every child is a gift of God-a gift must be nurtured with care and affection, with in the family and society. But unfortunately due to socio-economic and cultural problems, the code of child centeredness was replaced by neglect, abuse and deprivation particularly in the poverty affected sections of the society.³ Our written constitution is guaranteeing social, justice, liberty and equality to its entire citizens. For achieving these objectives, we have three organs of government, the legislature, the executive and the judiciary. Each of these is supreme within the sphere allotted to it. To interpret the constitution, keep the three organ of government within their allotted spheres and enforce the rule of law, an independent authority is absolutely essential and this furnished by the court justice. The Supreme Court of India, at the apex has been assigned a very important role, and constituted as a guardian of the constitution which is the yardstick of ground norms for other legislation.⁴

Child labour is the practice of having children engaged in economic activity, on part or full-time basis. This practice deprives children of their childhood and is harmful to their physical and mental development. Poverty, lack of good schools and the growth of the informal economy are considered as the important causes of child labour in India. The national census of India estimated the total number of child labour, aged 5-14 years, to be at 12.6 million, out of a total child population of 253

*Assistant Professor, Faculty of Law, DSMNRU, Lucknow

**Research Scholar, Faculty of Law, DSMNRU, Lucknow

million in 5-14 age group. A 2009-2010 nationwide survey found child labour prevalence had reduced to 4.98 million children (or less than 2% of children in 5-14 age groups). The 2011 national census of India found the total number of child labour, aged 5-14, years to be at 4.35 million and the total child population to be 259.64 million in that age group. The child labour problem is not unique to India; worldwide, about 217 millions children work done, many full times.⁵

Statement of the problem: -Child labour in India and other countries. Child labour huge universal problem. Child labour offence then working is punishable offences, but child labour work every ground level imposed. That the problem grass-root level solution is every work is not possible in the 21st century. Child labour problem is areas research and investigation and solution of the problem. The area of the investigation is poverty, education, low wages, poor living standard, social distance, and others. In India lower the socio-economically background is an inferior group of India. Some studies found that the child labour migration of the cities due to central problem unemployment and high take cities developing. Some studies are found child labour working different-different workplace engaged. The focus on the urbanization had even allured run away rural home and others place work. There they find multiple causes in child labour.

Objectives of the study: -The objective of the study is to develop a comprehensive understanding of the phenomenon of child labour, to facilitate the formulation of appropriate policies and programmed meant to effectively curb and control the problem of child labour in India. For the above discussion, the study aims to:

1. The response of the judiciary regarding child labour in India.
2. Suggestions and measures for the protection of children from child labour.
3. Discuss the Indian laws against child Labour.

The judiciary discusses and judgment of the cases time to time and protected the child rights of Indian judiciary:

People union for Democratic Rights v. Union of India this case is the famous name of Asian worker case. The Supreme Court decided the case of child labour below the age of 14 years prohibited employment in contractive activities and hazardous work. Article 24 of the constitution justice P.N Bhagvathi and Justice Bahrul held that each other ILO convention no.59 not an even enforces. They have prohibited hazardous work.

Bandhua Mukti Morcha v. Union of India & others Justice Bhagvathi say that Government includes State Government that is the problem to need attention. The Government to takes steps and adopts measures to ensure social justice. The government does not ignore the exploitation of human being to include bonded child labour.

M.C Mehta v Tamil Nadu & others the court said that Justice Kuldeep Singh and B.L Hansaria, every child labour under the Act of child labour legislation violation his must be punished. S.B Majumdar analyzed the child labour rehabilitation very must of the present time, and child labour condition is heinous. So every employer enforces the high compensation violation of the Act. There are compensation Rs. 20,000 imposed of employer and deposits the adequate "Child labour Rehabilitation-cum Welfare Fund. There is a provision under sec 17 enforce Appointment of the inspector.

Ganesh Ram v. State of Jharkhand & others Justice S. Mukhopadhaya and Justice N. Tiwari Bench held that child labour below the age of 14 years prohibited in employment. But they are passed an order of penal in an employee so child labour (Prohibition and Regulation) Act, 1986 prohibited every child engaged in employment.

The court on Its Motion v. The State of Jharkhand the court held that Jharkhand State government how many schemes are working in child labour welfare and how are working in ground level. They said the court child labour matter is no settlement employer and employee. So state government child labour situation ignore and focus the rehabilitation.⁶

Conclusion:- Indian judiciary direction and exploitation of children matter imposed the high fine and Imprisonment and enforcing of law. They are legislation to protected and imposed punishment but not enforce the legislation in proper. There are very important the enforcement in legislation and welfare work in children. Today must be significant State government Policy made in the welfare of the child labour and enforce the grass-root level.

I have observed the Indian Constitution and other Indian legislative Acts are worked enforce welfare and rehabilitation, but grass root level not adequately enforced. They are the main problem enforcement in-laws is not the right direction worked.

REFERENCES

Books

1. Sandilya, Tapan Kumar, sake Ahmad khan, "child labour: A global challenges", deep and deep pub ltd new Delhi [2006]
2. Siddiqui, M.I, "child labour theory Conventions and Experiences", Anamika pub. And Distributions[P] ltd Delhi [2005]
3. Sinha, Rajeew Kumar, "Child labour in Unorganized sector", Shree publisher and distributions Delhi,
4. Nanjunda D.C, Dr. "Encyclopaedia of Child labour myth or reality", Anmol publications Pvt. Ltd,Delhi,[2009]
5. Dipak das.Dr., "Child labour in India rights, welfare and protection", deep and deep publication Pvt. Ltd Delhi [2011]
6. Saksena. Anu, "Human rights and child labour in Indian Industries", Shipra publication Delhi [1999]

Article

1. MONASH UNIVERSITY business and economics
2. Child labour in India by K.chandrasegaran SCHOOL OF LEGAL STUDIES COCHIN UNIVERSITY OF SCIENCE AND TECHNOLOGY COCHIN DECEMBER '1996
3. <http://www.scholastic.com/teachers/article/historychildlabour>
4. the Juvenile Justice (care and protection of children) Act 2000
5. Savitri Goonesekre " Children Law and Justice: A South Asian perspective", SAGE Publication, UNICEF, 1998.
6. <https://blog.ipleaders.in/laws-related-child-labour-india/>
7. <https://www.ilo.org/dyn/natlex/docs/WEBTEXT/27803/64848/E86IND01.htm>.
8. <https://www.nluo.ac.in/wp-content/uploads/2019/05/Journal-on-the-Rights-of-the-Child.pdf>
9. India: India's Law On Child Labour Prohibition Revamped Last Updated: 30 November 2016 10 Article by S. Preetha and Vikram Shroff Nishith Desai Associates
- 10.. Sherya Tripathi, "judicial view on child labour", blog-Ipleadres.in Fjudicial-view-on child-labour
11. <https://vikaspedia.in/social-welfare/social-awareness/legal-awareness/legal-provisions-in-child-labour-trafficking>.

Acts

- **Indian constitution of India**
- **The Juvenile Justice {Child and Protection}2000**
- **Child labour {prohibition and regulation} 1986**
- **Factories Act 1949**
- **The Employment of Children Act 1938**
- **The Indian Mines {Amendment} Act 1952**
- **Indian Penal Code 1860**

ENDNOTES

1. Poul, Thomas, "Judicial response to child labour in India: a human rights perspective
2. . Justice V.R. Krishna Iyer "Jurisprudence of juvenile justice: A Preamble perspective" , -Souvenir of the International Conferences on shaping the future of law hosted by the Indian Law Institute, Delhi on 21-25 March, 1994.
3. .Shukla, Narendra " child labour in India", sarup publishers pvt ltd, new delhi, p. 131
4. . sandile, tapan kumar, shakeel ahmad khan, "child labour: a globe challenge", deep and deep pub {p} ltd new delhi p.102
5. . Nagar,Mrs. Niti, Mrs. Binda roy "A Critical analysis of child labour in india", IJCRM,
6. . Sherya Tripathi, "judicial view on child labour", blog-Ipleadres.in Fjudicial-view-on child-labour

A Study of Academic Anxiety and Institutional Climate of Student Teachers in Relation to their Residential Status

Dr. P.F Mary*

INTRODUCTION

Education is an important instrument for bringing out potentialities of human beings while effectiveness of a system of education is mainly depended up on its teachers. That is among all the dimensions of education, teacher education is considered to be the most critical. The quality, competency and character of teachers and their professional preparation depends on the quality of teacher preparation programme. Educational development has always been a for runner of social change and development. Therefore we have been striving hard to find appropriate responses to the challenges in the field of education, so as to make it a powerful vehicle of social change. The quality and efficiency of education and its contribution to national development rests on the quality and competency of teachers.

Teachers performance is depend upon the teacher education received by the prospective teachers. If the student teachers are under academic anxiety, they fail to receive the expected competencies and may not be able to perform well n their profession. Institutional climate also has an important role in shaping them to be better teachers. This is a comparative study, which is in tented to find out whether the residential study of prospective teacher has got any influence on this academic anxiety and institutional climate.

OBJECTIVES OF THE STUDY

The following are the objectives of the present study.

To find out the relationship between---

- Academic Anxiety and residential status of student teacher.
- Institutional climate and residential status of student teachers.

HYPOTHESIS OF THE STUDY

Hypothesis presented in null form: Hypothesis of the present study were –

- There is no significant difference between Day Scholars and Residential student Teachers in Academic Anxiety and institutional climate.

METHODOLOGY

The investigator used survey method.

SAMPLE

This study is conducted on a sample of 395 student teachers of training colleges of Wayanad district through stratified random technique.

*Principal, C.K Raghavan Memorial College of Teacher Education, Pulpally, Wayanad,Kerala.

TOOLS USED FOR THE STUDY

To gather data, the investigator used Academic Anxiety scale and Institutional Climate Inventory; high score indicates high academic anxiety and high institutional climate.

PROCEDURE

The Investigator administered the tools to student teacher of different training colleges of Wayanad district. The scores obtained in the scale have been tabulated and analyzed using descriptive statistics such as mean, median, mode, standard deviation and kurtosis. t-test was used for testing the hypothesis.

Analysis and interpretation of data

Academic Anxiety and Residential Status

Hypothesis 1

There is no significant difference between Hosteller and Day scholar student teachers with regard to their academic anxiety.

The various dimensions of academic anxiety of student teacher and the overall academic anxiety of student teacher were tested.

To test the above hypothesis t-test was used. The values of t-test are mentioned in the following table.

Table-1: Hosteller and Day Scholar Student teachers with regard to their academic anxiety.

Academic anxiety	Hosteller			Day scholar			t'value	Level of significant
	N	Mean	SD	N	Mean	SD		
Faculty	90	6.866	3.693	305	7.134	3.808	0.591	Not significant
Academic works	90	9.922	3.219	305	9.180	2.799	2.130	0.05 level
Over all Academic Anxiety	90	17.222	5.531	305	16.769	5.283	0.706	Not significant

Sub hypothesis 1.1

There is no significant difference between Hosteller and Day scholar student teachers in faculty dimension of academic anxiety.

The above table indicates that the null hypothesis is accepted. The obtained 't' value of 0.591 is less than the table value at 0.05 level of significance with a degree of freedom 393. This indicates that there is no significant difference between Hosteller and Day scholar student teachers with regard to faculty dimension of academic anxiety.

Sub- Hypothesis 1.2

There is no significant difference between Hosteller and Day scholar student teaches in academic work dimension of academic anxiety.

The above table indicates that the null hypothesis is rejected. The obtained 't' value of 2.130 is greater than the table value at 0.05 level of significance with a degree of freedom 393. This indicates that there is a significance difference between hosteller and Day scholar student teachers with regard to academic work dimension of academic anxiety.

Further, when the means were compared, it was found that hostellers experiences a high academic anxiety than that of Day scholars in academic work dimension of academic anxiety.

Sub- hypothesis 1.3

There is no significant difference between Hosteller and Day Scholar student teachers in overall academic anxiety.

The above table indicates that the null hypothesis is accepted. The obtained 't' value of 0.706 is less than the table value at 0.05 level of significance with a degree of freedom 393. This indicates that there is no significant difference between Hosteller and Day scholar student teachers with regard to overall academic anxiety.

Institutional climate and residential status

Hypothesis -2

There is no significant difference between Hostellers and Day Scholar student teachers with regard to institutional climate.

The various dimensions of institutional climate and the overall institutional climate were tested. To test the above hypothesis 't' test was used. The values of 't' test mentioned in the table below.

Table 2

Institutional Climate	Hotelier			Day Scholar			't' Value	Level of Significance
	N	Mean	S.D	N	Mean	SD		
Principal	90	43.66	73425	305	42.338	5.687	1.76	Not significant
Teacher Educater	90	49.011	8.954	305	483246	6.583	0.886	Not significant
Student teacher	90	33.266	5.271	305	35.036	6.148	2.476	0.05 level
Administration	90	38.744	6.552	305	40.898	5.272	3.211	0.05 level
Over all Institutional climate	90	224.533	.911	305	232.848	22.460	3.102	0.05 level

Sub-Hypothesis 2:1

There is no significant difference between Hosteller and Day scholar student teachers with regard to Principal dimension of Institutional climate.

The obtained 't' value of 1.76 is less than the table value of 1.96 at 0.05 level of significance with df 393. This indicates that there is no significant difference between Hosteller and day scholar student teachers with regard to principal dimension of institutional climate. Therefore, the null hypothesis is accepted.

Sub-Hypothesis 2:2

There is no significant difference between Hosteller and Day Scholar Student teachers with regard to Teacher Educator dimension of institutional climate.

The obtained 't' value of 0.886 is less than the table value of 1.96 at 0.05 level of significance with df 393. This indicates that there is no significant difference between Hosteller and Day Scholar Student teachers with regard to teacher education dimension of institutional climate. Therefore, the null hypothesis is accepted.

Sub hypothesis 2:3

There is no significant difference between Hosteller and Day Scholar Student teachers with regard to student teacher dimension of institutional climate.

The obtained 't' value of 2.474 is greater than the table value at 0.05 level of significance with df 393. This indicates that there is a significant difference between Hosteller and Day scholar student teaches with regard to student teacher dimension of institutional climate. Therefore, the null hypothesis is rejected. When the means were compared, it was found that Day scholar student teaches scored a high score, which indicates that Day scholar student teachers experiences a high institutional climate than that of hostellers.

Sub hypothesis 2:4

There is no significant difference between Hosteller and Day scholar student teaches with regard to Administration dimensions of institutional climate.

The obtained 't' value of 3.211 is higher than the table value of 1.96 at 0.05 level of significance with df 393. This indicates that there is a significant difference between Hosteller and Day scholar student teaches with regard to administration dimension of institutional climate. There for, the null hypothesis is rejected. Further, when the means were compared it was found that Day scholar student teaches scored a high score in the administration dimensions of institutional climate.

Sub-hypothesis 2:5

There is no significant difference between Hosteller and Day scholar student teachers with regard to overall institutional climate.

The obtained 't' value of 3.102 is higher than the table value at 0.05 level of significance with of 393. This indicates that there is a significant difference between day scholar and hosteller student teachers with regard to overall institutional climate. Therefore, the null hypothesis is rejected.

Further, when the means were compared, it was found that Day Scholar student teaches scored a high score in overall institutional climate than that of hostellers.

SUMMARY OF ANALYSIS AND EDUCATIONAL IMPLICATIONS

Hosteller and Day Scholar student teaches do not differ significantly with regard to faculty dimension of academic anxiety. Hosteller and Day scholar student teaches do not differ significantly with regard to principal, teacher educator dimensions of institutional climate. Day Scholar student teaches experience a high institutional climate in student teacher, administration dimensions and in overall institutional climate.

Residential status has not influenced this faculty dimension of academic anxiety but it has influenced academic work dimension. Hostellers experiences high academic anxiety than that of Day Scholar, they should be given some relaxation techniques to reduce their academic anxiety and hostel authorities can be more lenient in dealing with the problems of hostellers.

Day scholar student teachers possess a high institutional climate in overall institutional climate. This may be due to the freedom and exposure they experience in their home and nature of their residential settings. The findings of the study suggests that hosteller student teachers should be provided with some special programmes which help them to get maximum exposure and optimum freedom to reduce their academic anxiety. Since the the hostellers experience unfavourable institutional climate, they should be provided with special attention to sort out their difficulties.

A Brief Analysis of Poverty Alleviation Initiatives in India

Dr. Manoj Kumar Yadav*

ABSTRACT

We know that majority of the people of total population in India reside in rural areas. The latest World Bank assessment also indicates that India is a home to the largest proportion of poor in the world. Poverty is a multi-dimensional phenomenon in India, with a bundle of economic, social, geographical, human, gender, and other deprivations. These diverse aspects of poverty have led to different strategies of poverty alleviation. The fact that the government has been formulating policies and programmes since the time of independence and particularly after beginning of planning. A sustainable strategy of poverty alleviation has to be based on increasing the productive employment opportunities in the process of growth itself. In addition to this, rural people should provide better prospects for economic development. Along with this, there should be decentralization of planning, better enforcement of land reforms and greater access to credit for the rural poor people. This paper is focusing light on various rural development programmes introduced in India since the beginning of five years plan.

Keywords: Poverty, IRDP, SGSY, Five Year Plan

INTRODUCTION

Poverty is a complex phenomenon influenced by a large number of factors and which can be studied from many different perspectives. Poverty is defined in terms of income, expenditure and nutritional value (calorie intake). Many countries adopt income poverty lines to monitor progress in reducing percentage of people below the poverty line. Poverty in India, as is the case in other countries, is measured in terms of the poverty line. Since 1951, India has completed 12th five year plan (2012-17). One of the most striking experiences of planned efforts in India is that economically backward and socially oppressed people in the underdeveloped regions have gained almost nothing in real sense. The special programmes & Green Revolution adopted by the government to boost the agricultural production in late sixties certainly helped to raise the food production but the benefits were largely reaped by those who had necessary resources. Small and marginal farmers trailed behind, as they were not directly benefited by the Green Revolution. Thus to tackle the problems of the rural poor, the Integrated Rural Development Programme (IRDP) was introduced in 1979, with specific focus on the weaker sections of the society, particularly those living in poverty and to involve them in programme implementation. While the earlier programmes emphasized on the delivery systems which suppressed self-reliance, there was good scope for people's initiatives to build up their economy with dignity. The goal of poverty alleviation programme should not aim merely increasing the income level of poor people but mainstreaming marginalized in the development process of the country. The country cannot claim economic growth when sections of the people are marginalized to the periphery of the society. Poverty alleviation programmes should address the

*Assistant Professor, L.N.M.C.B.M., Muzaffarpur (Bihar)

issue of poverty from broader social and economic perspectives. Further, we shouldn't forget that poverty is not simply poverty but a multidimensional phenomenon.

METHODOLOGY

This article is based on the study of secondary data. Journals, Magazines, Project reports and various websites have been used for the article.

OBJECTIVES

The aim of this article is to have an insight regarding the various poverty elimination schemes during the five years plan since the time of its inception.

PLANNING AND REMOVAL OF POVERTY IN INDIA

Poverty elimination has been an avowed objective in Indian Planning, at least since the early 1960s. The Plan documents have often noted the poverty trends in the country. The Planning Commission also tried to assess the performance in certain programmes & schemes through the decline in the percentage of people below the poverty line.

The First Plan (1951-56) was an attempt to strike a balance between the prevailing socio-economic conditions and the building up of a model society founded on the Indian Constitutional norms relating to the protection and advancement of the people belonging to the weaker sections. The Community Development Programme & National Extensive Service was started during the First Five Year Plan as a major attempt to alleviate poverty & unemployment. The basic premise of this programme was founded on the assumption that efforts at the local level could be instrumental in motivating the community to participate in the development programmes. However, the Community Development Programme, despite having been continued during the subsequent plan periods, failed to generate the desired results because of the over-dependency of the programme not only on the government initiative but also on government funding.

The Second Plan (1956-61) embarked upon a strategy of development based on the two-sector closed economy model of Professor P.C. Mahalanobis, namely, capital goods producing sector and consumer goods producing sector. The objective of acceleration of economic growth, as perceived and applied during this period, was primarily based on higher investment in the domestic capital goods producing sector (and the associated metal-producing sectors).

The Third Plan (1961-66) tried to address the problems that cropped up in the second plan period without bringing about any basic changes in the policy of public sector driven industrialization and protectionism. A major development that took place during the third plan period, however, was the beginning of a comprehensive programme of rural works with the objective of generating additional employment opportunities and utilizing the large reserve of rural labour force for accelerating the process of economic development.

The focus of the first three five-year plans in India was eradication of poverty through economic growth. Since the Fourth Plan (1969-74), a new strategy of rural development was adopted, known as direct attack on poverty. So, it was decided to attack poverty directly. Thus came into existence the Small Farmers Development Programme (SFDP) to provide better employment opportunities to eradicate poverty, Drought Prone Area Programme (DPAP), Minimum Needs Programme (MNP), etc. the small farmers development. Poverty alleviation schemes have been implemented in the form of distribution of alms without any serious consideration to generate viable income or service. Some projects were realized along with the mode of regional development, which were, Hill Area

Programme (1972), Desert Development Programme (1970), etc. Small Farmer's Development Agency (1960) & Marginal Farmers & Agricultural Labour Agency (1971) were the projects which aimed to remove poverty & to develop the marginal and small farmers.

The Fifth Five Year Plan (1974-79) was launched with the objectives of poverty removal and achievement of self-reliance. In this plan, it was mentioned that "at present over 220 million are estimated to be living below poverty level. Since the inception of Fifth Five Year Plan poverty eradication programme was started through the slogan of "Garibi Hatao" (removal of poverty). Since then, various programmes of poverty eradication were continuing with the help of different projects through trial & error method.

The Sixth Five Year (1980-85) Plan emphasized on the goal of poverty alleviation and was sought to be achieved by using two main instruments. First was, a set of self-employment schemes for the poor & second was, wage employment programme. IRDP was started on 20th October 1980 in all blocks in India. It was earlier started in several blocks of the country. Its aims were to lift the families of below poverty live through employment generation. But IRDP could not achieve its goal & target as it was expected.

The Seventh Five Year Plan (1985-90) document again, recognized that the government had still to play a major role in the development process in order to remove poverty. IAY was started in 1985-86, for providing free housing to BPL.

The Eighth Plan (1992-97) was another important landmark in the development strategy when the limitation of an income and commodity-centric notion of poverty and human well-being was recognized. During the Eighth Five Year Plan, employment was provided to underemployed & unemployed through various employments programme namely IRDP, JRY & NRY. It was also stated in the document of the plan that "it must be recognized that while these programmes meet the short-term objective of providing temporary work to unemployed, they must be contribute to the certain of productive capacity of areas & individuals.

In the Ninth Five Year plan (1997-2002), the emphasis was on primary health facilities, safe drinking water, nutrition to school & pre-school children, shelter for poor and public distribution system with a focus on poor. The mid-term appraisal of Ninth Five Year Plan had indicated that sub-programmes like TRYSEM, DWCRA, and SITRA & GKY of IRDP presented a matrix of multiple programmes without desired linkages. The Ninth Plan also identified Land Reforms as an important policy instrument for alleviation of rural poverty. However, little has been done by the states in this direction. The Planning Commission Committee in 1997 started to review self-employment & wage employment programmes. The Committee recommended the merger of all self-employment programmes for the rural poor & emphasized group-based approach to remove poverty. On April 1999, the IRDP and other programmes were merged into a single programme known as SGSY. The SGSY was conceived as a holistic programme of micro-enterprise development in rural areas. The GOI also launched a scheme known as SGRY in 2001, which aimed the generation of wage employment mainly.

As per the Tenth Five Year Plan (2002-07), the GOI focused on the effective implementation of poverty alleviation programmes. During 2004-07 the Government initiated several new schemes for the removal of poverty and welfare for weaker section of the society. India had emerged as one of the fastest growing economy by the end of the Tenth Plan. But the growth was not perceived as sufficiently inclusive for many groups, specially SCs, STs & minorities as borne out by data on several dimensions like poverty, malnutrition, mortality, current daily employment etc.

Eleventh Plan (2007-12) was aimed "Towards Faster & More Inclusive Growth" after UPA rode back to power on the plank of helping common man. The Eleventh Five Year Plan clearly stated that development of rural India is the key for an inclusive and equitable growth.

The Eleventh Plan period saw major new initiatives towards inclusive growth in rural India. The total budgetary allocation for all rural development programmes by the Government of India in the Eleventh Plan was 2, 91,682 crores. Rural development programmes cover employment through the MNREGA, NRLM, housing via the IAY and various other schemes.

The broad vision and aspirations which the Twelfth Plan (2012-17) seeks to fulfill are reflected in the subtitle: 'Faster, Sustainable, and More Inclusive Growth'. The Twelfth Plan has set a target of 8 percent growth over the five year period 2012-13 to 2016-17. The government intends to reduce poverty by 10 per cent during the 12th Five-Year Plan. According to the Tendulkar methodology, the percentage of population below the poverty line was 29.8 per cent at the end of 2009-10. This number includes 33.8 per cent in the rural areas and 20.9 per cent in the urban areas.

The government of India set-up The National Institution of Transforming India (NITI AAYOG) in January, 2015 and changed the philosophy of planning as far as economic development & growth is concerned. It works as a 'Think Tank' of the government & helps government to formulate & design long term economic policies. That's why after completion of 12th five year plan, there is no further five year plan in our country.

CONCLUSION

The conclusion is that any country or society can never be prosper or called developed economically if its majority of the people belong to below poverty line category. Poverty alleviation programmes should address the issue of poverty from broader social and economic perspectives. But in spite of the massive development expenditures & increase in production recorded in various sectors, the socio-economic status of a vast majority has deteriorated continuously. The majority of the people have gained little benefits of five-years plans in our country. To achieve desired targets, the Indian government also needs to concentrate on agriculture and allied activities, research and development, infrastructural development and effective implementation of anti-poverty programmes. Now, there is no existence of planning commission so implementation & assessment of poverty elimination programmes become more challenging.

REFERENCES

1. Anti-Poverty Programmes in Rural India, Dr. Neeraj Sharma, Deep & Deep Publications Pvt. Ltd., New Delhi-27.
2. Economics of Poverty; Debesh Bhowmik, Deep and Deep Publications Pvt. Ltd., New Delhi-27.
3. Issues in Employment and Poverty, Discussion Paper, The Working Poor in India: Employment Poverty linkages & Employment Policy options, K. Sundaram, S.D. Tendulkar, Sep. 2002, Delhi University.
4. www.planningcommission.gov.in
5. www.planningcommission.gov.in/reports/publications/rep_povelv.pdf
6. Sen, Abhijit & Himanshu (2004) 'Poverty & Inequality in India-I, EPW, Sep.18
7. Integrating poverty alleviation programmes with development strategies, EPW, Nov., 28, 1992
8. Towards Faster and More Inclusive Growth: An Approach to the Eleventh Five Year Plan (2007-12)

Relevance of Peer Tutoring As A Teaching Strategy: A Conceptual Focus

Ms. Sarabjeet* and Dr. Vipinder Nagra**

ABSTRACT

This article tries to provide a comprehensive conceptual focus about peer tutoring and how it can be effectively used in a pedagogical process to enhance meta-cognitive functioning. Due to its interactive nature, peer tutoring helps in bridging up the gaps between the academic and social - emotional domains of tutor and tutee, resulting into positive effects on both attitudinal and learning outcomes.. Peer tutoring helps to develop the skills of students to manage and plan learning experiences, work in association, give and receive responses about their activities and finally evaluate their own learning. The key role of the teacher during peer tutoring is to ensure that peer interactions are rich from an academic perspective and that most of the students are benefiting from peer tutoring and an effective co-operative learning is going to be developed among students. Research studies revealed that results are very successful if the tutor and tutees are engaged in collaborative work and meaningful activities under planned and structured program.

INTRODUCTION

Instruction is a key component of any educational program. An important role of the teacher is to impart knowledge on one hand and other is to provide continued support for new instructional patterns and to facilitate learning. It is not an easy task for a teacher to involve all students with varying abilities and needs in the general education classroom and to ensure that each student within the class is meeting his learning potential. Also a teacher has to move along through the curriculum according to the perceived or stated requirement to cover the entire grade-level curriculum in one school year even though students have not yet mastered foundational skills or material (Mattatall,2011). Hence teachers find it difficult to differentiate instruction effectively across varying levels of need and to provide ample time for additional practice and corrective feedback (Mathes & Babyak, 2001; Timperley & Parr, 2007).

Since Individual differences cannot be neglected at any stage of human learning, thus modern education demands new ways of thinking, planning, designing access to curriculum, and teaching (McLeskey & Waldron, 2007). Therefore, teachers should design learning activities that can better meet the individual needs of students. Some need-based learning activities are discussion, projects, group work, private tuition, mentoring and peer tutoring. All these methods are usually adopted to enhance students' learning. Among these methods Peer tutoring is one of the useful strategies that can be used to offer inclusive education to diversified students and also to reduce the social and behavioral problems among these students to a greater extent. Researchers also indicated that peer tutoring has the potential to be an effective practice that can be used to increase outcomes

*Research Scholar, P.U., Chandigarh, E-mail:ssarabjeet.arora@gmail.com

**Associate Professor, D.A.V. College of Education, Hoshiarpur (Punjab)

for a diverse group of learners in secondary school settings (Stenhoff & Lignugaris, 2007; Okilwa & Shelby, 2010; Wexler et al., 2013) and in mathematics (Kunsch, Jitendra, & Sood, 2007).

Peer tutoring is a flexible, peer-mediated strategy that involves students serving as academic tutors and tutees. A higher performing student is paired with a lower performing student to review the critical academic or behavioral concepts. Peer tutoring is an instructional strategy that consists of student partnerships, linking high achieving students with low achieving students or those with comparable achievement, for structured reading and math study sessions. According to Rohrbeck, Ginsburg-Block, Fantuzzo, & Miller (2003), peer tutoring is "systematic, peer-mediated teaching strategies." Peer tutoring gives teachers the capability to accommodate a classroom of diverse learners to improve academic achievement across ability levels and content areas (Johnson, Maruyama, Nelson & Skon, 1981; Cohen, Kulik & Kulik, 1982; Cook, Scruggs, Mastropieri & Casto, 1985). Studies have proved that peer tutoring is frequently used abroad and this method has some positive results such as improving academic achievement, increasing students' confidence and developing attitudes and interests against the courses (Robinson, Schofield and Steers-Wentzell, 2005; Hussain et al., 2011).

IMPACT OF PEER TUTORING ON STUDENT'S LEARNING AND BEHAVIOR

Peer tutoring strategy is based on the assumption that "students generally identify more easily with peer helpers than with adult authority figures." This strategy has a very positive impact on learning of students. In this type of tutoring the students are usually less hesitant to ask questions from their tutors. They don't feel uncomfortable with a peer as they might feel with a teacher. Peer tutoring helps to develop the skills of students to manage and plan learning experiences, work in association, give and receive responses about their activities and finally evaluate their own learning. According to researchers such as Austin and Eisenko, Peer Tutoring has positive impacts on student learning, motivation and socialization. Peer tutoring was found effective in the development of creativity and problem-solving skills of both tutors and tutees. Due to its interactive nature, peer tutoring helps in bridging up the gaps between the tutor and tutee, resulting into positive effects on both attitudinal and learning outcomes. It provides a non judgmental acceptance, care and support and hence creates a non- competitive empowering environment (Egbochucku & Obiunu, 2006). Results are very successful if the tutor and tutees are engaged in collaborative work and meaningful activities under planned and structured program. Moreover, peer tutoring is advantageous for students, as it provides opportunities for discussion which lead to learning in a congenial environment. In the same way, peer tutoring builds up confidence and enhances cognitive levels of introvert students because it gives confidence to shy students which may enable them to express themselves in front of the class or other gatherings. Also, the process of explaining concepts and facts is thought to support tutors to develop and reinforce their own skills (Mitchell et al. 2015). Learning Together states, "Working together, both students repair academic deficits, achieve proficiency and build social and emotional skills vital for lifelong learning" (Learning Together Company, 2017).

PEER TUTORING AND TEACHER

It is observed that in a general classroom, traditional instruction values only established techniques and concepts. Unfortunately, most of the instructions that children receive does little to promote real educational goals, beyond rote learning and numeral recognition. The lack of attention to actual learning outcomes results into the fact that many children later experience considerable difficulty in learning school subjects and hence result into low achievement. Although many teachers use concrete materials to introduce ideas, yet the goal is to get to the abstract, symbolic and established learning. Thus, a teacher must be able to pose tasks that develop appropriate conceptual reorganizations in students. It is observed that

each of us construct our knowledge in different /similar ways, by using our own past experiences, existing knowledge structures or schemas, learning styles, and motivations. Hence, the more appropriate role for the teacher is to engage the child academic conversations in classroom settings, attempting to draw out the best from within the individual, helping the child to make connections with existing understanding and to contemplate the intellectual positions of others. But normally these practices are not maintained by the teacher. Research revealed that the students need to have support systems in academics, whether this comes from their parents at home or with other students at school (Schwartz, 2000).

Thus Peer tutoring strategy is very beneficial for learning purposes. Organized peer tutoring can give greater results as compared to unorganized peer tutoring. So for a teacher this activity can be an important responsibility. Pre-instructional planning, introducing the activity to students, monitoring and intervention, assessing and processing are the key steps for its successful implementation. Proper and sufficient training of tutors leads to better results in learning. The proper evaluation of peer tutoring process can also make improvement in learning activities. Through interaction with learning tasks and peer students, the students enhance their meta-cognitive functioning, gradually becomes more abstract and powerful. They will be self-motivated by using such practices to investigate patterns, shapes, measurement, meaning and working of numbers as well as reading skills.

Peer tutoring has been proved as an effective instructional approach to improve reading skills and mathematics skills (Fueyo & Bushell 1998; Sprinthall & Scott 1989). The key role of the teacher during peer tutoring is to ensure that peer interactions are rich from an academic perspective and that most of the students are benefiting from peer tutoring and an effective co-operative learning is going to be developed among students. The teacher can then directly monitor social interaction. It is the teacher who provides favorable conditions for a student to become an active, self-regulated learner and provides opportunities for learners to interact verbally and non-verbally with each other. This can be in form of physical assistance, or verbally guiding another's performance of acceptable social skills.

REFERENCES

- Kunsch, C. A., Jitendra, A. K., & Sood, S. (2007). The effects of peer-mediated instruction in mathematics for students with learning problems: A Research Synthesis. *Learning Disabilities Research and Practice*, 22(2), 1-12.
- Learning Together Company(2017). Double the impact with peer learning. Retrieved from <http://www.learningtogether.com/home>
- Mitchem, K. (2001). A class wide peer-assisted self-management program for general education classrooms. *Education & Treatment of Children*. 24(2).111-116.
- Mondal, H. R. (2005). Effects of peer tutoring on learning outcomes of high school science students. *Indian Educational Review*, 41(1), 41-58
- Obiuni, J.J. (2008). Effects of reciprocal peer tutoring in the enhancement of career decision making process among secondary school adolescents. *Educational Research and Review*, 3 (7), 236-241
- Okilwa, N. S. A., & Shelby, L. (2010). The effects of peer tutoring on academic performance of students with disabilities in grades 6 through 12: A synthesis of the literature. *Remedial and Special Education*, 31(6), 450-463.
- Robinson, D. R.; Schofield, J. W.; Steers-Wentzell, K. L. (2005). Peer and Cross-Age Tutoring in Math: Outcomes and Their Design Implications. *Educational Psychology Review*, 17(4), 327-362.
- Rohrbeck, C. A., Ginsburg-Block, M. D., Fantuzzo, J. W., & Miller, T. R. (2003). Peer assisted learning interventions with elementary school students: A meta-analytic review. *Journal of Educational Psychology*, 95(2), 240–257.
- Wexler, J., Reed, D. K., Pyle, N., Mitchell, M., & Barton, E. (2013). A synthesis of peer mediated academic interventions for secondary struggling learners. *Journal of Learning Disabilities*. doi: 10.1177/0022219413504997

Coping Strategies for Managing Stress Among Library and Information Science Professionals

Mrs. Harvinder Kaur*

ABSTRACT

'Stress and Coping' are interrelated and research on these areas has been increased tremendously over the recent years. Coping refers to thoughts and actions that one uses to deal with stress, and coping strategies are abilities or talents employed to respond effectively to stressors to abolish their effect on one's mental and physical health. Due to globalization, academic libraries encountered numerous and speedy changes during the transition phase from 90s to 21st century. As the library professional resources are very important part of the libraries, which has the whole command of force to make the parent body a success. They can provide quality library services only if they will experience a stress free atmosphere at their work. In the present investigation, descriptive survey method has been employed to collect data and to find the Occupational Stress among 320 Library Professionals working in central libraries of State, Central, Deemed and Private Universities of Punjab and Chandigarh. Coping Strategies adopted by the LIS professionals for the stress management have also been explored. The data collected was tabulated and transformed into SPSS spread sheet. From the responses to coping strategies, it is concluded that library professionals working in university libraries try to moderate the effect of occupational stress by adopting various coping strategies. Library professionals ranked Social Support as the most preferred dimension of coping followed by Cognitive Approach, Recreational Activities, Relaxation Techniques and Maladaptive Techniques.

INTRODUCTION

"Stress is not an illness, it is considered as a state of mind" (Lazrus, 1974). An appropriate amount of stress sharpens our efficiencies and capabilities. However, if it becomes excessive and persists for long time, mental and physical illness may develop. This negative stress called distress needs to be managed. When a stressful situation overpowers anyone for long period, it can cause psychological damage resulting in aggression and frustration and that needs to cope up as early as possible.

Coping can have an effect on the three aspects of a person- Psychological, Social and Physiological. 'Stress and Coping' are interrelated and research on these areas has been increased tremendously over the recent years. Coping refers to thoughts and actions that one uses to deal with stress, and coping strategies are abilities or talents employed to respond effectively to stressors to abolish their effect on one's mental and physical health. Coping may be described as efforts to master conditions that exceed adaptive resources (Monat & Lazarus, 1977).

To meet the challenge of quality education and services, academic libraries are also in the stressful position to manage the 360 degree change in collection development,

*(Librarian) D.A.V. College of Education, Hoshiarpur (Punjab), E-mail:harvinderdhanoa9@gmail.com

organization and dissemination of information in this digital era within the limited financial and human resources. As the stress is looming in the environment, university library professionals cannot escape themselves from this impact of stress. After independence to 1990s, the job of librarian was limited to acquiring, processing and circulation of books along with some additional functions like stock taking and general maintenance of library. But during the transition phase from 90s to 21st century, Libraries encountered numerous and speedy changes.

Currently 'Stress and its Management' is the focus area of consideration for various organizations at national level except the library profession. Libraries known as 'Information Houses' are still lagging behind in this area of research as only a few studies have been done so far. A limited number of studies pertinent to this problem of stress especially in libraries have been conducted in context to India.

LITERATURE REVIEW

Bunge (1989) grouped organizational strategies into three categories such as reduction of number and intensity of stressors, improving library workers' ability to confront stress effectively and finally recognizing and assisting those employees who are unable to cope and who are at bottom line of burnout possibilities. Nawe (1995) suggested time set aside for leisure activities, involving employees in consultation process and proper communication channel some of coping strategies. Onwushi and Meggison (2001) observed that stable social relations help people to overcome stress and also emphasized upon open communication and participatory management between librarians and other subordinate staff. Hurprich (2007) recommended strategies at management level for academic library professionals including orientation of new employees to help them, providing opportunities to library staff to acquire new skills to keep them safe from burnout. Tiemo & Ofua (2010) also explored the coping strategies adopted by librarians to cope with techno- stress such as to discuss and plan for this type of stress, buying more user friendly hardware and software and take frequent breaks while working on computers. Bamber (2011) suggested workers to make a problem list, prioritizing one's problems, setting goals, establishing criteria of success, planning interventions, developing self-help treatment plan, monitoring and reviewing progress to overcome occupational stress. Ratha, Hardia & Naidu (2012) recommended the library staff certain techniques of de stress such as yoga, meditation and also suggested them to keep calm by controlling their anger in difficult situations and plan their work on daily basis for providing better library services to users both qualitatively and quantitatively. Salaam, Alawiye & Okunlaya (2013) found relaxation as the basic way of reducing stress among librarians. Chief librarians' job experience was found to be a tool for managing stress situations. Playing and listening music and exercising were detected as stress relieving techniques for university librarians. Ekwelem(2015) identified the moderating effect of stress among academic librarians due to various coping strategies such as sense of humour, delegating responsibility among staff, engaging themselves in recreational activities such as sport, listening music, enjoying in staff club, reading newspapers, magazines and watching television. Ilo (2016) talked about different techniques adopted by librarians to resolve with stress such as social withdrawal, emotional regulation and wishful thinking. As unmanaged stress can result into reduced output in academic libraries and it may lead to ill-health and death also. Linden, Salo and Jannsons (2018) were supporters of the approach of work re-organization, desirable to handle the problem of the librarians who receive more and more work on top of their current tasks taking into account how the employees cope with the actual

situation. Mutual understanding between management and employees must be promoted to win over the conflict over values.

OBJECTIVES OF THE STUDY

1. To know the coping strategies adopted by the library professionals and suggest other ways and means to reduce as well as manage their occupational stress.
2. To identify the dimensions of coping strategies preferred by the surveyed Library professionals working in university libraries of Punjab and Chandigarh.

RESEARCH METHODOLOGY AND SCOPE

In the present investigation, descriptive survey method has been employed to collect data and to find the Occupational Stress among 320 Library Professionals working in central libraries of State, Central, Deemed and Private Universities of Punjab and Chandigarh. Coping Strategies adopted by the LIS professionals for the stress management have also been explored. The data collected was tabulated and transformed into SPSS spread sheet. For the better understanding of coping strategies adopted by library professionals working in university libraries of Punjab and Chandigarh in stressful situations, the researcher has classified coping strategies into the following dimensions: Cognitive Strategies, Relaxation Techniques, Social Support, Maladaptive coping strategies, Recreational Activities.

DATA ANALYSIS

The collected data has been organized and analyzed by the investigator on the basis of above mentioned dimensions of coping and record the opinions of library professionals working in university libraries of Punjab and Chandigarh.

Table-4.1: Cognitive Approach as Stress Buster

Sr. No.	Statements	Never %	Sometimes %	Often %	Always %
1.	I try hard on solving the problems creating stress	11.6	21.3	28.2	38.9
2.	I make a plan of action and try to follow it	6.6	16.6	34.6	42.2
3.	I remind myself to focus on the good things in my life instead of bad ones	6.3	13.3	29.9	50.5

Table 4.1 shows that 38.9 percent library professionals 'try always on solving tough situations' whereas 28.2 percent and 21.3 percent respondents use this coping strategy 'Often' and 'Sometimes' respectively. 42.2 percent and 34.6 percent university library professionals make and follow a plan of action to deal with stressful situations 'Always' and 'Often' respectively. Whereas 16.6 percent use it 'Sometimes' and only 6.6 percent never use it. Half of the respondents (50.5%) 'Always' use strategy of 'Reminding oneself to focus on the good things rather than bad ones' whereas 29.9 percent do it 'Often' and 13.3 percent opt it for 'Sometimes'. 6.3 percent respondents 'Never' use this cognitive strategy to manage their stress.

Table-4.2: Relaxation Techniques as Stress Buster

Sr. No.	Statement	Never %	Sometimes %	Often %	Always %
1.	I prefer doing yoga, exercises and walk	6.3	32.2	32.2	29.2
2.	I try to find reasons to laugh	8.3	28.2	25.6	37.9
3.	I spend more time alone	30.2	44.5	16.6	8.6
4.	I count one to ten, take a deep breath to relieve my stress	43.2	34.2	12.6	10.0
5.	I pray to God or meditate for a while.	7.3	22.3	29.6	40.9
6.	I take a day off when the stress really gets to me	36.9	38.9	17.3	7.0

Table 4.2 reveals adoption of healthy way such as practicing yoga, exercising and walk to cope with stress more effectively, 29.2 percent library professionals use it 'Always' and 6.3 percent totally denied to use it. The same percentage (32.2%) of the respondents uses this healthy way 'Often' and 'Sometimes' respectively. Following this strategy 'I try to find reasons to laugh', 37.9 percent library professionals responded 'Always' followed by 28.5 percent as 'Sometimes' and 25.6 percent as 'Often'. 44.5 percent respondents spend more time alone 'Sometimes' while 30.2 percent respondents 'Never' use this strategy to cope up with stress. For the basic relaxation technique of 'Counting one to ten and taking a deep breath' 43.2 percent 'Never' do it and 34.2 percent respondents 'Sometimes' do it, whereas 12.6 percent and 10 percent respondents do it 'Often' and 'Always' respectively. Maximum number of library professionals i.e. 40.9 percent 'Always' pray to God and meditate for a while for attaining physical and mental health to deal with stress, while only 7.3 percent respondents denied using this strategy completely. For the statement of 'Taking a day off when the stress really gets to me', 38.9 percent Library professionals admitted using this strategy 'Sometimes' and almost equal of respondents i.e. 36.9 percent admitted using this strategy 'Never', while only 7.0 percent and 17.3 percent admitted using it 'Always' and 'Often' respectively.

Table-4.3: Seeking Social Support for Stress Buster

Sr. No.	Statement	Never %	Sometimes %	Often %	Always %
1.	I accept sympathy and understanding from some close one	12.0	31.2	26.2	30.6
2.	I spend more time with my family and friends	6.3	22.9	35.2	35.5
3.	I surf on social networking sites (Facebook, twitter, WhatsApp etc.)	10.0	48.2	23.3	18.6

As it can be seen from Table 4.3, on the item no. 1, 30.6 percent library professionals responded that they always accept sympathy and understanding from some close one while almost same percentage (31.2%) of library professionals admitted that they 'Sometimes' use this strategy whereas 26.2 percent and 12 percent of Library professionals responded for this strategy of social support as 'Often' and 'Never' respectively. 35.5 percent library professionals responded 'Always' for spending more time with family and friends to cope up with stress, 35.2 percent library professionals responded as 'Often', while 22.9 percent opted for 'Sometimes' whereas 6.3 percent respondents 'Never' use

it. Almost half of the library professionals i.e. 48.2 percent expressed that they use 'Sometimes' such social networks to get relief from stress, while 23.3 percent and 18.6 percent admitted to use it 'Often' and 'Always'.

Table-4.4: Recreational Activities as Stress Buster

Sr. No.	Statement	Never %	Sometimes %	Often %	Always %
1.	I read my favourite books/ magazines	12.3	33.9	24.6	29.2
2.	I spend more time in watching television	42.2	41.2	11.6	5.0
3.	I do some favourite or interesting work that helps me to relieve my stress	5.6	27.2	28.2	38.9
4.	I prefer to listen to music to relieve my stress	11.3	41.9	23.3	23.6

Table 4.4 shows that to relieve their stress 33.9 percent respondents do reading 'Sometimes' whereas 29.2 percent and 24.6 percent respondents read 'Always' and 'Often' respectively. For the item no. 2, almost 42 percent of the surveyed library professionals admitted that they 'Sometimes' watch television to reduce their stress and the same percentage of respondents denied completely for opting this strategy. For the item no. 3, 38.9 percent of the surveyed library professionals recorded their opinion 'Always' for involving themselves in 'Favorite or interesting work' during stressful situations. Almost same percentage of respondents (28%) agreed to do it 'Often' and 'Sometimes' respectively. Nearly 42 percent library professionals believe that 'listening to music' helps them sometimes to relieve stress and almost 23 percent of them admitted it works 'Always' and 'Often'.

Table-4.5: Maladaptive Coping Strategies as Stress Buster

Sr. No.	Statement	Never %	Sometimes %	Often %	Always %
1.	I hope for a miracle to happen	34.2	29.2	22.3	14.3
2.	I prefer using drugs (pain relievers, sedatives and relaxers etc.) to relieve my stress	72.1	17.6	6.3	4.0
3.	I avoid thinking or doing anything about the situation	30.2	40.9	17.3	11.6
4.	I take out stress on others (lashing out, angry, outbursts and physical violence)	61.8	27.9	6.3	4.0

Table 4.5 reveals only 14.3 percent of library professionals are found to be fantasizing 'Hoping for Miracle' 'Always' while 22.3 percent and 29.2 percent of respondents believe in miracles 'Often' and 'Sometimes' respectively, while 34.2 percent of surveyed library professionals totally denied using this strategy for coping. For addressing the issue of using 'Drugs such as Sedatives and relaxers' to regulate the negative emotional state due to problematic situations, maximum percentage (72%)

of library professionals totally denied using this maladaptive coping strategy, while only negligible percentage i.e. 4 percent admitted this type of substance use for de-stressing. On the item no. 3, 40.9 percent library professionals accepted they 'Sometimes' avoid thinking and actively staying away from the stressful situation, while 11.6 percent admitted to use this strategy 'Always.' 17.3 percent of library professionals admitted using this avoidance mechanism 'Often' and 30.2 percent of respondents totally denied using this avoidance mechanism. On the item no. 4, majority of the population (61%) totally denied to use the maladaptive coping strategy of 'Blaming others and take out stress on others' to deal with stressful situations and only a negligible percentage of library professionals (4%) admitted to use this 'Always'.

Further analysis was done to identify the dimensions of coping strategies preferred by the surveyed Library professionals working in university libraries of Punjab and Chandigarh. Ranking of the preferred coping strategies is based on the dimension wise mean scores of the respondents and calculated rationalized equivalent.

Table-4.6: Ranking of Dimensions of Coping Strategies

Dimensions of Coping	Mean	Rationalized Equivalent	Rank	Std. Deviation
Social Support	13.80	27.60	1	2.256
Cognitive Approach	12.16	24.32	2	2.184
Recreational Activities	13.49	20.235	3	2.669
Relaxation Techniques	16.79	16.79	4	3.077
Maladaptive Strategies	9.44	14.16	5	3.272

*Ranking is computed on the basis of dimension wise mean scores and rationalized equivalent
Ranking of Dimensions of Coping Strategies Mean (%) is shown in Pie Chart 4.6.1

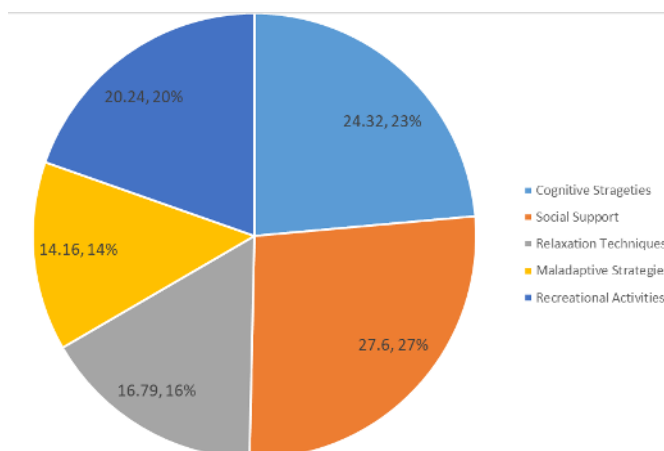


Chart 4.6.1: Ranking of Dimensions of Coping Strategies Mean (%)

Table 4.6 reveals that library professionals ranked Social Support as the most preferred dimension of coping followed by Cognitive Approach, Recreational Activities, Relaxation Techniques and Maladaptive Techniques.

CONCLUSION

Being ambitious and having goals is justified to live a better life, but when one is caught in the clutches of stress for attaining success, it is not justified to cost with mental and physical health. Therefore, in this changed scenario, it becomes imperative for library professionals to identify how much stress they experience, how it affects their work and life, thus come to know how to cope up with stress with simple techniques. This study indicates that the library professionals working in university libraries are suffering from moderate level of occupational stress. From the responses to coping strategies, it can be seen that library professionals working in university libraries try to moderate the effect of occupational stress by adopting various coping strategies. Library professionals ranked Social Support as the most preferred dimension of coping followed by Cognitive Approach, Recreational Activities, Relaxation Techniques and Maladaptive Techniques. Therefore, this empirical research tracking the coping strategies used by library professionals to tackle occupational stress in university libraries is definitely going to fill the gap in the systematic structure of research and evoke further awareness to conduct such surveys to know the prevalent stress in libraries and its management and ways to remove them.

REFERENCES

- Bamber, M.R. (2011). *Overcoming your workplace stress: A CBT-based self-help guide*, London: Routledge.
- Ekwelem, V. O.(2015). Coping with stress in librarianship: A case study of academic librarians in universities in South-East Nigeria. *New Media and Mass Communication*, 35. ISSN 2224-3267 (Paper) ISSN 2224-3275 (Online)
- Ilo, P.(2016).Managing stress among librarians in selected University Libraries in Ogun State Nigeria. *Library Philosophy and Practice (e- journal)*. <http://digitalcommons.unl.edu/libphilprac/1343>
- Lazarus, R. S. (1991). *Emotion and adaptation*. New York: Oxford University Press.
- Nawe, J. (1995). Work-related stress among the library and information work force. *Library Review*. 44 (6), 30-37..doi: 10.1108/00242539510093674#sthash.mj898MCu.dpuf
- Ratha, B., Hardia, M. & Naidu, G.H.S. (2012). Occupational Stress among Library Professionals: A study at Indore city. *PEARL: A Journal of Library and Information Science*. 6(1), 1-7. Retrieved from www.indianjournals.co
- Seyle,H.(n.d.) Hans Seyle quote. In PestonjeeD.M.(1999). *Stress and coping: The Indian experience*. New Delhi: Sage publications.
- Salaam, M. O., Alawiye, M.K. &Okunlaya, R.O.A. (2003). Occupational Stress among University Librarians in Nigerea, *PNLA Quarterly*, 77(2), 143-149 Retrieved from: <https://pnla.memberclicks.net/assets/documents/Quarterly/pnlaq 77->
- Tiemo, P. A. &Ofua, J. O.(2010). Techno stress: Causes, symptoms and coping strategies among Librarians in University libraries. *Educational Research* 1(12), 713-720.Retrieved from<http://www.interesjournals.org>. (ISSN: 2141-5161)

Legal Perspective of Surrogacy in India

Bipin Bihari Mishra,* Sujit Kumar Mishra* and Mita Rani***

ABSTRACT

Advancement in reproductive technologies has blessed infertile couples with their own babies with the surrogacy. On one hand this is helpful; on other hand this has potential for exploitation of all three; surrogate, surrogate baby and infertile couple. Government of India has taken many initiatives to control this and to regularize the ART clinics. Recently surrogacy regulation bill has been passed fro, Lok Sabha on 19th December 2018 and soon it will become law. This is a major step to surrogacy and need critical evaluation. Making Commercial surrogacy illegal has the potential to perpetuate illegal practices; making surrogate even more vulnerable. Putting ban over this is not the solution rather commercial surrogacy has to be regulated.

Keywords: Surrogacy; Commercial surrogacy; Surrogacy regulation bill; Altruistic

INTRODUCTION

When a couple who are unable to give birth to a child takes the help of another woman and that women carries and give birth to a baby of that couple then it is termed as surrogacy. Surrogacy is derived from Latin word Subrogate means to substitute. Surrogacy arrangements are usually sought when pregnancy is either medically impossible or it is considered very risky for health of the mother. Those couple seeking surrogacy are called intended parents and this is not a new concept. It has been used since ancient times like there was a custom known as antiquity in the time of Babylonian prevent divorce because of childlessness and that child would be reared by that childless woman born in England in 1978 Term commercial surrogacy is used when the surrogate is given compensation higher than the medical reimbursement and other reasonable expenses. When surrogate mother helps the couple out of love and compassion and monitory compensation is not more than medical reimbursement then it is called altruistic or non-commercial surrogacy.

ISSUES WITH SURROGACY

There are several ethical, social, psychological and legal issues associated with commercial surrogacy (1). These issues have worked as deterrent for its worldwide acceptance and for that surrogacy requests are decided by independent surrogacy committiees. In countries like United Kingdom, Netherlands, Ireland, Denmark, Belgium, South Africa, Austrilia, Canada and Greece; only altruistic surrogacy is allowed. Commercial surrogacy is legally allowed in countries like Recent advances in medical science, changes in social customs and legal framework have led to the development of modern commercial surrogacy. With the help of modern science now a day it is possible to develop embryo outside the womb or to inseminate the woman artificially without any need for physical contract between man and woman so the moral issues are less with ART.

*Assistant Professor, Maharaja Law College, Ara, Bihar

**Assistant Professor, N.V.M, Nawada Bihar

***Assistant Professor, Department of Education, A.M.College, Gaya, Bihar

Surrogacy is of two types mainly gestational and traditional. Traditional surrogacy involves insemination of the surrogate naturally or artificially with semen of the male partner of the childless couple and thus resulting child is genetically related to the surrogate mother. This has several ethical, social as well as legal implications. In case of gestational surrogacy, it is with the help of Artificial Reproduction Techniques (ART) and an embryo from the eggs of intended couple is formed in the test tube and transferred to the womb of the surrogate. Thus Resulting child has no genetic similarity to the surrogate mother. Newer advancement in the Artificial Reproductive Techniques (ART) has led to the boom in the field of surrogacy. The first test tube baby was born in Russia, Ukraine, and Thailand. While in France, Germany, Spain, Sweden, Italy and Iceland any form of surrogacy is not allowed at all. In India commercial surrogacy is banned but not illegal.⁽²⁾ Such discrepancies in law in different nations, legal restrictions in native country and cheaper services abroad result in reproductive tourism. Childless couple of those nations where surrogacy is illegal usually goes to other country where it is legal and take help of surrogate and come back with their own child after adoption. These commissioning parents usually go to developing countries for this purpose as the services are cheaper over there. This gives rise to a trend called the baby factories and has a potential for exploitation of surrogate by the middleman for greed of money.⁽³⁾ Sometimes there is difficulty in handing over the babies as in case of baby Manji⁽⁴⁾ as the laws in different countries are different for surrogacy and adoption and they are not at par. There are different laws for legal parentage of such child and also issues with travel documents and citizenship. There is no inter-national convention over these problems. Sometimes these infertile parents abandon the child which is against the right of a child and endanger the child born out of surrogacy. Relinquishment of baby sometimes leads to psychological problem. There is a social stigma attached with infertility and surrogacy.

LAWS RELATED TO SURROGACY IN INDIA

Commercial surrogacy is legal in India since 2002. First effort to regularize this was done in 2005 when Indian Council for Medical Research (ICMR) gave first guidelines for accreditation, supervision and regulation of ART clinics. In 2008 Supreme Court of India stressed the need of legislation to govern the surrogacy. Then in 2009 Law Commission of India submitted a report on need for legislation to control surrogacy and to solve issues related to this. In 2010 ICMR revised the guidelines and proposed a legal agreement between commissioning parent, prospective surrogate and ART clinic before commencing the process⁽⁵⁾. In 2015 ministry of health and family welfare invited suggestions to revise the draft of ART bill which is still pending⁽⁶⁾. In 2015 Government of India prohibited commercial surrogacy and closed the doors for foreign nationals, NRI and POI. In 2016 union cabinet approved the surrogacy regulation bill⁽⁷⁾. This bill allows only Indian married heterosexual infertile couple to avail surrogacy services. Now this bill has been passed from Lok Sabha and to be discussed in Rajya Sabha and soon will be implemented as law⁽⁸⁾.

Lacunae of Surrogacy Regulation Bill(2016) : Indian Perspective

As per surrogacy regulation bill 2016 commercial surrogacy is banned in India and only altruistic or non commercial surrogacy is allowed that too by a close relative. Although close relative is not defined here and this is also a shortcoming of bill and it needs to be addressed. This bill is framed such that to prevent exploitation of surrogate mother and to safeguard the rights of a surrogate child, so that nobody can force her to carry a pregnancy in the greed for money. But is it the situation in reality. Are these measures enough to prevent exploitation of female body. Is it really working for infertile couples? The altruistic concept of carrying a baby for someone else is allowed in the bill as long as there was no exchange of money beyond the medical bills. In addition, this altruistic form of

surrogacy can only be done with the help of a close relative. As per the bill, this close relative should be married and must have her own child. It sounds good but practically it will be almost impossible for an infertile couple to find such close relative to carry their pregnancy and that too for no money. In today's scenario, people do not have extended families; they usually have nuclear family so finding such close relative who fulfils the criteria for surrogate may be difficult. Now a day's women are carrier oriented and usually they themselves find it difficult to carry pregnancy for them self then how such close relatives can spare time to help their needy relatives even if they wanted to do so and that too without compensation for their wages loss. How many infertile couples will be able to find appropriate surrogate and can ask for such favour. Even if a close relative is ready to help she may be restrained by her husband or family members from doing so and it may lead to friction within family. Here also there are chances that close relative female could be forced by family members for helping infertile couple against her own wish as infertile couples do not have other option, so they may force her. Is it not the exploitation of that poor lady? She may become surrogate against her wish just to prevent coercion in family. Even if both the parties are ready even then there are few issues with close relatives like secrecy is not maintained in such situation and everyone in relation knows about surrogacy. There could be problems in handing over of resulting child, as child is in continuous contact with her gestational mother and this can complicate their lives later. Gestational mother may find it difficult to detach emotions as she is in continuous contact with the child and that child may know that she is her real mother and may develop affection for her later when he grows up. There could be issues with property within the family. If such infertile couples go for traditional surrogacy with their blood relatives then there are increased chances of baby having genetic disorders as this situation is just like consanguinity as both are close relative. When you make something illegal, people find other ways to do so and surrogacy may take place undercover and you cannot stop them. Such infertile couple may find someone in need of money and they may get their work done. She will become surrogate but will be deprived of insurance and will put her life to danger. So this is clear that a woman can be exploited even in altruistic surrogacy. It would be wise not to ban commercial surrogacy but to make strict laws to regulate it. When it will become a law that a woman cannot become surrogate more than once then this would be injustice not to compensate her daily wages loss and her efforts monetarily. Since she is doing it once, it cannot be called commercial rather it should be called compensated altruistic surrogacy. Another issue is age of the intended parents; this should be 40 years for woman and 45 for father, Presently it is 50 and 55 years respectively. Imagine how old these parents will be when their children will become 20 year old. This long age gap between child and parents is not good for child. They could die when their child born out of surrogacy is very young and he may be emotionally and financially not secured. Old age parenthood is especially dangerous for their child and should be discouraged. Also there are more chances of birth defects in such pregnancies if parents are that old, it will itself complicate the situation.

One important issue which needs to be addressed is the question that whether single parents should be allowed or not. A child needs both mother and father for his complete personality development. By allowing single parent will diligently deprive child from his basic need since birth Child is not a toy meant for fulfilling your motions only. This is a big responsibility since a properly grown child can become a responsible citizen in future. One has no right to bring a new life in this world for their enjoyment without taking care of what is good for that child. It is injustice with the unborn child. Every child has right of full potential to grow as a person but by allowing single parents to have their own babies through surrogacy, we are depriving the child for no reason. It may lead to psychological and behavioural problems in child in future. Single parents have other options to satisfy their urge to become parents like adoption if they really want.

Since there are so many criticisms and lacunae to this draft bill; there is a strong need to address all the pitfalls before enforcement of law. Government should not take a hasty decision and consider all the future prospects.

REFERENCES

1. Nakash A. Herdman J. Surrogacy J Obstet Gynecol. 2007, 27(3):246-51
2. PRS Legislative Research New Delhi International comparison of surrogacy laws : (cited 2019 Apr(2))
3. Deonandan R. Recent trends in reproductive tourism and international surrogacy ethical considerations and challenges for policy.
4. IndianKanoonRajasthan : Baby Manji, Yamada Vs Union of India & Anon 29 September, 2008
5. Indian Council of Medical Research New Delhi Guidelines (cited 2019)
6. Department of Health Research New Delhi : Assisted Reproductive Technology (Regulation) Bill-2017
7. PRS Legislative Research, New Delhi : The Surrogacy (Regulation) Bill, 2016
8. Sushmi Dey, Lok Sabha clears Bill banning commercial surrogacy : The Times of India 2018 Dec. 20

Moral and Ethical Issues Relating to Surrogacy: A Critical Analysis

Bipin Bihari Mishra*

ABSTRACT

The Paper is centered on “Moral and Ethical Issues Relating to Surrogacy.” After introducing the topic briefly, it clarifies the meaning and concept of Surrogacy. Thereafter, the paper has put forth various definitions of Surrogacy. It also discusses the three different kinds of surrogacy followed by the discussion of its historical background. The history has been discussed in both Indian and World context in the paper, after which it mentions a discussion on commercialization of Surrogacy in India. The paper also mentions about the Surrogacy Super Mart prevalent in India. Thereafter, various moral and ethical issues relating to surrogacy have been discussed. Further it discusses the law relating to surrogacy in India. The Judicial response in India regarding surrogacy has also been discussed followed by the discussion of legal issues on surrogacy. The paper thus concludes after putting forth the concluding observation followed by some suggestions and recommendations on surrogacy.

Keywords: Surrogacy, Gestational Surrogacy, Genetic Surrogacy, Total Surrogacy, Egg Donor, Surrogate Mother, Gestational Mother etc.

INTRODUCTION

Nature has bestowed the beautiful capacity to procreate a life within women and every woman cherishes the experience of motherhood. Right to reproduction is an innate right of an individual. The desire for children among couples is an universal phenomenon. Parenthood is a life changing and eternally rewarding experience. The pain and agony of not fulfilling the dream of parenthood is immeasurable. The science of infertility treatment has moved forward by leaps and bounds. Every society across the world has given primary importance to the institution of family. When two individuals come together and enter into a matrimonial bond, a new family comes into existence and such family becomes complete with the birth of the children. From the ancient times, children are considered as a necessity for the continuation of the family lineage and a source of happiness for the parents. Psychologists points out that birth of a baby creates a bond between the spouses which can help stressful marriages to sustain in the long run.

However due to various reasons, a large section of the society are unable to have their child. Research has stated that one in six couples have such problems. The absence of a child is considered as a stigma to the family. There are many instances where the inability to have a child led to matrimonial breakdown. The inability to have a child which is known as infertility in medical terms is a global problem. According to the WHO Report the incidence of infertility across the globe including India is around 10-15percent.¹

Some forms of infertility which were considered untreatable in the past have simple solutions today. Till recently the only solution for childless couples was adoption. The advancement in medical

*Assistant Professor, Maharaja Law College, Ara, Bihar

science particularly in the field of artificial human reproductive technologies (ART) has come to rescue of such individuals and provided them with various options to beget a genetically related child. There are various options in ART like artificial insemination, In-Vitro fertilization, embryo transfer etc. Among all the methods surrogacy has become popular.

MEANING AND CONCEPT OF SURROGACY

Surrogacy, has emerged as a new level of scientific advancement for reproduction with the usage of womb of a woman to reproduce children for another woman. One of the most efficient methods to overcome both biological and social infertility is 'surrogacy.' Surrogacy has provided opportunities to have a genetically related child to the couples who are unable to reproduce through artificial reproduction and in vitro fertilization. Surrogacy has become an attractive alternative for couples and individuals who wish to have a child biologically related to them. The concept of surrogacy has become widely recognized all over the world. Surrogate motherhood is considered as a boon by infertile couples as it is revolutionary hope for having a child.²

The word 'surrogate' has been derived from a Latin word 'surrogatus' meaning a substitute, that is person appointed to act on behalf of another. Traditionally, surrogate motherhood is referred to as 'an agreement between a married couple who is unable to have a child because of wife's infertility, and a fertile woman who agrees to conceive the husband's child through artificial insemination, carry it to term, and surrender all parental rights in the child.'

DEFINITIONS OF SURROGACY

According to **Black's Law Dictionary**, 'an agreement wherein a woman agrees to be artificially inseminated with the semen of another woman's husband.'

The New Encyclopedia Britannica defines- 'Surrogate motherhood' as the practice in which a woman bears a child for the couple to produce children in the usual way.

In Medical parlance- the term surrogacy means using of a substitute in place of natural mother.

The ART Bill has defined surrogacy as 'an arrangement in which a woman agrees to a pregnancy, achieved through assisted reproductive technology, in which neither of the gametes belong to her or to her husband, with the intention to carry it to the term and hand over the child to the person or persons for whom she is acting as a surrogate.'³

TYPES OF SURROGACY

Surrogacy is of three kinds. They are **Genetic surrogacy/partial surrogacy, Total surrogacy and Gustatory/Gestational surrogacy.**

In **Genetic/ Partial Surrogacy**, woman's egg either through artificial insemination or less often by natural intercourse is fertilized by the sperm of the male partner of the couple desiring the child (commissioning father). Here the surrogate mother is the genetic mother of the child and the commissioning mother plays the role of social and legal mother. This type of surrogacy is also called as Partial Surrogacy or Traditional Surrogacy. **Total surrogacy** is where the surrogate's egg is fertilized with the sperm of the donor or with the commissioning father.

In **Gustatory/Gestational Surrogacy**, the egg and semen are obtained from the commissioning couple (or from anonymous donors), and the resultant embryo is subsequently implanted into the surrogate or carrying mother. Here, the surrogate mother has no genetic link with the child. This type of surrogacy is also called as **Full Surrogacy**.

Surrogacy can be further divided into two types based on financial compensation. First is **Altruistic Surrogacy** and second is **Commercial Surrogacy**. In **Altruistic Surrogacy** financial compensation is not given to the surrogate mother, though the commissioning parent may provide fees and costs to the surrogate mother in bringing an embryo to the term. This type of surrogacy is mostly common among family members or close friends. The typical reason given for why no financial compensation is needed is that, in this type of surrogacy, the decision to be a surrogate stems from love, not from personal gain or even avarice. While the language of generosity is often employed in the other type of surrogacy – **commercial surrogacy** – the surrogate is financially compensated beyond expenses associated with the pregnancy. That is, the surrogate is paid for her gestational services

HISTORICAL BACKGROUND OF SURROGACY

Surrogacy is not a new practice. It is an ancient practice. This practice dates back to biblical times. The first surrogate mother in history is believed to have lived somewhere near the city of Hebron, the land of Canaan, two thousand years before the birth of Christ. Sarah, infertile wife of Abraham, commissioned her maid Hagar to bear a child by persuading

Abraham to sleep with her. Abraham was 86 years that time. But despite of his age he was still able to conceive a child. In 1910 BC Hagar gave birth to a son called Ishmael. Ishmael was the first child in history born due to the so called traditional surrogacy programme.

The second surrogacy programme was carried out in Summer Mesopotamia in the middle of the XVIII century BC. Rachel, wife of Jacob, commissioned her maid Billah to have a child by convincing Jacob to sleep with her.

Surrogacy was quite common in ancient Egypt. Many of the Egyptian Pharaohs asked their concubines to help them in producing an offspring. The ancient rulers of Egypt were believed to directly descend from the God of Sun Ra. Artificial insemination has been studied for several centuries already. In 1677 the inventor of microscope, the Dutch scholar. A. Leeuwenhoek examined human sperm and was the first to detect spermatozoons. He made a suggestion that a spermatozoon was a kind of seed, and a woman's uterus created a favourable environment for its spouting.⁴ In 1790 Scottish surgeon and venerologist John Hunter, artificially inseminated a woman and this was the first artificial insemination in history. In 1880 the first IVF attempt in history was listed in guinea pigs. In 1891 a French scientist Heape was the first to carry out successful IVF by transferring an embryo from one guinea rabbit to another one.

Starting with 1920 artificial insemination by the husband's or a selected donor's sperm has become widely spread in infertility treatment. The world's first IVF baby, Louise Brown, was born on July 25, 1978, in the UK through the efforts of Dr. Robert G. Edwards and Dr. Patrick Steptoe. The world's second and India's first IVF baby, Kanupriya, alias Durga was born 67 days later on October 3, 1978 through the efforts of Dr. Subhas Mukherjee and his two colleagues in Kolkata. The first gestational surrogacy programme was implemented in Ann Arbor (MI, US) in April 1986. The first surrogacy programme implemented among relatives, when 48 years old Pat Anthony successfully bore and delivered three grandchildren for her own 25 year old daughter Karen Ferreira Jorge, was carried out in South Africa in 1987.

INDIAN HISTORY OF SURROGACY

Hindu mythology also offers instances of surrogacy and reflects the secrecy that still surrounds surrogacy practice. In Bhagavata Purana, Vishnu heard Vasude's prayers beseeching Kansa not to kill all sons being born. Vishnu heard these prayers and had an embryo from Devaki's womb

transferred to the womb of Rohini, another wife of Vasudev. Rohini gave birth to the baby Balaram, brother of Krishna, and secretly raised the child while Vasudev and Devki told Kansa that the child was born dead.⁵

In the Mahabharat, Gandhari did not deliver a child rather delivered a semi solid material which was divided by Maharishi Vyas into 100 pieces and planted them in different pans. Thus, the 100 Kauravas were born. Similarly, Maharishi Bhardwaj saw a divine nymph coming out of water after having a bath and seeing such a beautiful woman, he felt discern and deposited his semen in a pot used for yagna called Darona. This is from where Dronacharya was born and named after the vessel. Thousands of years after the biblical events in 599 AD, the 24th Trithankar, Mahavira, was born after an embryo had been transferred from one woman's womb to another one's. He is one of the key figures of the Jain Mythology. Devananda, wife of a Brahmin named Rishabdeva conceived him. The gods, ingeniously, transferred the embryo to the womb of Trishala.⁶

The world's second and India's first IVF baby, Kanupriya, alias Durga, was born 67 days later on October 3, 1978, through the efforts of Dr. Subhas Mukherjee and his two colleagues in Kolkata. The birth of baby Kanupriya (also known as Durga), through the novel procedure was marked by tremendous controversy.

COMERCIALIZATION OF SURROGACY IN INDIA

It is hard to imagine the child as commerce. Babies, after all are the product of love, not money, a conception that occurs far away from any commercial activity. Poor parents across time and place have viewed their children as potential economic assets, weighing their eventual economic contribution-in the rice field or factory or manor- against the costs of carrying them through childhood. Likewise, surrogacy has become a commercial business in countries like India, which has given rise to many questions leading to political debate. Feminists have argued over the alienability of woman's bodies; legal scholars have probed the contractual and jurisdictional issues. The market for surrogacy is large and is growing. There are thousands of potential parents across the world with both the desire and the wherewithal to hire another woman to bear their children.

Commercial surrogacy, or "wombs for rent," is a growing business in India.⁷ Critics have described the popularity of surrogacy arrangement in India as 'baby booming business', 'womb on hire', 'baby firm', 'parenthood by proxy'.⁸ Surrogacy has turned a normal biological function of a woman's body into a commercial contract. Surrogate services are advertised, surrogates are recruited and operating agencies make large profits. The commercialization of surrogacy raises fears of a black market and baby-selling, breeding farms, turning impoverished women into baby producers and the possibility of selective breeding at a price. In India surrogacy is becoming a booming industry due to the fact that surrogate mothers are easily available and the entire cost of this method is very less as compared to other countries. A high demand of surrogates has been witnessed in India because of the comparative ease with which the foreigners can find surrogate mothers. Non- intervention of law had made surrogacy a knotty issue in India. At present surrogate motherhood in India involves a business of \$445 billion, faces severe pressures from different social concerns. India is the only country in the world which has legalized commercial surrogacy. Legalised in India in 2002, it is now a half-a billion-dollar a year industry, with surrogacy services offered in at least 350 clinics.

On average, most Indian surrogate mothers are paid in instalments over a period of 9 months. If they are unable to conceive they are often not paid at all and sometimes they must forfeit a portion of their fee if they miscarry. The amount of money given to a surrogate mother in India may appear

very miniscule from any reasonable perspective, however, the amount may serve as the economic life blood for the families, and will be spent on the needs of the family (a house, education of the children, medical treatment). Indian clinics are at the same time becoming more competitive, not just in the pricing, but in the hiring and retention of Indian females as surrogates. Clinics charge patients between \$10,000 and \$28,000 for the complete package, including fertilization, the surrogate's fee, and delivery of the baby at a hospital. Including the costs of flight tickets, medical procedures and hotels, it comes to roughly a third of the price compared with going through the procedure in the UK. In India there has been rise of more than 150% of surrogacy cases in the past few years. The hot places to find surrogate mothers in India are Anand town in Gujarat State, Indore city in Madhya Pradesh, Pune, Mumbai in Maharashtra State, Delhi, Kolkata and Thiruvananthapuram. Private clinics in Indore, Pune, Surat and Anand have witnessed mushrooming growth. These clinics act as middlemen between the foreign couples and the willing surrogate mothers. Childless couples from all over the world are coming to India in search of surrogate mothers due to the availability of poor Indian surrogate mothers at a much lower costs. Several American, Russian and British women are duly registered with the Akankshya Clinic of Anand and the Bhopal Test Tube Baby Centre for the procedure. Generally surrogacy arrangements are drawn up in a random fashion and can be exploitative especially since surrogates are mostly from socio-economic weaker sections.⁹ The very act of commercial surrogacy in India is exploiting the poor and vulnerable surrogate mothers and exposing them to unnecessary and unwanted risks. They have no legal representation and no rights under the contract: they do not have a grace period following birth within which they can change their mind, and they are owed no compensation whatsoever should they fail to produce a child.¹⁰ The surrogacy market in India is estimated to be between Rs 1,000 and 5,000 crore, considerably lower (about, a fourth of what they would cost in the United States). That has again increased the international confidence in going in for surrogacy in India. The status-conscious lower middle class is resorting to surrogacy for fulfilling its material and financial needs.¹¹ According to data compiled by the National ART (artificial reproductive techniques) Registry of India (NARI), from 50-odd cases in 2004 there has been a near 300 per cent jump to 158 cases in 2005. Gujarat alone accounts for 75 of these cases, 16 were reported from Chennai, 15 from Hyderabad, and the rest from other major cities in India.¹²

Surprisingly, surrogate hiring of wombs exist in India even though the Transplantation of Human Organs Act, 1994, bans the sale of human organs, loaning of organs and commercialization of trade of human organs. Moreover surrogates are nowhere available as in India to single parents, gay and unmarried partners, despite the fact that the same sex relationship are not permissible in India. The urge to have a biological child of one's own flesh, blood and DNA, aided with technology and purchasing power of money coupled with the Indian entrepreneurial spirit has generated this flourishing Indian reproductive tourism industry.¹³

An article titled "Moms on the Market," was published on 13 March, 2011 in a renowned Indian national newspaper The Hindustan Times, which is published simultaneously from a large number of major cities in India.

The relevant rates and figures with regard to the surrogacy arrangements as highlighted in box format within the sad one complete page article are tabulated hereunder::

THE SURROGACY SUPER MART¹⁴

"From being a centre of cheap reproductive labour, India is now virtually a surrogacy supermarket where deals are available off the shelf and bonuses are thrown in for good measure. Here's what it takes to go baby shopping:

a. Surrogate Charges: INR1,00,000-3,50,000

This fee varies across various cities, IVF clinics and the third party (recruitment agents) involved. To claim this, surrogates need to be “healthy”, married, have at least one child and be “mature enough” to understand/handle the surrogacy. Specific demands can be made by parents. For instance, Israeli couple do not want Muslim women. Some couples want to ensure that the women do not smoke, drink and are “religious minded.” Clinics can also be choosy: not all will agree to do surrogacy for gay couples.

b. IVF Procedure Costs: INR66,000

Some IVF packages include up to 4 embryo transfer attempts. So, a surrogate could be implanted with about 3-4 embryos to ensure pregnancy.

c. Egg Donor (Indian) INR 1,80,000Extra

Highly qualified, postgraduate, fertile, fair complexioned egg donors can demand upto Rs. 50, 000.

d. Egg Donor (BlondeBlue-Eyed)

Add another INR 1,80,000 for donors flown in from the US, UK, Russia

e. Twins

Rs. 1,35,000 extra for handling complications, C- section etc.

Hiring a second surrogate Add another INR 4 lakh to the package. There will be an extra cost if both surrogates get pregnant and foetal reductions need to be done.

f. Surrogate Compensation

INR 2,0000-3000 for food. This varies across cities. Some surrogates say they get even lesser than INR 2,000. Some parents send across gifts, for the surrogate, cloths for her children, religious texts and songs and also end up offering any other monetary help.

g. Other add-ones

Spa packages, Agra tours, airport pick-up, drop.”

Also, the sources to the said article states that fertility clinic costs, other costs are approximate figures. The said article also gives figures of complete packages offered by some of the fertility clinics and medical tourism agencies.¹⁵

The law commission of India in its 228th report submitted by Dr. Justice AR Lakshmanan, Chairman of law commission of India on 5th Aug 2009 has recommended that the need of the hour to adopt a pragmatic approach by legalizing altruistic surrogacy arrangements and prohibit commercial ones. It has pointed out that prohibition of surrogacy totally on moral grounds without proper assessment of social ends and purposes which surrogacy can serve would be irrational.

MORAL AND EHTICAL ISSUES RELATNG TO SURROGACY

The underlying idea behind surrogacy is a noble one as it is based on the altruistic principle of doing good to others i.e. one woman helping another woman. The religious texts of Hinduism and Christianity highlight the practice of surrogacy in ancient times. Some of the moral and ethical issues relating to surrogacy are as follows:

1. **Harm to Surrogate Mother-** Most Indian women act as surrogate mothers due to poverty or other economic necessity. However, surrogacy technology may involve some complications and cause harm to the health and life of the surrogate mother. This raises the important issue of liability for the harm caused or suffered by a surrogate mother. If there is no medical negligence on the part of the doctors and other medical staff, it would be difficult to fix the liability and thereby indemnify the loss suffered by the surrogate mother.
2. **Interest of the Child-** Surrogacy generally involves payment of money to the surrogate mother for delivering and handing over the child to the commissioning parents. Thus, it is criticized as equivalent to buying and selling a child. It is argued that it would lead to selection of sex and traits in a child, i.e. creation of designer babies. Thus, surrogacy would result in treating a child as a product which is considered as morally wrong and unethical. It is also observed that the process of surrogacy involving in vitro fertilization usually results in birth of triplets or quadruplets. This may harm the interest of the child, as the commissioning parents may not be in a position to look after such number of children born against their wish. Further, it is argued that surrogate children may be born with defects. Another contentious issue in the process is the determination of parentage and custody of child. Surrogacy involves participation of three or four or five adults. So it is difficult to determine the parentage of child.
3. **Surrogacy Degrades the Dignity of Woman-** Right to dignity is one of the inherent and cherished rights of every human being. It is argued that surrogacy degrades the inherent dignity of a woman. Surrogacy involves the use of a woman's body for producing a baby which is handed over to the commissioning parents. During the term of pregnancy, the surrogate mother has to abide by the conditions laid down in the contract and has no right to take any decision affecting her body. Moreover the surrogate mother also considers pregnancy as a means of earning money and tries to avoid developing a special bond with the child in her womb. Thus the natural mother-child bond is either absent or suppressed and the entire process is viewed as a commercial transaction. The critics argue that the woman's body is reduced to being an incubator or breeder machines and thus it degrades the dignity of woman.¹⁶
4. **Surrogacy has been equated with Prostitution-** Many authors have criticized that surrogacy is like prostitution, as it involves selling of the reproductive capacity of a woman and the use of her body in return for payment of money. Further it is argued that similar to a prostitute who has no choice and control before a customer who has solicited her favour and paid money; the surrogate mother also has no choice and has to abide by all the terms and conditions put forward by the commissioning parents. In both cases one's physical services is being offered, in both cases material compensation is offered for the physical services provided.¹⁷
5. **Surrogacy has been compared to Exploitation of Poor Women-** Women with limited economic means in India have readily accepted this method of earning quick money and fulfilling the needs of the family. Thus, the presence of world class medical care facilities and availability of cheap surrogate mothers have placed India at the forefront as the outsourcing destination for surrogacy. As a result, childless couple from across the world are flowing to India to have their children through surrogacy at a much lower cost. This practice of outsourcing has been subject of great criticism raising issues like 'slavery of women', 'neocolonialism' 'exploitation of poor womenetc.'¹⁸
6. **Surrogacy is Playing the Role of God-**Traditionally a child is considered as a gift of God. The act of procreation was also considered as a sacred obligation to be undertaken by the

couples for begetting a child. Before the advancement of medical technology the only option available to the childless couple was either to adopt a child or to accept the childlessness as a decision of God. The developments in science and medical technology have created a revolution by enabling the childless couples to beget a child which is genetically related to at least one of the parent. Though science has been a boon to childless couples, the increasing use of technology and experimentation for creating babies with specific traits and characteristics is being criticized. The critics argue that by interfering with the natural reproductive process, the man is playing the role of God. This is considered as a moral, ethical and religious wrong.¹⁹

7. **Attachment with the Gestational Mother** – In a surrogate situation, the gestational mother is the woman who carries the baby to term. This can be a very taxing process both physically and emotionally – and unique in that after the surrogate mother physically carries the baby throughout the pregnancy, she needs to physically and emotionally detach herself from the child once it is born.
8. **Involvement with the Gestational Mother** – Because the gestational mother will not likely be the child's primary caretaker, there could be legal questions that arise in terms of what – if any – involvement she will have with the child once born.²⁰

Some of the other ethical issues that have been raised with regard to surrogacy are:

- To what extent is it right for society to permit women to make contracts about the use of their bodies?
 - To what extent is it a woman's human right to make contracts regarding the use of her body?
 - Is contracting for surrogacy more like contracting for employment/labor, or more like contracting for prostitution, or more like contracting for slavery?
 - Which, if any, of these kinds of contracts should be enforceable?
 - Should the state be able to force a woman to carry out "specific performance" of her contract if that requires her to give birth to an embryo she would like to abort, or to abort an embryo she would like to carry to term?
- What does motherhood mean?
 - What is the relationship between genetic motherhood, gestational motherhood, and social motherhood?
 - Is it possible to socially or legally conceive of multiple modes of motherhood and/or the recognition of multiple mothers?

LAW RELATING TO SURROGACY IN INDIA

The legal aspect of surrogacy varies from one jurisdiction to another jurisdiction. The international approach to surrogacy has been divided into three aspect- Free market, regulated and prohibited. Some jurisdiction completely bans surrogacy declaring commercial surrogacy as an criminal offence, while on the other hand some jurisdiction allows surrogacy on limited grounds of altruism. The law relating to surrogacy differs from one jurisdiction to another. Some jurisdiction completely bans surrogacy declaring commercial surrogacy as an criminal offence, while on the other hand some jurisdiction allows surrogacy on limited grounds of altruism.

India is the only country where surrogacy is neither banned nor completely regulated. Currently there is no law in India for regulating surrogacy. As it is not directly declared as unenforceable by law, it is deemed to be enforceable and fully valid. After several years of discussion and debate, primarily among the ICMR, the National Academy of Medical Sciences, and practitioners of ART, the Ministry of

Health and Family Welfare published the non-binding National Guidelines for Accreditation, Supervision & Regulation of ART Clinics in India in 2005.²¹ In the absence of any codified law as the situation exists only, in respect of surrogacy arrangements, the ordinary civil law of the land would be applicable in respect of surrogacy, also, since there is no specific law on the subject to govern such arrangements. The Indian Council of Medical Research has drafted the Assisted Reproductive Technology Bill, 2008 to regularize and legitimate different forms of reproductive technologies, including commercial surrogacy. The Law Commission of India in its 228th Report it has reasoned as to why surrogacy laws are needed. The ART Bill even though made an effort to regulate surrogacy has been criticized by a large number of scholars on the ground that it promotes the interest of the medico-business lobby and does not provide an adequate protection to the rights of the surrogate mothers and children.

The Draft Assisted Reproductive Technology Bill and Rules 2010, is the latest draft of following the incorporation of additions and modifications to the Draft of 2008. While the previous Draft was an effort to include issues concerning Assisted Reproductive Technologies (ARTs), it had several limitations, and it was expected that the new Draft would address these gaps. The present Draft with additions and modifications has tried to take into consideration some of the concerns with the previous document. While some of these are welcome changes, the Draft in its present form is far from being an inclusive document. If the proposed legislation is expected to effectively regulate the proliferating ART and surrogacy industry in India, these lacunae will have to be addressed. New Indian Medical Visa Regulations, 2012 provides that only duly married men and women with a subsisting marriage for at least 2 years will be allowed medical visas for surrogacy.

According to the Assisted Reproductive Technology (Regulation) Bill, 2013 provisions, no woman less than 21 years of age and over 35 years can act as a surrogate mother. The bill for the first time, states conditions for foreign couples seeking to hire surrogates in India. The compensation for surrogacy as per the 2013 draft will be private negotiation between the surrogate mother and commissioning parents. IVF clinics or ART banks have no role to play in it. This Bill disqualifies homosexual couples, foreign single individuals and the couples in live-in-relationships from having children through surrogate mothers in India. In the present form, it is inadequate in protecting and safeguarding the rights and health of women going for IVF techniques, recruited as surrogates and children born through commercial surrogacy. It also lacks setting the standards for medical practice and completely ignores the regulation of the third party agents who play pivotal role in arranging surrogates such as surrogacy agents, tourism operators and surrogacy home operators.

JUDICIAL RESPONSE TO SURROGACY IN INDIA

The substantial issue of surrogate arrangement was presented before the Supreme Court of India in **Baby Manji Yamada's** case,²² In this case a Japanese couple entered surrogacy contract pursuant to which Baby Manji was born to the Indian surrogate mother. The commissioning father Mr. Yamada tried to secure travelling document to take the baby to Japan. But the Japanese Embassy in India refused to grant Maniji a Japanese passport or visa as the Japanese Civil code did not recognize surrogate children. Mr. Yamada then tried to file for an Indian passport for Maniji, which requires a birth certificate for its issuance. Further, a birth certificate according to Indian law requires the names of both mother and father. In the present case facts, Mr. Yamada was genetic father but ambiguity for authorities arose in case of mother's name because Baby Maniji had three mothers-commissioning mother, the anonymous egg donor, and the surrogate. Thus, authorities refuse to grant a birth certificate because legal mother status was uncertain. Consequently, even the Indian passport was refused. The court instead of giving any decision, ultimately directed the petitioner, the baby's parental grandmother, to the National Commission for Protection of Child Rights for further directions.

The unresolved surrogate mother as natural mother has again visited the Supreme Court²³ of India as a challenge to ruling given by the Gujarat High Court in **Jan Blaze v. Anand Municipality**.²⁴ This case is famously known as German Couple case. In this case a childless German couple had twins through a surrogate mother with the help of Anand infertility clinic, Gujarat. As German laws do not recognize surrogacy as a means of parenthood, obvious corollary to such law was it would not allow the children to be treated as German Citizens being born out of surrogacy. To avoid the foreseeable legal hurdle of immigration process, the couple approached the Gujarat High Court for permitting their surrogate children to carry Indian passport. The court in this case along with the citizenship and issuing if passport to twins, was also concerned with the gestational surrogate mother and donor of ova. The court found that in absence of any legislation to the contrary, the court is inclined to recognize the gestational surrogate who has given birth to the child as natural mother and anonymous egg donor cannot be regarded as natural mother. Considering the intended mother, the court held that she is just the wife of the biological father, who has neither donated the ova nor conceived or delivered the babies, cannot in the absence of legislation be treated as legal mother and she can never be natural mother.

Nonetheless, Indian courts have not yet comprehensively addressed surrogacy, leaving the task to the legislature.²⁵

Subsequently in the year 2010, a gay couple, Dan Goldberg and Arnon Angel from Israel to whom twin baby boys were born in Mumbai from an Indian surrogate mother, were stranded in India after the refusal of the Jerusalem Family Court to allow a paternity test to initiate the process for Israeli citizenship for the twins. The issue was debated in the Knesset (Israeli Parliament) where Prime Minister Benjamin Netanyahu had to intervene so that the infants could be brought to Israel following legal procedures. Ultimately, in appeal, the Jerusalem District Court, accepted the claim that it was in the best interest to hold a DNA paternity test to establish that Dan Goldberg was the father of the twin baby boys Itai and Liron. The DNA sample of Goldberg and the twins were brought to the Sheeba Medical Centre in Israel which established Goldberg as the father of the infants. After being stranded in Mumbai for over 3 months, Goldberg and his twin baby boys returned to Israel in May 2010 after being granted Israel passports.

In another separate case, Israeli gay couple Yonatan and Omer Gher became parents in India on 12 October, 2008, when their child was conceived with the help of a Mumbai based surrogate mother in a fertility clinic in Bandra. It is reported that a 3.8 kilo baby boy was born to them at Hiranandani Hospital in Powai (Mumbai) on 12 October, 2008. Reportedly, Yontan and Omer had been together for past seven years and had decided to start a family. But since Israel reportedly does not allow same sex couples to adopt or have a surrogate child, India became their choice to find a surrogate mother. Yontan and Omer reportedly first came to Mumbai in January 2008 for an IVF cycle Yontan is stated to have donated his sperm. Thereafter they selected an 'anonymous mother'. Accordingly, the child was conceived with the help of Mumbai based surrogate mother in a fertility clinic Bandra. After the child was born, the gay couple left for Israel with the child on 17 November, 2008.²⁶

LEGAL ISSUES RELATED TO SURROGACY

1. **Access to Surrogacy**-The right to procreation is a fundamental basic human right. However the increasing use of technology raises the important question as to whether surrogacy can also be used as a right and who can avail this right? Traditionally, surrogacy is considered as the last option available for procuring a child by married infertile couples. However use of surrogate become a contentious issue due to the use of surrogacy by other persons also like divorced, widowed, single, same sex couples, aged, disabled who are interested to have

a child. Increase use of technology by these people to beget a child would have a great impact on the social structure, meaning of family, institution of marriage and it will affect the social norms, morals and ethics in the society. Further, the use of surrogacy by aged and disabled persons will raise the issues of maintenance and welfare of the child. Therefore it is necessary to determine the criteria regarding the use of surrogacy by individuals other than married infertile couples.

2. **Validity of Surrogate Contracts-** The law relating to surrogacy is vague and uncertain. Different countries have different laws with respect to validity and enforceability of surrogacy contracts. Some of the countries consider these contracts as illegal while some others have their own laws for their regulation. In India, it is generally criticized that surrogacy contracts are opposed to public policy because they involve the use of womb by a woman for begetting a child to be handed over to the other party on payment of money, which is like renting of womb and selling of child. It is to be noted that a contract opposed to public policy is void contract according to the Indian Contract Act, 1872. Thus the legality of surrogacy contracts is uncertain.
3. **Child's Right to Know his Origin-** Article 7(1) of the Convention on the Rights of the Child (CRC), 1992 emphasizes that a child has the right to know about his or her origin. This means that the authorities have to maintain proper records pertaining to the origin of child. A duty is also cast on the doctors, hospitals and the parents to provide necessary information as and when required. The genetic information is necessary for diagnosing and treating certain diseases as well as to avoid consanguineous and incest marriages. It is to be noted here that, in case of surrogacy the disclosure of such information may have adverse consequences on the child as well as surrogate mother and commissioning parents. It is argued that once the child knows about the history of his or her birth, the child may go back to the genetic mother or surrogate mother as the case may be. It may also affect the child psychologically and it can cause mental harm to the surrogate mother as well as the commissioning parents. However, there is no specific law which regulates the disclosure of genetic information to the child in India.²⁷

Some of the other questions which are often posed professionally are:

- as to what would be the remedy available to biological parent/s to obtain exclusive legal custody of surrogate children;
- how can the rights of the surrogate mother be waived off completely;
- how can the rights of the ovum or sperm donor be restricted
- how can the genetic constitution of the surrogate baby be established and recorded with authenticity

CONCLUDING OBSERVATION

Since the ancient times, surrogacy has been a method for begetting a child. But with the development in science and technology, this method is being used for begetting a child not only by the infertile couples but also by anyone who wishes to have a child. A technology made contraception easier and less expensive; a market emerged to fulfill this demand. As a result the increasing use of surrogacy has raised legal, ethical, moral and religious debates all over the world. As surrogacy arrangements involve more than two people, where all of whom can legitimately claim that he/she is the parent of the child. Therefore, a conflict can arise about who should assume the parental rights and responsibilities towards the child. This is a problem inherent to surrogacy and one cannot be certain that such a problem will not arise. On one hand, surrogacy is a boon to the infertile couples

but on the other hand it has led to the commercialization of this method posing various problems. Commercial surrogacy protects the reproductive entitlements of infertile women but its criminalization violates the human right. Developing nations that permit commercial surrogacy might nonetheless better protect the negative reproductive rights of female citizens. Regulating the surrogate practice towards mutually beneficial ends is a key direction. Lack of adequate regulation will contribute to the maintenance of a global black market of surrogacy services, with considerable risks and exposure of women to trafficking, exploitation, coercion. Legal contracts need to evolve as to safeguard the interests of surrogate mothers, taking into consideration the inescapable fact that surrogacy decisions are taken under certain personal circumstances, which might change over time. Surrogacy contracts should include clauses on medical insurance and emergency needs of the surrogate mother. As India is becoming a booming industry for surrogacy, it has brought in various attendant complexities and inscrutable impact on the society due to the lack of comprehensive piece of legislation. There is a need to adopt a specific legislation for the regulation of surrogacy and protection of surrogate mothers in India. There is a need to protect the interest of the baby child born out of surrogacy from exploitation. Due to lack of proper legislation, both surrogate mothers and intended parents are somehow exploited and the profit is earned by middlemen and commercial agencies. There is no transparency in the whole system, and the chance of getting involved in legal problems is there due to unpredictable regulations governing surrogacy in India. In India, there is no provision of psychological screening or legal counseling, which is mandatory in USA. Like any other technology, surrogacy too has its positive and negative effects. If it is used wisely it would rather bring happiness to millions of childless couples. But if it is used in a careless way and as a means of commerce, it would have an adverse impact on the society and would result in the degradation of human relationships and values. If this practice keeps growing the way it is, it would rather change from medical necessity of infertile couples to the convenience of rich and wealthy couples, who do not want to face the pain and stress of a natural birth.

It's now time for India to take stock, evaluate, assess and decide the future course of surrogacy. A clear cut law on surrogacy must be enacted by the Parliament. The medical professionals need to aid and assist the Government in preparing a new draft law on surrogacy, with proper checks, safeguards, safety measures and adequate precautions to ward off the ills of the commercial overtones of surrogacy. The foreign citizens must not be misguided anymore. A proper law must rein in all concerned. There's a need to prepare a legislation to regulate not only the ART clinics but also the rights and obligations of all parties to a surrogacy including rights of the surrogate child. Surrogacy has both positive and negative effects. If it is wisely used, it would bring happiness to millions of couples. But if it is used in a careless way and as a means of commerce, it would have an adverse impact on the society.

SUGGESTIONS/RECOMMENDATIONS

- Developing nations that permit commercial surrogacy might nonetheless better protect the negative reproductive rights of their female citizens. Negative rights violation can and should be addressed by the state that permits commercial surrogacy through a strengthened commitment to women's empowerment, which it can demonstrate by improving the conditions of vulnerability that make such offers so difficult for female citizens to refuse.
- Positive reproductive rights must be employed to the end of securing the social, material and potential tools by which all women will truly be able to make reproductive decisions free from coercion.

- Further, for those countries that continue to prohibit commercial surrogacy within their borders, there is the option to introduce prohibitions that apply extraterritorially.
- That is, residents of those states would be committing a crime if they travelled elsewhere to engage in practices that are prohibited in their own territory. This is the position taken in three Australian states (New South Wales, the Australian Capital Territory and Queensland), Malaysia, and Turkey.
- Domestic laws should not be changed to permit commercial surrogacy in those jurisdictions that currently prohibit the practice solely based upon dilemmas created by people who have engaged in global surrogacy arrangements (sometimes against the law of their own jurisdiction). Such cases should be dealt with by the courts, on a case-by-case basis; or the legislature should speak as to what should occur.
- Israel model must be adopted by every nation proposing to legalize commercial surrogacy as it has successfully balanced the needs of the society and those of private individuals.
- Both the surrogate and the infertile couple should obtain legal counsel before agreeing to and signing a contract.
- Disclosure of the surrogate relationship should be limited so as to avoid unwarranted scrutiny and the criteria for being a surrogate should be laid down clearly.
- Establishing methods to control payment for surrogacy and making it altruistic act, instead of a business could help eliminate this unethical aspect.
- Laws should be framed and implemented to cover the grey areas to protect the rights of women and children.
- There is a urgent need to have a specific legislation for the regulation and control of surrogacy in India. It should take into account issues like access to surrogacy, liability issues, interest of the child, parentage of child etc. The terms and conditions must be clearly laid down and proper balance should be maintained between the duties of surrogate mother and the protection of dignity of her rights. The relationship between the surrogate mother and the child and commissioning parents should be properly defined and made uniform in all surrogate practices.
- Its high time for the Indian Parliament to study in detail the international perspectives on surrogacy in general and the position prevailed in India in particular to understand it the best and to provide a good deal of rules and regulations to our own country after carefully considering societal feelings and acceptance to this practice of surrogacy.
- India must focus on legalizing altruistic surrogacy and prohibiting commercial surrogacy.
- Legislation being framed for regulation and monitoring of surrogacy in India should also consider the ethical, moral, social and religious standard of the society.
- Typically, after the birth the surrogate mother is left without any medical support, it is recommended that there should be a provision of intensive care and medical check-ups of their reproductive organs during the 3 months after pregnancy.
- Legal recognition of termination and transfer of parenting rights.
- It is crucially important to maintain and monitor the anonymity of the surrogate mothers.
- The surrogate mother should not undergo more than 3 trials and it has to be monitored.
- The surrogate mother should be provided by the copy of the contract as she is a party in the agreement and her interests should be taken into account. It happens that very often decision is taken by the intended parents and clinic, while surrogate mother does not have any say in this matter.
- Similarly, while we should accept and encourage different family formations, commercial surrogacy should not be 'sold' as the preferred option to people seeking to form a family.

REFERENCES

1. Annual Report 2008-2009 Ministry of Health and Family Welfare, Government of India available at http://monh.nic.in/FINAL_HEALTH_MINISTRY_ANNUAL_REPORT_2008_09.pdf accessed on 09/04/2014 at 5:30 p.m.
2. Kusum Jain, 'Surrogate Motherhood: Some Legal and Moral Problems in Bio Ethics', Vol. 25 Issue 4, 1983 Journal of Indian Law Institute (546 to 558) at 547.
3. Yashomati Ghosh, "Surrogacy and Law: An Affirmative Approach to Deal with the Ethical and Legal Dilemma", Vol. II. Issue 1, 2011 Journal of Law Teachers of India (83 to 92) at 85.
4. Available at http://www.indiaparenting.com/infertility-treatments-and-solutions/479_4466/surrogacy-the-history-and-today.html accessed on 02/10/2013 at 8:30 p.m.
5. Jasdeep Kaur, "Surrogacy: A Paradox regarding Motherhood rights with Special Reference to India", Vol. II No. 1, 2012 The Legal Analyst (113 to 121) at 114.
6. Available at http://www.indiaparenting.com/infertility-treatments-and-solutions/479_4466/surrogacy-the-history-and-today.html accessed on 02/10/2014 at 8:30 p.m.
7. Available at <http://www.stanford.edu/group/womenscourage/Surrogacy/> accessed on 30/01/2014 at 7:15 p.m.
8. Yashomati Ghosh, "Surrogacy and Law: An Affirmative Approach to Deal with the Ethical and Legal Dilemma", Vol. II. Issue 1, 2011 Journal of Law Teachers of India (83 to 92) at 84.
9. Rekha P. Pahuja, "Problem of Surrogacy - A Critical Study", Vol. XII. Issue 2, 2011 *Naya Deep, The Official Journal of Nalsa* (112 to 118) at 117.
10. Available at <http://onlinelibrary.wiley.com> accessed on 07/01/2014 at 5:00 p.m.
11. Available at <http://timesofindia.indiatimes.com/india/Anand-A-womb-to-let/articleshow/5934831.cms> accessed on 09/04/2014 at 5:15 p.m.
12. Available at <http://sunnarin.wordpress.com/> accessed on 03/02/2014 at 5:00 p.m.
13. Anil Malhotra, Ranjit Malhotra, *Surrogacy In India*. 1st Edition (New Delhi: Universal Law Publishing Co. Pvt. Ltd. 2013) at 8.
14. *ibid*
15. Anil Malhotra, Ranjit Malhotra, *Surrogacy In India*. 1st Edition (New Delhi: Universal Law Publishing Co. Pvt. Ltd. 2013) at 8-10.
16. Kaumudhi Challa, "Contentious Issues in Surrogacy: Legal and Ethical Perspectives in India" Vol. 1, 2012 Christ University Law Journal (117 to 126) at 121.
17. Aneesh V. Pillai, "Surrogate Mother and its Challenges to the Indian Legal System", Vol. 1 No. 2, 2011 The Legal Analyst (89 to 93) at 92.
18. Yashomati Ghosh, "Surrogacy and Law: An Affirmative Approach to Deal with the Ethical and Legal Dilemma", Vol. II. Issue 1, 2011 Journal of Law Teachers of India (83 to 92) at 87.
19. Kaumudhi Challa, "Contentious Issues in Surrogacy: Legal and Ethical Perspectives in India" Vol. 1, 2012 Christ University Law Journal (117 to 126) at 124..
20. Available at http://www.modernfamilysurrogacy.com/page/surrogacy_ethical_issues accessed on 3/02/2014 at 4:00 p.m.
21. "National Guidelines for Accreditation, Supervision and Regulation of ART Clinics in India," Indian Council of Medical Research (ICMR), 2005, Ministry of Health and Family Welfare, Government of India, New Delhi.
22. Baby Manji Yamda v. Union of India and another AIR 2009 SC 84 (2008) 13 SCC 518.
23. R. Sedhuraman, Why no to Surrogacy Laws, Asks SC. 16th December 2009 (Wednesday) The Tribune 2.
24. AIR 2010 Gujrat 21.
25. Jasdeep Kaur, "Surrogacy: A Paradox Regarding Motherhood Rights With Special Reference to India", Vol. II No. 1, 2012 The Legal Analyst (113 to 121) at 119.
26. Anil Malhotra, Ranjit Malhotra, *Surrogacy In India*. 1st Edition (New Delhi: Universal Law Publishing Co. Pvt. Ltd. 2013) at 31.
27. Kaumudhi Challa, "Contentious Issues in Surrogacy: Legal and Ethical Perspectives in India" Vol. 1, 2012 Christ University Law Journal (117 to 126) at 121.

Limited Liability Partnership in India

Sujit Kumar Mishra* and Lovely Sharma*

INTRODUCTION

India economy, the third largest economy in the world (in terms of purchasing power) is going to touch new heights in coming years.¹ As predicted by Goldman Sachs, the Global Investment Bank, by 2035 India would be the third largest economy of the world just after US and China. It will grow to 60% of size of the US economy² India has a rich set of choices in determining its future growth path in a globalised competitive business environment. The future choice or a combination thereof will depend on how well the government, the private initiative, and the civil society can work together to create a common understanding of the direction in which the economy should head and what it needs to get there³ India can, no doubt, reap tremendous economic gains by developing policies and strategies that focus on making more effective use of its rich knowledgebase to increase the overall productivity of the economy and the welfare of its population⁴ In so doing, India will be able to improve its international competitiveness and join the ranks of countries that are making a successful transition to the knowledge economy⁴

Joint Stock Companies, limited by shares or guarantees, have as significant a role to play in the economic processes of country's economy as the other forms of businesses e. g sole proprietorships or partnership firms or, for that matter, the limited liability partnerships.⁵ These business forms undertake operations across the manufacturing sector and the services sector⁶, both of which account for a very large contribution to the overall development of a nation's economy⁷ India is all set to provide a legal framework for the new hybrid business form, the Limited Liability Partnerships (LLPs) which combine the benefits of a company and a partnership, in view of the opportunities this form offers for the organised growth and a promising future of the Indian knowledge sector, more particularly, the professionals.⁸

INDIA AS A AN EMERGING MARKET

Since independence, India has achieved remarkable progress in overcoming the long-term colonial stagnation and economic backwardness⁹ After 1990, when India opened up its economy and followed the LPG (Liberalisation, Privatisation and Globalisation) model for its growth, the economy has moved by now to a position of centre-stage, or lease a position which is none too far from the centre-stage for its sound fundamentals on a number of counts¹⁰ A democratic polity well entrenched with a strong and independent judiciary, besides its economic growth story and sound macroeconomic fundamentals, India's strength, as already perceived by the international businesses, lies in its vast market potential, trained human capital in its doctors, engineers, management and IT professional, Chartered Accountants, Company Secretaries and lawyers, a buoyant capital market with Sensex having crossed the mark of 18000 only recently.¹¹

OVERALL BUSINESS ENVIRONMENT

Among the various business forms that operate in India within the given legal framework are the (i) sole proprietorships, (ii) Partnership firms and (iii) the joint stock companies operating

*Assistant Professor, Nawada Vidhi Mahavidyalaya Nawada Bihar

**LL.M, Research Scholar

under the Companies Act, 1956¹² The overall composition presents an interesting mix as the sole proprietorships, partnership firms and the SMEs, which are largely family owned/promoted enterprises, account for a major part of the economic players in the secondary and tertiary sectors of India economy.¹³

Out of a little more than 0.8 million companies¹⁴, those listed on the stock exchanges are a little less than ten thousand and those which are actively traded are no more than 3000 entities accounting for a major part of the capital market tapping.¹⁵ While the Securities Exchange Board of India (SEBI) is the regulator for the capital and securities market, the Ministry of Corporate Affairs is the nodal ministry responsible for the administration of the companies Act, 1956 and other major initiatives that significantly impact the corporate sector as a whole.

New Initiatives

The erstwhile Department of Company Affairs, attached to the Ministry of Finance, and carved out as an independent ministry in 9 May, 2007¹⁶ and now positioned as the Ministry of Corporate Affairs, has taken a number of initiatives for the growth and regulation of the Indian corporate sector. A brief mention of some of these measures would be highly contextual :

- (i) Enabling framework for the growth and regulation of professional services : The Ministry of Corporate Affairs is responsible for provision of a statutory framework for the growth and regulation of the professions of Chartered Accountants¹⁷ Cost & Works Accountants¹⁸ and the Company Secretaries¹⁹ The country has a strength of about 1,50,000 qualified Chartered Accountants and over 40,000 Company Secretaries¹⁹ These professionals play a major role in the affairs of the corporate sector in the country. The Ministry has amended the related statutes with a view to providing opportunities of growth with greater accountability for the professionals from these institutes.
- (ii) Notification of Accounting Standards²⁰ : The Accounting Standards, following the best international practices²¹, have been developed and notified by the Ministry of Corporate Affairs in with a view to mapping Indian Accounting systems with the international standards and practices, and strengthening the disclosures with good corporate governance practices.²² These would be instrumental in integrating the Indian corporate accounting systems with the internationally recognised practices in a seamless manner.
- (iii) Company Law under comprehensive revision : The Companies Act, 1956 having been amended 2524 times since its introduction, is all set to be comprehensively revised with a view to bringing the legal framework in sync with the aspirations and requirements of the corporate sector in a global business environment. Though a Bill on the new law is yet to be introduced in the parliament, it is understood that it is envisaged to be simpler, shorter and marks a shift from an approval based regime to empowerment of the shareholders for decision making in the affairs of the corporate. The process of the shareholders for decision making in the affairs of the corporate. The process of revision follows from a wide consultative process of all the stakeholders. As stated by the Minister of Corporate Affairs in his various press meets, the Ministry would like to play the role of a 'facilitator' for the growth of business while ensuring 'compliance' of laws.
- (iv) Keeping in view the enormous opportunities for the growth of service sector and the knowledge based industry, the Ministry of Corporate Affairs (GoI) had introduced a Bill in the Parliament in December, 2006 for creation of enabling legal framework on the Limited Liability Partnerships.

- (v) The Ministry has placed another concept paper¹²⁹ on its website www.mea.gov.in for regulating the profession of valuation professionals through a statute in the same manner as in the case of Chartered Accountants and the Company Secretaries. The valuation professionals are expected provide a significant value addition to the scope of future LLPs looking after the work of companies facing insolvency proceedings.
- (vi) It is in the process of setting-up the Competition Commission of India for which certain amendments in the 2000 Act are envisaged soon. Similarly efforts are on way to set-up Company Law Tribunals for expediting the process of liquidation of companies.
- (vii) E-governance and MCA21130 : On the administrative side, the Government has implemented an e-Governance project known as MCA21, under which all the manual processes on corporate interface with the Registry have been shifted to the e-Governance mode, thereby introducing transparency in delivery of services with speed and certainty. The entire Indian corporate are now mandatorily required filing all their documents in electronic form w.e.f. September 16, 2006¹. It has led to significant case of transaction of all services for the corporates, empowerment of the general citizen/public domain, and an effective compliance management for the government. The programme has been perceived as a major step towards facilitating good Corporate Governance practices : Following the economic concept of neo-liberalism and economic globalisation, economic policies of countries are driven by their self-interests, which in turn are founded on their inherent strengths. In addition to the sound macro-economic fundamentals of Indian economy, its latest strength lies in its knowledge based industry with a large pool of professionals across various sectors. The Indian economy has already taken advantage of the accelerated pace with which the BPO industry has found its roots with the huge IT industry related strengths. The future also holds significant promises in other knowledge sectors related to professionals from legal, financial, business and engineering professions.

REFERENCES

1. An Economy History of India (1947-2011), available at : <http://eternian.wordpress.com/2010/02/20/failedstate-india/>(Visited on 26 February 2012)
2. Ajit Pal Singh, "Globalization and its Impact on Politics With Reference to India : An Overview of Different Dimensions", LXIX (4) Indian Journal of Political Science Oct Dec 635-650 (2008)
3. Carl Dhlman Anuja Utz, "India and the Knowledge Economy : Leveraging Strengths and Opportunities", The World Bank, Washington D. C. (2005)
4. Ibid
5. Dr. Sanjiv Agarwal & Rohini Aggarwal, Limited Liability Partnership : Law and Practice (lexis Nexis, 2009)
6. The most striking feature of the structural change in the Indian economy in recent decades has been the preeminence of services sector as the major contributor to growth, raising its share rather sharply in the national output.
7. Limited Liability partnership : An Emerging Concept in India, available at : <http://jaccindia.wordpress.com/2010/11/11/limited-liability-partnership-an-emerging-concept-in-india/>(Visited on 26 February 2012)
8. Supra note 109
9. Dr. Vijay L. Kelkar, India's Reform Agenda : micro, meso and macro Economic Reforms available at : http://web.sfc.keio.ac.jp/~kgw/Lecture/SFC/Comparative_Systems/2005/reading-assignment/KelkarPaper.pdf (Visited on 26 February 2012).
10. Macroeconomics of Poverty Reduction India case study, available at : <http://www.igidr.ac.in/pd/publication/PP-057.pdf>. (Visited on 26 ebruary 2012).
11. Ibid
12. Avtar Sing Company Law (Eastern Book Company 6th, edn. 2010)

13. Ibid
14. Annual report 2009-10 ministry of corporate affairs government of India
15. Ministry of Statistics and Programme Implementation available at : http://mospi.nic.in/Mospi_New/site/inner.aspx?status-3&menu-id-36 (Visited on 26 February 2012)
16. Vide Notification dated the 9th may, 2007 by the President under clause (3) of Article 77 of the Constitution.
17. The Chartered Accountants Act, 1949
18. The Cost and Works Accountants Act, 1959
19. The Company Secretaries Act, 1980
20. Supra note 118
21. With effect from December 7, 2006, 28 Accounting Standards, i. e. AS 1 to 7 and AS 9 to 29, have been notified by the Central Government under the Companies Act, 1956 on the recommendation of National Advisory Committee on Accounting Standards (NACAS), Every company registered under the Companies Act, 1956 is required to comply with these Standards.
22. International Financial Reporting Standards (IFRS)
23. Annual Report 2009-10 ministry of corporate affairs, Government of India
24. Ministry of corporate affairs, available at http://www.mea.gov.in/Ministry/annual_reports/annualreport2005/CHaPTER1.pdf. (Visited on 26 february 2012)
25. Ministry of Company Affairs Concept Paper on Limited Liability Partnership, explanatory Note (Concept Paper) available at : <http://www.insolindia.com/shimla PDFs/ministry/Company Affairs.pdf> (Visited on 26 February 2012)
26. Annual report 2007-08 ministry of corporate affairs, Government of India
27. The project is fully operational from all 20 registry locations.

Commercial Surrogacy is Legal in India

Sujit Kumar Mishra* and Lovely Sharma**

ABSTRACT

The ever-rising prevalence of infertility world over has led to advancement of assisted reproductive techniques (ART). Herein, surrogacy comes as an alternative when the infertile woman or couple is not able to reproduce. Surrogacy is an arrangement where a surrogate mother bears and delivers a child for another couple or person. In gestational surrogacy, an embryo, which is fertilized by *in vitro* fertilization, is implanted into the uterus of the surrogate mother who carries and delivers the baby. In traditional surrogacy, the surrogate mother is impregnated with the sperms of the intended father artificially, thus making her both genetic and gestational mother. Surrogacy may be commercial or altruistic, depending upon whether the surrogate receives financial reward for her pregnancy.

Commercial surrogacy is legal in India,(1) Ukraine, and California while it is illegal in England, many states of United States, and in Australia, which recognize only altruistic surrogacy. In contrast, countries like Germany, Sweden, Norway, and Italy do not recognize any surrogacy agreements. India has become a favorite destination of fertility tourism. Each year, couples from abroad are attracted to India by so-called surrogacy agencies because cost of the whole procedure in India is as less as one third of what it is in United States and United Kingdom (10-20 lakhs).

IS SURROGACY PROFITABLE FOR ALL ?

At a glance, surrogacy seems like an attractive alternative as a poor surrogate mother gets very much needed money, an infertile couple gets their long-desired biologically related baby and the country earns foreign currency, but the real picture reveals the bitter truth. Due to lack of proper legislation, both surrogate mothers and intended parents are somehow exploited and the profit is earned by middlemen and commercial agencies. There is no transparency in the whole system, and the chance of getting involved in legal problems is there due to unpredictable regulations governing surrogacy in India.

Although in 2005, ICMR issued guidelines for accreditation, supervision, and regulation of ART clinics in India, these guidelines are repeatedly violated.(2) Frustration of cross border childless couples is easily understandable who not only have to cope up with language barrier, but sometimes have to fight a long legal battle to get their child. Even if everything goes well, they have to stay in India for 2-3 months for completion of formalities after the birth of baby. The cross border surrogacy leads to problems in citizenship, nationality, motherhood, parentage, and rights of a child. There are occasions where children are denied nationality of the country of intended parents and this results in either a long legal battle like in case of the German couple with twin surrogate children or the Israeli gay couple who had to undergo DNA testing to establish parentage or have a bleak future in orphanage for the child. There are incidences where the child given to couple after surrogacy is

*Assistant Professor, Nawada Vidhi Mahavidyalya Nawada Bihar

**LL.M, Research Scholar

not genetically related to them and in turn, is disowned by the intended parent and has to spend his life in an orphanage.(3)

If we look upon the problem of surrogate mothers, things are even worse and unethical. The poor, illiterate women of rural background are often persuaded in such deals by their spouse or middlemen for earning easy money. These women have no right on decision regarding their own body and life. In India, there is no provision of psychological screening or legal counseling, which is mandatory in USA. After recruitment by commercial agencies, these women are shifted into hostels for the whole duration of pregnancy on the pretext of taking antenatal care. The real motive is to guard them and to avoid any social stigma of being outcast by their community. These women spend the whole tenure of pregnancy worrying about their household and children. They are allowed to go out only for antenatal visits and are allowed to meet their family only on Sundays. The worst part is that in case of unfavorable outcome of pregnancy, they are unlikely to be paid, and there is no provision of insurance or post-pregnancy medical and psychiatric support for them. Rich career women who do not want to take the trouble of carrying their own pregnancy are resorting to hiring surrogate mothers. There are a number of moral and ethical issues regarding surrogacy, which has become more of a commercial racket, and there is an urgent need for framing and implementation of laws for the parents and the surrogate mother.(4)

Assisted reproductive technology legislation

The Indian government has drafted a legislation, earlier floated in 2008, finally framed as ART Regulation draft bill 2010. The bill is still pending with Government and has not been presented in the Parliament. The proposed law has taken consideration of various aspects including interests of intended parents and surrogate mothers. The proposed draft needs to be properly discussed, and its ethical and moral aspect should be widely debated by social, legal, medical personal, and the society before any law is framed.

The bill acknowledges surrogacy agreements and their legal enforceability.(5) The surrogacy agreements are treated at par with other contracts under the Indian Contract Act 1872 and other laws applicable to these kinds of agreements. Both the couple/single parent and surrogate mother need to enter into a surrogacy agreement covering all issues, which would be legally enforceable. Some of the features of proposed bill are that an authority at national and state level should be constituted to register and regulate the I.V.F. clinics and A.R.T centers, and a forum should be created to file complaints for grievances against clinics and ART centers. The age of the surrogate mother should be 21-35 years, and she should not have delivered more than 5 times including her own children. Surrogate mother would not be allowed to undergo embryo transfer more than 3 times for the same couple. If the surrogate is a married woman, the consent of her spouse would be required before she may act as surrogate to prevent any legal or marital dispute. A surrogate should be screened for STD, communicable diseases and should not have received blood transfusion in last 6 month as these may have an adverse bearing on the pregnancy outcome. All the expenses including insurance of surrogate medical bill and other reasonable expenses related to pregnancy and childbirth should be borne by intended parents. A surrogacy contract should include life insurance cover for surrogate mother. The surrogate mother may also receive monetary compensation from the couple or individual as the case may be for agreeing to act as such surrogate. It is felt that to save poor surrogate mothers from exploitation, banks should directly deal with surrogate mother, and minimal remuneration to be paid to the surrogate mother should be fixed by law.

The surrogacy arrangement should also provide for financial support for the surrogate child in case the commissioning couple dies before delivery of the child, or divorce between the intended

parents and subsequent willingness of none to take delivery of the child so as to avoid injustice to the child. A surrogate mother should not have any parental rights over the child, and the birth certificate of the baby should bear the names of intended parents as parents in order to avoid any legal complications. Guidelines dealing with legitimacy of the child born through ART state that the child shall be presumed to be the legitimate child of the married/unmarried couple/single parent with all the attendant rights of parentage, support, and inheritance.

The ART clinics should not be allowed to advertise for surrogacy for its clients, and couples should directly seek facilities of ART Bank. The intended parents should be legally bound to accept the custody of the child/children irrespective of any abnormality in the child/children. Confidentiality should always be maintained, and the right to privacy of the donor as well as surrogate mother should be protected. If a foreigner or NRI is seeking surrogacy, they should enter an agreement with written guarantee of citizenship for the child from their government, and they should also appoint a local guardian who would be legally responsible for taking care of the surrogate during and after the pregnancy till the child is delivered to the foreigner couple or reaches their country. Sex-selective surrogacy should be prohibited, and abortions should be governed by the Medical Termination of Pregnancy Act 1971.(6)

CONCLUSION

It seems ironical that people are engaging in the practice of surrogacy when nearly 12 million Indian children are orphans. Adoption of a child in India is a complicated and a lengthy procedure for those childless couples who want to give a home to these children. Even 60 years of Independence have not given a comprehensive adoption law applicable to all its citizens, irrespective of the religion or the country they live in as Non-Resident Indians (NRIs), Persons of Indian Origin (PIOs) or Overseas Citizens of India (OCIs). As a result, they resort to the options of IVF or surrogacy. The Guardian and Wards Act, 1890 permits Guardianship and not adoption. The Hindu Adoption and Maintenance Act, 1956 does not permit non-Hindus to adopt a Hindu child, and requirements of immigration after adoption have further hurdles.(7)

There is a strong need to modify and make the adoption procedure simple for all. This will bring down the rates of surrogacy. Altruistic and not commercial surrogacy should be promoted. Laws should be framed and implemented to cover the grey areas and to protect the rights of women and children.

REFERENCES

1. [Last accessed on 2012 May 2]. Available from: [http://surrogacylawsindia.com/legality.php?id=%207 and menu_id=71](http://surrogacylawsindia.com/legality.php?id=%207&menu_id=71) .
2. National guidelines for the accreditation supervision and regulation of ART clinics in India. [Last accessed on 2012 April 30]. http://www.icmr.nic.in/art/art_clinics.htm .
3. [Last accessed on 2012 April 30]. Available from: <http://www.timesonline.co.uk/tol/news/world/asia/article/7113463.ecc> .
4. The Associated Press (2007-12-30) "India's surrogate mother business raises questions of global ethics" [Last accessed on 2012 May 1]. Available from: <http://www.nydailynews.com/news/world/india-surrogate-motherbusiness-raises-questions-global-ethics-article-1.276982> .
5. ART Regulation draft bill 2010. [Last accessed on 2012 May 2]. Available from: <http://icmr.nic.in/guide/ART%20REGULATION%20Draft%20Bill1.pdf> .
6. [Last accessed on 2012 May 1]. Available from: <http://www.mp.gov.in/health/acts/mtp%20Act.pdf> .
7. Central adoption resource authority. [Last accessed on 2012 April 30]. Available from: <http://www.adoptionindia.nic.in> .

Indo-Asahi Glass Company: Role of Mental Revolution in HRM

Dr. Rudra Kinker Verma*

ABSTRACT

The INDO-ASAHI Glass Company situated at Bhadaninagar, Jharkhand producing bullet proof glass and having second position in Asian Sub continent and running on the path of success by leaps and bonds. I observe its reason of success that this enterprise adopt the basic approach of HRM to perceive the organization in its totality. Skilled management for social development in Rural Areas. As per company Act 1956 every private company has to develop electricity, Road facility, education facilities, skill facilities and Yoga, Training for enterprises and survival etc. it has a separate department in Jharkhand the FAG fulfilled the minimum requirement of the neighboring villages for their survival and good health education etc.

ROLE OF MENTAL REVOLUTION

Mental Revolution is the key to success of any organization. The father of the Scientific management F.W. Taylor firmly believed that the objective of management should be the maximum prosperity for the employer and the maximum prosperity to each employee. The prosperity for the employer means lower costs but higher returns. Maximum prosperity to the employee means fair as well as higher wages. It can be achieved through the mentally revolved employer and employee in any organization.

Mental Revolution is an invisible things. It can't be seen with the open eyes in any organization. It can be felt and realized that in an organization mental revolution exists or not. If the employees of an organization feel that they are an important part of that organization and any wastage of that organization will be the self wastage then it can be said that mental revolution prevails among the employees of that organization. Thus there will be no doubt about the success of the organization where employees are mentally revaluated.

For more clarification about the concept of mental revolution we may put an example of F.W. Taylor who evaluated the extent of mental revolution of American laborers. In U.S.A. laborers divided in different groups were breaking stone for road construction. Taylor asked a simple question from the first group of labor what are you doing? They replied we are breaking stone. From this simple answer Taylor remarked that there is no mental revolution among that group of laborers. They feel monotony in their work and therefore cannot work with their full efficiency. When the same question was repeated from the second group of laborers, then they replied that we are building our livelihood. From this answer, it was the opinion of Mr. Taylor that there are mental revolution among the second group of laborers but up to the limited extent. They think about themselves only. When the same question asked from the third group of laborers then they replied that we are building our nation. From this answer Taylor remarked that mental revolution prevails among the third group of laborers up to the maximum extent. Taylor says that the laborers thought that from these braked stones

*Assistant Professor, Department of Commerce, Madhepura College, Madhepura. Bihar

road transport of U.S.A. will developed and ultimately our country will prosper. With this mentally reevaluated people of any country will prosper without any doubt.

Mental revolution refers to change in thinking both on the part of management, and workers. If not all the majors suggested in scientific management system would be useless.

In the words of Taylor "Scientific management involves a complete mental information on the part of workers and management, and without this complemented revolution on both sides scientific management doesn't exists." Both sides must aims for corporation for missing output and give up hostility and suspicion. Both sides should take their eyes off the division of the surplus as the All important matter and together them their attentions towards increasing the size of the surplus. Usually the worker's try to keep output low for fear of creating unemployment. Again due to payment on times bases, extra output or increased inefficiency do not benefits the worker's employers also does not take kindly to increase in worker's earning.

The net effect in mutual hostility and suspicion resulting in low profits and lower wages. Worker's should realize that would work being cost down and pulls up profits with a constant rise in wages. The employers should also recognized that if output goes up cost comes down, increased wages will still leave higher profit for them. therefore, workers should welcome efforts to increase output and cooperate with the employee, employers should readily raise wages. Both must recognize that prosperity of Both depend upon the property of each and Non should attempt to prosper of the cost of other. Taylor never introduced scientific management without rising wages for it is futile to expect worker cooperation without materials benefits to them.

No doubt scientific management brought New revolution in the field of effective management and advocated to left rule of thumb where there is no chance of wastage. Thus, the success of imputation of scientific management depends on the mental revolution of management and worker. As Taylor says "The success of scientific management rests primarily on the fundamental change in the attitude of management and workers both as to their duty to cooperate in producing the largest possible surplus and to the necessicity for substituting adjust scientific knowledge for opinion or old rule of thumb of individual knowledge.

Some concepts and positive effect of mental revolution we may observe that Taylor's idea led to a powerful scientific management movement in the united State and other western countries. The movement led to significant improvement in productivity and remuneration of workers. Taylor laid the foundation for scientific study of management as a separate discipline.

Human Resource Management (HRM) is concern with the people in management. HRM is the term increasingly used to refer the philosophy, policies producers and practices relating to the management of the people within organizations. Since every organization is made up of people, acquiring their success, developing their skills, motivating them to higher level of performing and ensuring that they continue to maintain their commitment to the organization which are essential in achieving organizational objectives.

Organization able to acquire, develop stimulate and keep outstanding workers will be both effective and efficient.

Human Resource thus creates organizations and makes them survive and prosper. Human resources are neglected or mismanage, the organization is unlikely to do well. HRM is an approach to the management of people, based on four fundamental principles.

- (i) Human Resources are the most important assets of an organization and their effective management is the key to it success.
- (ii) This success is most likely to be achieved in the personnel policies and procedures of the enterprise are closely linked with, and make a major contribution to the achievement of corporate objectives and strategic plans.

- (iii) The corporate culture and the values, organizational climate and managerial behavior that emanate from that cultural will exert a major influence on the achievement of excellence.
- (iv) H.R.M. is concerned with intraliving getting all the members of the organizations involved and working together with a sense of common purpose in its essence, HRM is the Qualitative improvement of Human beings who are considered the most valuable asset of an organization. The Resource, sources, and end users of all products and services. HRM is, no doubt an outgrowth of the older process and approach but it is much more than its parent disciplines that is personnel management and behavioral science.

HRM is also more comprehensive and deep rooted than training and development.

The INDO-ASAHI Glass Company situated at Bhadaninagar, Jharkhand producing bullet proof glass and having second position in Asian Sub continent and running on the path of success by leaps and bounds. I observe its reason of success that this enterprise adopt the basic approach of HRM to perceive the organization in its totality. Skilled management for social development in Rural Areas. As per company Act 1956 every private company has to develop electricity, Road facility, education facilities, skill facilities and Yoga, Training for enterprises and survival etc. it has a separate department in Jharkhand the FAG fulfilled the minimum requirement of the neighboring villages for their survival and good health education etc. schools for Tribal Its emphasis is not only on production and productivity but also on the quality of life. It seeks to achieve the fullest development of human resources and the fullest possible Socio-economic development.

CONCLUSION

The key factor of its success is its employees who are mentally revaluated up to the maximum extends. Its employees fructify that we are an important member of our Indo-Asahi Glass Company Limited.

It can be expected that this enterprises will fructify in future also with their mentally revaluated Human resources.

REFERENCES

1. W.F. Taylor, The Principles of scientific Management, Digireads, Published, Stilwell, KS, 2008.
2. P.S. Robbins, A.D. Decenzo, and M. Coulter, Fundamentals of Management, 8th edition, Pearson Education Prentice Hall, 2013.
3. K. Fisek, Administration [In Turkish: Frederick Winslow Taylor ve Ankara, 2012.
4. A. Baltas, "People and the work that adds value to the new human resources management [In Turkish : Insana ve ise deger Katan, yeni [K], "Remzi Kitabevi, Istanbul, 2009.
5. A. Berber, "Classical management thought [In Turkish : Klasik Yonetim distincesi], "Alfa Basim Yayum, Istanbul, 2013.
6. Noe, Raymond A, et al. Human Resource Management Gaining a competitive Advantage. 5th ed. Boston: McG raw Hill, 2006.
7. Desier, Gary. Human Resource Management 10th ed. Englewood Cliffs, NJ: Pearson/ Prentice Hall, 2004.
8. Indo-Asahi Glass Company, Bhadaninagar, Jharkhand, Annual report.
9. New paper Time of India, Hindustan Times, Aaj, Prabhat Khabar, Dainik Bhaskar etc.

Ceptualizing CCE in A Pedagogical Framework

Dr. R.V. Anuradha*

To trace the trajectory of the systemic reforms in the context of education, there requires a focused attempt so as to highlight the crucial moments in the history of educational development and progress. In the perspective of the pedagogical reforms, the element of teaching/learning process has undergone a series of changes.

The examination reforms in India earnestly attempt to question and re-direct the sense of accountability on behalf of the policy makers and implementers who run the education system. In the policy document of 1986 and 1992, there are several highlights in the context of reorientation of the content and the process of education. Part VIII of the National Policy for Education section 8.23 mentions the importance of the evaluation process and examination reforms. It talks about assessment of performance as an integral part of the teaching/learning process. The major objectives are to re-cast the examination system so as to ensure a valid and a reliable measure in the student development and to improve the entire teaching/learning process. In functional terms, the objectives stated in the National Policy of Education (1992) are as follows:

- The elimination of excessive element of chance and subjectivity;
- The de-emphasis of memorization;
- Continuous and comprehensive evaluation that incorporates both scholastic and non-scholastic aspects of education, spread over the total span of instructional time;
- Effective use of the evaluation process by teachers, students and parents;
- Improvement in the conduct of examination;
- Introduction of concomitant changes in instructional materials and methodology;
- Introduction of the semester system from the secondary stage in a phased manner; and
- Use of grades in the place of marks.

It is in this context that the concept of Continuous Comprehensive Evaluation has led to an epoch making decision in the long run examination reforms in India.

CONTINUOUS COMPREHENSIVE EVALUATION (CCE)

Prior to the introduction of Continuous Comprehensive Evaluation as an integral element in the CBSE run schools, the examination system faced numerous criticisms where the whole notion of writing exams was considered a non-productive task, wherein the learner's ability was mainly restricted to the ability to memorize. However, the recent introduction of assessment practices has shifted the notion of a learner's understanding from rote learning to thinking skills. The idea of Higher Order Thinking Skills (HOTS) was emphasized as the major aspect of assessment. The learners' application of the acquired knowledge both analytically and critically has become one of the major considerations in the process of assessment. Bloom's Taxonomy was used as learning objective to bridge the gap between the mere transactions of content with respect to the channelized exchange in terms of development of Higher Order Thinking Skills.

Continuous and Comprehensive Evaluation (CCE) refers to a system of school based evaluation of a student that covers all aspects of a student development. It is a developmental process of

*Assistant Professor, Department of Education, English and Foreign Languages University, Hyderabad, Andhra Pradesh, India, E-mail: write2anuradha@gmail.com

student which emphasizes on two fold objectives. These objectives are continuity in evaluation and assessment of broad based learning and behavioral outcomes on the other.

The term 'Continuous' is meant to emphasize that evaluation of students are conducted on the basis of 'growth and development' in a continuous process rather than an event, integrated into the teaching-learning process and spread over the entire span of academic session. It means regularity of assessment, frequency of unit testing, diagnosis of learning gaps, use of corrective measures, retesting and feedback of evidence to teachers and students for their self-evaluation.

The second term 'Comprehensive' means that the scheme attempts to cover both the scholastic and the co-scholastic aspects of the students' growth and development. Since abilities, attitudes and aptitudes can manifest themselves in forms other than the written word, the term refers to application of variety of tools and techniques (both testing and non-testing) and aims at assessing a learner's development in areas of learning, like:-

- Knowledge
- Understanding
- Applying
- Analyzing
- Evaluating
- Creating

(CBSE Manual)

CCE as a process of evaluation focuses on a holistic development of the learner. Unlike the former examination system where the learner was assessed at the end of a term, CCE emphasizes assessment as an integral part of teaching/learning process. The regular assessment not just includes scholastic achievement but also the co-scholastic achievement of a student. The Central Board of Secondary Education, mentions CCE as an effective scheme which envisages improvement of the teaching/learning process and also to diagnose the learning gaps by providing corrective measures at the right time. The paradigm shift from examination to effective pedagogy is one of the important aspects of CCE. The following are the stated objectives of CCE.

- It will reduce the stress and anxiety that is often built up in an examination system.
- It will result in the higher level of learning due to timely diagnosis of learning gaps, and the remedial interventions.
- It will help the learners to develop holistically in terms of all the three domains of personality.
- It will enable the learners to appreciate the love for learning compared to the need for learning.

CONCEPTUAL FRAMEWORK

The education system which reflects the expectations of a society's needs has to work in tandem with the evolving social structures. The curriculum meets the demands of the society, and in turn functions as the supporting framework for the system so as to be able to produce effective citizens for its nation. Subsequently, the curriculum and its important components need to be constantly reviewed in the context of a pedagogical framework in relation to the development. However, what is left behind in this whole process is the reform of the assessment which measures the quality of this very transaction.

Various reforms have taken place in the past, wherein CCE is the latest and the least explored field. It is indeed like a nuclear fission, where the reaction has taken place and its effect shall continue as long as it is rightly channelized.

STATEMENT OF THE PROBLEM

The alternative scheme of evaluation came as a revolutionary step. It was considered to be a relief from the external examination, and the evaluation was de-emphasized from the perspective of the mere test of the memory. However, the field of reforms has somewhere fallen prey to a non-performative set of ideologies which have become dormant or in active. Rather it has become a sort of dis-illusionary state in this whole function of learning versus performance. The researcher here intends to identify the gap from a teacher's perspective where the whole onus of learning and performance is at times refracted from the pedagogical framework to a system of uncertainties. Though CCE has now become a new philosophy of education it fails at times to achieve that very concept of freedom.

SIGNIFICATION OF THE STUDY

The National Policy on Education (1986) mentioned the need for internal assessment; where for the first time the term Continuous Comprehensive Evaluation was used as a basis to improve the teaching/ learning in functional terms. However its implementation in a larger context was initiated by CBSE in 2009. By the year 2012-13, CCE system has been mandatorily been implemented in many state run schools.

The SCERT in Telangana and the government of Telangana took active initiative to implement CCE in the government run schools. Through the initiatives of the Rajiv Vidya Mission, the Telangana state has been able to implement CCE by significantly modifying the textbooks in CCE format.

The present study is an attempt by the researcher to understand the perception of the teachers on CCE approach and also to understand the current practices and the difficulties faced by the teachers in CCE approach in Telangana State schools.

OBJECTIVES OF THE STUDY

- To understand the perception of the teachers on CCE system in the Telangana state schools.
- To understand the current practices and the difficulties faced by the teachers in CCE system in Telangana State schools.

RESEARCH QUESTIONS

- Is CCE in a real time classroom environment able to achieve its objectives?
- What are the challenges faced by the teachers while implementing CCE?

The target population for the present study was secondary school teachers from Hyderabad. The sample consisted of 40 teachers from two government schools and two private schools respectively.

RESEARCH TOOLS

In the absence of a standardized tool for the present study a self-constructed questionnaire was used by the researcher. The questionnaire administered to the teachers was in three sections which consisted closed-form questions.

In addition to the questionnaire, the researcher also conducted a semi-structured interview comprising of questions on the focus areas of CCE approach.

The Statistical Package for Social Sciences (SPSS, Version 21.0) was used to analyze the data.

RESEARCH FINDINGS

- The study confirmed that there is a gap in the prescribed objectives of CCE and its implementation in the real time classroom environment

- Though there is a visible difference in the performance of students after the introduction of CCE, yet at the same time teachers also feel that students carry clear lack of interest in studies with the introduction of policies like 'no detention'.
- Teachers do agree to a certain extent that there is a shift from the summative to formative assessment, however in reality they do not see much difference between what they call formative assessment and summative. That is, as CCE means a process of continuous learning and assessment, it is the responsibility of the teachers to conduct a regular pattern of assessment so as to identify the learning gaps and to provide remedial measures to the students. However what happens in reality is that many a time, teachers see formative assessments as mere tests which would be counted as one of the marks so as to fit in the entire formula of CCE.

RECOMMENDATIONS

- The scheme of CCE should not be an imposed system. Rather teachers should feel from within what the true ideology and the philosophy of CCE really propounds.
- As suggested by one of the teachers from the government school, CCE is not meant for the learners alone; it equally means for the teachers' and their continuous development.
- There should be regular appraisal programmes for the teachers.
- There should be regular workshops on better teaching/learning approaches/practices and it should be for all the subjects.
- While designing the textbooks in the CCE model, there is huge gap as identified by the teachers both from the private and the government schools. This gap has to be filled by involving the teachers in designing the textbooks.

CONCLUSION

CCE is all about holistic development of a learner. However there is a need for introspection in real terms so as to ensure how far our teachers are trained in implementing CCE so that they will be able to provide the best of their potential too, and be the real potter and be able to mold the wet clay as a complete human. The reforms in the field of education are a continuous process. More studies and research need to be conducted in this area on CCE. Though CCE as a concept has widely spread like a wild fire, its true implications can only be channelized if it is effectively implemented.

REFERENCES

- Nawani, Disha. (January 12, 2013) Critique on the adoption of CCE. Economic and Political Weekly. VOL XLVIII No 2
- Singhal, Pooja. (January - June 2012) Continuous and Comprehensive Evaluation- A Study of Teachers' Perception, Delhi Business Review X Vol. 13, No. 1
- Academic Support to States and UTs in CCE implementation at the Elementary Stage (July 9-11, 2013) NCERT
- Rao, Dr. Manjula, T. Rao, Dr. Purushothama. Effectiveness of Continuous and Comprehensive Evaluation over the Evaluation Practices of Teachers, Regional Institute of Education, NCERT, Mysore. <http://conference.nie.edu.sg/paper/Converted%20Pdf/ab00673.pdf>
- Iyer, Harish and, Yagnik, Ms. Babusha. A critique of Continuous and Comprehensive Evaluation (CCE) as a Philosophy of education. Concept Institute of Education, Ahmedabad, Gujarat. http://www.azimpremjiuniversity.edu.in/sites/default/files/userfiles/files/Babusha-Yagnik_Harish-Iyer.pdf

- NCERT Position Paper on Examination Reforms, 2006, NCERT
- National Curriculum Framework. 2005, NCERT
- CBSE Manual for Continuous Comprehensive Evaluation. 2010. CBSE
- Scheme of Continuous Comprehension for Navodaya Vidyalayas, Navodaya Vidyalaya Samiti, Ministry of Human Resource Development, 1989
- National Policy on Education, 1986

India's Intervention Regarding Access to Patented Drugs

Nahid Hasan*

ABSTRACT

Has State of India done sufficiently to ensure access to drugs to their citizen's at large? What should it has to do more? Paper intends to see the role of state of India regarding access to patented category of drugs.

Keywords : Patent policy, TRIPS agreement, Patented drugs, Non-Patented drugs, Indian Patent Act 1970.

INTRODUCTION

Indian pharmaceutical industry has gone through different phases. Each phases has its own characteristics. Before independence it was dominated by foreign multinational companies. After independence, state started to intervene the industry and took the control over industry. But after 1995, nature of Indian pharma industry started changing due to the threat of globalisation.

After independence, state made strong public sector for the pharma industry. Indian pharma industry grew indigenously till 1990's. This is due to process patent. The Indian Patent Act 1970 granted process patent in place of product patent in food and pharmaceuticals. With the help of process patent Indian Pharma industry grew rapidly. Balance of trade grew in this field in favour of India after the 1990's. But the threat to industry started after India endorsed the "TRIPS" agreement in 1995. "TRIPS" agreement initiated product patent in all sector including pharmaceuticals. But India successfully managed this challenge by utilising the TRIPS provisions and saved their industry.

OBJECTIVE OF THE PAPER

The paper tries to find out the provision of TRIPS agreement, which is used by the government of India to protect their pharma industry and to continue ensuring the essential drugs to their citizens at large.

METHOD

Paper will see the intervention of state through human right discourse because it includes access to drugs, health rights as their critical pursuit. Because pharmaceutical industry is primarily related with the health of people, ensuring community and public health becomes the prime duty of state.

DESCRIPTION

There are two types of drugs available in India. One is patented category drugs and other is non-patented category drugs. Patented category drugs are those drugs whose price ownership is

*Department of Political Science, Guru Ghasidas Central University, Bilaspur, Chattisgarh, India.
E-mail- hasannahid282@gmail.com

controlled by foreign multinational companies. It can also be said it is those drugs whose patent is held by foreign multinational companies.

India granted process patent for food and pharma products in section 5 of Indian Patent Act of 1970¹. This meant that same drug could be produced by several companies using another method. It reduced the price of medicines drastically comparing to other countries. It is the process patent which helped the Indian pharma industry to grow into a world class industry. Through this Indian pharma industry stands not only to its counterparts, but also gave challenges to the most developed countries.

But when product patent regime was introduced in pharmaceuticals as per the TRIPS agreement, the scenario of the drug industry got changed. It created constrain on developing new molecule through reverse engineering, which is making the patented drug by using another process. State intervened to ensure access to drugs. It took the flexibilities which were existed in TRIPS agreement in para 4 and 5 of the Doha Declaration, to keep the price of essential drugs as low as possible.

First intervention by the state to extract TRIPS provision to ensure drugs

Indian Parliament has made three sets of amendments before endorsing product patent in food and pharmaceuticals. Through these amendments state utilised the flexibilities of TRIPS agreement which was inducted in TRIPS with the pressure of the developing countries. It was done under the name of access to essential drugs.

The amendments were brought up in 1999 as first amendment, 2002/2003 as second amendment and 2005 as third amendment. 1999 amendment accepted product patent applications in food and pharmaceuticals from January 1 1995 (known as mailbox provisions) and provided EMR (Exclusive Marketing Rights) to multinational drug companies. Ones EMR is given to any pharma company it stops the production of the same drug by any other company. So far four EMR have given by India. First was the Novartis AG for its anti blood cancer drug Glivec. Ones generic manufacturers stopped producing the drug its price shot up to 1, 20,000 per month from 10,000 per month.

Second intervention by the state to extract TRIPS benefit for ensuring drugs

The other step taken by state to enhance drug access was the change in Section 3(d) of 1970 India Patent Act. This change which is highlighted below became the basis for the rejection of the patent claim made by "Novartis AG" for its supposedly new drug "Gleevec", by the "Supreme Court of India". Patent Amendment Act 2005 excluded discoveries or new use of a known substance from patenting. Just before its amendment in 2005, section 3(d) in the Patents (Amendment) Ordinance, 2004 (Ordinance No.7 of 2004), read as under:

"Section 3. What are not inventions.--The following are not inventions within the meaning of this Act,-- (d) the mere discovery of any new **property or mere new use for a known substance** or of the mere use of a known process, machine or apparatus unless such known process results in a new product or employs at least one new reactant."

After the amendment with effect from Jan 1, 2005, section 3(d) stands as under:

"Section 3. What are not inventions.--The following are not inventions.--within the meaning of this Act,-- (d) ***the mere discovery of a new form of a known substance which does not result in the enhancement of the known efficacy of that substance or the mere discovery of any new property or new use for a known substance or of the mere use of a known process, machine or apparatus unless such known process results in a new product or employs at least one new reactant***".

Explanation.--For the purposes of this clause, salts, esters, ethers, polymorphs, metabolites, pure form, particle size, isomers, mixtures of isomers, complexes, combinations and other derivatives

of known substance shall be considered to be the same substance, unless they differ significantly in properties with regard to efficacy²."

The objective of this change legislated by the parliament of India was to prevent "evergreening" i.e. the practice of extending patent protection by obtaining another 20 year patent on different attributes to a single product. The law sought to achieve this by prohibiting the patenting of new forms of existing pharmaceutical products that do not demonstrate significantly enhanced efficacy.

Third intervention by the state to extract TRIPS benefit for drug access

Indian Parliament inserted **section 11A to 1970 Act** in the first amendment (which is 1999 amendment) to accept mailbox applications. It is the application for a new drug which is accepted and kept in mailbox for examining in the year of 2005. After third amendment, 2005 Act gave "automatic compulsory license³" to those generic companies who has already made investment and who were producing the particular drugs. It is for those drugs who was kept in 'mailbox applications", who had the possibility of getting the patent right.

This provision gave advantage to the generic version of the Gleevec was producing the drug before 2005. The Indian company could invoke Ar. 11A and continue producing the drug. But they have to give the royalty to the patent holder of those particular drug.

Fourth intervention by the state to extract TRIPS benefit to access drugs

Third amendment in 2005 added 92A to give compulsory license to export the drugs to those countries who has no infrastructure to produce generic drugs. This issue was kept unresolved in para 6 of Doha Declaration of TRIPS Agreement. The Doha Declaration had no clarity for importing the cheap generic needed drugs to least developing countries.

Third amendment bill tried to resolve this issue. It allowed those countries to import drugs from India after invoking Ar. 92A⁴. It is the very important state intervention regarding drug access. As 31(f) of TRIPS agreement restricted to export the drug to other countries apart from their domestic market⁵, who had the infrastructure to make generic drugs. This TRIPS article directly meant that generic drug producing countries are debarred to export drugs to least developing countries who needed them most.

CONCLUSION

Present article describes that state of India has made several provision to meet the drugs need of the people at large. It has made various amendments of The Indian 11Patent Act 1970 in this regard. This way to access the patented category of drugs state has done a great job but simultaneously there are lots more to be done to access non-patented category of drugs.

REFERENCES

- "Civil Appeal Nos.2706-2716 OF 2013 (ARISING OUT OF SLP(C) Nos. 20539-20549 OF 2009), NOVARTIS AG (APPELLANT) VERSUS UNION OF INDIA& OTHERS (RESPONDENT)", 1-112:5
- "Indian Patent Act 1970."
- "Lok Sabha Debates, Combined Discussions on the Statutory Resolution Regarding.on 22 March, 2005. Title: Combined Discussions on the Statutory Resolution Regarding disapproval of Patents (Amendment) Ordinance, 2004 (No.7 of 2004) and the Patents (Amendment) Bill, 2005. (Resolution negatived and Bill Passed)", 1-126.
- "Raju, K.D" (2012), "Interpretation of Section 3(D) in the Indian Patents Act 2005: A case study of Novartis"[On line web] Accessed on 5Dec 2014, www.nalsar.ac.in/IJIP/Archives/volume%2012.pdf, 1-19:12.
- "TRIPS Agreement."

ENDNOTES

1. Section 5 of the "Indian Patent Act 1970" states, "In the cases of inventions- (a) claiming substances intended for use, or capable of being used, as food or as medicine or drug, or (b) relating to substances prepared or produced by chemical processes....no patent shall be granted in respect of claims for the substances themselves, but claims for the methods or processes of manufacture shall be patentable.
2. "Lok Sabha Debates, Combined Discussions on the Statutory Resolution Regarding.on 22 March, 2005. Title: Combined Discussions on the Statutory Resolution Regarding disapproval of Patents (Amendment) Ordinance, 2004 (No.7 of 2004) and the Patents (Amendment) Bill, 2005. (Resolution negatived and Bill Passed)", 1-126:116, 117; "Civil Appeal Nos.2706-2716 OF 2013 (ARISING OUT OF SLP(C) Nos. 20539-20549 OF 2009), NOVARTIS AG (APPELLANT) VERSUS UNION OF INDIA& OTHERS (RESPONDENT)", 1-112:54; See also "Raju, K.D" (2012), "Interpretation of Section 3(D) in the Indian Patents Act 2005: A case study of Novartis"[On line web] Accessed on 5Dec 2014, [www.nalsar.ac. in/ IJPL/Archives/volume%2012.pdf](http://www.nalsar.ac.in/IJPL/Archives/volume%2012.pdf), 1-19:12.
3. Compulsory license is making the generic version of patented drug after giving permitted royalty to the patent holder.
4. "Resolution passed by Lok Sabha in "Combined discussion on the Statutory Resolution regarding...on 22 march, 2005, Lok Sabha debates", 1-128: 126
5. "TRIPS", Ar.31, 319-351: 333, "where the law of a member allows for other use of the subject matter of a patent without the authorisation of the right holder, including use by the govt. or third parties authorised by the govt., the following provisions shall be respected:...
(f) any such use shall be authorised predominantly for the supply of the domestic market of the Member authorising such use".

Strategic Partnership as a Tool in Bilateral Relations

Dr. Vijay Pratap Gaurav*

ABSTRACT

The Strategic Partnership Agreement is truly an elevation of the 1971 agreement on peace, friendship and cooperation in the altering situation of the post-Cold War international relations. In 1971, the situation was very different. The South Asian continent was beclouded by a warlike situation that culminated into a conflagration in the December of that year. The Nixon administration was pursuing a clear anti-India stance by persuading Pakistan to wage a war on India, and at the same time, provoking China to threaten India. The US naval ship "Enterprise", popularly known then as the 7th Fleet, was moving from the Indian Ocean menacingly into the waters of the Arabian Sea. In the backdrop of all these developments, the former Soviet Union was siding with a friendly India morally, technologically and militarily, to ward off any risk and to guarantee harmony in the subcontinent. It was then that the famous treaty of friendship and cooperation had been signed. The situation is, however, strikingly different today (Dash 2008: 49).

Keywords: Strategic Partnership, Post-Cold War

EVOLUTION OF THE RUSSIA-INDIA STRATEGIC PARTNERSHIP

The end of the Cold War and especially the disintegration of the Soviet Union have transformed several geopolitical questions in the International Relations. The Russia – India relationship sustained to ensure secure and nice. Though, the military technical collaboration maintains to keep tough in the modern times and the other factors like economic, strategic factors lead to new confrontations. The end of the Cold War and particularly the fall down of the Soviet Union has changed many geopolitical equations in international relations. The Russia-India relations continued to remain close and pleasant. However, while the military technical cooperation continued to remain strong, in the recent times, economic and strategic considerations have brought forth new challenges.

The Russian leadership under Yeltsin had hoped that the collapse of the USSR, systemic transformation, including alteration to a market economy and multi-party democracy, would lead in a period of escalating collaboration and assimilation with the West. Thus, followed a period of harmony with the West that witnessed an increasing isolation of Russia from its traditional allies. However, it did not take long for Russia to realize that its geopolitical and strategic interests as a big power did not coincide with that of the US and its Western allies. Its efforts to strengthen the UN system were given a blow with the expansion of, and unilateral actions by, NATO). The aid and investment from the West were not adequate and mostly used as a factor to influence Russia's internal events. The NATO expansion, disillusionment with the reforms, economic hardship, dangers of secessionism, terrorism and religious fundamentalism, compelled the Russian leadership towards the end of the Yeltsin period itself- to rethink and reorient its foreign policy (Arbatova 2002: 166).

*PhD, Centre for Russian and Central Asian Studies, School of International Studies, Jawaharlal Nehru University, New Delhi.

RUSSIA'S NEW FOREIGN POLICY CONCEPT

Russia's foreign policy doctrine under President Putin moved away from the Euro-centric, rather US-centric, foreign policy pursued earlier. The new foreign policy concept, approved by Putin in July 2000, formed new guidelines and emphasized the priority of Asian giants like India and China in its external relations. One of the critical dimensions of the Russian foreign policy in Asia is of expanding friendly connections with the important Asian states, mainly China and India. The new doctrine also emphasizes Russia's active participation in regional organizations of Asia like ASEAN, APEC and SCO (Mohanty 2001: 149).

Mohanty (2001) says that Russia's new foreign policy doctrine said that "Russia intends to strengthen its traditional partnership with India, including in international affairs, and to facilitate the overcoming of problems persisting in south Asia and strengthen stability in the region". India was boosted to the centre-stage of Russia's renewed foreign policy under Putin's presidency.

Nazarkin (2008) has discussed that the advent of the new millennium and a new leadership in Russia under President Putin heralded a new era, when Russia looked forward to play its role in the new context of globalization. The whole gamut of bilateral relationship received a fillip in the strategic partnership. The partnership treaty is first of all, an official approval accorded to the time-tested friendship between the two countries. Secondly, it is an essential ingredient to checkmate the growing US presence around the two countries, in Central Asia and West Asia. Thirdly, it has charted out a broad outline of future relations and identified several areas where mutual cooperation is possible. Fourthly, it has chosen such key areas of cooperation as information technology, space and environmental security, bio-science, biotechnology, and so on. Precisely, the treaty has reiterated the essence of commonness where imperatives of cooperation prevail or could be initiated. The whole gamut of military cooperation, including the procurement of advanced Sukhoi fighters, joint production of BrahMos missiles and the upgrading of the MiG series fighters is inclusive of the strategic partnership. It is not a military alliance, not a strategic bloc; it not a political union or an economic grouping, yet it is all encompassing, ever unfolding and opening up new vistas of synergy in the new globalizing context of the growing US involvement in South Asia.

PUTIN'S VISIT TO INDIA AND STRATEGIC PARTNERSHIP

President Putin's India visit from 2nd to 5th October 2000 was distinguished from his other foreign tours in that it was his first full-fledged, single-nation visit and was the longest stay in a guest country. As a Russian head of the state, Putin's visit to India was destined to alleviate the bilateral ties to a qualitatively new level. Russian understood well that India was the only country among Moscow's former friends and allies which did not turn its face away from Russia, notwithstanding the latter's predominantly pro-Atlantic foreign policy (Gopal 2008: 86).

Strategic partnership is viewed as an active pursuit of mutual interests by countries in both the bilateral and global affairs for which a priority importance is assigned to each other's national policy. The Russia-India strategic partnership was not a military alliance but provided an anchor of assurance in a sea of considered flux. It conveyed that both countries have a sense of solidarity in each other's strength and stability. Talking about it, Vajpayee said, "Our friendship is not based on short term calculations, but transcends the twists and turns of history and politics" (Dash 2008: 11). Indeed, this pact presents a detailed roadmap for stronger Russia-India ties in the new century.

Bilateral defence cooperation constituted a significant element in the strategic organization between the two nations and received a further boost as a result of the summit during which an agreement was signed to set up an intergovernmental assignment on defence and technical collaboration to strengthen the contact.

Putin addressed the scientific community at BARC and became the first Russian president to visit the Indian atomic energy establishment since its inception. He also visited the research reactor *Dhruva*. He had a glimpse of a special exhibition on the state-of-the-art technologies developed by various units of the Department of Atomic Energy at the Central Complex during his visit there. The uppermost atomic energy representatives signed a Memorandum of Understanding on increasing bilateral assistance in the nonviolent exercises of atomic energy. The MoU was also believed to emphasize that the designed nuclear assistance would be completely in adjust with Moscow's international legal responsibility on the relocate of nuclear technology. The accord was to strengthen India's strategy to hasten the nuclear power invention agenda. Over the last few years, nuclear power has given to the energy market (Parthsarathy 2002: 27-28).

But the nuclear mutual aid with India has been made complex by the present international rules on transmit of nuclear reactors. These system concerned by the nuclear suppliers group, a cartel of sophisticated states, in early 1992, insist that any nuclear sale to India must be pursued by the so called "full scope safeguards" or absolute worldwide rule over the Indian nuclear agenda. India has no purpose of accommodating such peripheral directions (Parthsarathy 2002: 27-29).

There are several defence missions that are presently in process; For instance, Brahmos cruise missile development and the licensed manufacture of the T-90 tanks for the Indian Army, the Sukhoi-30 for the Indian Air Force and MiG-29 K for the Indian Navy. There are also several other developments on the anvil which comprise the transformation of ships, joint scheming and manufacture of medium-lift helicopters, unmanned aerial vehicle, fifth-generation fighter aircraft and the GLONASS navigation structure.

Thus, barring some exceptional areas which belong to the domestic domain, there is virtually no difference, or any conflict, between the strategic objectives of Russia and India.

Thus, it can be seen that the strategic partnership between Russia and India is not limited to defence cooperation but is comprehensive in nature. Its ultimate aim is the creation of an equitable, just and fair world order and though it is not overtly directed against any State, it talks, in no uncertain terms, about the deliverance of the world from the vices of unipolarity.

Therefore, the Russia-India strategic partnership expects both these countries to act in unison in every possible way. These objectives require not only military but also economic, political, cultural and all the other possible types of cooperation between them. It will not be an exaggeration to say that if Russia and India are really serious about these objectives, they will have to pool all the resources at their command and act in so concerted a manner as to appear as being not two different nations but one and the same.

STRATEGIC PARTNERSHIP AS A TOOL IN BILATERAL RELATIONS

The strategic partnership rejuvenated a battered relationship by encouraging a public-private partnership in joint ventures. If the Russia-India relations had been state-to-state affairs, they are no longer so. The private participation in a wide range of activities is the hallmark of the new epoch. The strategic partnership has put behind the years of worry over procuring spurious defence spares from a third source. It has enhanced the possibilities of tapping the huge potentials that do exist in both the countries, but are going unexploited. Gone is the decade of 1990-2000, when the Russian economy, saturated by a pro-Western infatuation, grew annually at minus 4.8 per cent, while the Indian economy maintained a sustained growth rate of 6 per cent. Back to its 6 per cent annual growth, Russia has rectified the past mistakes and looks forward to having friends with whom its economic interaction will be fruitful. However, there are two major asymmetries: 86 per cent of the Russian GDP comes from the sale of oil, gas and metals which shows signs of economic fragility.

Secondly, up to 2006, all Russian exports to India were being paid for in hard currency, while the Indian exports to Russia were largely being adjusted against the debt resettlement account. A growing engagement in various economic activities may fundamentally alter questions in relation to the context of strategic partnership, simply because the partnership must not be based on unequal terms (Dash 2008: 407).

In the field of trade and economy, the two countries agreed to strengthen a quicker collaboration within the structure of the Russia-India Inter-Governmental assignment on Trade, Economic, Scientific and Technological, and Cultural Cooperation, as well as other joint bodies of business and industry officials, with an analysis of intensifying the trade and economic relations. Defence is a crucial part of support. Both nations decided to go further from a simple buyer-seller connection to strengthening defence and military technical assistance in a long-term viewpoint. With this aim, they decided to deepen service cooperation and explore the possibility of joint venture and production. In the science and technological sphere, they agreed on supporting active and new structure of assistance in basic and practical scientific research, increasing the substitute of scientists and scientific information and determining direct connection between scientific research and high educational establishments (Gidadhubli 2009: 21-23).

They also agreed on collaboration in the fight in opposition to terrorism, autonomy, organized crime and illegal trafficking in narcotics.²

CONCLUSION

Apart from Israel, France, USA, UK and Ukraine are other major suppliers of weapons to India. The US regards India as a strategic partner and is willing to sell a large number of weapons to India.

Russia will not easily let go its leading position in the Indian weapons market. One cannot deny that collaboration and cooperation in the defence sector is mutually beneficial for both parties. For India, one can easily assume that a military sale of Moscow is not the only route and it is not the only option also for any other sector. It is significant change when one compare the military cooperation with the US. India is the only state with which Russia has a military-technical **mutual aid harmony**.

REFERENCES

(*indicates a primary source)

- Ashgar, Tahir (2001), "Indo-Russian Trade: An Overview", in Shams-ud-Din, (eds.), India and Russia: Towards a Strategic Partnership, New Delhi: Lancers Books.
- Badan, Phool (2001), Dynamics of political Development in Central Asia, New Delhi: Lancer Books.
- Bakshi, Jyotsna (2001), "Cooperation between India and Russia in Economy and Science & Technology", in Shams-Ud-Din (eds.) India and Russia: Towards a Strategic Partnership, New Delhi: Lancers Books.
- Bakshi, Jyotsana, (1999), 'Russia and India: From Ideology to Geopolitics: 1947-98, Delhi: Dev publication.
- Bakshi, Jyotsna (1999), "Russian Policy towards South Asia", Strategic Analysis, 23 (8): 1367-98.
- Bakshi, Jyotsna (2000), "India-Russia Strategic Partnership: President Putin's Visit", Strategic Analysis, 24 (8): 1539- 44.
- Bakshi, Jyotsna (2002), "Post-Cold War Sino-Russian Relations: Indian Perspective", Strategic Analysis, 26 (1): 80-117.
- Bakshi, Jyotsna (2006), "India-Russia Defence Co-operation", Strategic Analysis, 30 (2): 449-446.
- Bakshi, Jyotsna (2010), "Russia and India: From Ideology to Geopolitics, 1947–1998", Journal of Cold War Studies, 12 (3): 50–90.
- Bakshi, Jyotsna, (1999), The advent of Gorbache: 'Russia and India from Ideology to Geopolitics (1947-1998)' Delhi : Dev Publication.

- Baskshi, Jyotsana, (2004), *Russia-China relations: relevance for India*, New Delhi: Shipra Publications.
- Basu, Baidya Bikash (1999), "Indo-Russian Defence Cooperation", *Strategic Analysis*, 23 (3): 503-505.
- Basu, Baidya Bikash (1999), "Primakov's Visit", *Strategic Analysis*, 22 (11): 1797-1801.
- Basu, Baidya Bikash (2000), "Putin's Visit and Future of India-Russia Defence Cooperation", *Strategic Analysis*, 24 (9): 1763-1769.
- Basu, Baidya Bikash (2002), "Business as Usual: Prime Minister Vajpayee's visit to Russia", *Strategic Analysis*, 26 (1): 164-169.
- Batra, Mnohar Singh (2008), "Sixty Years of India-Russia Cooperation", in V.D. Chopra (eds) *Significance of Indo-Russian Relations in 21st Century*, Delhi: Kalpaz Publications.
- Bhatia, Rajiv K. et al.(2014), *India and Russia: Deepening the Strategic Partnership*, Delhi: Shipra Publications.
- Bhatt, G.D. (1989), *Indo-Soviet Relations and Indian Public Opinion*, New Delhi: Pacifier Publications.
- *BrahMos Aerospace (2016), *History of Brahmos*, [Online: web] Accessed 12 March 2016, URL: <http://www.brahmos.com/content.php?id=1&sid=2>.
- Chandra, Amresh (2010), "Strategic Triangle among Russia, China and India: Challenges and Prospects", *Journal of Peace Studies*, 17 (2): 40-60.
- Chenoy, Anuradha (2001), *Making of New Russia*, New Delhi: Har-Anand Publishers.
- Chenoy, Anuradha M. (2010), "India and Russia: Allies in the International Political System," in P. Stobdan (eds.), *India-Russia Strategic Partnership: Common Perspectives*, IDSA.
- Chenoy, Anuradha M. (1992), "Soviet New Thinking on National Liberation Movements: Continuity and Changes", in Roger Kanet and Debrah Miner (eds.) *Soviet Foreign Policy in Transition*, Cambridge University Press.
- Chenoy, Anuradha M. (2001), "Phases of Indo-Russian Relation", in Shams-Ud-Din, (eds.) *India and Russia: Towards a Strategic Partnership*, New Delhi: Lancers Books.
- Chenoy, M. Anuradha and Ajay Patnaik (2007), *Commonwealth of Independent States: Energy Security and Development*, New Delhi: Knowledge world Publication.
- Chopra, V.D (2008), "Significance of Indo- Russian Relations: Regional and International - In the 21st Century", in V.D. Chopra (eds) *Significance of Indo-Russian Relations in 21st Century*, Delhi: Kalpaz Publications.
- Chopra, V.D (2008), *Indo-Russian Defence Cooperation: Some New Aspects*", in V.D. Chopra (eds) *Significance of Indo-Russian Relations in 21st Century*, Delhi: Kalpaz Publications.
- Chopra, V.D. (2008), "India's Relations with Russia Rooted in History ", in V.D. Chopra (eds) *Significance of Indo-Russian Relations in 21st Century*, Delhi: Kalpaz Publications.
- Chopra, V.D. (2008), "Indo-Russian Cooperation in Science and Technology", in V.D. Chopra (eds) *Significance of Indo-Russian Relations in 21st Century*, Delhi: Kalpaz Publications.
- Chopra, V.D. (2008), *Significance of Indo-Russian Relations in 21st Century*, New Delhi:
- Chopra, V.D. (ed), (2001) *Indo-Russia Relations: Prospects, Problems and Russia Today*, New Delhi: Kalpaz Publications.
- Dash, P.L (2008), "India-Russia: The Threshold of Partnership", in V.D. Chopra (eds.) *Significance of Indo-Russian Relations in 21st Century*, Delhi: Kalpaz Publications.
- Dash, P.L. (2003), "Indo-Russian Relations: Putin's Visit in Perspective", *Economic and Political Weekly*, 38 (3): 192-194.
- Dash, P.L. and Andrei M. Nazarkin (2008), *Indo-Russian Diplomatic Relations: Sixty Years of Enduring Legacy*, New Delhi: Academic Excellence.
- *Declaration on Strategic Partnership between Republic of India and Russia Federation in October 2008, [Online: web] Accessed 24 November 2015, URL: <https://mea.gov.in/Images/pdf/DeclarationStrategicPartnership.pdf>.
- Densiov, Andrei and Alexi Grivach (2008), "The Gains and Failures of the Energy Superpower", *Russia in Global Affairs*, 6 (2): 96-108.

- Desai, M.T. (2008), "Indo-Russian Relations for a Better International Order", in Dash, P.L and Andrei M. Nazarkin (eds.), Indo-Russian Diplomatic Relations: Sixty Years of Enduring Legacy, Delhi: Academic Excellence.
- Deshpande, Sanjay (2008), "India and Russia: Mismatch of Potentials and Performances in Economic Ties" in V.D. Chopara (eds) Significance of Indo-Russian Relations in 21st Century, Delhi: Kalpaz Publications.
- Dikshit, Sandeep (2007), "India inks biggest arms deal with U.S", The Hindu, New Delhi, 8 February 2008.
- Mohan, C.Raja (2000), "India Russia to strive for multipolar world order", The Hindu, New Delhi, 4 October 2000

Managerial Effectiveness in Relation to Organizational Climate – A Study in Tirupati, Chittor District

Dr. G. Bhadramani* and S.U.N. Radha Krishna**

ABSTRACT

Effectiveness involves doing the right things. It is particularly important in the case of managers, as they are responsible for the performance of others. Effective managers improve the overall effectiveness of the organization. They translate their ideas and intelligence into results, and ultimately make themselves successful. Effectiveness is best seen as something a manager produces from a situation by managing it appropriately. The effective managers have an appropriate style of functioning and it is assumed that they perceive the organizational climate as favorable. The manager should involve in such type of job behavior, which he becomes part of the effort for achieving the results. The study was conducted in Commonweal organizations. In the process Managerial Style Diagnosis Test designed by Reddin (1988) was used to measure managerial effectiveness and a modified version of Litwin and Stringer's (1968) organizational climate questionnaire developed by Ansari (1990) was used to tap the managers' perceptions of the organizational climate. In commonweal organizations, bureaucrat style of management is mostly preferred and all the effective management styles did not show any difference with regard to their perception of organizational climate.

Keywords: Bureaucrats, Managerial Style, Organizational Climate, Commonweal Organizations

INTRODUCTION

Management is simple but subtle. This means that many ideas that form the core of management often seems like common sense to many people, on the other hand, making these ideas work on the job requires a tremendous amount of insight into organizations and human behavior as well as the ability to weave together the job requirements and personal needs. Management is defined as "getting things done through people" by Mary Parker Folett (FJH Ontology, 2011). A manager in an organization has to co-ordinate all the activities for achieving the goals set by the organization. For this he works along with his superiors, peers, subordinates and meets number of delegates at his work place. Developing countries like India requires an effective management for its fast development. The stand of a country in a rapid changing international scenario depends on the managers. These people are solely responsible for creating the wealth by utilizing the resources that are available to them. An effective manager is one who utilizes the available resources fully, i.e, human resources, machinery and produces output in the stipulated period of time. When a manager in an organization

*Associate Professor in Psychology SPW Degree & PG College Tirupati- 517502 Andhra Pradesh, INDIA
E-Mail:gollabhama@gmail.com

**Assistant Administrative Officer. Commissionerate of Collegiate Education Vijayawada-521108

uses his abilities, skills fully the organization reaches its goals. It can be seen as achieving the goal within a period of time by utilizing the available resources fully.

MANAGERIAL EFFECTIVENESS

Effectiveness is not an aspect of personality. It is a quality a manager possess. "Effectiveness" is the central issue in management. It is the manager's job to be effective. Research experience indicate that some behavioral dimensions help managers to be effective in the organizational settings. Managerial effectiveness is difficult to measure in purely objective and observable terms. Effectiveness is best seen as something a manager produces from a situation by managing it appropriately (Lata Devi, 2018). In its current terminology, it represents output, not input. A manager must think in terms of performance. It is what he achieves but not what he does. Profit of a unit purely is not one's own effort, but it is a collective work of managers, their cooperation, favorable economic environment. Company strategy also plays a major role. A manager can recognize his own strengths and weaknesses, requirements of a job well; overcoming weakness through continuous learning may be considered as effective; because he is solely responsible for creating wealth and using resources in new and useful ways.

Managerial effectiveness is believed to be a function of (1) ownership, real or conceptual, (2) ability to promote an atmosphere in which specialists can thrive and offer advice on relevant issues, (3) generalizing an atmosphere where there is a complete mastery of relevant details at all levels. Though the work of all managers is usually described by behaviors and activities, different managers in managerial jobs will place more or less attention on specific behaviors, associated to particular roles to perform effectively.

Managerial effectiveness consists of the following elements

1. Manager

Manager is the key pin of a successful organisation. Well-defined objectives and strategies are required to effectively transform inputs into outputs. Managerial effectiveness is governed by managerial skills, competence, intelligence, knowledge, sincerity and creativity. It is judged by not what the managers do but by how well they do. Effective managers enable the business to grow in the dynamic environment.

2. Organisation

Managerial effectiveness is also judged by the organisation itself. Highly innovative and creative managers may not perform well if the organisation structure does not permit them to do so. The structure, value system, design, culture, size and the work environment largely determine the way managers manage the organisation. A highly bureaucratic and formal organisation structure may not have committed and effective managers.

3. Entrepreneurship

Success cannot be ensured unless managers have the quality of entrepreneurship. Managerial effectiveness ensures that business in future is different from business today. It requires hard work, intelligence, creativity and innovativeness to keep the business successful in future.

4. Environment

Business operates in the dynamic and turbulent environment with ever changing factors (economic, political, legal, social etc.). Managers adapt the organisations according to demands of the environment. Successful and effective managers not only respond to environment; they also influence the environment and become market leaders in the industry.

Managerial effectiveness is not an end. It is a means to the end, that is, efficient attainment of organisational goals. In order to accomplish the tasks effectively, managerial effectiveness deals with managerial jobs, skills of managers and the organisation as a whole.

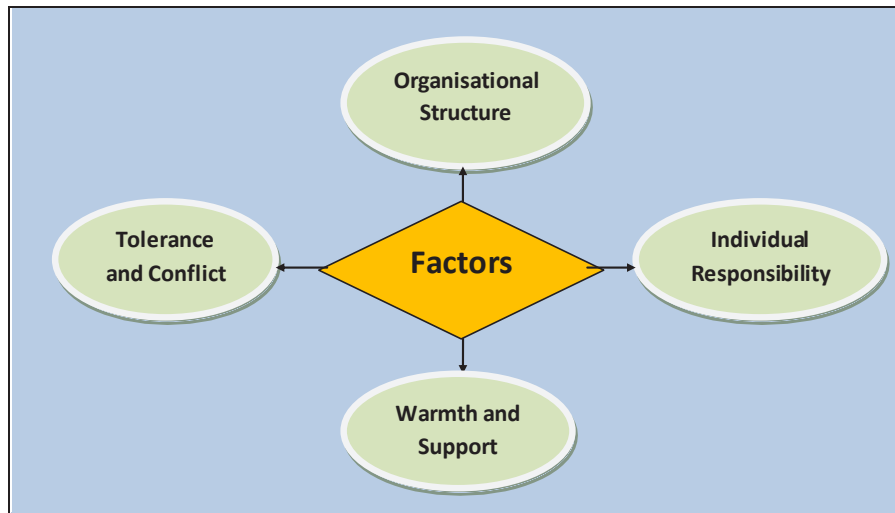
ORGANIZATIONAL CLIMATE

Basically organizations are social systems. They differ in their characteristics in internal environment. The internal environment of an organization may be termed as “Organizational Climate”. Campbell (1971) has defined organizational climate as a set of characteristics that describes an organization that distinguish it from other organizations, are relatively enduring over period of time and influence the behavior of people in it. The two definitions of Gerber (2003) and Moran & Volkwein (1992) were integrated to define Organizational climate as the shared perceptions, feelings and attitudes that organizational members have about the fundamental elements of the organization, which reflect the established norms, values and attitudes of the organization’s culture and influences individuals’ behavior positively or negatively (Manish Madan, 2015). Organizational climate has a long history in industrial & organizational psychology and organizational behavior.

Organizations involve a large number of workers, specialists interacting to produce a whole output. The size, structure, policies, principles of organizations may differ from one another. However, the purpose of any organization is to organize people and coordinate them to function for the development of the organization. The type of work differs from organization to organization. To lead his organization towards the goal set by the organization, a manager’s style of function should meet to the demands of the situation. It is assumed that a manager should possess certain personality characteristics, achievement motivation and favorable perceptions of his organizational climate in order to know and understand the demand of the situation. In achieving the goals of the organization a manager has to control and motivate the people in it. It is his performance that makes him to-be-called an effective manager. It is the performance of the manager through which managerial effectiveness is defined or determined. To be effective, managers have to behave appropriately to the situation in which they work. The effective managers have an appropriate style of functioning and it is assumed that they perceive the organizational climate as favorable. The manager should involve in such type of job behavior, which he becomes part of the effort for achieving the results.

The impact of work environment of employees has significant influence for both individuals and organization. Climate or environment in workplace has significant effect on the motivation, behavior, attitudes and capability of employees, which, in turn is assumed to influence organizational productivity. Employees are recruited in such type of organizations which have healthy work environment and effective communication practices, where they can get platforms to express their concerns and opportunities to grow and develop their potential. The goals of organization acts as the driving factors to engage its employees and enhance the development of organization.

Factors Influencing organizational Climate



REVIEW OF LITERATURE

Ms. Ruchi Arya, Dr. Monica Sainy (2017) Studied the Impact of Organizational Climate on Employee Engagement in the Banking Sector with Special Reference to State Bank of India, Indore. The result shows that there is a significant relation between organizational climate and Employee Engagement. The study also focuses on organizational climate factors such as Structure, Responsibility, Standards, Support, Commitment, Reward, Warmth and Risk and Conflict that effect the employee's counterproductive behaviours that act as a driver for engaging the bank employees.

Manish Madan, Esha Jain (2015) aims to draw attention towards the importance of managerial effectiveness and its dependency on variables like organizational climate and culture in the Indian context. Results revealed significant influence of Organizational Climate and Organizational Culture on Managerial Effectiveness of managers of private and public sector undertakings. On the other hand t-test reveals significant difference between managers categorized under public and private sector organizations on all the measured variables.

Umesh Bamel, Santosh Rangnekar, Peter Stokes, Renu Rastogi (2013) conducted a present study is to propose a conceptual model that empirically examines the relationship of dimensions of organizational climate with managerial effectiveness in Indian organizations. The results indicate ways in which organizations might develop supportive climates in order to reinforce effectiveness of the organizational members. Originality/value The role of organizational climate in employee effectiveness is currently under-researched in the Indian context. The present study is an earnest effort in this direction to analyse the link between organizational climate and managerial effectiveness.

S.R. Vijayakumar (2007) organized a present study to investigate the forces within the organizational context that help to shape favorable climate perceptions among its employees. While directive style results in unfavorable climate perceptions, diversity tolerance and individual orientation moderate by reducing the unfavorableness of climate perceptions. Participative style shapes favorable perception and its effects are enhanced by diversity tolerance and team orientation.

METHODOLOGY

In view of the importance attached to manager's effectiveness at jobs, the present study has been planned to study managerial effectiveness commonweal with idea that managers play a key role in the organizations' growth. Further the study also aims to examine the contribution of organizational climate to managerial effectiveness.

In the light of the available research information, the study has been planned with the following objectives;

1. To classify the managers independently according to the managerial styles used by them appropriately or inappropriately as
 - Managers more effective
 - Managers less effective
2. To explore the relationship between organizational climate to managerial effectiveness.

SAMPLE

The sample in the present study consists of persons in managerial positions in commonweal organizations and overall 60 respondents are selected randomly for the study. The units considered for the present study are government offices in Tirupati, Chittoor District and the sample are superintendents in government offices. The selected respondents ranges from 40 years to 50+ years.

TOOLS

In the present study Managerial Style Diagnosis Test was designed by Reddin (1988) was used to measure managerial effectiveness. This test is directly related to the eight styles of 3-D theory of managerial effectiveness and has been widely tested in government organizations. The 3-D theory (Reddin, 1988) introduces 'effectiveness' as a third dimension, In addition to task orientation and relationship orientation. Task orientation is the extent which managers direct the efforts of others characterized by initiating, organizing and directing. Relationship orientation indicates the extent to which a manager has personal job relationships characterized by listening, trusting and encouraging.

The third dimension 'effectiveness' is defined as the extent to which a manager achieves the output requirements of the position. A manager may move along the third dimension of effectiveness by matching the basic styles to the needs of the situation. The basic styles are integrated, separated, dedicated and related. Styles are imbibed in situations where they are appropriate and imbedded in situations where they are inappropriate. The four basic styles gave all possible combinations of high and low on task orientation, relationships orientation and effectiveness and are called the eitht managerial styles of the 2-D theory.

The eight styles were divided into two groups. Less effective styles comprises of;

1. **Compromiser:** He is involved in handling high task orientation and a high relationship orientations in a condition that needs high orientation to only one or neither and who is extremely less effective.
2. **Deserter:** He is involved in a low task orientation and a low relationships orientation in a condition in which the behavior is inappropriate and is less effective.
3. **Autocrat:** He is involved in dealing a high task orientation and low relationships orientation in a condition in which the behavior is inappropriate and and is ultimately less effective.
4. **Missionary:** He is involved in establishing high relationships orientation and low task orientation in a condition in which the behavior is inappropriate and furthermore he is less effective.

More effective styles comprises of,

1. **Executive:** He uses high task orientation and a high relationships orientation in a situation where such behavior is appropriate and who is therefore more effective.
2. **Bureaucrat:** He performs low task orientation and a low relationships orientation in a situation where such behavior is appropriate and who is therefore more effective.
3. **Benevolent Autocrat:** He involves in a high task orientation and low relationships orientation in a situation where such behavior is appropriate and who is therefore more effective.
4. **Developer:** He establishes a high relationships orientation and a low task orientation in a situation where such behavior is appropriate and who is therefore more effective.

In the present study, a modified version of Litwin and Stringer's (1968) organizational climate questionnaire developed by Ansari (1990) was used to tap the managers' perceptions of the organizational climate. It measures reward and participation, structure, warmth and support. The reliability of the scale was used to establish on split-half reliability and it was found to be 0.71. The data was obtained from Commonweal organization and permission was obtained from heads of various organizations for distributing the questionnaire at their leisure hours. They were requested to answer during their convenient period. Sufficient time was given to them and the completed data sheets were collected and scored according to the scoring procedures.

SCORING

Scoring for assessing management style is very simple. If the score is 11 or above, it indicates that the style is dominantly used. That is, it is frequently used. If the score is 10, it is a supporting style. That is, the style is used fairly frequently. If the score is four or below, it represents over rejection of the style or the style is used very little if at all. Further, High scores represent favorable perception of organizational climate and low scores as unfavorable perception of organizational climate. Scoring was done according to the procedure. The responses given by the respondent on five point scale were added on positive direction except for the items 5, 7, and 9 where the scoring is reversed.

RESULTS AND DISCUSSION

Managerial Effectiveness

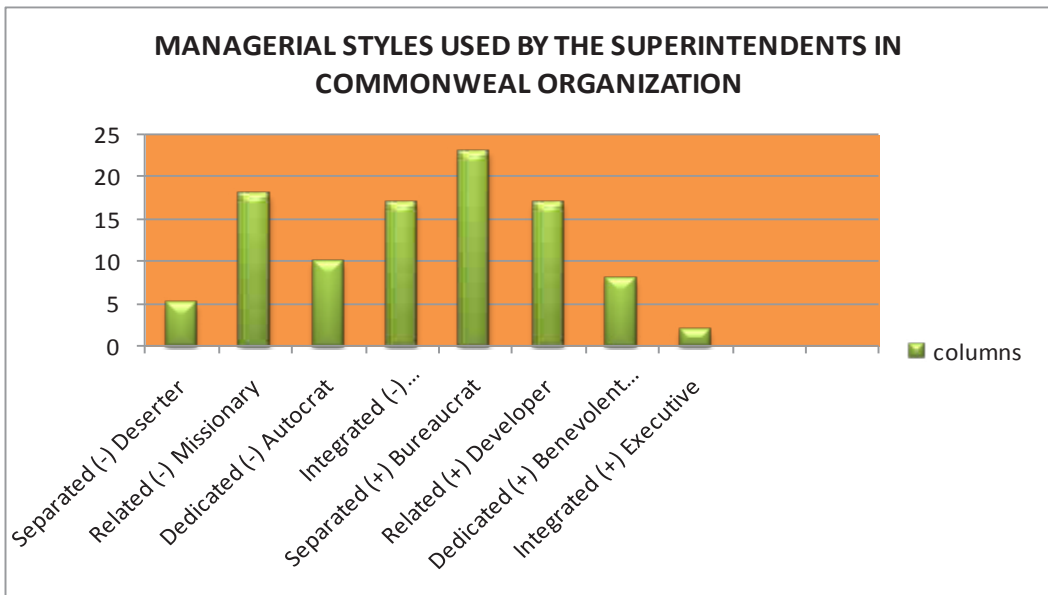
The style of functioning of a manager in a particular organization may suit only to that organization but may not be suitable to other organization. It is the manager's responsibility to behave appropriately or use a management style that is appropriate to the situation. This indicates that effectiveness is predicted from the person's performance. It is further understood that effectiveness is not anything to do with efficiency, but seen as something a person produces in a situation by behaving to it appropriately.

Styles used by the managers in the commonweal organizations

Management Styles	Number	Percentage
Separated (-) Deserter	3	5.00
Related (-) Missionary	11	18.33
Dedicated (-) Autocrat	6	10.00
Integrated (-) Compromiser	10	16.66

Management Styles	Number	Percentage
Separated (+) Bureaucrat	14	23.33
Related (+) Developer	10	16.66
Dedicated (+) Benevolent autocrat	5	8.33
Integrated (+) Executive	1	1.66

It could be seen from the table that a high percentage of superintendents are bureaucrats (23.33%) who used separated style appropriately (+) and therefore are effective. When we consider the other three basic styles – related, dedicated and integrated, it is observed that majority of them are using these styles inappropriately (-). Hence they are called missionaries (related) (-), autocrats (dedicated) (-). According to the 3-D theory, when these styles are inappropriately used these persons are considered to be less effective. However, attention has been focused on the suitability of these styles in office administration.



Commonweal organizations are units that contribute for the common goal. They benefit the public at large and function for the general welfare. The commonweal organizations include government organizations include government organizations viz., revenue officials, office of police, office of educational institutions etc. The activities that are taking place in this type of organizations are purely concerned with the need of the general public. For such system one would say that bureaucrats are mostly suitable. Bureaucrats are characterized by low task orientation and low relationship orientation. They have an orientation to procedures, methods and systems. They believe that job functions are officially conferred and circumscribed by the chain of common organization charts, government policies, standard operating procedures, etc.

The persons who use these styles of management are efficient. They prefer right channels and follow orders exactly. This type of behavior is seen in government offices where they implement

the orders issued by the higher authorities. The bureaucratic style is seen as method oriented. One would agree that this style is more suitable in government offices at superintendent levels, who manages the people and policies. Bureaucrats say that if everybody knows and carries out his own duty, nothing can go wrong. This kind of duty mindedness, rule oriented persons certainly are reliable and believable for the effective functioning of any government office. Bureaucrats who emphasize regular evaluation, measurements and review of performance may become negative terms in management. But one should recognize and accept that bureaucrat style is a key style in maintaining effectiveness of modern organizations.

Along with bureaucrats, missionaries (18.34%), compromisers (16.66%) and autocrats (10.00%) are found in the commonweal. As per the 3-D theory these managers are less effective. Missionaries use related (-) basic style inappropriately. Such managers use a high relationship orientation and a low task orientation in a situation where such behavior is inappropriate and therefore are less effective. The high relationship orientation in missionaries indicates their friendliness. They opine that people produce more and strive to create a warm and pleasant social atmosphere where an easy going work tempo may be maintained. Missionary managers are masters at pouring oil on troubled water. When conflict arises, they smoothen it with concern for the feeling involved.

The other basic style inappropriately used by the managers in the study is integrated style. Hence, they are called compromisers. An integrated manager is characterized by both high task and high relationships orientation and is less effective. He prefers team work. This type of behavior may fit into administration of government offices. Effective managers who are integrated are often found supervising other managers who have to interact in making decision. They wish to structure things and adopt highly cooperative approach for the achievement of organization's goals. While solving the problems compromisers ask their subordinates to participate so as to arrive an ideal decision. The compromiser believes that good relationships with subordinates and the general public are beneficial to the organization.

The other group of managers, the autocrats (10.00%) of the sample use dedicated basic style inappropriately and are less effective. An autocratic manager is one who is using a high task orientation and a low relationships orientation in a situation where such behavior is inappropriate. They perceive workers as extensions of machines and instruct their subordinates to follow their orders. They fail to handle conflict properly. This leads to problem in situations where proper decision has to be taken at an appropriate time.

Dedicated managers are hard working and well suited for office management where directions are needed. They are dominant, powerful and influence their subordinates through dedication. This tendency is more effective in office administration where sincerity and dedication of employees determine work output. In commonweal organizations, bureaucrat style of management is mostly preferred (23.33%) and managers of the commonweal organization preferred the bureaucrat style. To some extent missionary style was also preferred in the commonweal organization. Other styles of management are not preferred in the commonweal organization. Thus, the finding of the present investigation is in line with what Reddin emphasized regarding bureaucratic tendencies in government organizations.

ORGANIZATIONAL CLIMATE

Organizational climate is attracting much attention these days. Increasingly it is seen as having a great influence on effectiveness and outputs, and that it can be managed. The main functioning of changing climate is to improve things.

Comparison of Perception of Organizational Climate of more Effective and less Effective Managers in three Organizations

Groups	Commonweal Organizations		
	Mean	SD	't' value
More Effective	35.60	4.77	T = 8.07**
Less Effective	31.63	3.72	

** Significant at 0.01

The two groups in the commonweal showed significant difference in their perception of organizational climate. The more effective managers perceived the climate as more favourable (Mean = 35.60) than the less effective managers (Mean = 31.63).

CONCLUSION

In commonweal there are bureaucrats and developers who are people oriented. Bureaucrats who follow orders, rules and procedures could maintain system. They think that things are best if they are perfect. It is obvious that managers, whose style of functioning involves behaviors like interest in systems, system maintenance, going through the right channels, method oriented always believe that the climate in which they function is quite favorable for their functioning. Their perception is positive. It is because they are effective in following rules and hence do not feel that the climate in the organization is not supporting or facilitating their management style. They rather view it warmth, supportive, a good structure and participative.

The other effective group of managers, developers are people oriented. They trust people and motivate them to develop their talents. The developer believes in sharing self and sharing any resources available in the service of the individual and the organization. Their trust in others provides an enormous source of strength. This is turned to the service of others and serving the situation. This kind of positive orientation, understanding towards others, co-operating with others, creating the situation where people can work effectively may develop in a manager a positive orientation towards the climate of the organization. One would expect that if one has a positive outlook and interesting assumption about work, he need not criticize that climate is not supporting his working.

REFERENCES

- Barbara Steinmann,* Sonja K. Ötting, and Günter W. Maier (2016), Need for Affiliation as a Motivational Add-On for Leadership Behaviors and Managerial Success, Published online 2016 Dec 22. doi: 10.3389/fpsyg.2016.01972.
- Charles Glisson (2015), The Role of Organizational Culture and Climate in Innovation and Effectiveness, Hum Serv Organ Manag Leadersh Gov. 2015; 39(4): 245–250. Published online 2015 Sep 18. doi: 10.1080/23303131.2015.1087770,
- FJH Ontology (2011), Sunday, July 24, 2011.
- Jon Aarum Andersen (2018), Managers' Motivation Profiles: Measurement and Application First Published April 27, Research Article, <https://doi.org/10.1177/2158244018771732>.
- Lata devi (2018), Managerial Effectiveness And Efficiency Of Sbi In Himachal Pradesh, Vol 4 No 8 (2018): Journal of Advance Research in Business Management and Accounting (ISSN: 2456-3544).
- Manish madan, Esha jain (2015), Impact of organizational culture & climate on managerial effectiveness - An empirical study, Delhi business review ☐ vol. 16, no. 2 (July – December).

- G Abedi, QA Molazadeh-Mahali, B Mirzaian, A Nadi-Ghara, and AM Heidari-Gorji(2016), The Effect of Personality Traits of Managers/Supervisor on Job Satisfaction of Medical Sciences University Staffs, *Ann Med Health Sci, Res.* Jul-Aug; 6(4): 239–242. doi: 10.4103/2141-9248.203642.
- Ms. Ruchi Arya, Dr. Monica Sainy (2017) *Indore Prestige e-Journal of Management and Research* Volume 4, Issue 1 (April,2017) ISSN 2350-1316.
- Umesh Bamel, Santosh Rangnekar, Peter Stokes, Renu Rastogi (2013), Organizational climate and managerial effectiveness: An Indian perspective, *International Journal of Organizational Analysis* 21(2) · May *with*2,122 Reads DOI: 10.1108/IJOA-09-2011-0514.
- Umesh Bamel (2015)Managerial effectiveness: an Indian experience *Journal of Management Development* 34(2):202-225 · January 2015 *with*985 Reads DOI: 10.1108/JMD-01-2013-0003.
- S.R. Vijayakumar (2007), *Journal of the Indian Academy of Applied Psychology*,July 2007, Vol. 33, No.2, 249-260 249,

Significance of Advertisement in Rural Development

Dr. Ritu Rani*

ABSTRACT

In an increasingly competitive marketplace, greater emphasis is being placed on brand image development as the basis for consumer discrimination. Advertising has a central role to play in developing brand image, whether at the corporate, retail or product level. It informs consumers of the functional capabilities of the brand while simultaneously imbuing the brand with symbolic values and meanings relevant to the consumer. These two functions of advertising closely parallel the informational and transformational schools of advertising effects and theories on the central and peripheral routes to consumer persuasion. Such dichotomous approaches to explanation are unlikely to represent the reality of consumer choice in that brand image is likely to be formed by the simultaneous absorption of advertising messages based on both the functional and expressive capabilities of brands.

The notion that there is no objective reality and that people trade in the realms of perception and image represents one of the most important tenets of human understanding. Nowhere is this more true than in the area of human relationships with business organizations, i.e. the domain of marketing.

The purpose of this project is to examine the role which advertising plays in developing brand image. It commences by examining the various levels of marketing imagery and focuses on those elements which the company controls in the image formation process. The concept of branding is reviewed as is the relationship which the brand forms with the consumer. The two main schools of thought with regard to advertising effects are examined in terms of their effects on brand imagery. Businesses conjure up a multitude of images with their many publics, with much attention focusing on the corporate/product relationship. That is the approach a company follows in communicating to its publics the relationship of its products to one another and to the overall corporate entity (Olins, 1989). While this and similar classifications (Gray and Smeltzer, 1985) focus on the producer's corporate/brand relationship, three key levels of imagery pursued by business entities, namely corporate, retail and product/brand, are briefly examined for the purposes of this discussion.

Of marketing have taken on an increased importance in recent times. Corporations have become obsessive about public perceptions of their activities while at the level of the product/brand there has been a "shift in attention away from the physical aspects and functional benefits of products to their symbolic associations, expressiveness" (Poiesz, 1989, p.461). A variety of reasons for this increased emphasis on image in marketing can be suggested:

- Marketing's increasing cognizance of the behavioral aspects of consumer decision making;
- Affluent society's predilection with symbolic rather than purely functional aspects of products;
- An increasing variety of relatively homogeneous products often involving high product complexity and confusing messages which increase consumer reliance on the image aspects of products.

*Ph.D. Commerce, B.N.Mandal University, Madhepura, Bihar

At each level at which it is attempting to manage the image development process an organization has available a wide variety of elements of its identity. Olins (1989) defines corporate identity in terms of four key elements, product/services, physical environment, information, and staff behavior. Topallan (1984) agrees with this concept of constituent elements of corporate identity, but restricts his classification to three key elements, physical, operational and human characteristics. At the level of retail identity Martineau (1958) defined four key dimensions, layout and architecture, colours and symbols, sales personnel and advertising. Similar classifications of store identity components are also proposed by Kunkel and Berry (1968) Lindquist (1974) and Mazursky and Jacoby (1986).

At the product/brand level the components of identity are in effect the elements of the marketing mix, which combine to form the image of the brand in the mind of the consumer. While, as stated, the elements of the marketing mix constitute the components of brand identity, the importance of these elements can vary. Product features which deliver meaningful product benefits are generally central to the brand image creation process in that it is the ability of the product.

Within the marketing tradition with its reliance on economic theory and related emphasis on rationality in buying behavior, the recognition of products having symbolic meaning's courtship with the behavioral sciences in the 1950s and 1960s. Gardner and Levy (1955) suggested there was a need for a greater awareness of the social and psychological nature of products while Levy (1959) captured the essence of symbolism when he suggested that "people buy things not only for what they can do but also for what they mean" (p 11B). The concept of brands as social signals is now well accepted with congruity between brand and user self-image regarded as a key motivational factor in consumer choice. Lannon and Cooper (1983), suggest that Brands are used as a sort of language. Brands tell you a great deal about who you are, where you are in life, what you are and where you are going. Brand choices are as much a part of ourselves as the way we speak, the words we use, our dialect dress, gestures and language Brands are part of ourselves and we are part of our brands. A recurring, though rarely explicitly stated theme in the literature on branding is that the physical product satisfies the functional benefits sought by consumers while the "brand" provides the requisite symbolism. In effect, the consumer is being sold at two levels of values, intrinsic values centering on perceived product quality and extrinsic values focusing on the symbolic content of the brand. Intrinsic values derive from consumer beliefs about the product's capacity to satisfy his/her functional desires while extrinsic or added.

CONCLUSION

The consumer in order to be successful, images and symbols must relate to and indeed, exploit the needs values and life styles of consumers in such a way that the meanings involved give added values, and differentiate the brand from other brands (Broadbent and Cooper, 1987 p 3). In the creation of a brand certain key elements connect, these include the product and its abilities/constraints, the brand and its name, the brand symbolism and imagery and the consumer. These raw material elements of a brand are illustrated it has long been recognized that products have meanings for consumers beyond providing mere functional utility. Symbolic consumption was recognized by Veblen (1899) in his Theory of the Leisure Class and termed conspicuous consumption. Noth (1988) quotes Karl Marx and his metaphor of the language of commodities in which the linen conveys its thoughts (p 175) while Barthes (1964) discussed a semiotic threshold with the semiotics, existing above the utilitarian or functional aspects of objects. Given the symbolic usage of brands it is no surprise that semiotics, as the study of signs in society, is increasingly being used in understanding consumer behavior. Initially used in facilitating understanding of the consumption behavior surrounding cultural

products such as film and other works of art (Holbrook and Grayson, 1986) and fashion (Barthes, 1983) its widespread usage to interpret symbolic consumption in all aspects of consumer behavior is anticipated (Mick, 1986).

REFERENCES

- Aaker, D.A. (1992), *Managing Brand Equality : Capitalizing on the value of a Brand Name*. The free press, New York NY.
- Achenbaum, A (1989) How to breathe new life into brands. *Advertising Age*, Vol. 60 No.-18 pp. 24-70
- Barthes R (1964) *Elements of semiology*, Cape, London.
- Barthes R. (1983) *The Fashion system*, Ward, M Gill and Wang New York, NY.
- Brooks, J.M. Davies, G.J. (1989) *Positioning strategy in Retailing*, Chapman Publishing, London.

Reading Habits Among Indians: A Systematic Review

Roopinder Kaur Somal* and Dr. Kiran Kathuria**

ABSTRACT

Reading is a backbone to the process of acquiring information and knowledge. Words travel through eyes to mind where they take shape of thoughts through reading. Reading habits extensively stimulates one's thinking and gives it exactness and sharpness that is why "reading has been the passion of the greatest personalities of all times" (Satija, 2002). Their mental horizons are widened with the result that they shed off narrow mindedness and this mental elevation is benefited to the individual and the community. This paper is focused on the review of studies conducted on reading habits among Indians.. A lot of research on reading habits and interests has been done in India in different age groups in which some important studies are reviewed thoroughly.

INTRODUCTION

Reading is a backbone to the process of acquiring information and knowledge. Words travel through eyes to mind where they take shape of thoughts through reading. This study is focused on the reading habits among Indians. "Reading habits is an intellectual activity for giving more information, knowledge and learn to various types of things and their activities. Reading adds new insight and new wisdom to one's mind" (Madhu, 2014). We are in the age of advanced technology; the audio/visual medium is very powerful. Visual aids certainly have more advantage over print ones. The access to the internet has weaned away readers from books and other reading material, thus adversely affecting their reading habits. It is of utmost importance that teachers, librarians and parents should be more aware and careful towards developing habits of reading among children. The libraries can play a vital role in inculcating the reading habit among students and readers. Majority of the respondents had the view that reading has effect on academic performance and that there is a direct relationship between reading habits and academic performance.

READING HABITS

Reading habit extensively stimulates one's thinking and gives it exactness and sharpness that is why "reading has been the passion of the greatest personalities of all times" (Satija, 2002). Their mental horizons are widened with the result that they shed off narrow mindedness and this mental elevation is benefited to the individual and the community. "Regular and systematic reading sharpens the intellect, refines the emotions, elevates tastes and provides perspectives for one's living and thereby prepares a person for an effective participation in social, religious, cultural, political and economic life" (Satija, 2002). Reasons for reading vary according to individual needs and factors such as age, cultural background, level of education, social status and religious as well as political values. In addition to self-motivation, motivation to reading is often provided by family members, teachers, librarians and the society.

*Research Scholar, Punjabi University, Patiala

**Assistant Professor, Punjabi University, Patiala

REVIEW OF LITERATURE RELATED TO READING HABITS

The exercise conducted by a researcher to study the previous work is called review of literature. For any research, the first step is to know about the researches already been done in the concerned field. It gives the researcher a better understanding of the matter. He/She has to keep himself/herself informed of all the work that has already been done in the related fields. Review of the literature is an early and essential step for conducting research. Only the research studies, which are directly related to the reading habits of Indian students, have been reviewed. A lot of research on reading habit and interests has been done in India and other countries in different age groups in which some important studies are given below:

Chauhan and Lal (2012) examined the impact of information technology on reading habits of college students. A total of 100 valid questionnaires were collected. After gathering the questionnaire, data were analyzed through totaling the frequency and percentage of responses for each of the 69 items. The results showed that 19 percent of respondents read online news followed by magazines (8%), e-books (38%), stories (24%), e-mails (23%), read journals (23%), sales information (25%), etc. When respondents surfed on the internet they tended to all of them check emails, 96.8 percent listened to music, 88.7 percent read information, 85.5 percent viewed photo album, 76.6 percent used yahoo messenger, 54 percent shop and 50 percent of them played games. As to the topics on the internet sequence that respondents indicated was entertainment, news and media, computer and internet, recreation and sports, references, humanities and health. The results also indicated that gender, age, education, scores, employment status, online hours and college students reading habits were related. Study also emphasized on what types of information should be built in online for students to read and to enforce not only their reading habits, but also language skills in listening, speaking, reading and writing.

Nagaratnam & Rasiah (2012) directed a study to determine the effect of stress factors on the reading habits among Gen-Y students. The data were collected from 206 business students in a private higher institution of education using a structured questionnaire after a prior pilot test study of 76 samples. The findings revealed that the number one choice for most preferred reading material was the newspapers (39%), followed by webzines 25 percent. 35 percent of respondents preferred reading prescribed books. The two types of stress were identified as self-inflicted stress and parent induced stress. It was found that that parents induced stress did not affect the reading habits of respondents. Respondents who easily stressed themselves were more prone to exam and the knowledge purpose due to the poor educational system. Therefore, it is needed to revise the exam oriented education system. It is essential to change from the traditional form of teaching and learning. Findings in this study would provide an insight into the students' reading attitudes and the impact of stress on the reading habits of Gen-Y students.

Bajpai (2013) administered a study on the reading habits of b-school students at the Jaipuria Institute of Management, Jaipur. The objectives of the study were to examine the reading habits of the users, frequency of use of the library, different types of reading materials used by the users, awareness of e-resources among the users and the satisfaction of users with regards to different types of resources available in the library. 150 questionnaires were distributed to collect the data, out of which 130 questionnaire were used for this study. The findings revealed that 34.62 percent of respondents were motivated to seek help for reading habit from the teachers of their college followed by 25.38 percent from the teachers of their university, 16.93 percent from their mothers, 11.54 percent from their fathers and 7.69 form their spouse. 34.62 percent of respondents visited the library daily, 29.93 visited twice or thrice a week, 26.93 once a week, 7.69 percent very rarely and 1.53 percent never visit the library. Faculty consultation was treated as the first priority for

seeking information by 35.39 percent respondents only 13.07 respondents sought their information from other libraries. The purpose of visiting to the library by respondents was to borrow books, use e-resources, read newspapers to take notes and to spent their leisure time. 55.38 percent respondents were using print resources and 44.62 percent preferred using electronic resources as the main source of information. 43.85 respondents opined that their reading habits had increased due to modern technology whereas 43.07 percent said that their reading habits were decreased. It was concluded that a person should keep himself/herself up-to-date 'so that those who had up-to-date knowledge did not leave them behind. It was suggested that libraries should be up-to-date for b-school respondents. Also the modern technology had contributed to decrease in reading habits, but they agreed that it should be adopted in the library for quick retrieval of information.

Rattan (2013) overviewed the inculcation of reading habit in digital era. The objective of this study was to sensitize the information stake holders to put forward a framework which includes the different formats, from traditional to latest information and communication technologies (ICT) - CD ROMS, e books, e journals, speaking books, digitized works and so on. It was also described that libraries and information centers roles had changed from traditional libraries to automated networked and digital libraries and of librarians to cyberarians to a greater extent, although the prime duties of librarians remained unchanged but with a shift in tools and techniques of managing the libraries. Advantages and disadvantages of printed books and electronic books were also discussed. It was found that role of library professional was changed due to advancement in technology they had to act like a psychologist who felt the pulse of his readers and personally helped them to locate a piece of information or a book. It was suggested to generate the reading habits library professionals should introduce library periods, library orientation for entry level classes, what is where indicators, exhibition covering national festivals, aesthetic display of resources, book reading contests, new arrivals board, marketing of library services etc. it was also suggested that books and e-books were going to stay forever and subjective reading and leisure reading needed to be altered towards multi career approach from single career approach.

Baladhandayutham and Suji (2014) focused their study on the students' reading habits of engineering colleges in Madurai district, Tamilnadu, India. A sample of 280 undergraduate and postgraduate students were selected with the objectives to identify their awareness regarding library, purpose of reading books, to find the level of satisfaction on the available reading books in college library and to examine the drawbacks of reading in the library. 43.21 percent of the respondents were daily library visitors followed by 24.64 percent visited once in a week. While 7.5 percent twice in a week and 24.64 percent visited rarely. 30 percent of the respondents were initiated to reading habits by their friends, 11.42 percent by their parents, 27.5 percent were by teachers and 31.07 percent were by librarians. 31.07 percent respondents purpose for reading books was examination, 7.5 percent read for preparation of assignment, 8.92 percent for seminar and 39.64 percent read for getting knowledge. 21.07 percent respondents think that they did not have relevant collection in college library, 17.85 percent felt that library environment was not good and 12.14 percent felt the lack of reading materials. 73.92percent of respondents accepted that the internet affects the libraries and information centers whereas 26.07 percent did not agree with it. Further, suggestions were given that librarian should introduce innovative programme that would increase the reading habits of users. It was also suggested that library's working hours should be increased and college authority should also take necessary steps to enhance the ambience of the library.

Madhu (2014) examined the reading habits of the coffee planters in Karnatka state. 76 questionnaires were received back for the analysis of data from which 64.47 percent were male and 35.52 were female. About 38.15 percent of respondents were undergraduates, 30.26 percent had completed post-graduation and rest of them had studied below 12th standard. Half of the

respondents were small coffee growers and they possessed an area of 20 acres and below. Majority of the respondents (97.36%) said that reading was pleasure for them whereas 2.63 percent did not find pleasure in reading. 68.42 percent preferred reading in printed format and a very small number of respondents preferred electronic resources. 57.89 percent read daily, 28.94 percent sometimes and 9.21 percent read rarely. The reasons for reading were to gain knowledge, to be well informed, recreation purposes and some read to prepare for exam. Mobile phones, television viewing, gossiping and computer/ laptop were the major barriers in reading. Respondents opined to improve reading habits, talks of eminent personalities/guest lectures, with the encouragement by family members and also by orientation programme should be conducted by library professionals. Furthermore, it was suggested to coffee board officials to educate the planters about the use of e-resources, public library extension services and mobile library service should be provided in remote plantation. Public libraries which were located near coffee plantations should also provide magazines and journals in Kannada and English language books to fulfill the needs of respondents.

Patel, Patel and Patel. (2014) assessed newspapers reading habits in Pharmacy College in Ganpat University. 301 questionnaires were collected from the respondents. 70.76 percent respondents spent less than 30 minutes on reading, 23.59 percent spent 30 minutes to 1 hour and 5.65 percent spent more than hour on reading. 59.67 percent of respondents preferred to read newspapers in library. It was also indicated that various topics in newspapers were preferred in which 82 percent read the sensational news, 77 percent preferred front page, 73 percent read educational oriented news, but about 25 percent read editorial columns only. Reasons for reading newspapers among respondents varied like general knowledge, to get up-to-date information, time pass, hobby, for job vacancy and for exam purposes. It was also revealed that large number of respondents was reading *Gujarat Samachar* because of their regional language. It was also found that newspaper reading habit helped to improve study habits and concentration power of respondents.

Vellaichamy and Jeyshankar (2014) studied the reading habits of central library users of Alagappa University, Tamilnadu, India. A total of 340 questionnaires distributed out of which 300 filled up questionnaires were received back. The response rate was 88 percent in which 46.67 percent were male and 53.33 percent female. Findings indicated that 32.33 percent of the respondents read text books followed by fiction (25.33%), non-fiction (18.67%) and newspaper/magazine (17.33%). Male respondents reading purposes were for education (35.71%); and female respondents for information purposes (38.13%). 36.43 percent of male respondents preferred reading in morning time while the female respondents(25.63%) preferred afternoon reading in the library. 36.67 percent respondents' favorite place for reading was home followed by library (24.67%), classroom (21.01%) and park (10.67%). It was found that almost the same number of male and female preferred to read at home (33.57% and 39.38% respectively). 27.33 percent of respondents visited the library to read books followed by borrowing/returning books (21%). The main obstacle in reading by male respondents was the internet (35%) and female respondents watching television (41.88%). It was suggested that in the library, reading materials should be arranged in proper order for easy accessibility as well as more computers should be added, separate reading rooms, photocopy facility, reference books and dissertations/theses, etc.

Benny (2015) examined the reading habits of students of Smt. MMK College of Commerce and Economics, Mumbai. The main objectives of this study were to find the differences in reading habits between males and females, their purpose to visit the library, determine the format of reading material. Data were collected through questionnaire method from 185 respondents. Results disclosed that 44 percent of respondents visited the library daily, 32 percent once in a week, 12 percent rarely and 2 percent never visited the library. Their purpose for library visit was to self-study, to use reference sources, to read magazines, newspapers, etc. Male respondents visited library for self-study whereas

females find the reading materials for study. It was also disclosed that friends and teachers were major motivators to study. Most of the respondents spent 1-2 hours studying in the library, very few of them spent more than 3 hours on reading. 67 percent female and 70 percent of male respondents read for their study. 74 percent respondents preferred to read from print resources whereas only 26 percent preferred e-resources. It was found that respondents reading habits had declined due to the internet and social media usage. Author suggested library should modify its services to motivate them and improve their reading habits.

Rao (2017) talked about the reading habits of students in Nellore district, Andhra Pradesh. A survey was conducted on 1008 children from 42 high schools. Data required for the study was collected through questionnaire, interview and observation method. For analysis of data, Statistical Package for Social Science (SPSS), percentage, mean and chi-square were used. It was found that nearly half of the respondents (48.5%) visited the school library. There was no significant difference between boys and girls with respect to library visits, but there was a significant difference between rural and urban respondents. 46.4 percent respondents spent half an hour to one hour per day in the library. Most of the respondents (85.5%) agreed that books required by them were available in their school libraries. There was a significant difference in availability of books in English and the Telugu language. Over third-fourth of them responded that there were no library periods in their school time-table. Researcher also found that 96.4 percent respondents found the books useful for their studies in their libraries. 57 percent respondents told that there was no public library in their locality. It was inferred that 39.2 percent respondents read short story books, 36.4 percent of them read general books, 32 percent read biographical books, 25.7 percent comics and the remaining 9.1 percent of them read novels in public libraries. Over a third of the respondents (34.4%) own 1-2 books (other than textbooks), nearly one fourth of them do not own any book, 17.9 percent own 3-4 books and 17.4 percent of them own more than 6 books. Also, a significant difference in this regard between the English and the Telugu medium respondents were found. A significant relationship was found between the girls and boys regard to the selection/suggestion of books by their parents. It was suggested that governments of Andhra Pradesh, *zillaparisshads* and management of private, aided and unaided schools should take necessary steps to establish libraries in their schools to make the children a good citizen.

Likewise, Kallapa(2018) in her doctorate study investigated the reading habits of working women teachers in degree colleges in Hyderabad Karnataka region. The data was collected from a sample of 209 women teachers employed in government degree colleges. In this study, nearly half of the respondents (45.5) belonged to the age group of 25-35 years and 46.4 percent of them belonged to the age group of 36-40 years. Majority of the respondents (86.4%) were married also 72.7 percent of the respondents were had M.Phil/Ph.D degrees. Only 4.8 percent of them cleared UGC NET/SET exam in Library and Information Science. The results found that out of 209 respondents 15.3 percent spent 2 hours, 4.8 percent spent 3 hours and 5.7 percent spent more than 3 hours on their reading and learning activities. 84.3 percent respondents opined that college library building was convenient for reading. 47.8 percent of the respondents go to the library for improving reading habits, 19.6 percent borrowed books from friends and 17.2 percent of them visited circulation library to read. More than half of the respondents tried to get the desired information sources through inter-library loan, 26.8 percent of them get by themselves and 15.6 percent asked library to procuring the book. Respondents' reasons for declined reading habits were television than social media like Facebook, chatting with friends, Youtube, etc were the main reasons. 60.3 percent respondents were in the opinion that family environment and culture played an important role in improving reading habits. Further, it was concluded that various talks, lectures, workshops, book reviews, competition with incentives, quiz on current events, general knowledge and library hours will promote reading habits.

CONCLUSION

Majority of the respondents had the view that reading has effect on academic performance and that there is a direct relationship between reading habits and academic performance. According to a finding from the survey, 'Kids and Family Reading Report' conducted by Scholastic publishing house and YouuGov (2006), "reading habits of children, only 32 percent of children read 24 books annually. Although many parents wish their children read more, the findings revealed the poor reading habits of school going children". Studies in which gender was the principle factor confirmed that gender affects reading habits of students as reading tastes and preferences between genders differ quite drastic. It was also indicated that in some or rather, the educational system has created the respondents who stress themselves for exam and seeking knowledge so there was a need to revise the exam oriented education system.

REFERENCES

- Ambika, M., & Samy, K. U. (2019). Newspaper Reading Habits Among Postgraduate Students of Periyar University, Tamil Nadu. *KIIT Journal of Library and Information Management*, 6(1), 15. doi:10.5958/2455-8060.2019.00002.8
- Bajpai, M. (2013). Reading Habit of B-School Users: A Case Study. *Pearl : A Journal of Library and Information Science*, 7(2), 97-102. doi:10.5958/j.0975-6922.7.2.015.
- Baladhandayutham, A., & Suji, S. (2014). Reading Habits among the Students of Engineering Colleges in Madurai District, Tamilnadu, India: A Study. *Journal of Advances in Library and Information Science*, 3(3), 244-248. Retrieved August 20, 2017, from <http://jalis.in/pdf/pdf3-3/Bala.pdf>.
- Benny, L. (2015). Reading habits of undergraduate students: A survey of smt.mmk college of commerce and economics, Mumbai. *KNOWLEDGE LIBRARIAN*, 2(5), 148-166. Retrieved October 15, 2017, from <http://www.klibjilis.com/2.2.5.8.pdf>.
- Chauhan, P., & Lal, P. (2012). Impact of information technology on reading habits of college students. *IJRREST: International Journal of Research Review in Engineering Science and Technology*, 1(1), 101-106. Retrieved January 2, 2013, from <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.300.7473&rep=rep1&type=pdf>.
- Kallapa, K. (2018). *Reading Habits of Working Women Teachers in Degree Colleges in Hyderabad Karnataka Region A Survey*. doi:<http://hdl.handle.net/10603/193165>.
- Madhu, K. N. (2014). Reading Habits among the Coffee Planters in Karnataka State: A Study. *Library Herald*, 52(2), 134-150. Retrieved December 22, 2018, from <https://www.indianjournals.com/ijor.aspx?target=ijor:lh&volume=52&issue=2&article=004>.
- Nagaratnam, S., H., & Rasiah, R. R. (2012). The Effect of Stress Factors On the Reading Habits among Gen-Y students. *International Journal of Interscience Management Review (IMR)*, 2(2), 1-5. Retrieved from https://expert.taylors.edu.my/file/rems/publication/100088_1693_1.pdf.
- Patel, P. I., Patel, D. B., & Patel, H. A. (2014). Reading Habits of News Papers in Pharmacy College: An Analytical Study. *Journal of Advances in Library and Information Science*, 3(2), 94-100. Retrieved June 19, 2016, from <http://jalis.in/pdf/3-2/Pravin.pdf>.
- Rao, D. V. (2017). *Reading Habits Among Children in Nellore District of Andhra Pradesh* (doctorate's thesis, 2017). Sri Venkateswara University. Retrieved September 28, 2019, from <http://hdl.handle.net/10603/235069>.
- Satija, M. P. (2002). Reading and book culture. *Herald of Library Science*, 41(1/2), 55-59.
- Vellaichamy, A., & Jeyshankar, R. (2014). Reading Habits of Central Library Users: A Case Study of Alagappa University, Tamilnadu, India. *Research Journal of Library Sciences*, 2(2), 6-10. Retrieved May 18, 2017, from <http://www.isca.in/RJLS/Archive/v2/i2/2.ISCA-RJLS-2014-007.php>.

Impact of Buddhism on Gross National Happiness in Bhutan

Dr. Sandeep Kumar*

ABSTRACT

Buddhism is deeply ingrained in the society and the culture of Bhutanese people. For a society whose culture is so imbued with Buddhism, it is quite natural for its people to be very religious. The people of Bhutan are very religious; they would not do anything without the command of religion. Every single incident from birth to death is associated with religion and all the customs related to them have a religious base. According to Buddhist principles, most of the customs are derived from the Buddhist ethics like, compassion, freedom, spirituality, peace and happiness, friendship. The Bhutanese culture which took shape under heavy Buddhist influence has many unique features, out of which three— happiness, gender equity, and environmental conservation are of particular importance. The concept of GNH formally constitutes the key objective of national development and serves as the foundation for Bhutan's normative approach. It acknowledges that people are the real wealth of a nation and propounds that income alone cannot be the measure of all human endeavors; equal emphasis must be given to the spiritual, cultural and emotional needs of the people.

Keywords: Bhutan, Gross National Happiness, Buddhism, public policy, governance

INTRODUCTION

Bhutan is a very small country with an area of approximately 4000 square kilometers. Geographical location of Bhutan is landlocked in nature that isolates it from the rest of the world. In the north, it is surrounded by the land of Tibet, whereas in the south it is bounded by Indian Territory. The population of Bhutan is approximately 7.2 lakh which consist of mainly four ethnic groups - the *Ngalongs* in the west, the *Khengs* in the center, the *Sharchops* in the east, and the *Lhotshampas* in the south. Although Bhutan has become a multi-religious society in the 21st century, Mahayana Buddhism is still a state religion and subsequently prominent in the Bhutanese society.

According to Buddhist principles, most of the customs are derived from the Buddhist ethics like, compassion, freedom, spirituality, peace and happiness, friendship. The Bhutanese culture which took shape under heavy Buddhist influence has many unique features, out of which three— happiness, gender equity, and environmental conservation are of particular importance.¹ The concept has been solely laid upon the teachings of Buddha, which say that the happiness is not just dependent upon the materialistic things alone but also depends on spiritual and emotional satisfaction of the individual. GNH has been the central developmental philosophy of Bhutan.² The concept of Gross National Happiness, aims at achieving a holistic development of the country and has led to the self-critical analysis of the conventional understanding of development (of any country), which has often been closely tied up with economic development.

*Assistant Teacher, (Faculty of Arts), RHS Gayghat, Inter College, Motihari, E-mail: sandeep.jnu07@gmail.com

METHODOLOGY

This paper has followed the descriptive and analytical method to analyse the Philosophy of Gross National Happiness, relied up on Buddhist principles in Bhutan. Along with available secondary literature the empirical data has been a major source to write this paper. Personal visit to Bhutan for collecting first hand information in the forms of public opinions and interviews has been appropriately collected and analyzed. On the basis of these approaches, this paper also follows the historical interpretation and fundamental analysis of Gross National Happiness in Bhutan. It also analyses policies adopted by government of Bhutan towards GNH. Moreover, this paper treats Buddhist principle and teaching as mentor to the core philosophy of GNH.

PHILOSOPHY BEHIND GROSS NATIONAL HAPPINESS

The core philosophy behind Bhutan's concept of Gross National Happiness is a Buddhist principle which recognizes the need to balance material well-being with spiritual, emotional and cultural well-being of the individual and the society for a holistic development. So, this is indicative of the diversion from the conventional philosophy of development which is solely material centric. In fact, the core idea behind the concept can be reiterated from the words of the fourth King Jigme Singye Wangchuk "Gross National Happiness is more than Gross National Product."³ These words are reflective of the fact that in Bhutan, merely achieving economic development was not the objective of the development model of Bhutan instead equal importance was also to be given to the spiritual, emotional and cultural well-being of the Bhutanese people. In fact, the main aim of Bhutanese development policy is to maintain a balance between modernization, culture and tradition.

So, in Bhutan 'development' has been understood as a mechanism driven towards serving the well-being of the people. In other words, development in Bhutan is only a means but not an end in itself Bhutan's concept of GNH is based on the Buddhist principle of maintaining a fine balance between the extremes, which in simple words meant 'neutral, upright, and centered' policy,⁴ but it does not mean mediocrity.⁵ In reality, middle path aims for the superior performance by taking a balanced view. For instance, Buddha was able to attain enlightenment, or was able to realize the ultimate truth through this path. Put in Bhutanese development context, the middle path means achieving the goal of sustainable development. The main characteristics of 'middle path' are molded into four folds: balance between materialism and spiritualism; focus on specific resource potentials for development; distribution of responsibilities and integrated management.⁶

On the other hand, the concept of GNH draws its ethics from another Buddhist principle of 'interdependence'. The Government of Bhutan views happiness as a public good and that it cannot be left exclusively to private individual's devices and strings. So, GNH encourages individuals to see all things as interdependent and such an understanding is needed to achieve collective happiness. Thus, GNH is based on the conviction that material wealth alone does not bring happiness, or ensure the contentment and wellbeing of the people and that economic growth and modernization should not be achieved at the expense of the people's quality of life or traditional values.

THEORETICAL UNDERSTANDING

In an attempt to conceptualize Gross National Happiness, scholars have singled out happiness as the important element of GNH. Therefore, questions have been raised, whether it is necessary to define happiness and if so, how it should be defined in the context of GNH. The

GNH approach somewhat defies the orthodox western development model, which is based on materialistic values. As a result, this unique concept sparked international debate among GNH scholars. Today the debate rests on three key issues; conceptualizing, quantifying/measuring, and operationalization of GNH.

A few schools of thought have emerged concerning this issue; one school of thought takes the position of the philosophical perspective and the other school has taken the empirical analytical approach of defining and measuring GNH. The first route aims at happiness itself. Some take on board 'individual happiness' as an important determinant of GNH just as 'product' is considered in case of conventional GDP. Happiness is generally understood as subjective well-being of state of mind of an individual. They believe happiness can be measured, as there is firm empirical methodology developed to measure subjective well-being. According to Dorji, GNH; it has been derived by replacing 'product' in GDP with 'happiness'. He argues that GNH can be defined similar to GDP, which could be "the sum total of individual per capita happiness that can constitute collective happiness or GNH."⁷

On the other hand, the empirical approach stresses on the societal determinants of happiness, it emphasizes the need to provide fair and equal opportunities.⁸ Adding to the notion of equal opportunities, Mancall discusses the concept of "GNH State" where by state 'assumes primary responsibility for the creation of a society in which the individual's progress towards enlightenment is not impeded by unnecessary suffering, material or mental. This suffering, according to Mancall, can be avoided by ensuring that all citizens obtain adequate livelihood through equal distribution of wealth.⁹ However, McDonald, another scholar remarks that, although there is evidence showing a positive correlation between happiness and material wealth, beyond a certain threshold economic growth does not translate into individual happiness. Similarly, below a certain level of development, poverty reduction does not make any difference.¹⁰ On this basis the state of environment or ecology cannot be the measure of GNH.

Buddhist economists, like Payutto (1998) and Zadek (1993), argue that in a Buddhist society the lifestyle is strongly influenced by the Buddhist way of life, which is based on the principles of the 'Noble Eightfold Path' preached by The Buddha. Schumacher argues that Right to Livelihood, the fifth path, touches upon economic aspects of Buddhist life and forms the basis of economic principles.¹¹ It embraces the relationship between three interconnected aspects of human existence: human beings, society and the natural environment. Maintaining the balance among these enhances the quality of life for the individual, for society and for the environment.¹² In essence, the Buddhist perspective is that development is a holistic process, which should be directed to meeting the material, social and spiritual needs of human beings.¹³ The Bhutanese approach to development is strongly rooted in the Buddhist system of beliefs, values, and custom. So, Bhutanese political system is closely interlinked to its religious history.¹⁴GNH as such should be linked to Buddhist philosophy to capture the spiritual dimension.¹⁵

EXECUTION OF THE CONCEPT OF GNH

In order to meet with the expectations and the set objectives behind the formulation of the concept of GNH, the Centre for Bhutan Studies (CBS) devised nine dimensions for assessing GNH. The nine dimensions are selected on normative grounds, and are equally weighted, each dimension is considered to be relatively equal in terms of intrinsic importance as a component of gross national happiness. It also integrates objective realities and subjectivity (what people feel about their own lives). The nine dimensions are: (1) Psychological Well-being, (2) Cultural diversity and resilience, (3) Time Use, (4) Governance, (5) Community Vitality, (6) Living Standard, (7) Ecological Diversity, (8) Health, and (9) Education.¹⁶

The prescribed domains have a number of indicators for each of these dimensions and the indicators tend to focus at a personal and subjective level. The information that the GNH index reveals are used by the Gross National Happiness Commission (GNHC), which is the planning branch of the government to construct policies to promote GNH. So, the GNHC with the information provided by the GNH index; tends to channelize the resources to the areas and issues where they are most needed.

Bhutan's development policy as mentioned earlier has focused on improving the general well being of the people by promoting equitable and balanced socio-economic development, promising an all round development especially spiritual which has been neglected by the past and the contemporary development theories. The Bhutanese people have been witnessing dramatic improvements in the quality of their lives. Despite remarkable progress, significant challenges like poverty alleviation remain and new challenges related to unemployment, rising ethnic inequities and integration into the global economy are also emerging. The rapid transformation of the political system to a democratic polity adds greater urgency to address these issues in the immediate future.

The Challenges

The challenge for Bhutan is to champion the vision and rationale behind the concept of GNH. In order to execute and achieve the set objectives of GNH, focus needs to be made on the four pillars of GNH. In order to ensure self-reliance through economic growth and development, the measures adopted by the state to uplift the minimum standard of living of the Bhutanese seems problematic, as 8.2 percent of its population lives below poverty line in 2017 and youth unemployment rate quadrupled from 2.2 percent to 9.9 percent (ADB 2020).¹⁷ So, one of the pervading issue of Bhutan, to be tackled by GNH is poverty. Furthermore, GNH also aims at forest protection (72 percent of land is covered by forests) but on the other hand this would affect the already inadequate agricultural development of Bhutan, as less land available for cultivation and rural development. Indeed, 87 percent of the population depends on 7.7 percent arable land. So this would then increase the rate of poverty further.¹⁸

One of the major challenges among many would be the building of hydro- power projects which has become one of the main sources of economy for Bhutan, but at the same time this also meant the exploitation of the natural resources like rivers and forest. So then how would Bhutan be able to strike a balance between environmental conservation and economic development as the balancing of the two could challenge the objectives of GNH.

Furthermore, GNH also aims at promoting a harmonious culture but this aspect of GNH stands challenged due to the policy of 'One Nation, One People' which promoted a strong sense of identity to the Bhutanese culture, for example dress code, language, and religion. Such a policy has triggered ethnic resentment and disharmony by the Lhotsampas (Nepali ethnic community living in southern Bhutan). With such a situation the objective of cultural harmony that GNH aims at, is definitely prone to several challenges.

Many of the institutional and legislative structures necessary to ensure good governance in Bhutan have been in place for less than 10 years. A major initiative on the government's restructuring and democratic reforms occurred in 1998-1999 and the administrative decentralization process a few years later, in 2002. With the first local elections occurring in 2005 and the first election of a new National Assembly in 2008, it is relatively early to evaluate the efficiency of these newly established procedures and institutions. The second problem arises on who is to be held responsible for the successful implementation of GNH? Is it the government machinery and its representatives or the civil society or both accountable? Besides, the issue of accountability, the next issue to be addressed is the medium/ways for co-ordination between the stakeholders of GNH?

Other such issues that definitely deserves to be discussed is whether GNH is dictating its visionary objectives on the Bhutanese people and in the process are they able to provide to the people a free and open society? Does GNH shape institutions and policies, or is the GNH developed to justify and endorse existing institutions and policies? Though Bhutan is homogeneous society in terms of race and religion, but along with Dzongkha, its official language, there are 19 different local dialects spoken, so to what extent can GNH be considered as representing the Bhutan's population as a whole?

ASSESSMENT OF THE WORKING OF GNH

A proper assessment of the working of GNH requires the identification of the various challenges that exists in the process of achieving the objectives of the GNH and the extent to which GNH has been able to successfully combat these challenging forces.

Status of poverty in Bhutan

So, one of the critical issue that the country has been facing is that of poverty, as mentioned earlier. A conventional understanding of poverty has been that of reducing income poverty. In other words, economic development has been understood as the only solution for alleviating poverty. But in the present contemporary context, poverty has varied dimensions like human poverty or capacity deprivation along with income poverty. It can be understood that poverty and development are to be inversely related but the irony is that faulty and rapid development could intensify the extent of poverty.¹⁹

So, according to the international measures, poverty can be reduced by including certain provisions in one's development model like basic social services, agrarian reforms, credit for all on easy conditions, job creation, active participation by all, social safety net, economic growth and sustainability of the programme. In fact, human development facilitates additional facilities like right to be educated and freedom to enjoy a descent standard of living, political freedom, human rights safety and security.²⁰ But if such facilities are not provided then poverty could crumble any developmental initiative as poverty takes various forms, including "lack of income and productive resources to ensure sustainable livelihoods; hunger and malnutrition; ill health; limited or lack of access to education and other basic services; increased morbidity and mortality from illness; homelessness and inadequate housing; unsafe environments and social discrimination and exclusion. It is also characterized by lack of participation in decision making and in civil, social and cultural life."²¹

Conservation policy of Bhutan

Bhutan also has a strong nature conservation policy. This policy is firmly grounded in the principles of the country's development philosophy, which emphasizes the importance of achieving Gross National Happiness (GNH) over Gross Domestic Product (GDP), and the firmly established ethos of conservation in Buddhism. Conservation is the central tenet of Buddhism which believes in preserving nature and the sanctity of life.²² As a result, the importance of protecting nature in all its manifestations has permeated Bhutanese consciousness and has become integrated into the Bhutanese value system. Due to economic globalization and a media boom, however, the Bhutanese are now increasingly exposed to the Western lifestyle. This is creating tensions between the state, civil society, and the market. The state imposes a strict conservation policy, whereas the market and the civil society strive for more material wealth. The challenge facing the policy makers is how to create a balance in the development process. To this end, an environmental strategy called the

middle path strategy has been adopted, the aim of which is to bring about balanced development by avoiding extremes in materialism on the one hand and environmentalism on the other.²³

The goal of the Tenth Five Year Plan (Ministry of Planning 2008) with regard to the natural environment was to sustain, preserve and fortify the ecological integrity. This includes a range of activities such as protecting forest ecosystems, maintaining biodiversity, legal frameworks, environmental awareness and advocacy, institutional capacity building and science-based optimization of natural resource management, and the promotion of partnerships with civil society organizations and communities.

For the benefit of global community Bhutan declared to remain carbon neutral at the United Nations Framework Convention on Climate Change Conference of Parties (COP 15) in Copenhagen, Denmark in 2009. In this regard, 53 percent of ecosystem services generated by the forests are benefited by populations outside Bhutan thus making Bhutan a net donor in this vital area.²⁴ Going hand in hand with the government's cultural preservation efforts is environmental conservation. Rural communities rely on environmental resources for all aspects of livelihoods. Furthermore, national economic revenue is generated almost entirely from hydropower and ecotourism, which are both dependent on a clean environment. In addition, Bhutanese religious philosophy strongly engenders both an individual sense of environmental stewardship, as will be discussed in later chapters, as well as a national imperative for conservation: Religious rhetoric is often inserted directly into environmental policy and strategy documents.

The National Environmental Protection Act (NEPA) of 2007 provides an example of the inclusion of the influence of Buddhism on legislation. This act is especially important to review as it amalgamated all other national environmental organizations and policies under once central National Environmental Commission. Article seven reads, "In line with the Government's Middle Path Strategy, economic development and environmental conservation shall receive equal priority."²⁵ The "Middle Path" mentioned here refers to a central Buddhist teaching, offered by the Buddha after he reached enlightenment. The notion is to live within one's means, to tread the middle way between over-indulgence and starvation. Indigenous values have engendered a strong environmental ethic for centuries and continue to influence national planning. Yet, while the values themselves are indigenous, the regulatory framework for environmental conservation is a modern, scientific framework with foreign origins. In 1974, the National Assembly passed a resolution mandating maintenance of at least 60percent of the total land area to remain as forest cover for all time; a decree that still holds strong influence on forest policy. To ensure that this level does not fall below 60 percent, the Government has designated almost a third of the total national land area under a comprehensive and intricate network of protected areas.

All of Bhutan's major ecosystem types are represented within four national parks, four wildlife sanctuaries, one national reserve and a number of biological corridors connecting these spaces.²⁶ Currently, 72.7 percent of the national land area is covered by forest and scrub forest. Of this, about 41percent is contained within formally protected areas, 5.8 percent is designated under resource utilization plans such as Forest Management Units (FMUs) and other working schemes, and 8.2percent is not currently under plans. The remaining area, which comprises 35.5percent of total forestland, is designated as Government Reserved Forest. This area, which is not suitable for commercial harvesting under current technologies, is available to rural communities to use on an ad hoc basis. Community forests are established on GRF lands, and comprise less than 1percent of the national forest area.²⁷

The key challenges for Bhutan include issues pertaining to land degradation, potential biodiversity habitat loss, and high fuel wood consumption, environmental impact of road construction, waste management and vulnerability to natural disasters. Another crucial environment challenge for Bhutan

relates to the competing interests of conservation and human livelihoods that concern many local communities living in protected and national park areas. This is not made any easier by the fact that the country is hugely dependent on natural resources for sustaining its economy and the livelihoods of the majority of its people. Sustaining large protected areas and maintaining the extensive water and sanitation facilities already developed will require significant resources and capacity, both of which are severely limited in a least developed country like Bhutan. Thus at the heart of this challenge lies the urgency of securing long term sustainable financing arrangements and capacity building without which past gains on the environmental front could be severely compromised.²⁸

Urban environmental degradation in recent times has emerged as a critical challenge. The rapid pace of urbanization has already imposed severe strains on available urban services and environmental health. With rapid increases in urban population, the urban environmental, situation and health is coming under severe stress with air and water pollution in urban and semi-urban areas deteriorating. Bhutan is highly vulnerable to natural hazards due to fragile geological conditions, immense altitudinal variations and steep terrain. Global warming has further added to this vulnerability. Situated in one of the most seismically active zones of the world, the grave threat of earthquakes in Bhutan is ever present. Furthermore, forest fires, flash floods and landslides are regular occurrences that incur frequent losses of lives and considerable damage to property and infrastructure.²⁹ The national planning vision, *Bhutan 2020: A Vision for Peace, Prosperity and Happiness* states, the further erosion of our traditional perception and understanding of our place in natural systems carries potentially disturbing consequences for the environment. It may be a shorter step than we care to imagine, from seeing ourselves as part of a living world to seeing it as a source of wealth and as a resource base to be exploited for immediate gain- a step that would undermine the whole ethos and ethics of conservation. We must be ever conscious of this danger. It can only be addressed by deliberate efforts to keep alive traditional attitudes and values. This establishes a clear link between environmental conservation and the conservation of our cultural heritage.³⁰

However, while the impetus behind modern environmental protection schemes may be spiritually influenced, specific environmental policy mechanisms and procedures are scientifically based, with influence from Western environmental paradigms. Environmental conservation broadly falls in line with Buddhist values; however environmental policies themselves in Bhutan may in fact challenge traditional and religious understandings of the environment. The government's overall policy objective for biodiversity conservation is to integrate nature conservation into economic development plans, with an emphasis on communities living within the protected areas and the buffer zones.

The present analysis gives a brief background of the nature conservation policy, park management system, and the existing rules and regulations. Since the Forest Act of 1969, the basis of Bhutanese policies and laws pertaining to conservation have progressed from forest-based land management to sustained yield principles and approaches. The 1969 Forest Act focused on traditional forest protection and introduced user permits. The revised 1991 Forest Act recognized the need for systematic management of conservation areas and to consider the economic needs of the local communities living in and around the conservation areas. This Act declared all non-private forest land to be government-owned forest reserves. In 1995, the National Assembly decreed that 60 percent of the country would remain under forest cover for all time. The amended Forest and Nature Conservation Act of 1995 therefore mandated the establishment of protected areas and the management system. The act also requires that the conservation of biodiversity should be guided by conservation values and should benefit the Bhutanese people. Over the years, the government has issued several acts, regulations, and orders, which provide the legal framework for the measures taken by the park managements to achieve the conservation goals.³¹

CONCLUSION

Thus, 'happiness' is a universally shared aspiration for all humans and can logically be regarded as the core purpose of development. If happiness is an ultimate goal of human being than development paradigm that focuses exclusively on economic prosperity may need a rethinking. Development should not be only about economic prosperity, only a material means of happiness, but should be conceptualized towards the goal of happiness that involves other aspects than economic such as physical, mental, social and spiritual. Public policy schemes, therefore, need to be re-designed in order to increase individual and societal happiness, while the maximization of the happiness of the Bhutanese people was first propounded by His Majesty, Jigme Singye Wangchuck, in the late 1980s, many of its underlying principles have guided the country's development for much longer.

The concept of GNH formally constitutes the key objective of national development and serves as the foundation for Bhutan's normative approach. The GNH concept squarely places the individual at the centre of all development efforts and includes a multi-dimensional approach toward improving human well-being. It acknowledges that people are the real wealth of a nation and propounds that income alone cannot be the measure of all human endeavors; equal emphasis must be given to the spiritual, cultural and emotional needs of the people. Whatever means we imply to achieve our end-the end of happiness this calls for the balancing of our spiritual and material needs and the enlightenment of the individual.

There is some concern that the concept of GNH is merely an elitist ideal, held by the ruling class but alienated from the common man. Despite its seemingly recent origin, the term GNH is a mere popularization of deep-rooted philosophies that have been present in Bhutanese development since even before the modernization efforts that started in 1960's. In spite of this, there are still discrepancies in how different people view and understand the concept of GNH. While some view GNH as an enlightened personal philosophy others are more critical, commenting that GNH is a mere repackaging of the long iterated concept of sustainable development made more appealing by inserting the word happiness. The other concerns are that happiness is a subjective and a psychological concept which cannot effectively be measured. Therefore the challenge lies in how the nine dimensions of the GNH index will be implemented in order to measure GNH.

REFERENCES

Endnotes

1. Tashi, W. & John, V. (2011): "Under the Influence of Buddhism: The Psychological Well-Being Indicators of GNH", *Journal of Bhutan Studies*, Bhutan, p 5.
2. Dasho, & Dorje, R. (1990): "A Brief Historical Background of the Religious Institutions of Bhutan", *Buddhist Himalaya : A Journal of Nagarjuna Institute of Exact Method*, pp. 1-2
3. Tashi, W. & John, V. (2011): "Under the Influence of Buddhism: The Psychological Well Being Indicators of GNH", *Journal of Bhutan Studies*, Bhutan, pp.7-8
4. S. N. Rong (2004), *Teachings in Chinese Buddhism – Buddhism - The Middle Path*. Retrieved July 9, 2020, from http://www.buddhanet.net/cbp2_f4.htm
5. Ibid.,
6. Mancall, Mark. (2004). "Gross National Happiness and Development: An essay", in Ura, K. & Galay, K. (eds.) *Gross National Happiness and Development, The Centre for Bhutan Studies*: Thimphu., p 78
7. K. D. Dorji (2004), *Gross National Happiness: Concepts, Status and Prospects.*, pp.87-88
8. V. Stehlik (1999), *Gross National Happiness: A Respite from a Biblical Economy or Attaining Utopia?* In: *Gross National Happiness: Discussion Papers*. Thimpu 1999, pp. 52-58

9. Mark Mancall (2004), *Gross National Happiness and Development: An essay*. In: Proceedings of the First International Conference on Operationalization of Gross National Happiness. Centre for Bhutan Studies, Thimphu, pp. 1-50
10. Mancall, Mark. (2004). "Gross National Happiness and Development: An essay", in Ura, K. & Galay, K. (eds.) *Gross National Happiness and Development, The Centre for Bhutan Studies*: Thimphu., pp. 203-204
11. E.F. Schumacher (1966), *Buddhist Economics*. Retrieved June 9, 2020 from website <https://centerforneweconomics.org/publications/buddhist-economics-translation/>
12. Payutto. Ven. P.A (2011), *Buddhist Economics – a middle way for the market place*. Retrieved March 16, 2020 from <http://inebnetwork.org/a-middle-way-for-the-market-place/>
13. J. Wickramasinge (2000), *People Friendly Economic Development: An Introduction to Buddhist Theory of Development Economics*. Retrieved April 27, 2020 from https://www.appropriate-economics.org/materials/people_friendly_economic_development.html
14. Rose, Leo (1977), *The Politics of Bhutan*, Ithaca, New York, Cornell University Press. pp 101-102
15. J. Hirata (2003) "Putting Gross National Happiness in the Service of Good Development: from ethics to politics", *The Journal for Bhutan Studies* 9(4). p 99
16. It was established in 2009 as a research centre for Bhutan.
17. Asian Development Bank. *Basic Statics 2020*, (April 2020)
18. Gross National Happiness Commission (2008): "*Tenth Five Year Plan 2008-2013*", Vol. 1
19. Wangmo. and John, Valk. (2011): "Under the Influence of Buddhism: The Psychological Well Being Indicators of GNH", *Journal of Bhutan Studies*, Bhutan, p 5.
20. UNDP (1994), *Human Development Report 1994*.
21. Ibid.,
22. Royal Government of Bhutan (1996), *Community Forestry Guidelines for Bhutan*. Social Forestry and Extension Section, Forestry Services Division, Ministry of Agriculture: Thimphu, pp.109-110
23. Rinzin, C. Velthuis, D. N., & Vermeulen, W. J. V. (2007), "The successful failure of the sustainable development agreement between the Netherlands and Bhutan", *Sustainable Development*, 15(6), 382-396.
24. Prakke, Diederik. (2005), "The Buddhist Truth of Happiness Spirituality and Development-The Case of Governance in Bhutan", *Journal of Bhutan Studies*: pp.119-165
25. Priesner, Stefan (2004), "Gross National Happiness: Bhutan's Vision of Development and its Challenges", in ParthaNathMukherji and ChandanSengupta (eds.) book *Indigeneity and Universality in Social Science: A South Asian Response*. New Delhi: Sage Publications India Pvt. Ltd., p.230
26. Ibid.,
27. Royal Government of Bhutan (1996), *Community Forestry Guidelines for Bhutan*. Social Forestry and Extension Section, Forestry Services Division, Ministry of Agriculture: Thimphu. pp.89-91
28. Ministry of Finance, (2005) Royal Government of Bhutan, 'Bhutan National Human Development Report, Thimphu. pp. 165-67
29. Ministry of Finance (2007), Royal Government of Bhutan, Department of Planning, *Millennium Development Goals Needs and Assessment Report 2007*, Thimphu., pp. 23-24
30. Royal Government of Bhutan (1999), *Bhutan 2020: A Vision for Peace Prosperity and Happiness*, Planning Commission: Thimphu., pp. 317-319
31. Report 2000, The Planning Commission Secretariat, Royal Government of Bhutan, Thimphu. Report from World Tibet Network News: "*Both Western and Himalayas Medicine Supported in Bhutan*" (Dateline Thimphu, Bhutan, Associated Press, June 16, 2001).

Study of Anthropometric Measurements (Weight & Height) Amongst Early Adolescent Boys in Rural and Urban Areas of Kishtwar District of Jammu and Kashmir

Dr. Nilesh A. Lohar*

ABSTRACT

Anthropometry has played a determining role in sports counseling, talent selection, talent identification, and guidance for nutritional intake in determining parameters for health related physical fitness. The developmental stages comprises of infancy, childhood, puberty, adolescence and adulthood. There are four characteristics stages of growth from birth to adult: Rapid growth in infancy and early childhood, slow steady growth in middle childhood, rapid growth during puberty, gradual slowing down of growth in adolescence until adult height is reached. Physical fitness helps in developing a positive attitude towards body and helps the child to remain concerned and highly motivated to maintain or improve his individual fitness. For identification of places which would qualify to be classified as 'urban' all villages, which, as per the 2001 Census had a population of 4,000 and above, a population density of 400 persons per sq. km. and having at least 75 per cent of male working population engaged in non-agricultural activity were considered. An area is considered 'Rural' if it is not classified as 'Urban' as per the above definition. The Researcher has undertaken a comprehensive survey comparing the anthropometric measurements and physical fitness levels amongst the Early Adolescent age, 50 students each from rural and urban areas of Kishtwar district of Jammu and Kashmir. The data was analyzed using independent Factorial ANOVA test. In the early adolescent age group the rural adolescent age group seems to have significant advantage in the anthropometric measurements and physical fitness over the urban adolescent age group. In Kishtwar District, the Early Adolescent age boys show no significant difference in the Gross Body Measurements variables, viz. Weight and Height between Rural and Urban areas.

Keywords: Anthropometry, Physical fitness variables, Rural, Urban, Early Adolescent age

BACKGROUND OF THE STUDY

The society in modern times provides a number of challenges that test the knowledge acquired by human beings. The human race comprises of different ethnic groups, each ethnic group provides unique features that differ with ethnicity and geographical location. The geographical location is an indicator that influences the general environmental conditions in which the humans are structured and develops. The development of the human being is the result of the type of diet, socio-cultural and political environment. As children grow various groups of people become more or less important. Significant groups and individuals are sometimes more important because of the powerful influence they can have on children. Significant others include parents, teachers, and other children, all of whom

*Assistant Professor, Department of Physical Education, University of Mumbai, E-mail : dr.nileshlohardpeum@gmail.com

may have different attitudes towards a child. The information and changing situations received from these different sources means that children frequently have to adapt their image of themselves. The exposure to different adults and other children allows them to fit according to the needs becomes important. As they mature they understand better how to get on with others¹.

The word Anthropometry is derived from the Greek word “Anthropo” meaning “Human” and “Metron” meaning “Measurement” (Gorstein et. al.,1994). It includes a range of human body measurement such as Weight, Height, Skin fold thickness, Circumferences, Diameters, and Length measurements of the body segments². Anthropometric measurements has played a very significant role in sports counseling, talent selection, talent identification, and guidance for nutritional intake in determining parameters for health related physical fitness.

Fitness is an individual matter which characterizes the degree to which the person is able to function³. It means the ability of each person to live with his potential most effectively. According to Kirchner, “the ability to function depends up on physical, mental, emotional and social components of fitness, all of which are related to each other and mutually interdependent.”

Play and sport is not necessarily the same thing and play has different functions for adults and children. Playing as far as adults are concerned means relaxing or taking time away from work and possibly taking some recreation while for children it provides unique opportunities and interesting learning experiences. Children should live for long periods in the world of play that provides a pathway for transforming their life upward from childhood to adulthood. Competition is a form of comparison and means different things to the child than to the adult⁴.

Jammu and Kashmir occupies a unique position lying in the northern most part of India which is mostly situated in the Himalayan mountain range. The state of Jammu and Kashmir is bounded with Himachal Pradesh and Punjab to the south, Pakistan to the west, Afghanistan to the North and China to the North -East. Some of its territory was forcibly captured by Pakistan, which is called Pakistan occupied Kashmir (PoK). The geographical location of the state of Jammu and Kashmir is situated between 32° 15” and 37° 05” north latitudes and 72° 35” and 83° 20” east longitudes geographically. The state of Jammu and Kashmir covers total surface area of about 2,22,236 sq. km, the urban population of the state of Jammu and Kashmir is 27.21% and the rural population is 72.79%.

Rural - Urban Areas: While classifying places as Rural and Urban areas, as per the 2001 Census, the areas that would qualify to be classified as 'urban' all villages, which, had a population of 4,000 and above, and population density of 400 persons per sq. km. Another criteria, is that at least 75 per cent of the male working population should be engaged in non-agricultural activity. An area is considered 'Rural' if it is not classified as 'Urban' as per the given definition below:

- (a) The areas such as municipality, corporation, cantonment board or notified town area committee, etc.
- (b) A place is considered as Rural if the following three criteria are satisfied simultaneously:
 - (i) The area has a minimum population of 5,000;
 - (ii) At least 75 per cent of male working population are engaged in agricultural pursuits;
 - (iii) Has density of population of at least 400 per sq. km or 1,000 per sq. mile⁵.

RATIONALE OF THE STUDY

Physical fitness is the capacity of an individual to do work effectively with joy and pleasure. Human beings come in all shapes and sizes and have different skin colors, but their bodies all work in exactly the same way. In children, the anthropometric measurements shows the health status of child and can act as an indicator to assess the health, work capacity and cognitive function of

children. These measurements help in the early stage of children, as this period experiences physical, mental, emotional and social change in a child. Physical fitness at the childhood stage has important benefits, as it is reflected in the later stage of adulthood. The developmental stages comprises of infancy, childhood, puberty, adolescence and adulthood. There are four characteristics stages of growth from birth to adult: Rapid growth in infancy and early childhood, slow steady growth in middle childhood, rapid growth during puberty, gradual slowing down of growth in adolescence until adult height is reached. Throughout the world, anthropometric characteristics and physical fitness levels are considered to guide any individual to take up any physical activity or sports.

AIMS AND OBJECTIVES OF THE STUDY

1. To find out the differences in anthropometric measurements between the rural and urban Early Adolescent boys of Jammu and Kashmir.
2. To find out the differences in anthropometric measurements between the rural and urban Middle Adolescent boys of Jammu and Kashmir.
3. To examine the differences in the physical fitness between the rural and urban Early Adolescent boys of Jammu and Kashmir.
4. To examine the differences in the physical fitness between the rural and urban Middle Adolescent boys of Jammu and Kashmir.

SIGNIFICANCE OF THE STUDY

The study has the significance in following ways

- The finding of this study might help in selecting the anthropometric variables for sports amongst rural and urban adolescent boys.
- The study may also help in comparing anthropometric characteristics and physical fitness standard of rural and urban adolescent boys.
- The findings of this study are likely to provide criteria for selecting potential beginners for different sports from rural and urban areas.
- The results of the study would add new objectives and interpretations to the literature, which would be helpful to physical educators, trainers, and coaches.
- The findings of the study would be helpful for government while making policies regarding sports promotion, health and fitness programs.

HYPOTHESIS OF THE STUDY

- H_{001} . There is no significant difference between rural and urban areas in the Anthropometric variables of Early Adolescent Boys of Kishtwar district.
- H_{11} . There is no significant difference between rural and urban areas in the Anthropometric variables of Early Adolescent Boys of Kishtwar district.

METHODOLOGY

In this work, the Researcher has tried to collect the Anthropometric Measurements and Physical fitness levels of Adolescent Boys in Rural and Urban Areas of Jammu and Kashmir. The Researcher visited (3) Districts each of Jammu Division and Kashmir Division respectively. In total six (6) districts were covered for collecting the required data from the State of Jammu and Kashmir, that are mentioned below:

- Jammu Division: Doda, Kishtwar, Kathua.
- Kashmir Division: Kulgam, Srinagar, Ganderbal.

The sample collected from the six districts of Jammu and Kashmir has been categorized into two groups.

- Early Adolescent age (E.A.A) 10 to14 Years.
- Middle Adolescent age (M.A.A) 15 to17 Years.

TOOLS OF DATA COLLECTION

The tools for Anthropometric measurements and Physical fitness variables was done, keeping in view the availability of equipment, acceptability to the subjects, feasibility of tests, the legitimate time that could be devoted for tests and after consultation with experts. The following Anthropometric Measurements (Weight) was collected by using Portable Weighing Machine in Kgs. The subject stands erect on the platform of the balance with equal weight on both feet. The machine was checked for alignment of zero error, before asking the subject to stand on its platform and after the subject gets down. The maximum height of the individual is taken by asking him to stand erect, barefooted on a plain horizontal surface against a wall, with his heels, back and head touching the wall, the subject is requested to stretch the body upwards as much as possible without his heels leaving the ground. The subject is placed in front of the anthropometer rod and the cross bar of the anthropometer rod is adjusted so that its lower edge touches the highest point of the subject's head.

STATISTICAL TECHNIQUE

The data has been analyzed using independent Factorial ANOVA test with online Vassar stats Computational package to test this hypothesis as shown in the following table.

Table-1: 2x2 Factorial ANOVA Summary for Gross Body Measurements variables, viz. Weight & Height of Rural boys and Urban boys of Early Adolescent age in Kishtwar District

ANOVA Summary					
Source	SS	df	MS	F	P
Rows	156.25	1	156.25	3.28	0.0733
Columns	310360.41	1	310360.41	6506.17	<.0001
r x c	0.81	1	0.81	0.02	0.8878
Error	4579.44	96	47.7		
Total	315096.91	99			

INTERPRETATION

The observed F- ratio $F(1,96) = 0.02$ is greater than the tabulated F- ratio $p = 0.8878$ ($p > .05$) we accept the null hypothesis that there is no significant difference between the interaction of Rural boys and Urban boys of Early Adolescent age in Kishtwar District with respect to Gross Body Measurements variables. The observed F- ratio $F(1,96) = 3.28$ is greater than the tabulated F- ratio $p = 0.0733$ ($p > .05$) we accept the null hypothesis that there is no significant difference between the Rural boys and Urban boys with respect to Gross Body Measurements variables. The observed F- ratio $F(1,96) = 6506.17$ is lesser than the tabulated F- ratio $p < .0001$ ($p < .05$) we reject the null hypothesis that there is no significant difference within the Gross Body Measurements variables, viz. Weight and Height of Rural boys and Urban boys of Early Adolescent age in Kishtwar District.

CONCLUSIONS

In Kishtwar District, the Early Adolescent age boys show no significant difference in the Gross Body Measurements variables, viz. Weight and Height between Rural and Urban areas.

SUGGESTIONS

1. The same Anthropometric measurements and Physical Fitness variables may be used for different districts of Jammu and Kashmir.
2. The same Anthropometric measurements and Physical Fitness variables may be used for different districts of various States in India.
3. Different Anthropometric measurements and Physical Fitness variables may be used for different districts of Jammu and Kashmir.
4. Different Anthropometric measurements and Physical Fitness variables may be used for different districts of various States in India.
5. The same Anthropometric measurements and Physical Fitness variables may be used for suggesting different sports disciplines in the different districts of Jammu and Kashmir.
6. The same Anthropometric measurements and Physical Fitness variables may be used for suggesting different sports disciplines in the different districts of various States in India.
7. Different Anthropometric measurements and Physical Fitness variables may be used for suggesting different sports disciplines in the different districts of Jammu and Kashmir.
8. Different Anthropometric measurements and Physical Fitness variables may be used for suggesting different sports disciplines in the different districts of various States in India.

REFERENCES

1. Introduction to Coaching : The International Association of Athletics Federations 2009 pg. 50
2. Committee on Physical Activity and Physical Education in the School Environment; Food and Nutrition Board; Institute of Medicine; Kohl HW III, Cook HD, editors. Washington (DC): National Academies Press (US); 2013 Oct 30.
3. Committee on Fitness Measures and Health Outcomes in Youth; Food and Nutrition Board; Institute of Medicine; Pate R, Oria M, Pillsbury L, editors. Washington (DC): National Academies Press (US); 2012 Dec 10.
4. Anthropometric Measurement Kyle Casadei; John Kiel.
5. Census India 2011
6. Sir Francis Galton, FRS Springer: The Legacy of His Ideas: Proceedings of the twenty-eighth annual symposium of the Galton Institute, London, 1991
7. Physical status: the use and interpretation of anthropometry Report of a WHO Expert Committee
8. Das, P. and Chatterjee, P. (2013). Urban-rural contrasts in motor fitness components of youngster footballers in West Bengal, India. *J. Hum. Sport Exerc.*, 8(3):797-805.
9. Hussain, I., Ahmed, A., Mohammad, A. and Ali, Z. (2013). Anthropometric profile of school children belonging to different regions of Himachal Pradesh. *European Academic Research*, 1(4):396-401.
10. Kolekar, S.M. and Sawant, S.U. (2013). A comparative study of physical growth in urban and rural school children from 5 to 13 years of age. *International Journal of Recent Trends in Science and Technology*, 6(2):89-93
11. Karak, K., Mithun, S.K. and Mishra, S.R. (2013). A comparative analysis on the level of body composition among active and inactive girls. *Indian Journal of Applied Research*, 3(12):493-494.
12. Kangane, S. and More, S. (2013). Study on percentage body fat of 13 years school going boys in Nashik district. *Variorum Multi-Disciplinary e-Research Journal*, 4(2):1-3.

13. Lierop, A.V., Nam, N.V., Doak, C., Hung, L.Q., Binh, T.Q., Hoekstra, J. and Vries, P.J.D. (2008). Regional clustering of anthropometric dimensions of primary school children in rural and suburban Vietnam. *Asia Pacific Journal of Clinical Nutrition*, 17(4):603-607.
14. Parimalavalli, R. and Sangeetha, M. (2011). Anthropometric measurements and nutrient intake of adolescent girls. *Anthropologist*, 13(2):111-115.
15. Shiva kumar, S., Gajanana, P.B. and Prakash, S.M. (2014). Influence of regional disparity on physical fitness of urban adolescent girls. *International Journal of Engineering and Sports Science*, 1(6):1-4.
16. Singh, B. and Bhola, G. (2012). Comparison of selected anthropometric measurements and physical fitness of Haryana school boys in relation to their social status. *Indian Journal of Movement Education and Exercises Sciences*, 2(2):

Old Age- A Lonely Phase

Nisha Kirar*

India is undergoing a demographic transition! While 8 percent of its population was recorded 60 years and above in 2011 Census, it is expected to increase its share to 12.5 percent and 20 percent by 2026 and 2050 respectively. 20% India will have around one-fifth of its total population aged 60 years and above by 2050.

There is an intensive need to sensitize people towards the problems faced by senior citizens. There are hardly any strong voice highlighting their issues or taking them into priority. Unfortunately people think that this group is not productive and not contributing for country's development so let's think of something which talks about growth. We are living because of our ambition, our profession, our responsibilities, our family....but what about this lonely group. They just have those beautiful memories where they performed many leading roles in their life. While reading i was stunned to know that elders were kicked, abused, evicted and forced to beg.... This all was done by their own children. **As per estimates 82% of those abused did not report the matter.** This is to maintain confidentiality of the family or did not know how to deal with problem. What kind of great value system they have.. So what to do with unreported issues. Shall we sit calmly thinking everything is fine or is their any law which talks about giving justice to unreported cases.

The following steps i believe can be taken to at least give a good start **to solve the issues** of senior citizens-

1. Time to revive the value system and make people understand that modernity is not moving away from traditional values.
2. We should also work to strengthen the laws related to senior citizens safety.
3. Involvement of civil society groups, NGO's, media etc.
4. Embracing awareness about their issues
5. Time to time survey, meetings, mohalla discussion, elderly people meetings to make this group empowered.
6. Effective health care facilities for old people and making them aware about them.
7. Spreading awareness about their rights.

I believe this is the time to revive the value system. Let's not make the generation so self centered that they'll forget about their own parents. There is an urgent need to talk about the importance of family in one's life. One parent came to me saying that they fulfill all the material demands of their child so that one can reward them with good marks. Let's not start their journey with such kind of contract which may continue till their old age. These children will expect the same contribution from your side when you are fighting with your own age. They will see- is your presence fulfilling any of the material demand. So instead of material fulfilment, reward them with family outings and emphasize the importance of family. Make them realize that happiness cannot be enjoyed alone. There is no substitute for family. Respect the elder family member. If possible come out from your comfort zones and listen and solve old person's problem. Don't become so stubborn by assuring yourself we'll see our old age when it comes let's enjoy this time now.

If we think enough mechanisms are there for them then they may not be working sufficiently, if they are working then they are not reaching, if they are reaching they may not be recognising the actual sufferer and not suggesting the effective solution. Time to think!

*New Delhi

A Comparative Study on Impact of Organised Retail on Unorganised Retail in View of Indian Customers

Swadesh Deepak*

ABSTRACT

India started its Retail Journey since ancient time. In Ancient India there was a concept of weekly HAAT, where all the buyers and sellers gather in a big market for bartering. It takes a pretty long times to and step to shape the modern retail. In between these two concepts (i.e. between ancient retail concept and the modern one there exist modern Grocery/ mom and pop shops or Baniya ki Dukan. Still it is predominating in India So the Indian retail industry is divided into two sectors- organized and unorganized. The Indian retail industry is now beginning to evolve transformation that has swept other large economies. There is a vast change in Indian retail, the liberalization of the consumer goods industry initiated in the mid-80's and accelerated through the 90's has begun to impact the structure and conduct of the retail industry. The concept retail, which includes the shopkeeper to customer interaction, has taken many forms and dimensions, from the traditional retail outlet and street local market shops to upscale multi brand outlets, especially stores or departmental stores. Hence, focusing on two aspects of retail marketing i.e. store retailing and non store retailing. Store Retailing as the departmental store, which is a store or multi brand outlet, offering an array of products in various categories under one roof, trying to cater to not one or two but many segments of the society and Non store retailing as the direct selling, direct marketing, automatic vending.

The evolution of retail activities, planning and strategies of retail activities and business, models and theories of change in retail activities, functions of retailing and behaviour of consumers associated with buying of goods and services with specific reference to Indian consumers. The study concluded that attributes like image, format and layout of the retail store, cleanliness, lighting, music, scent, information graphics in the retail store, facilities offered to consumers and after sale service of the retail store are the main factors leading to frame buying behaviour of consumers.

INTRODUCTION

Retailing is a process of contacting the end customers through the medium of goods and services taking benefits of the various channel of distribution for the generation of profit and thus occupies a major place in the field of business. Retailing is the function that is to be performed by the individuals known as retailers. Supply chain management is the one of the major functions involved in retailing and is organized by the process of retailing. The goods and services provided by the retailers are for the use of the personal, family or household. The retailing sector is an important aspect for the overall mediators in the channel of distribution such as manufacturers to enable them to have a control over their production without having any distraction while maintaining end relation with the customer as many efforts are involved in maintaining the end relation with the end user

*Research Scholar, Faculty of Commerce, Udai Pratap Autonomous College, Varanasi. E-mail- swadeshdeepak@hotmail.com

or the consumer. The process of retailing makes the purchase of goods and services easy for the customer; therefore, it is very important on part of the retailers to be very vigilant in their trading activities. The major feature of retailing includes:

- Retailing is a process of direct interaction with the consumers.
- The volume of sales involved in the concerned scenario is generally high.
- Techniques of sales promotion are involved at this stage only.
- The critical factor involved in retailing is location and layout.
- The concerned process brings out more employment opportunities.
- The process brings out useful information from the consumers and provides them to manufacturers to enable them to act accordingly.
- The retailing process also maintains a good competition in the market.
- The retailing sector performs multiple tasks in order to provide the consumer information about the availability of the products and attracts them toward the products.

The retailing sector has however faced many changes in its operation, format or working patterns, particularly in countries which are still developing. New formats in relation to the process of retailing have emerged such as a departmental store, discount specialized stores, super-markets, convenience retail houses, junk food stores, specialised stores, warehouse retailers and hyper-markets etc. The retail sector has come out as the most dynamic sector with the entrance of many players from both domestic and international background and is alternatively exposed to many risks from both the internal and external influences. With the result of these, level of competition has molded the operations of the retailing process in an entirely different manner. This requires on the part of the retailers to be innovative and creative in their position of distribution to have a good and valuable share in the overall system of trading.

OBJECTIVES OF THE STUDY

1. To study the factors influencing the consumers to buy from organized retailers than from unorganized retailers.
2. To study the perception of customers towards organized and unorganized retailers.

EVOLUTION AND STRATEGIC PLANNING OF RETAIL ACTIVITIES

The evolution of retailing is a broader concept including areas like Economics, History, Geography, etc. Retailing has been evolved through many stages and thereby changed the operations in a vast manner. The first form of retail was the barter system which involves the exchange of goods from the other good. This was a major drawback in the retail sector and proves to be very difficult in implementation. With the passage of time, the barter system was abolished and the currency acts as a proper intermediate of exchange of goods and services.

After, hawkers turned out to be another form of retailing using pushcarts to sell their products which was further followed by the ration shops which facilitate necessity goods at nearby places. Finally, the era of manufacturing comes out with small stores and specialty stores which act as a big revolution in the retailing sector. After that, the emergence of large chain store takes place and then finally big malls.

Strategic Planning of Retail Activities

With the growing competition, entry of new players, new formats, new technologies and intensity of the operations in the retail era is demanding (market)ng the retailers to adopt a strategic planning

which could help them in having a proper knowledge of the environment of retail. Retailing strategy has built up a bridge in understanding the world of retailing in a more enhanced manner.

An effective retail strategy is required to identify the following:

- The target market for a retail sector.
- The method adopted by the retailer to assess and understand the needs of the market.
- The retailer should develop a strategy to have a sustainable competitive advantage that cannot be easily copied so as to derive the benefit for the long period.

Any business the retailer is engaged in must have an advantage over the competitors such that to attract the customers and have maximum advantage. Following strategies will enable the retailers in getting a better overview of the retail sector and capture a greater share in the market:

- Loyalty of the Customers
- Store Location
- HR Management
- Distribution and Information System
- Unique Merchandise
- Relationship with the Vendors
- Services offered to customers

Retail Market of India: Overview

Below Figure represents the higher revenue progression of the unorganised retail sector in India for last five years, while the organised sector shows the steady revenue progression, which indicates that there is more growth potential in unorganised retail than organised retail in the Indian business environment. While the India retail market size concerning the growth of organised and unorganised retail based on years is mentioned below. The changes taking place in the Indian retail sector are fast as compared with major global markets. Global players took 20 to 25 years to develop the retail sector, but in India, such types of changes are occurring in 10 years. However, at present, we do not know the impact of organised retailing on the unorganised retail sector, i.e., mom and pop stores.



Figure: Organised Vs Unorganised Indian Retail Market (In \$ Billion)
Source-<http://www.technopak.com>

ORGANIZED VS UNORGANIZED RETAIL

In the developed economies, organized retail is in the range of 75-80 per cent of total retail, whereas in developing economies, the unorganized sector dominates the retail business. The share of organized retail varies widely from just one per cent in Pakistan and 4 per cent in India to 36 per cent in Brazil and 55 per cent in Malaysia. Modern retail formats, such as hypermarkets, superstores, supermarkets, discount and convenience stores are widely present in the developed world, whereas such forms of retail outlets have only just begun to spread to developing countries in recent years. In developing countries, the retailing business continues to be dominated by family-run neighbourhood shops and open markets. As a consequence, wholesalers and distributors who carry products from industrial suppliers and agricultural producers to the independent family-owned shops and open markets remain a critical part of the supply chain in these countries.

Organized Retail Models

High population density in the metropolitan cities and surrounding tier-1 towns is driving the geographic penetration of modern retail. Nationwide, the retail penetration has been the highest in the South in Tamil Nadu, Kerala, Karnataka, and Andhra Pradesh, moving towards the West along Maharashtra and Gujarat and now penetrating the North, in Delhi's National Capital Region (NCR), Punjab, and Western Uttar Pradesh. The fresh crop of modern retail in the late 1990s started in the southern region as South India has clusters of metro cities and tier-1 towns. In addition, less complicated licensing regulations by the state and local authorities have played an important role in the spatial penetration along the regions. In Andhra Pradesh, the licensing process is now online, thereby reducing the time lag. Broadly, retail firms are following three routes for their market entry:

- (a) the acquisition route which gives a jump-start to take advantage of the already experienced manpower, infrastructure, front-end property of the acquired firm;
- (b) the JV partnerships, a preferred route for firms seeking foreign collaboration for technical know-how and assistance in the back-end operations as well as future export opportunities; and
- (c) the green-field investment route for market entry.

A few firms are also following a mixture of acquisition and JV routes for quick market access. Additionally, firms are strategically expanding verticals by forming subsidiaries or holding firms that act as catalysts to their retail business. Typically, firms are positioning themselves in one or both of the segments: lifestyle⁷ and value retailing⁸ under multiple retail formats. Retail firms are adopting a combination of formats including, mega (hyper and/or super), medium (department and/or speciality), and small size (convenience and/or discount) for expansion. This strategy benefits firms in several ways. It helps to:

- (a) attain critical mass;
- (b) economies of scope in sourcing by accruing costs across stores; and
- (c) reach out to consumers in the local neighbourhood locations.

Some of the Reasons adduce for this Positive Impact are

Benefits for consumers: Organized retail will offer consumers several benefits, such as wider product choice more in line with consumer needs, lower prices, better shopping experience because of improved store ambience and increased browseability, enhanced service, and quality levels.

1. **Greater job creation:** Organized retail will create employment at several levels. The most significant increase will be in front-end jobs for retail staff, where the contribution of organized retail will be not only in the greater number of the people employed but also in making jobs that were otherwise considered “menial”, more dignified, thereby, giving even those without higher educational qualifications a decent livelihood.
2. **Efficient supply chain:** The robust sourcing and distribution network likely to be set in place by modern trade would result in a more efficient supply chain management -- reduced lead times, fewer stock outs, reduced wastage, and consistent product quality.
3. **Survival of traditional retail:** Manufacturers believe that both small and large retailers would continue to co-exist in India. Small retailers account for the bulk of retail sales today and will remain a significant force in the future since growing consumption will itself warrant the growth of both organized and traditional retail. Traditional retailers will also innovate, upgrade their stores and enhance value-added services to retain and strengthen relationships with their customers.

Modern Retail Formats in India

1. Hypermarket
2. Cash-and-carry
3. Department Store
4. Supermarket
5. Shop-in-Shop
6. Speciality Store
7. Category Killers – Large Speciality Retailers
8. Discount Store
9. Convenience Store

Table: Organized and unorganised retail growth in India.

Sr. No	Type of Retail Sector	Year on Year Growth			
		2014	2015	2016	2017
1	Organised Retail Sector	19.10%	19.17%	19.15%	19.22%
2	Unorganised Retail Sector	10.17%	11.08%	11.12%	11.26%

Source- Technopak (2017). Retail, Consumer Products and E-tailing: Fashion - Textiles and Apparel: Food Services and Agriculture: Education. Retrieved from <http://www.technopak.com>

A Balanced Approach to Retail

India is at the crossroads with regard to the retail sector. Several emerging market economies have gone ahead and reaped the benefits of modern retail. India is however a latecomer to organized retail expansion and the picture still remains unclear as to its future direction. The study advocates a balanced approach to retail and suggests that the government plays a major role in shaping its future course. There is no doubt that traditional retail has been performing a vital function in the economy and is a significant source of employment. However, it suffers from huge inefficiencies as a result of which consumers do not get what they want, and farmers often get prices for their produce much

below what is considered fair. In contrast, organized retail provides consumers with a wider choice of products, lower prices, and a pleasant shopping environment. It gives farmers a better alternative channel for selling their products at a better price. The competition from organized retail has affected the business of traditional retailers but they are making efforts to stay on. In their struggle to face this competition, they are handicapped by a lack of access to formal credit from commercial banks. As in other countries, government policy can and should play an important role in modernizing the unorganized sector and improve its competitiveness. On the other hand, a policy of protection of traditional retailers by restricting organized retail will harm the growth prospects of the country by foregoing the enormous benefits that are generated by organized retail.

Changing landscape of Indian consumerism: The face of Indian consumerism is changing: not Indian consumerism is evolving from Bajaj Scooter family man to Bajaj Pulsar trendy youngster. This changing consumer's taste and lifestyle, somewhere automatically give some advantage to organized sector. This makes imperative for unorganized retail sector to restructure itself in order to withstand the increasing competition and to meet consumer expectations by moving with trends. What they can do and what they are doing, some of these issues will be discussed in future parts of article.

Role of government: As in other countries, government policy can and should play an important role in modernizing the unorganized sector and improve its competitiveness. But question is what should be exact role of government. Should it go for policies for protection of traditional retailers by restricting organized retail or encourage organized retail to reap benefits that are generated by it? What should be mechanism to promote or protect one or other? Can government act only as a facilitator or enablers or both? In the said context, it is imperative to develop a strategic roadmap for unorganized retail form to be able to survive, compete and keep the economy growing.

Retail Trends in past few years: Before the decade of eighties, India with hundreds of towns and cities was a nation striving for development. The evolution was being witnessed at various levels and the people of the nation were learning to play different roles as businessmen and consumers. The foundation for a strong economy were being laid, youth were beckoning new awareness in all spheres. And this brought in an opportunity for retail industry to flourish. First in the metros and major cities later to impact sub urban and rural market as well. Retailing in India at this stage was completely unorganized and it thrived as separate entities operated by small and medium entrepreneurs in their own territories. There was lack of international exposure and only a few Indian companies explored the retail platform on a larger scale. From overseas only companies like Levi's, Pepe, Marks and Spencer etc. had entered targeting upper middle and rich classes of Indians. However as more than 50 % population was formed by lower and lower middle class people, the market was not completely captured. This was later realized by brands like Big Bazaar and Pantaloons who made their products and services accessible to all classes of people and today the success of these brands proves the potential of Indian retail market. A great shift that ushered in the Indian Retail Revolution was the eruption of Malls across all regional markets. Now at its peak, the mall culture actually brought in the organized format for retailing in India which was absent earlier. Though malls were also initially planned for the higher strata, they successfully adapted to cater to the larger population of India. And it no wonder, today malls are changing the way common Indians have their shopping experience.

MARKET PENETRATION STRATEGY

The modern retailers follow either a spiral⁹ or a cluster¹⁰ approach for retail expansion, and in India typically the cluster approach is more popular. In the cluster approach, the firm initially launches in an urban city and then expands towards surrounding tier-1 towns belonging to the same cluster

catchment area. Each cluster covers its own region for direct sourcing, distribution, and logistics like a separate business unit. This approach is favourable for retailers because they can build a more efficient logistics network and take advantage of cultural similarities among consumers in the same region in order to develop their product offerings. The real estate constraint however is restricting the retailers' expansion plans in large formats.

The new crop of retailers across the country are acquiring or leasing mega sized store spaces in newly constructed malls in an approved market space. Paradoxically, modern retail is diverting the shoppers' traffic and noise congestion away from residential localities and minimizing the possibility of land encroachment beyond the store area as it is currently being done in the case of traditional retail outlets. However, in recent years, large retailers are heading for a pyramidal approach by launching several small-sized neighbourhood convenience stores in tandem with a few large hypermarket or department store formats. This strategy is beneficial to large retail firms because they can absorb supply-chain costs across formats. Further, bulk purchases enable them to squeeze profit margin from suppliers. However, the local traditional retailers in the nearby locations feel more intense competition.

MODERNIZATION OF UNORGANIZED RETAIL

The government should launch a time-bound "national kirana and wet-market reform" programme. The key elements of this programme should be the following:

1. Assist the formation of co-operatives or associations of kirana stores, which in turn can undertake direct procurement of products from manufacturers and farmers. By eliminating intermediaries, kirana stores can obtain their supplies at lower prices, while farmers get better prices for their produce. The European and US experience of co-operative retailing needs to be studied in greater detail.
2. Encourage setting up of modern large cash-and-carry outlets, which could supply not only to kirana stores but also to licensed hawkers at wholesale rates. The case in China where the central government is using Metro Cash & Carry to modernize the entire supply chain and source directly from farmers is a case in point.
3. Make available credit at reasonable rates from banks and micro-credit institutions for expansion and modernization of traditional retailers. While a liberal branch expansion for Indian and foreign banks would help, the study recommends the promotion of innovative banking solutions for unorganized retail like Syndicate Bank's lending for small business linked with the collection of daily or weekly pigmy deposits.
4. Convert all uncovered wet-markets to covered ones and modernize those markets in a time-bound manner with emphasis on hygiene, convenience to shoppers, proper approach roads, entry, exits, etc. In India, the route of public-private partnerships (PPPs) is advocated for this purpose. PPPs should be formed between the government and existing small shops on the pattern of the "Industrial Infrastructure Up-gradation Scheme" being successfully undertaken to improve infrastructure in existing industrial clusters.
5. Facilitate the formation of farmers' co-operatives to directly sell to organized retailers. In this case, while the government could provide tax incentives and capital subsidies, equity support should be avoided.

Modernization of APMC Mandi (Markets)

Modernization of government regulated markets in the states is suggested on the lines on the NDDB Safal mandi (market) model in Bangalore. The infrastructure of these markets needs to

be improved by providing closed places for trading, better access roads, and also better hygiene with an effective waste disposal system. The total number of traditional retailers is estimated to be 13 million by Technopak Advisers Pvt. Ltd. The classification of the unorganized retail universe by category is shown below.

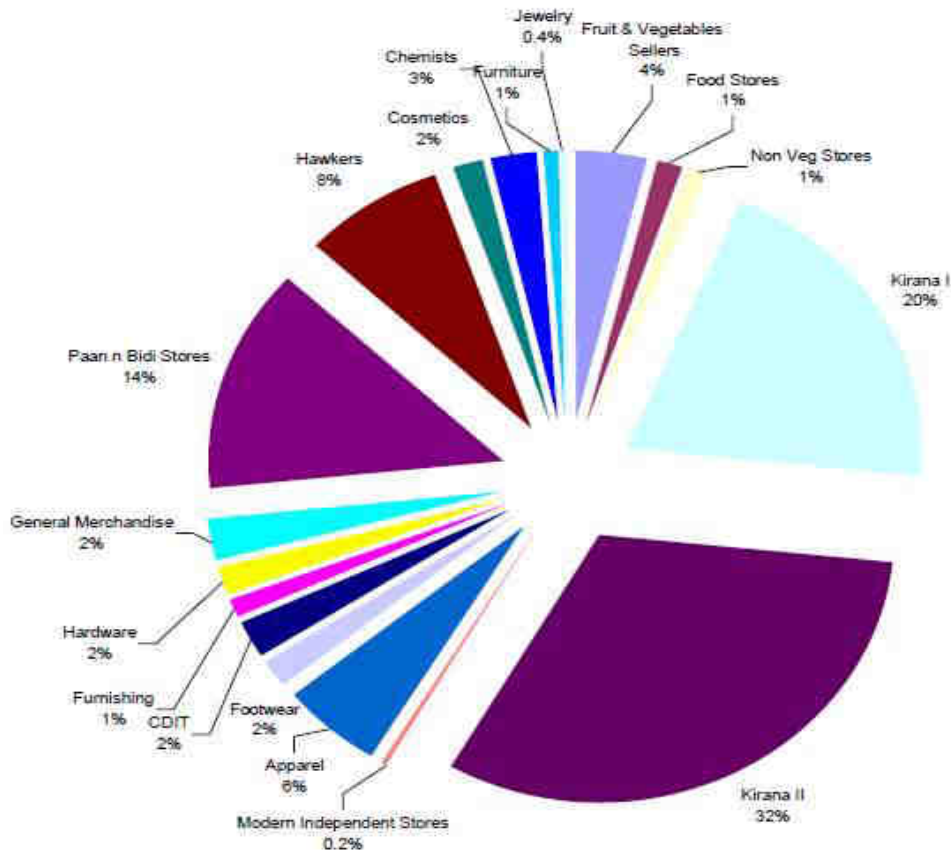


Figure: Share of different products
Source-Technopak Analysis

Categories of traditional retailers

1. **Fruit and Vegetable Sellers** - Sells fruit and vegetables.
2. **Food Store** - Reseller of bakery products. Also sells dairy and processed food and beverages.
3. **Non -Vegetable Store** - Sells chicken and mutton (supplemented by fish), or predominantly fish.
4. **Kirana I** - Sells bakery products, dairy and processed food, home and personal care, and beverages.
5. **Kirana II** - Sells categories available at a Kirana I store plus cereals, pulses, spices, and edible oils.

6. **Modern Independent Stores** - Sells categories available at a Kirana II store and has self-service. Operates single or several stores (but not an organized chain of stores).
7. **Apparel** – Sells men’s wear, women’s wear, innerwear, kids’ and infant wear.
8. **Footwear** – Sells men’s wear, women’s wear, and kid’s wear.
9. **CDIT** (Consumer Durables & IT) – Sells electronics, small appliances, durables, telecom, and IT products.
10. **Furnishing** – Sells home linen and upholstery.
11. **Hardware** - Sells sanitary-ware, taps and faucets, door fittings, and tiles.
12. **General Merchandise** – Includes lightning, stationery, toys, gifts, utensils, and crockery stores.

Impact of Organised Retail on Unorganised Sector

- **Reduced sales turnover-** Growing number of organised retailers may result in the reduction in sales of small unorganised retailer as more and more number of customers are attracted towards organised retail.
- **Impact on profit-** Since this is study based on perception so perceived threat of unorganised retailer is taken as dependent variable and reduction in profit is taken as independent variable, it is based on the opinion that unorganised retailer treat growing organised retail as threat which will reduce their sales as customer will prefer them for shopping this will result in reduction of their profit.
- **Unfair competition-** Since organised retailers are large retail stores they carry large assortment of goods, they have greater bargaining power with their suppliers, economies of scale and bulk orders may lead to lower price and enable them to transfer this benefit to customers directly this is perceived as means of unfair competition by small unorganised retailer.

MAIN FINDINGS

Impact on Unorganized Retailers

- Unorganized retailers in the vicinity of organized retailers experienced a decline in their volume of business and profit in the initial years after the entry of large organized retailers.
- The adverse impact on sales and profit weakens over time.
- There was no evidence of a decline in overall employment in the unorganized sector as a result of the entry of organized retailers.
- There is some decline in employment in the North and West regions which, however, also weakens over time.
- The rate of closure of unorganized retail shops in gross terms is found to be 4.2 per cent per annum which is much lower than the international rate of closure of small businesses.
- The rate of closure on account of competition from organized retail is lower still at 1.7 per cent per annum.
- There is competitive response from traditional retailers through improved business practices and technology up gradation.
- A majority of unorganized retailers is keen to stay in the business and compete, while also wanting the next generation to continue likewise.
- Small retailers have been extending more credit to attract and retain customers.

- However, only 12 per cent of unorganized retailers have access to institutional credit and 37 per cent felt the need for better access to commercial bank credit.
- Most unorganized retailers are committed to remaining independent and barely 10 per cent preferred to become franchisees of organized retailers.

Impact on Consumers

- Consumers have definitely gained from organized retail on multiple counts.
- Overall consumer spending has increased with the entry of the organized retail.
- While all income groups saved through organized retail purchases, the survey revealed that lower income consumers saved more. Thus, organized retail is relatively more beneficial to the less well-off consumers.
- Proximity is a major comparative advantage of unorganized outlets.
- Unorganized retailers have significant competitive strengths that include consumer goodwill, credit sales, amenability to bargaining, ability to sell loose items, convenient timings, and home delivery.

Impact on Intermediaries

- The study did not find any evidence so far of adverse impact of organized retail on intermediaries.
- There is, however, some adverse impact on turnover and profit of intermediaries dealing in products such as, fruit, vegetables, and apparel.
- Over two-thirds of the intermediaries plan to expand their businesses in response to increased business opportunities opened by the expansion of retail.
- Only 22 per cent do not want the next generation to enter the same business.

Impact on Farmers

- Farmers benefit significantly from the option of direct sales to organized retailers.
- Average price realization for cauliflower farmers selling directly to organized retail is about 25 per cent higher than their proceeds from sale to regulated government mandi (market).
- Profit realization for farmers selling directly to organized retailers is about 60 per cent higher than that received from selling in the mandi (market)
- The difference is even larger when the amount charged by the commission agent (usually 10 per cent of sale price) in the mandi (market) is taken into account.

Impact on Manufacturers

- Large manufacturers have started feeling the competitive impact of organized retail through price and payment pressures.
- Manufacturers have responded through building and reinforcing their brand strength, increasing their own retail presence, 'adopting' small retailers, and setting up dedicated teams to deal with modern retailers.
- Entry of organized retail is transforming the logistics industry. This will create significant positive externalities across the economy.
- Small manufacturers did not report any significant impact of organized retail.

Policy Recommendations

On the basis of the results of the surveys and the review of international retail experience, the study makes the following major recommendations:

1. Modernization of wet-markets through public-private partnerships.
2. Facilitate cash-and-carry outlets, like Metro, for sale to unorganized retail and procurement from farmers, as in China.
3. Encourage co-operatives and associations of unorganized retailers for direct procurement from suppliers and farmers.
4. Ensure better credit availability to unorganized retailers from banks and micro-credit institutions through innovative banking solutions.
5. Facilitate the formation of farmers' co-operatives to directly sell to organized retailers.
6. Encourage formulation of "private codes of conduct" by organized retail for dealing with small suppliers. These may then be incorporated into enforceable legislation.
7. Simplification of the licensing and permit regime for organized retail and move towards a nationwide uniform licensing regime in the states to facilitate modern retail.
8. Strengthening the Competition Commission's role for enforcing rules against collusion and predatory pricing.
9. Modernization of APMC markets as modelled on the National Dairy Development Board (NDDB) Safal market in Bangalore.

CONCLUDING REMARKS

India is at the crossroads with respect to the retail sector. Both modern and traditional retailers are likely to co-exist in India for some time to come, as both of them have their own competitive advantages. The kirana has a low-cost structure, convenient location, and customer intimacy whereas modern retail offers product width and depth and a better shopping experience. One of the prime objectives of this study was to find the consumers' attitude towards organized and unorganized retailers across demographic profiles in different areas.

Unorganized retailers are having a comparatively strong advantage because of their ability to sell loose items, provision of credit, bargaining and home delivery facilities. From this study it was observed that due to changes in the disposable income and increased awareness of quality, the consumers' perception towards organized and unorganized retailers differ on the basis of quality and price. They preferred to buy different products from the organized and different from the unorganized retailers.

From the study it was found that when compared to the unorganized retail format, most of the respondent had a good image about the organized retailers. Even the unorganized retailers had a good share in Market, but due to factors such as space, parking etc. a gap existed between both the formats. The customers wished for more outlets being opened. In spite of the enormous potential and growth opportunities available for the organized sector, it might not create a major impact on the unorganized retailers because of the mindset of the consumers will who cannot think of a life without having a local neighbourhood store (kirana store).

REFERENCES

1. Berman, B. and Evans, J.R. Retail Management. 8th ed. Upper Saddle River, N.J.: Prentice Hall; 2001.
2. Andrew Hollingsworth. Increasing retail concentration: Evidence from the UK food retail sector. British Food Journal 2004; 106 (8):629 - 638.

3. McGoldrick, P. Retail Marketing. 2nd Edition. London: McGraw Hill; 2002.
4. Mathew Joseph, Arpita Mukherjee. Foreign Direct Investment in Indian Retail – Need for a Holistic Approach. Maharashtra Economic Development Council, Monthly Economic Digest; 2010.
5. Smith, T. Nurturing a Customer Service Culture. Retail Control 1989; 15-18.
6. EXCEL International Journal of Multidisciplinary Management Studies ISSN 2249- 8834 EIJMMS, Vol.3 (7), July (2013)
7. Bhatnagar Gitanjali, Retail Revolution -Indian Journal of Marketing, (13-17) (2004)
8. Joseph Mathew, Nirupama soundararajan, Manisha Gupta, and Sanghamitra Sahu Impact of Organised Retailing on Unorganised Sector Working paper ICRIER, 222 (2008)
10. Baseer Amatal and G.Laxmi Prabha, Prospects and problems of Indian retailing – Indian Journal of Marketing,(26-28) (2007)

Educational Status of Schedule Caste in Bihar

Dr. Meena Kumari*

ABSTRACT

The literacy among the Scheduled Castes of Bihar is dismally low. The overall literacy rate of SCs is 28.5 per cent at 2001 census which is nearly half of that recorded for all SCs at the national level (54.7 per cent). The potential of the hostel scheme to act as an incentive for higher education, especially for girls, is an equally important factor along with the need to be inclusive. Though the census data give the positive trend that the literacy rate of SCs increased from 10.27% in 1961 to 54.69% in 2001, the gap in the literacy rate between SC males and females in 2001 remains almost the same that in 1961. Also, a stark gender gap in literacy rate is a reality among SC, ST and general categories, and it is more pronounced among STs followed by SCs. The most important question then is what are the chances of SC males and females to go beyond the official category of "literate" and achieve quality education. Data of the ministry of human resource development on the dropout rate show that 73.76% girls and 68.16% boys from SCs still do not go beyond secondary schooling in India due to various reasons.

Though the scheme is potentially beneficial for poor SC students, it has not adequately reached the "eligible beneficiaries", primarily due to the prioritised selection criteria. In order to avoid this wrong exclusion, segregation of data across middle, secondary and higher education of SC males and females in rural and urban India by level of poverty appears to be a prudent option. The possibility of poor SC females continuing higher education by crossing the barriers of poverty, discrimination and patriarchal structures is the primary issue that needs to be addressed.

Keywords: scheduled caste, Education

Although there have been concerted efforts by the Central and State governments to improve the educational status of SCs since independence; evidences show that structural hindrances still exist for them to attain quality education. Various official reports and studies have pointed out that the rate of growth of literacy among SCs has increased; however, the gap in literacy as well as higher education between SC and non-SC communities remains the same. Equally, gap in educational status between SC males and females remains the same. Census data provide more insight into literacy rate and literacy gap among and across social groups. It shows that there has been a steady growth in the literacy rate of both male and female SC and ST between 1961 and 2001 (see Table 1). It shows that literacy rate of SCs increased from 10.27 per cent in 1961 to 54.69 per cent in 2001. Strikingly, the gender gap in literacy rate within SCs in 2001 remained almost equivalent to that of in 1961. Although stark gender gap in literacy rate is a reality among SC, ST and General categories, it is more pronounced among STs followed by SCs.

*Assistant Professor, School of Education, Nalanda Open University, Patna

Table-1: Percentage of Literacy Rates among Scheduled Castes (SC) and Scheduled Tribes (ST) in India (1961, 1971, 1981, 1991 and 2001)

Years	General Category			Scheduled Castes			Scheduled Tribes		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
1961	40.40	15.35	28.30	16.96	3.29	10.27	13.83	3.16	8.54
1971	45.96	21.91	34.45	22.36	6.44	14.67	17.63	4.85	11.30
1981	56.38	29.76	43.57	31.12	10.93	21.38	21.38	8.04	16.35
1991	64.13	39.29	52.21	49.91	23.76	37.41	40.65	18.19	29.60
2001	75.30	53.70	64.80	66.64	41.90	54.69	59.17	34.76	47.10

Source: Population Census, 1961-2001

Table sheds light on the literacy gap and its gender dimension among SC, ST and other categories. It shows that literacy gap of SCs to 'others' declined to 14.12 per cent in 2001 from 19.62 per cent in 1991. What is striking is that the decrease in literacy gap for SC women to non-SCs is not in the same pace of the general reduction. For instance, while literacy gap of SCs to 'others' stood at 14.12 per cent in 2001, the gap between SC and non SCs women was 16.27 per cent. Also, percentage reduction in literacy gap of SC women to non-SC women was less than that of men. Data also show that literacy gap of STs to non-STs is more pronounced than SCs. It is also important to note that percentage reduction in literacy gap of ST females between 1991 and 2001 in comparison with ST males and non-ST females was significantly less.

DROPOUT RATE

Among many, higher rate of dropout at different levels of schooling is an important manifestation of the lower educational status of SCs. Table 3 presents data on school dropout rates of scheduled caste students at the primary, elementary and secondary levels from 1980-81 to 2005-06. It shows that despite various programmatic interventions of central and state governments; dropout rates of SC students have not declined remarkably at any level. Dropout rate in twenty five years (between 1980-81 and 2005-06) decreased by around 30 per cent at primary level (I-V), by 20 per cent at the elementary level (I-VIII) and nearly by 15 per cent at the secondary level (I-X). What is also evident from the data is that 73.76 per cent girls and 68.16 per cent boys from SCs still do not go beyond secondary schooling in India due to various reasons. Dropout rates clearly show that only a small section of the scheduled caste students enrol for higher and technical education in India.

ENROLMENT AND LEVEL OF EDUCATION

Non-enrolment is also a major associated cause of educational deprivation of SCs in India (Venkatanarayana, 2009). Table 4 provides some idea on enrolment of SC students to school,

vocational, professional and higher education in the recent past. While enrolment in pre-primary schools recorded a substantial increase between 1996 and 1998, enrolment to vocational, professional, special and other educational institutions declined significantly; pointing to the existing barriers for SC students to achieve higher and technical education. Similarly, enrolment to primary and middle schools recorded only a marginal increase. It should be mentioned that higher rate of enrolment to pre-primary education could be due to the wider reach of Anganwadies and Balwadies and its services with regard to health and nutrition of mother and children.

Data on level of education of persons between the age 15 and 30 reveals the differences in educational status of scheduled caste and scheduled tribes as compared to other social groups.⁴ Age group has been limited to >15<=30 for analysis due to the assumption that this group has higher proportion of persons who are continuing their education at present and this data can give a fresh account of recent educational interventions.

DATA SHOWS social group wise level of education of males and females in the age group of 15 to 30 in rural and urban India. Out of SC males who are in the age group between 15 and 30, level of education of more than 50 per cent and around 40 per cent is up to middle in the rural and urban India; respectively. Similar trend is found among SC females as well nonetheless with gender gap. Data also shows that their education declines

POVERTY AND LEVELS OF EDUCATION

Studies have shown that household poverty to a large extent explains the educational deprivation of SCs, which is often reflected as low levels of enrolments and higher rate of dropout (Nambissan 1996; Muralidharan 1997; Bhatta 1998; Thorat 2005). It should also be noted that discrimination against scheduled caste is a major reason for their low educational status (Nambissan 1996, 2009; Shah 2000; Srivastava 2001). The direct relationship between poverty and educational deprivation of scheduled castes can be evidently drawn from Table 7 (See Annex 1). It shows that among SCs and STs, chances of poor persons being educated beyond higher secondary level are comparatively far lesser than that of non-poor. The data, specifically, show that both in rural and urban India; proportion of scheduled caste poor males in the age group of 15 to 30 in higher education is less than that of non-poor SCs, poor in other social groups except STs and non-poor in all social groups. Around 60 per cent in rural and 54 per cent in urban India of SC male poor do not go beyond middle level. Situation of ST poor is worse than SCs.

It reiterates that chances of poor SC females schooling beyond secondary level are still very distant. Data also show that chances of SC poor females schooling beyond secondary level are lesser than SC poor males, non-SC females except STs and far lesser than non-poor SC males and females. It should also be mentioned that no SC poor female in the age group >15<=30, was educated up to the level of post graduation.

LITERACY AMONG THE SCHEDULED CASTES OF BIHAR

The literacy among the Scheduled Castes of Bihar is dismally low. The over all literacy rate of SCs is 28.5 per cent at 2001 census which is nearly half of that recorded for all SCs at the national level (54.7 per cent). Male and female literates constitute 40.2 per cent and 15.6 per cent respectively. These figures are lower than those at the national level (66.6 per cent & 41.9 per cent). Among the numerically larger castes, Dhobi have registered the highest over all literacy as well as female literacy followed by Pasi, Dusadh and Chamar. Musahar have shown the lowest literacy rate.

Table: Source: Office of the Registrar General, India

Literacy rate	All SCs(Bihar)	Dhobi	Pasi	Dusadh	Chamar	Bhuiya	Musahar
Persons	28.5	43.9	40.6	33.0	32.1	13.3	9
Females	15.6	27.9	25.3	18.5	16.8	6.5	3.9

Among the literates, 39.7 per cent of SCs are either without any educational level or have attained education below primary level. The proportion of literates who have attained education up to primary and middle levels constitute 28.4 per cent & 13.1 per cent respectively. As many as 15.1 per cent literates are educated up to matric/ secondary/higher secondary etc. Graduates & above are 3.6 per cent while non -technical & technical diploma holders constitute a meagre 0.1 per cent only. Among the major castes, Dhobi have the highest proportion of matriculates (19.7 per cent) whereas Musahar and Bhuiya have the lowest proportion of matriculates (6 per cent each). Chamar have every 7th literates, a matriculate, whereas Dusadh and Pasi have every 6th literate, a matriculate.

It may be discerned from the educational levels attained by all SCs, the drop-out rate is high after primary level as the percentage of middle level literates is less than half of the primary level literates. Number of students decline sharply from secondary level onwards.

Levels of Education among the major Scheduled Castes Educational levels attained

Names of SCs	Literate without educational level	Below Primary	Educational levels attained				
			Primary	Middle	Matric/ Secondary/ Higher Secondary/ Intermediste etc.	Technical non-Technical diploma etc.	Graduate &above
All Scheduled Castes	6.6	33.1	28.4	13.1	15.1	0.1	3.6
Bhuiya	15.3	44.1	26.5	7.4	6	nil	0.6
Chamar	5.9	33.6	28.5	13.4	15	0.1	3.5
Dhobi	4.5	28.3	27	14.9	19.7	0.2	5.4
Dusadh	6	32	28.5	13.7	16.1	0.1	3.5
Musahar	15.3	44	27.8	6.7	5.5	nil	0.8
Pasi	5.7	30	27.1	13.4	17.9	0.2	5.6

Source: Office of the Registrar General, India

Out of the total 38.8 lakh SC children in the age group 5 -14 years, 11.4 lakh attend school constituting 29.4 per cent. Alarming, as many as 70.6 per cent (27.4 lakh) children in the corresponding

age group do not go to school. Among the major SCs, Dhobi have the highest share of school going children followed by Pasi, Dusadh and Chamar.

WORK PARTICIPATION RATE (WPR)

The Work Participation Rate (WPR) of the Scheduled Caste population is 39.7 per cent which is marginally lower than that of all SCs at the national level (40.4 per cent). While there has been a marginal decline in male WPR from 50.4 per cent to 49.2 per cent, female WPR has increased from 23.3 per cent to 29.5 per cent during 1991-2001. Among the total workers, 71 per cent are main workers and this proportion is almost comparable with that of all SCs at the national level (73 per cent).

Among the major groups, Musahar and Bhuiya have WPR higher than the national average for all SCs whereas Chamar, Dusadh, Pasi and Dhobi have WPR lower than the state as well as national averages.

REFERENCES

1. Hasan, Rana and Aashish Mehta (2006): "Under-representation of Disadvantaged Classes in Colleges: What Do the Data Tell Us?", *Economic & Political Weekly*, 2 September, pp 3791-96.
2. Ministry of Social Justice and Empowerment (2009): Annual Report, 2008-09, Government of India, New Delhi.
3. Muralidharan, V (1997): *Educational Priorities and Dalit Society* (New Delhi: Kanishka Publisher).
4. Nambissan, G B (1996): "Equity in Education? Schooling of Dalit Children in India", *Economic & Political Weekly*, Vol 31, Nos 16 and 17, pp 1011-1124.– (2009): "Exclusion and Discrimination in Schools: Experiences of Dalit Children", IIDS UNICEF Working Paper Series, Vol 1, No 1.
5. NSSO (2005): "Household Consumer Expenditure among Socio- Economic Groups: 2004-2005", National Sample Survey Organisation 61st Round, Report No 514 (61/1.0/7), Ministry of Statistics and Programme Implementation, Government of India, New Delhi.

Effect on Migration After MGNREGA

Madhurendra Singh*

ABSTRACT

MNREGA in Bihar becomes paramount as 89.5% of total population comprise of rural population and almost half (46.7%) of the rural population lives below poverty line (census 2001). According to the official Planning Commission estimates after the Tendulkar report, at present, 54.4 % of entire population lives below poverty line as compared to the national average of 37.2%. According to the new method of estimation of poverty as proposed by Suresh Tendulkar Committee, rural poverty was estimated to be 55.7% in 2004-05 compared to national average of 41.8% and urban poverty in Bihar was estimated to be 43.7% with national average of 25.7%. Demographic composition and migration pattern in Bihar is highly vulnerable which directly and indirectly affects NREGA participation.

The primary objective of this act is to provide strong safety net for the vulnerable groups in rural areas by providing a fall back employment source, when other employment alternatives are scarce and inadequate so that no one should stay hungry. At least it has made a big impact in many poor places in the country. That does not mean they are getting enough food and nutrition or that they are even at reasonable limits of living and survival. But at least they are not going to bed hungry. The secondary aim is to strengthen the natural resource base of rural livelihoods and create durable assets in rural areas in order to generate rural wealth. And thirdly its aim is to provide the employment in the village within the circle of 5 km and if it is outside the circle then 10% of wage will be paid for traveling expenses in order to stop the migration to urban and other states.

The basic approach and motives in this study is to study variations among districts of Bihar in MNREGA by analyzing the latest data of 2010-11 of NREGS in Bihar which is provided by Ministry of Rural development of Bihar and to find out three things Firstly is really NREGS in Bihar is able to push the standard of living of B.P.L people so that no one should sleep without food. Which can be known by social inclusion in NREGS? The higher workforce participation of marginalized groups like women, SC and ST in Bihar which indicates towards increase in income and standard of living. Second even though NREGS is demand driven and State Govt. is bound to provide the unskilled jobs to whomever who demands employment for 100days. But is it NREGS able to control migration? What are the different kinds of works under taken in NREGS? Is it really generating rural wealth and durable assets? And if not then what should be steps taken to do so? This report will look at NREGS activities taken in Bihar and evaluate on it. And also see that whether it is helpful for the rural people or not.

Keywords- BPL families, unemployment allowances, right based demand

INTRODUCTION

The National Rural Employment Guarantee Act, the flagship welfare programme of the UPA Government was passed by the Parliament in August 2005 and came into effect on 5th September 2005. MNREGS or Mahatma Gandhi National Rural Employment Guarantee Act is one of the most ambitious schemes of the Indian Government as it treats employment as a right and the programme is

*Assistant Professor, School of Education, Nalanda Open University, Patna

intended to be demand driven. The Act provides at least 100 days of guaranteed wage employment, in a financial year to every household whose adult members volunteer to do unskilled manual work. In the past, public employment programs in India targeting the poor were generally identified with poverty alleviation. MNREGA goes beyond poverty alleviation and recognizes employment as a legal right (Ministry of Law and Justice, 2005).

The NREGS offers hundred days of work to unemployed families in rural areas. The two conditions for the adults of a household to apply are:

1. They must be living in a rural area.
2. They must be willing to undertake unskilled manual labour for which they would receive the minimum wage.

The details that need to be furnished are their name, age and address. These are submitted to the Gram Panchayat, which issues the household their job card, which contains details of adult members of the household. All registered members of the household are then entitled to a maximum of 100 days employment for the entire household in a given financial year. Applicants who are provided with employment are informed in writing, by means of a letter sent to the address given in the job card and by a public notice displayed at the Panchayat Offices at the district, intermediate or village level. As far as possible, the work site is to be within a five km radius of the applicant's village- in case it is not, it must be provided within the Block and the labourers must be paid 10 % of their wages as extra wages to meet the additional travel and living expenses. Facilities of safe drinking water, periods of rest, first-aid box with adequate material for emergency treatment for minor injuries and other health hazards connected with the work being performed are to be provided at the work site. In case the number of children below the age of six years accompanying the women working at any site is five or more, provisions shall be made to depute one such woman to look after the children. Working hours are from 9 a.m. to 5 p.m. with a lunch break from 1 p.m. to 2p.m.

The primary objective of this act is to provide strong safety net for the vulnerable groups in rural areas by providing a fall back employment source, when other employment alternatives are scarce and inadequate so that no one should sleep with food. The secondary aim is to strengthen the natural resource base of rural livelihoods and create durable assets in rural areas.

The introduction of MNREGA is completely different in conception from earlier government employment schemes since it treats employment as a right and the programme is intended to be demand driven i.e. people who need jobs will demand them, which the government is legally bound to provide and in case of failure to do so, the government has to provide unemployment allowance. The distinctive rights-based approach has led to a vast body of literature since its inception.

EFFECT ON MIGRATION IN NREGS ACTIVITY

Employment demanded vs. provided

NREGS is demand driven employment programme because state govt. is bound to provide employment whoever demands under the eligibility. The NREGS offers hundred days of work to unemployed families in rural areas.

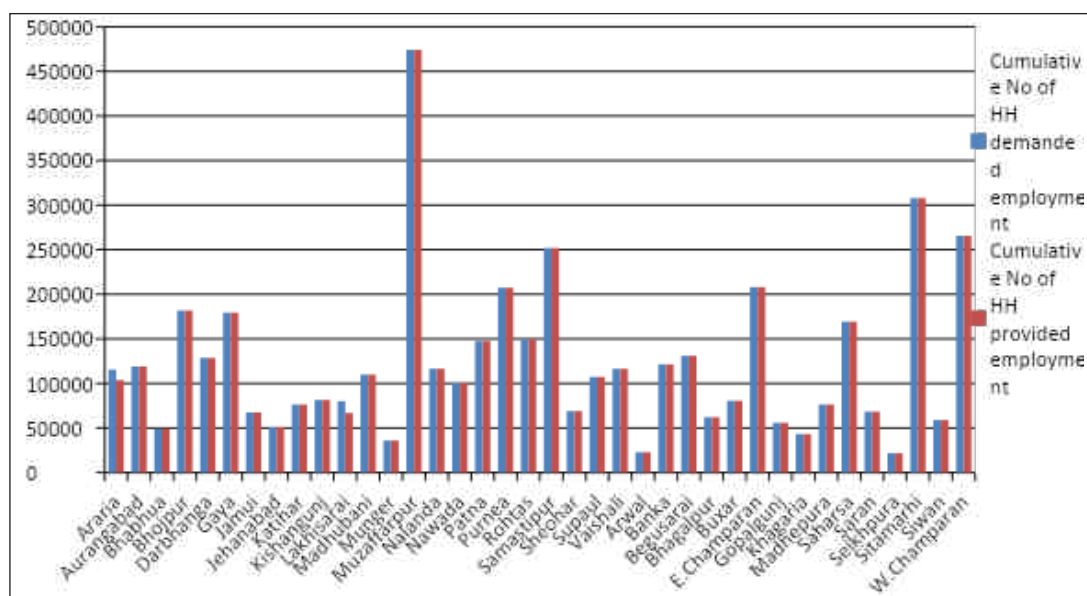
The two conditions for the adults of a household to apply are:

1. They must be living in a rural area.
2. They must be willing to undertake unskilled manual labour for which they would receive the minimum wage.

If a worker who has applied for work under NREGA is not provided employment within 15 days from the date on which work is requested, an unemployment allowance shall be payable by the State Government at the rate prescribed in the Act.

S. No.	District	Cumulative No of HH demanded employment	Cumulative No of HH provided employment
1	Araria	115497	103731
2	Aurangabad	119074	119074
3	Bhabhua	49405	49405
4	Bhojpur	181744	181744
5	Darbhanga	128754	128612
6	Gaya	179400	179400
7	Jamui	67535	67535
8	Jehanabad	51051	51051
9	Katihar	76407	76407
10	Kishangunj	81469	81469
11	Lakhisarai	80086	66862
12	Madhubani	109953	109953
13	Munger	36004	36004
14	Muzaffarpur	474328	474328
15	Nalanda	116530	116530
16	Nawada	100509	100509
17	Patna	147494	147494
18	Purnea	207344	207344
19	Rohtas	149210	149210
20	Samastipur	251826	251826
21	Sheohar	69025	69025
22	Supaul	107259	107259
23	Vaishali	116468	116468
24	Arwal	22891	22891
25	Banka	121466	121401
26	Begusarai	131000	131000
27	Bhagalpur	62176	62178
28	Buxar	80564	80564

S. No.	District	Cumulative No of HH demanded employment	Cumulative No of HH provided employment
29	E.Champaran	208071	208071
30	Gopalgunj	55872	55872
31	Khagaria	43223	43223
32	Madhepura	76425	76425
33	Saharsa	169290	169290
34	Saran	68395	68395
35	Seikhpura	21768	21768
36	Sitamarhi	307950	307950
37	Siwan	58964	58964
38	W.Champaran	265472	265472
Total		4709899	4684704



From the above we can see that numbers of employment demanded by HH is same numbers of employment provided by govt. in all districts except **Araria**, **Lakhisarai** and **Banka** where employment demanded is not equal to provided. Then still people are migrating.

IS IT REALLY NREGS IS ABLE TO CONTROL MIGRATION?

Workers migrate from one place to another when they are jobless in order to feed their family or because of Income difference they are motivated to migrate from low-income areas to relatively high-income areas.

Two major the impact of migration on city expansion

(1) Unusually rapid rates of population growth pressing on limited farm acreage and pushing landless labour into cities. The deficiency of reproducible tangible capital relative to labour in the face of a high population density exacerbates the problem of rural unemployment and underemployment, which in turn fosters the rural-urban population movement. In the face of limited demand for labour in the formal sector, in particular the organized industrial sector, excess supplies in the urban labour market force them to be engaged in the informal service sector. The low rate of growth of industrial employment and the high rate of rural-to-urban migration make for excessive, even explosive urbanization involving a transition from rural unemployment to excessive urban unemployment and underemployment. Within the urban informal sector this tends to reduce the level of earnings and get manifested in a high incidence of urban poverty. Thus in the process, rural poverty gets transformed into urban

(2) Migrants are being pulled into the cities by the economic forces such as domestic terms of trade squeezing agriculture, the diffusion of technology from the developed world favoring modern large-scale urban industries, foreign capital flows into urban infrastructure, housing, power, transportation, and large-scale manufacturing.

Income differentials are taken as the motivating factor in moving people from low-income areas to relatively high-income areas. The workers seem to prefer temporary or seasonal migration because firstly, they do not have the connections to settle down in an urban area, where rent would be very high and the area itself would be quite unfamiliar and secondly if they permanently shift to the slums, they face a high risk because there is no guarantee that they will be employed throughout the year, because they participate in the informal sector.

They keep one foot in the rural economy provides a safety net. A major attraction for the poor working in the farm sector is the part-payment in cooked food. Although this has been perceived as exploitative by some, the laborers themselves see it as an important way of coping and surviving during economically lean times when casual work in the cities may be scarce.

So we can consider that NREGS could be the steps in order to stop migration by providing them minimum 100 days works within the 5 km of village otherwise 10% extra will be paid for travelling allowance. Not only NREGS but earlier also Govt. had Wage employment programmes, an important component of the anti-poverty strategy, have sought to achieve multiple objectives. They not only provide employment opportunities during lean agricultural seasons but also in times of floods, droughts and other natural calamities. They create rural infrastructure, which support further economic activity. These programmes also put an upward pressure on market wage rates by attracting people to public works programmes, thereby reducing labour supply and pushing up demand for labour. Such an assurance would ensure a minimum level of employment and stability to the incomes of the poor and give them an opportunity to develop their collective strength. It would improve their economic position, reduce vulnerability and discourage migration to facilitate their continued access to health, education and welfare facilities available in the village. The allocation under this second stream would be enhanced to meet the target of 100 days of employment for every able-bodied person willing and seeking work.

This is based on the logic that people would not migrate if enough work/income were available locally. Earlier approaches tried to achieve this through the promotion of irrigation, high yielding varieties

and agro-chemicals. But these tended to benefit only some areas while others (usually “remote”, “difficult”, “weakly integrated” or “less-endowed” areas) lagged behind. Now there is renewed hope for these weakly integrated or less endowed areas through NREGS as in Bihar it is implemented in all 38 districts. The number of male and female was almost equal in total rural-to-urban flows. While women outnumber men in intra-state rural-urban flows, the number of male was significantly greater in case of inter-state rural-urban migration. The differences in work participation rates are also observed along the line of religion and caste group of migrants. On the basis of a large sample survey in Bihar reported that in all the urban areas female migrants’ work participation rates are generally higher among Christians and Scheduled Castes/Tribe whether married or unmarried and availability of high productivity jobs in the rural areas could reduce in-migration to the urban areas.

Working under a labor contractor gives labourers more days of work but they are often exploited by the contractors and mistreated. "For labourers coming from landless and small peasant households struggling to subsist, the maistries (contractors) are practically monopoly creditors and monopony buyers their labour power in the absence of alternative sources of credit and employment.

CONCLUSION

The jobs under NREGS is known as the green job because it restores and balances the ecological environment through afforestation and tree plantation works and through irrigation and water conservation it ensures the food and energy security for a nation as a whole as it, provides better livelihood avenues for majority of population which depend on agriculture. This act helps in checking distress migration. It is the lack of facilities and employment in the villages which force rural people to migrate to cities Women prefers and feel safe to work in native place even at low wage rather than working at other places where as men still continued to migrate as this programme provides only 100 days grantee jobs.

In Bihar workers migrates usually the is no job in their native place or because of income differentials are taken as the motivating factor in moving people from low-income areas to relatively high-income areas as they are paid more in other state when they work in factory under contract. In NREGS Bihar men and women gets equally paid infact women are more benefited because, women get paid more than men for the same amount of work done for the same amount of work. If a man digs 80 Cft of soft soil he should be paid a minimum wage of Rs 87. A woman has to dig 68 Cft to receive the same minimum wages. Bihar govt. had notified in 2008 that minimum wage in NREGS will be Rs 89 in the entire districts. But at present Rural Development Department of Bihar had informs that now they are paying Rs 120 to every worker under NREGS.

The women will be getting between 100-120 rupees per day where as the men receiving 150-180 rupees per day if they work in other states. The women would not be feeling to migrate now that NREGA was implemented because in other states they would earn less- as migrant labourers they would earn upto 20,000 rupees per annum, then selling the forest crop and agricultural labour would give them another 10,000, whereas under the NREGA they could earn 8000 rupees per annum plus the amount from cultivation and selling forest produce, and working as agricultural labourers in the season- they did not mind earning less because they had no debts to contractors, they are in their native places and had regular work and the flow of income was steady and reliable as opposed to the uncertainties of informal sector work which is what they would do if they were migrant labourers. But for the men said that they may continue to migrate in general, unless they were old, because they earned so much more than 90 or 120 rupees per day that they couldn't really afford to just depend on the NREGS because it had limitation of 100 days, though it provided a good back up for them in lean periods of employment. But still NREGS had really some control over migration as

Nitish Mishra; R.D.D Minister of Bihar told that there is no survey conducted so far but still the report of other state like Punjab, Andhra Pradesh ect. says that now they are feeling shortage labors who usually comes Bihar. Government should have similar kind of scheme for skilled works because there is greater proportion of migration of skilled labors than unskilled.

REFERENCES

- Latest Data of NREGS of Bihar (2010-11) of Bihar by Rural Development Department(Bihar)
- **NREGA website:** www.nrega.nic.in
- **Economic Survey of Bihar (2010-11)**
- **PACS:-**Poorest Areas Civil society programme; National Rural Employment Guarantee Scheme, Bihar.
- "NREGA is creating jobs and assets in rural India"- Nikhil Dey (Civil society, March -2011 edition)
- **RURAL LABOUR MIGRATION from BIHAR by-** Institute for Human Development, New Delhi, (ihindia.org)
- One Million Affected By Floods in Bihar, Outlook india.com, Aug31,2010
- **Bihar: Need of Water Conservation-** Indra R Sharma(The Bihar Timess(24/05/2011)
- Agenda for Improvement of NREGA in Bihar 2008 by Diwakar- Current Affairs Magazine_NREGS_Bihar :: Office Orders <http://rdd.bih.nic.in/nregsbihar/office-orders.htm>
- <http://www.ihindia.org/pdf/A-CONSULTATION-WORKSHOP.pdf>
- http://knowledge.nrega.net/863/2/Poor_implementation_of_NREGS_in_Bihar.pdf
- NREGA wage payments through banks: **Anindita Adhikari**
- <http://rural.nic.in/IMC/StaticMGNREGA/FAQsMGNREGA.pdf>
- **A report on NREGS Supaul-** -k Sharan, DF, Supaul.
- <http://www.mapsofindia.com/maps/bihar/bihar-district.htm>
- <http://en.wikipedia.org/wiki/Bihar>

Environmental Protection: A Prime Need of Our Country

Anish Kumar*

ABSTRACT

*"Earth Provides enough to satisfy every man's needs.
but not every man's greed."*

-Mahatma Gandhi

Environment Protection is a practice of protecting the natural environment on individual organizational or governmental levels, for the benefit of both the natural environment and humans. Due to the pressures of population and Technology: the biophysical environment is being degraded, sometimes permanently. This has been recognized, and governments have began placing restraints on activities that cause environment degradation.¹

Our Environment consists of "Panchtatva", viz., earth or land, water, light or luster, ether and air, which together responsible for our survival. If the equilibrium of Panchtatva disturbs the existence of human being, it will be dangerous. We obtained our survival element from all these Panchtatva, one need Pollution free air to breath, uncontaminated water to drink, nutrituous food to eat, hygienic condition to live and healthy environment to move. These elements are Sine qua non' for the sound and healthy development of human personality. In the absence of Panchtatva human being cannot develop themselves with fullest extent. Pollution free environment is basic need of every human being, but everyone has contributed in its pollution and in present day it has become universal phenomenon. Healthy environment is essential for our existence inspite of that we are polluting and destroying our own environment and creating endanger for us. The basic reason behind it is that we are taking advantage of development at the cost of health. In present era money become more essential for us than our life.

In other words 'Love of Nature' is not modern phenomenon. Man loves nature and nature in turn nourishes him. Nature, society and human being are interdependent and inherent duty of man is to protect the nature and environment. Interdependent relationship constitute equilibrium between development and ecological balance and this equilibrium can be established by sustainable development of environment and well management of natural resources by process of aforestation. Healthy and sound environment is universal need, but universal existing Phenomenon is that human being had focused on laoment and growth at the cost of environment, this create unequilibrium between development and environment protection. This existing unequilibrium caused many problem like global warming, acid rain, green house effect, ozone depletion, loss of biodiversity and bad impact on flora and fauna.

The basic area of this study concentrate upon analysing the problem discussing the constitutional and statutory provision. This topic also focused on the principle laid down by the Supreme Court for the solution of environment like sustainable development precautionary principle and polluter pays

*APO, Bihar Government

principle. The principle laid by the Supreme Court and various High Court and existing constitutional and statutory provision are not enough to solve the problem in absence of independent, imperial and effective enforcing institution. In India Judiciary is the effective institution to enforce the fundamental right as well as to create healthy environment. In the case of Subhash Kumar's v/s state of Bihar, the Supreme Court declared pollution free environment is fundamental right under Article 21 of our Constitution. This verdict of the supreme court established equilibrium between environment and development and in case Indian Council for Enviro-legal Action v/s Union of Indian Supreme Court also suggested for the establishment of green court for the protection of Environment."

In vedic era the environment was considered very pious position and matter of religions importance. "One tree is equal to ten sons". This quotation shows the importance of environment. The mentality and need is a kinetic term and it changes according to time. In Age of modernization, urbanization, globalization, privatization and the race of technical development, human being caused ecological imbalances, these ecological imbalance creates endanger to life, health comfort and healthy survival of human being, for the ecological balance we have to establish equilibrium between development and environment from the commencement of the Constitution. There had been no provision under Constitution which specifically relate to right to environment, Article 19(1) (g) provide trade and profession as a fundamental right which is essential for the development of people of the India as well as Nation. There was no provision under Constitution which provide specific space for environment protection. The Constitutional provision had silent and statutory provision is not much enough to solve environment problem. Environment problem not restricted to India, but it constitute global problem and demands, global solution. First UN's conference on the Human Environment was held in June (5-16, 1972) at Stockholm, Sweden. Which has been described as mternational "Magna Carta on our environment. This conference provide legal assistance for the enactment of law for the protection of environment and the United Nations Conference on Environment and Development held at Rio de Janeiro declaration in June 1992, to take appropriate steps for the protection and improvement of human environment. India was one of the signatory member of the conference and, after the conference certain amendment made under Indian Constitution. The 426 amendment in incorporate to signification to Art 48(A), art 51-(A) (g) to protect and empowered the environment and item number 17-A Forest, 17-B- Protection of wild life of birds and item number 20-A.

Pollution control and family planning was transfer from state list to concurrent list (list II to NII) of seventh schedule. Which empowered to parliament to legislative on the environment issue. This conference not only compel constitutional amendment but also compel parliament for certain enactment namely - Water (prevention and control of pollution) Act, 1974, Forest (conservation) Act 1980, Air (prevention and control of pollution) Act 1981. The Environment Protection Act 1986, National Environment Tribunal Act 1995. National Environment Appellate authority Act 1997. This conference also introduce the concept of sustainable development. Which is effective for establishing equilibrium between development and ecological balance. This conference introduce the constitutional provision for the protection of environment under Article 48-(A), 51-A (g). In spite of various constitutional provision environment did not possess position under part III of our Constitution. Development and environment are contrary term and development directly or indirectly effect and injured the enjoyment. In spite development is protected as fundamental right under Article 19(1) (g). On the other hand no such protection provided for environment in absence of constitutional provision which provide better an effective protection for environment. Supreme court pronounce various judgment under which court declared pollution free environment is fundamental right under Article 21 of the Constitution, because it directly create to the life.

CONCLUSION

There is no doubt that sound, healthy and pollution free environment is basic need of every individual as well as the basic fundamental right under our Constitution One should be reminded of the fact that the Constitution places duty of protecting and improving environment not only on the state but also on every citizen of the country and therefore role of NGO a cumulative enterprise of the community, the society awakening is necessary for the service of the humanity through protecting environment.

REFERENCES

1. Anirudha Prasad, Environmental Law Allahabad central Law Publications Addition, 2001
2. (1991)s SCC598, AIR 1996 SC (420424)
3. (1996) SCC 212 : AIR 1996 SC 1446
4. Padmapurana. p. 1.44, 455
5. J.N Pandau, Indian Constitution Addition, 2006
6. 42nd Amendment Indian Constitution 1976
7. Indian Constitution Art 19(1)(g)
8. M.C. Mehta v/s Union of India & Other (2001) 38cc.756

Right to Information & Democracy: A Long Journey

Anish Kumar*

ABSTRACT

The Right to information Act 2005 provides effective access to information for citizen of India, which is under the control of the public authorities. It promotes transparency and accountability in the working of every public authority. In order to ensure greater and more effective access to information. The aim of this article is to explore the constitutional and statutory right of the Individual to acquire and dissemination in all its contours and perspective. These right are legally couched in terms of mandates, which are primarily, directed against the state its instrumentalities.

INTRODUCTION

The Freedom of expression and right to information are two important pillars of modern democracy. These are also recognized as fundamental human right which upholds the dignity of all human beings. The beginning of 21st century is marked with the developments made in the field of information and technology. Information is a buzz word today. Information has an unlimited potential. It is at heart of all process of governance and indispensable for the functioning of democracy as it is the right of people to know what the government and its functionaries are doing. In fact without this accountability no democratic government can survive. This type of open and transparent government ensures reduction in number of administrative faults and the misuse of it. The freedom of speech is the lifeblood of democracy. The free flow of information and ideas informs political growth. It is a safety valve. People are more ready to accept the decision that go against them if they can in principle seem to influence them.

In a way, it checks abuse of power by the public officials, in the modern times, where there has been globalization of trade and industry, the scientific growth in the communication system and faster commuting has turned the world into a very well-knit community. The view projected, with some emphasis, is that the imparting of information and the working of the government on the one hand and its decision affecting the domestic and international trade and other activities on the other, impose an obligation upon the authorities to disclose information.

The right to information harnessed as a tool for promoting development, Strengthening the democratic governance and effective delivery of socio-economic services. Acquisition of information and knowledge and its application have intense and pervasive impact on the process of taking informed decision, resulting in overall productivity gains. It is also said that information and knowledge are critical for realizing all human aspirations such as improvement in the quality of life.

Sharing of information, for instance, about the new techniques of farming, health care facilities, hazards of environmental degradation, opportunities for learning and earning, legal remedies for combating gender bias etc, have overtime, made significant contribution to the well being of poor people. It is also felt that this right and the laws relating there to empower every citizen to take charge of his life and make proper choices on the basis of freely available information for effective participation in economic and political activities.

*APO, Bihar Government

JUDICIAL RESPONSE TOWARDS RIGHT TO INFORMATION

Supreme court of India has played vital role in recognizing right to information as a fundamental right to by its various pronouncements in different cases. Peoples union for civil Liberties V. Union of India was a case relating to information about safety grounds implemented by the Government in nuclear plants sec. 18 of the Nuclear energy Act 1962 imposes restriction on the information as whistle blowing provision in the interest of public. Supreme court held that information must be general rule while secrecy must be an exception justifiable only when it is demanded by the requirement of public interest and it was held that whether or not to disclose the contents of a particular document, a judge must balance the competing interest and make his final decision depending upon the particular facts involved in each case.

In Dinesh Trivedi (MP), V. Union of India, it was held that in modern constitutional democracies it is axiomatic that citizens have a light to know about the affairs of the government which having been elected by them seeks to formulate sound policies of governance aimed at their welfare.

In Time V. Hill' the us Supreme court said, "the constitutional guarantee of freedom of speech and press are not for the benefit of the press so much as for the benefit of all the people The case of state of U.P V. Raj Narain relates to disclosure of information and documents Supreme Court observed that" to cover with veil of secrecy common routine business is not in the interest of Public. Such secrecy can seldom be legitimately desired. It is generally desired for the purpose of parties and politics or personal self interest or bureaucratic routine.

In the landmark Judgment of S.P. Gupta V. Union of India supreme court recognized the citizens right to know what their government is doing. No democratic government can survive without accountability. The concept of open government is the direct emanation from the right to know which seems to be manifest in the Art 19(1)(a) of the constitution. The decision of the court in the case of people's Union for civil Liberties V. Union of Indian' has attained the finality in association of the case "The Association for democratic reforms where right to know the antecedents of the candidates is based on interpretation of Article 19(1)(a), the court held that a little man - a citizen a voter is master of his vote. He must have necessary information so that he can intelligently decide in favour of a candidate who satisfies his criterion of being elected as MP or MLA.

In secretary, ministry of information and broad casting Government of India V. cricket Association of Bengal' the Supreme court held that the right to freedom of speech and expression also includes right to educate to inform to entertain and also the right to be educated, informed and entertained. Disinformation, misinformation, non-information all equally create a uniformed citizenry which would finally made democracy a monarchy and farce.

In R.P Limited V. Indian Express Newspaper the Supreme court read into Article 21 the right to know, the Supreme court held that right to know is a necessary ingredient of participatory democracy. Enabling the citizens of Indian democratic republic to get the right to information, RTIA with an exhaustive preamble declares to provide setting out the practical regime of right to information for citizens to secure access to information under the control of public authorized in order to promote transparency and accountability in the working of every public authority, the constitution of a central information commission and state information commission and whereas democracy requires an informed citizenry and transparency of information which are vital to the functioning and also to contain corruption and to hold Governments and their instrumentalities accountable to the governed and whereas revelation of information in actual practice is likely to conflict with other public interests including efficient operations of the Governments."

CONCLUSION

The recently enacted Right to information Act, 2005 is a historic event in the democratic growth of India. It not only covers within its ambit central and state government but also local authorities.

Every citizen has a right to impart and receive information as part of his right to information. The state is not only under an obligation to respect this right of the citizen but equally under an obligation to ensure conditions under which this right can be meaningfully and effectively enjoyed by one and all. This right includes right to acquire information and to disseminate it. This right can be limited only by reasonable restrictions under a law for the purposes mentioned in Art 19(2) of our constitution. That right has reached new dimensions and urgency. That right puts greater responsibility upon those who take upon the responsibility to inform.

REFERENCE

1. Namit Sharma V. U.O.1, (2013) 1 SCC 745
2. AIR 2004 SC 1442
3. (1997) 4 SCC 306
4. 385 US 374
5. AIR 1975 SC 865
6. AIR 1982 SC 149
7. AIR 2003 SC 2363
8. (2002) 5 SCC 294
9. (1995) 2 SCC 161
10. SIR 1989 SC 190
11. The Hindustan Times 16 May 2008 P.3 Dainik Jagran, Hindi daily 15 May 2008 P.4

महात्मा गांधी और सत्याग्रह

डॉ. तुंगनाथ मौआर*

सारांश

महात्मा गांधी का सत्याग्रह जीवन और राजनीति का दर्शन है। यह सत्य और अहिंसा पर आधारित है। जिसे उन्होंने दक्षिण अफ्रीका में भारतीयों के अधिकारों के लिए शुरू किया था। गांधीजी ने भारत में चंपारण आंदोलन, खेड़ा सत्याग्रह, असहयोग आंदोलन, सविनय अवज्ञा आंदोलन तथा भारत छोड़ो आंदोलन जैसे सत्याग्रह का सफल नेतृत्व किया और भारत को अंग्रेजी शासन से मुक्ति दिलाने में महत्वपूर्ण भूमिका निभाई। गांधी ने सत्याग्रह को सामाजिक, आर्थिक, राजनीतिक और व्यक्तिगत, प्रत्येक रूप के अन्याय के विरुद्ध प्रयुक्त किया है। परिवार से लेकर राज्य तक मनुष्य को जहां कहीं अन्याय तथा असत्य का सामना करना पड़े, वहां वह सत्याग्रह का प्रयोग कर सकता है। सत्याग्रह का दायरा विस्तृत है जिसमें एक ओर शपथ लेना, प्रार्थना करना, उपवास रखना जैसे शुद्धि कारक साधन हैं तो दूसरी ओर असहयोग के विभिन्न तरीके भी आ जाते हैं जैसे – हड़ताल, बहिष्कार, आमरण अनशन, धरना देना, यात्राएं निकालना, करो की अदायगी ना करना तथा किसी नियम विशेष का जानबूझकर उल्लंघन करना। यह सभी तरीके स्वरूप में नकारात्मक प्रतीत होते हैं। अतः गांधी ने रचनात्मक/सकारात्मक कार्यों पर बल दिया है जिसमें मुख्य है – सांप्रदायिक एकता, अस्पृश्यता समाप्ति, प्रौढ़ शिक्षा, ग्राम सुधार, किसानों की बेहतरीन, श्रमिक संघों का विकास, विकेंद्रीकृत आर्थिक विकास एवं विभिन्न सामाजिक बुराइयों का उन्मूलन। उन्होंने बार-बार उन स्थितियों – परिस्थितियों एवं शर्तों के बारे में लिखा इसमें सत्याग्रह किया जा सकता है। गांधी का सत्याग्रह आज भी महत्वपूर्ण और प्रासंगिक है।

मुख्य शब्द: सत्याग्रह, सत्य, अहिंसा, आंदोलन, असहयोग, सविनय अवज्ञा

मोहनदास करमचंद गांधी आधुनिक भारत के लोकप्रिय जन नायक, समाज सुधारक, स्वतंत्रता सेनानी और नैतिक दार्शनिक थे। गाँधीजी एक मुकदमे की पैरवी के लिए दक्षिण अफ्रीका गए। वहां उन्होंने देखा कि अंग्रेजों के शासन में भारतीयों को अत्यंत कष्ट और अपमान का जीवन बिताना पड़ रहा है। इसके प्रतिकार के लिए भारतीयों के पास कोई विशेष शक्ति नहीं थी। अतः गांधी ने वही सत्याग्रह की शक्ति आजमाने की शुरुआत की। गांधी ने अपनी संपूर्ण अहिंसक कार्यपद्धति को सत्याग्रह नाम दिया। गांधी का सत्याग्रह दर्शन सत्य के सर्वोच्च आदर्श से उत्पन्न हुआ है। उनके लिए सत्याग्रह का अर्थ सभी प्रकार के अन्याय, अत्याचार, उत्पीड़न और शोषण के खिलाफ आत्मबल का प्रयोग करने से था। कष्ट सहन तथा विश्वास आत्मबल के गुण हैं। गांधी का विचार है कि सत्याग्रह मनुष्य का जन्म सिद्ध अधिकार और पवित्र कर्तव्य भी है। यदि सरकार जनता का प्रतिनिधित्व नहीं करती और बेईमानी तथा आतंकवाद का समर्थन

*असिस्टेंट प्रोफेसर राजनीतिक विज्ञान विभाग आर्यभट्ट कॉलेज, नई दिल्ली विश्वविद्यालय नई दिल्ली

करने लगती है तो उसकी अवज्ञा करना आवश्यक हो जाता है। किंतु जो अपने अधिकारों की रक्षा करना चाहता है उसे सब प्रकार के कष्ट सहन के लिए तैयार रहना चाहिए। यदि हैंपडन और वाट टेलर मे कष्ट सहन की क्षमता न होती तो वह विद्रोह का झंडा कभी नहीं उठा सकते थे। इस प्रसंग में गांधी ने थोरो की शिक्षाओं का भी उल्लेख किया है। किंतु उनका कहना था कि वह अहिंसा का पूर्ण समर्थक नहीं था। शायद वह सरकारी कानूनों की अवज्ञा को राजस्व संबंधी कानूनों तक ही सीमित रखना चाहता था। उसने कर देने से इनकार किया। किंतु गाँधीजी द्वारा प्रतिपादित सत्याग्रह का सिद्धांत अधिक व्यापक तथा सार्वभौम है। परिवार से लेकर राज्य तक मनुष्य को जहां कहीं अन्याय तथा असत्य का सामना करना पड़े, वहां वह सत्याग्रह का प्रयोग कर सकता है। गांधी जी को स्वयं अपने पारिवारिक जीवन में सत्याग्रह के कुछ मधुर अनुभव हुए थे, उनका उन्होंने अपनी आत्मकथा में उल्लेख किया है। वे कहा करते थे कि अहिंसा की वर्णमाला परिवार की पाठशाला में सीखी जाती है और फिर उसका प्रयोग राष्ट्रीय तथा अंतरराष्ट्रीय स्तरों पर भी किया जा सकता है। 19वीं शताब्दी में विश्व में जो युद्ध और संघर्ष हुए हैं उसके संबंध में गाँधीजी की इच्छा थी कि इथोपिया, स्पेन, चेकोस्लोवाकिया, चीन और पोलैंड की जनता को आक्रमणकारियों का अहिंसक ढंग से प्रतिरोध करना चाहिए था।

महात्मा गांधी के सत्याग्रह को युद्ध के नैतिक विकल्प के रूप में देखा जा सकता है। उन्होंने आमजन को सिखाया कि सत्याग्रह का प्रयोग समस्या तथा संघर्ष के समाधान हेतु किस प्रकार किया जाता है। गांधी का सत्याग्रह राजनीतिक मुद्दों के निवारण हेतु एक प्रभावी साधन साबित हुआ है। इसे अमेरिका में मार्टिन लूथर किंग और दक्षिण अफ्रीका में नेल्सन मंडेला के कार्यों से समझा जा सकता है। इन दोनों ने महात्मा गांधी के सत्याग्रह के पथ पर चलते हुए सामाजिक और राजनीतिक समस्याओं का समाधान खोज निकाला।

सत्याग्रह, सत्य और आग्रह दो शब्दों के मेल से बना मूल रूप से संस्कृत शब्द है। सत्य से तात्पर्य सच्चाई है तथा आग्रह से तात्पर्य उस पर बल देना। अतः सत्याग्रह का शाब्दिक अर्थ है सत्य पर टिके रहना। गांधी के पुत्र राज मोहन गांधी ने इस संबंध में टिप्पणी की है। सत्य को प्रेम, न्याय एवं आत्मा के पर्याय के रूप में तथा आग्रह को बलध शक्ति के समानांतर प्रयुक्त करके गांधी ने सत्याग्रह को अंग्रेजी में सत्य बल, प्रेम बल या आत्मबल के रूप में प्रयोग करने की छूट दे दी है।

गांधी ने इस शब्द को सामाजिक, राजनीतिक, आर्थिक यहां तक कि प्रत्येक प्रकार के अन्याय के विरुद्ध प्रयुक्त किया है। सत्याग्रह का सहारा केवल एक व्यक्ति या एक दल या जन समूह द्वारा एक आंदोलन के रूप में भी चलाया जा सकता है। यह सामाजिक और राजनीतिक एकता का सूत्र है। सत्याग्रही वही हो सकता है जिसने पहले राज्य के कानूनों का पालन किया हो। गाँधीजी लिखते हैं सत्याग्रही समाज के कानूनों अपनी स्वतंत्र इच्छा से पालन करता है क्योंकि वह ऐसा करना अपना पवित्र कर्तव्य समझता है। जब इस प्रकार मनुष्य समाज के कानूनों का ईमानदारी से पालन कर लेता है तभी वह यह निर्णय करने की स्थिति में हो सकता है कि कौन सा कानून अच्छा और कौन न्याय उचित है और कौन सा अन्याय पूर्ण तथा अनुचित। तभी उसे कुछ कानूनों की सुनिश्चित परिस्थितियों में सविनय अवज्ञा करने का अधिकार प्राप्त हो सकता है। महात्मा गांधी अपने को स्वभाव से कानून का पालन करने वाला मानते थे जब राज्य के नागरिक नैतिक कानूनों का पालन करके अनुशासन सीख ले, तभी उसमें सविनय प्रतिरोध की क्षमता उत्पन्न हो सकती है।

सरकार के कानूनों का प्रतिरोध करते समय सत्याग्रही को इस बात का ध्यान रखना चाहिए कि सामाजिक व्यवस्था छिन्न-भिन्न न होने लगे।

गाँधीजी ने सत्याग्रही के लिए नैतिक अनुशासन के कठोर नियम निर्धारित किए। उसे ईश्वर में अटल विश्वास होना चाहिए, अन्यथा वह अपने शरीर के साथ उच्च हिंसक शक्ति धारण करने वाले अधिकारियों द्वारा किए गए अत्याचारों को शांति पूर्वक सहन नहीं कर सकेगा। उसे धन तथा यश की लालसा नहीं होनी चाहिए। उसे सत्याग्रही जत्थे के नेता के आदेशों का पालन करना चाहिए। उसका कर्तव्य है कि वह अपने शरीर को हठयोग आदि क्रियाओं द्वारा बलिष्ठ बनाने का प्रयत्न करें। उसे चाहिए कि वह ब्रह्मचर्य का पालन करें। वह धैर्यवान हो, अपने उद्देश्य में निष्ठा रखता हो और क्रोध अथवा अन्य किसी मनोविकार के वशीभूत होकर अपने कर्तव्य मार्ग से विचलित न हो। सत्याग्रह का प्रयोग कभी निजी लाभ के लिए नहीं किया जा सकता। वह तो प्रेम की क्रिया है, इसलिए उसका उद्देश्य हृदय को प्रभावित करना होता है न कि अनाचारी में भय उत्पन्न करना। अतः सत्याग्रह का आधार व्यक्ति का शुद्धीकरण है। इस प्रकार गाँधी ने चरित्र की शुद्धता को राजनीतिक शक्ति की कसौटी बताकर राजनीतिक चिंतन को महत्वपूर्ण योग दिया है। उनके अनुसार न्याय तथा धर्म का पक्ष पोषण करने के लिए शुद्ध साधनों का प्रयोग करना आवश्यक है। प्लेटों ने भी राज्य के शिक्षकों के लिए शारीरिक शिक्षा, गणित और तर्क शास्त्र की शिक्षा का विधान किया था किंतु गाँधी ने ब्रह्मचर्य पर बल दिया और इस प्रकार प्लेटों से भी आगे बढ़ गए। यह सत्य है कि गाँधीजी विज्ञान तथा दर्शन की व्यापक बौद्धिक शिक्षा को महत्व नहीं देते थे, जहां तक सत्याग्रही की बौद्धिक शिक्षा का संबंध है, वह भागवतगीता तुलसी – कृत रामायण से संतुष्ट हो जाएंगे। सत्याग्रही के लिए पांडित्य की आवश्यकता नहीं है। उसका हृदय मजबूत होना चाहिए और यह श्रद्धा तथा कष्ट सहन से ही उत्पन्न हो सकता है।

सभी प्रकार के सत्याग्रह के नियमों का कड़ाई से पालन किया जाना महत्वपूर्ण है। सत्याग्रही से अपेक्षित है कि वह सच्चा हो, शत्रु के प्रति घृणा भाव से रहित हो तथा अपने जीवन पर आ रहे खतरों की स्थिति में भी निडर हो। सत्याग्रह किन विषयों को लेकर किया जा रहा है, इसके बारे में दूसरे पक्ष को सूचित करना, विरोधी दल को बातचीत करने का मौका देना, आपसी बातचीत में विफल हो जाने की स्थिति में अधिकारी वर्ग के प्रति और असहयोग एवं नागरिक अवज्ञा आंदोलन का सहारा लेना। विशेष स्थिति में भूख हड़ताल का भी परामर्श दिया गया है परंतु गाँधी के अनुसार सभी सत्याग्रही भूख हड़ताल के पात्रता नहीं रखते।

सत्याग्रह का दायरा विस्तृत है जिसमें एक ओर शपथ लेना, प्रार्थना करना एवं उपवास रखना जैसे शुद्धि कारक एवं पश्चाताप के साधन हैं तो दूसरी ओर असहयोग के विभिन्न तरीके भी आ जाते हैं। जैसे— हड़ताल, बहिष्कार, आमरण अनशन, हिजरत, यात्राएं निकालना, करो की अदायगी न करना तथा किसी नियम विशेष का जानबूझकर उल्लंघन करना। गाँधीजी "घर-फूक" नीति को सत्याग्रह का रूप नहीं मानते थे। उन्होंने गुप्त कार्यवाही का समर्थन नहीं किया। उनका कहना था कि गुप्त कार्यवाही चाहे स्वतंत्रता के न्याय पूर्ण संघर्ष का अंग हो या वे सत्य तथा अहिंसा पर आधारित हो, फिर भी सत्याग्रही के लिए भी उचित नहीं है।

पापी के साथ असहयोग करना सत्याग्रह का एक नरम रूप है। सरकार के अनुचित कानूनों के विरुद्ध सविनय अवज्ञा सत्याग्रह का कठोर रूप है। गाँधीजी के अनुसार सविनय अवज्ञा की धारणा में सविनय का अर्थ है विवेक, अनुशासन, विनम्रता तथा अहिंसा। सविनय अवज्ञा व्यक्तिगत और सामूहिक दोनों प्रकार की हो

सकता है। जनता का स्वतः प्रेरित कार्य सामूहिक अवज्ञा है। गाँधीजी का कहना है कि पूर्ण सविनय अवज्ञा जिसके अंतर्गत राज्य के अन्याय पूर्ण कानून का उल्लंघन किया जाता है, अत्यधिक शक्तिशाली आंदोलन बन जाता है। सशस्त्र विद्रोह से भी अधिक खतरनाक सिद्ध हो सकती है। जब निर्दोष जनता बिना प्रतिरोध एवं प्रतिशोध के अन्याय तथा अत्याचार को सह लेती है तो उससे जिस प्रचंड शक्ति का प्रादुर्भाव होता है, उसकी संभावनाओं का अनुमान भी लगाना कठिन है। अतः सविनय अवज्ञा सत्याग्रह का वर्णन है जिससे निरंकुश और अत्याचारी शासन का अंत हो जाता है।

गांधी जी को आत्मा की श्रेष्ठता में विश्वास था। कभी ऐसे किसी कानून के सामने समर्पण करने की अनुमति नहीं दे सकते थे जो मनुष्य की नैतिक गरिमा के प्रतिकूल होता। अंतःकरण की आवाज को सर्वोपरि मानते थे। यदि राज्य के कानून तथा आदेश मनुष्य के कर्तव्य की भावना से टकराते हो तो उनका प्रतिरोध करना आवश्यक है। यह कहना सही नहीं है कि गाँधीजी लोकतांत्रिक प्रणाली के अंतर्गत सत्याग्रह की अनुमति नहीं देते। गाँधीजी को संसदीय लोकतंत्र के रूपों से विशेष लगाव नहीं था उनका दृष्टिकोण लॉक से भिन्न था। वे लॉक की भांति संसद द्वारा व्यक्त बहुसंख्यको की इच्छा की श्रेष्ठता को स्वयं सिद्ध नहीं मानते थे। उनकी दृष्टि में सत्य के नियमों के अनुसार जीवन बिताना आधारभूत समस्या थी। भारतीय राष्ट्रीय आंदोलन के इतिहास में अनेक ऐसे अवसर आए, जब गांधी जी ने कहा कि यदि मैं अकेला रह गया तो भी अनुचित कानून अथवा व्यवस्था का विरोध करूंगा क्योंकि पाप से असहयोग करना पवित्र कर्तव्य है। इस प्रकार सत्याग्रह की नैतिकता संख्यामूलक लोकतंत्र की नैतिकता की पर्यायवाची नहीं है। सत्याग्रह का उसमें सम्मिलित होने वालों की संख्या से कोई संबंध नहीं है। लोकतंत्र हर प्रकार के आवेशों, पूर्वाग्रहों तथा उच्च विचारों और आकांक्षाओं से प्रभावित हो सकता है। किंतु सत्य का पुजारी इन सब बातों को स्वीकार नहीं करेगा। उसे केवल पांच वर्षों में एक बार विधानसभा के सदस्यों में परिवर्तन करके संतोष नहीं हो सकता। वह लोकमत को बदलने का अवश्य प्रयत्न करेगा। गांधी की शिक्षाओं के अनुसार सत्याग्रह वह शाश्वत कानून है जो आत्मा को अप्रिय लगने वाली हर वस्तु का विरोध करता है। सत्य तथा अंतःकरण का अनुयाई पूर्णता अकेला होने पर भी प्रतिनिधि विधानसभा के उन कानूनों का विरोध करेगा जो आत्मा के नियमों के विरुद्ध हैं। सत्याग्रही सत्य की खातिर हर जोखिम उठाने के लिए तैयार रहेगा। गाँधीजी लिखते हैं राज्य के प्रत्येक अनुचित कानून का अवज्ञा होना चाहिए चाहे इसके परिणाम कुछ भी हो। इसके लिए सविनय अवज्ञा आंदोलन अपरिहार्य हो जाता है।

गांधी ने इस तथ्य पर भी बल दिया कि सत्याग्रह के शक्तिशाली हथियार को बिना सोचे समझे और विवेक पूर्ण ढंग से नहीं इस्तेमाल करना होगा। उन्होंने बार-बार उन स्थितियों परिस्थितियों एवं शर्तों के बारे में लिखा, जिसमें सत्याग्रह किया जा सकता है।

- (1) सत्याग्रह अपने चिंतन और व्यवहार में अहिंसक होना चाहिए।
- (2) इसका उपयोग केवल न्याय पूर्ण कार्य के लिए किया जाना चाहिए।
- (3) इसमें उन नियमों और कानूनों को कड़ाई से पालन करना शामिल है
- (4) सत्याग्रह में पीड़ा सहने की क्षमता और इच्छा का होना आवश्यक है।
- (5) सत्याग्रह के दौरान प्रत्येक स्तर पर अनुशासन का होना जरूरी है
- (6) सत्याग्रह को सार्वजनिक भलाई के लिए अपनाना चाहिए।

(7) सत्याग्रह को केवल वे ही व्यक्ति अपना सकते हैं जिनका चरित्र उत्तम हो

(8) सत्याग्रही को विनय पूर्वक काम करना चाहिए।

इस प्रकार गांधी ने सत्याग्रह के सिद्धांत, परिभाषा, प्रकार आदि का वर्णन किया है और इसके व्यवहारिक पक्षों पर बल दिया है।

प्रोफेसर भीखू पारेख गांधी के सत्याग्रह के सिद्धांत का स्वागत सामाजिक परिवर्तन एवं राजनीतिक क्रियाकलाप के सिद्धांतों में एक मौलिक एवं सृजनात्मक योगदान के रूप में करते हैं। हालांकि वे सत्याग्रह को समाज में फैली हर बीमारी के लिए रामबाण नहीं मानते हैं। वे सत्याग्रह की अनेक सीमाएं बताते हैं। प्रोफेसर पारेख की मान्यता है कि गांधी का यह मानना गलत था कि सभी सामाजिक बुराइयां विरोधी के हृदय को छूने मात्र से दूर की जा सकती हैं। कभी-कभी समाज में तनाव उत्पन्न हो जाते हैं क्योंकि बहुत बार लोगों को अपने ऊपर विश्वास होता है कि वे सही हैं, खासकर युद्ध, गर्भपात आदि मुद्दों पर। प्रोफेसर पारेख करते हैं, यद्यपि दूसरे व्यक्ति की यात्रा लोगों को प्रायः हिला कर रख देती है परंतु अगर वे एक बार मान लें कि दूसरा व्यक्ति उस यात्रा के लिए वाकई हकदार है, उनका दृष्टिकोण बिल्कुल भिन्न हो जाएगा। जैसे – अपराधी को पिटता देख अधिकतर लोग दया भाव नहीं दिखाते हैं। प्रोफेसर पारेख का करना है कि सत्याग्रह बिल्कुल अचूक नहीं है। सत्याग्रह की एक गंभीर सीमा यह है कि यह प्रचार पर निर्भर है। हिटलर द्वारा जर्मनी में यहूदियों को बिना किसी कारण और बिना किसी पूर्व सूचना के देश से निकाल दिया जाता था या मार दिया जाता था। वहां पर सत्याग्रह के लिए कोई अवसर उपलब्ध नहीं हो सकता था। मार्टिन लूथर इस विचार से सहमत हैं कि बिना किसी गवाह के कोई शहीद नहीं हो सकता। बिना प्रचार के सत्याग्रह का प्रभाव सीमित हो सकता है।

प्रोफेसर पारेख हिंसा के प्रश्न पर भी गांधी से मतभेद रखते प्रतीत होते हैं। वे यह मानते हैं कि हिंसा के लिए यह जरूरी नहीं है कि वह किसी दुर्भावना को साथ लेकर आए। जैसे – एक कसाई के द्वारा जानवरों का वध करना। परंतु अपने चर्चा के अंतिम चरणों में कार्य किया स्वीकार करते हैं कि अपनी सीमाओं के बावजूद गांधी के तरीकों ने संपूर्ण विश्व के विभिन्न आंदोलनों को प्रेरित किया है। मार्टिन लूथर किंग के नागरिक अधिकार आंदोलन में गांधी के सत्याग्रह की सार्वभौमिक प्रासंगिकता के साथ-साथ इसके सृजनात्मक अनुकूलन एवं विकास की आवश्यकता को भी सबके सामने उद्घाटित किया है।

गांधी के सत्याग्रह का उनके जीवनकाल में ही दुरुपयोग देखा गया। गांधी इसी कारण सत्याग्रह की शर्तों को बार-बार अपने समाचार पत्रों में विस्तार से दोहराते रहे ताकि उसके आध्यात्मिक पक्ष को लोग न भूलें। उनकी मृत्यु के पश्चात सभी प्रकार के सरकार विरोधी आंदोलन को सत्याग्रह कहा जाने लगा। यह बात समझनी चाहिए कि सभी प्रकार के विरोध आंदोलन सत्याग्रह नहीं हैं। पश्चिम बंगाल के सिंगूर किसानों के हितों के लिए ममता बनर्जी की भूख हड़ताल के बारे में लिखते हुए खुशवंत सिंह ने यह स्पष्ट किया है कि यह सत्याग्रह बिल्कुल नहीं है जैसा कि ममता बनर्जी सोचती हैं, क्योंकि मतभेदों के समाधान के लिए अन्य विकल्पों को नहीं अपनाया गया। इसी प्रकार आजकल के सत्याग्रही के लिए यह प्रायः आवश्यक नहीं रह गया है कि वह एक पवित्र एकांकी जीव दिखाई पड़े। आजकल का सत्याग्रही शांति यात्राओं में, सांप्रदायिक एकता के लिए आयोजित साइकिल यात्राओं में, भारत-पाक शांति के लिए मोटरसाइकिल रैली में

तथा कन्या भ्रूण हत्या के विरोध में अभियानों के आयोजन में देखा जा सकता है। इन सत्याग्रही को गांधी के चल-चित्र एवं चर्चा समूह को स्कूल कॉलेजों तक ले जाते हुए रेडियो कार्यक्रमों एवं भित्ति चित्रों, समाचार पत्रों को बस्तियों तक पहुंचाने अथवा हर प्रकार के राजनीतिक नेताओं के साथ गोलमेज चर्चा यहां तक कि आतंकवाद की वकालत करने वाले लोगों के साथ सीधी बातचीत को भी आम जनता तक पहुंचाने के कामों में देखा जा सकता है क्योंकि उनका यह मानना है कि हर एक व्यक्ति को सुने जाने का अधिकार प्राप्त है। सत्याग्रह के दायरे में इंजीनियर संदीप पांडे, देबेन बरुआ, आमना मिर्जा, बिट्टू सोंधी से लेकर पेट्रोल की बचत करने के लिए पैदल चलने की बात करने वाला, सेहत सुधार के लिए तरह-तरह के तरीके बताने वाला, गली के बच्चों के लिए पैसे जमा करने के लिए आइसक्रीम के लिए खर्च होने वाले पैसे की बचत करने वाला कोई भी विद्यार्थी हो सकता है। इंजीनियर संदीप पांडे ने सत्याग्रह का इस्तेमाल न्याय पूर्ण सार्वजनिक वितरण व्यवस्था एवं सही जानकारी का अधिकार प्राप्त करने के लिए किया था। देबेन बरुआ आसाम का ऐसा रिपोर्टर है जिसने राज्य में बेरोजगारी एवं आतंकवाद की समस्या से निपटने के लिए अहिंसा को साधन बनाया। आमना मिर्जा एक छात्रा है जिसने दिल्ली में अपने कॉलेज में एक पर्यावरण क्लब प्रारंभ किया। बिट्टू सोंधी एक मोटरसाइकिल चालक है जिसने पंजाब के 100 से अधिक गाँवों में कन्या भ्रूण हत्या के विरोध में प्रचार पत्र बांटे जे कुंघनदम चेन्नई का एक स्नातक है जो ग्रामीण लोगों को आत्मनिर्भर बनाने के लिए उन्हें कार्ड बोर्ड बनाने के लिए केले के वृक्ष के शाखाओं का इस्तेमाल करने एवं एवं सिल्क व सूती जैसे देसी प्राकृतिक संसाधनों का इस्तेमाल करने हेतु प्रोत्साहित करता है तथा उनकी समस्याओं के लिए नए-नए हल ढूँढने में कार्यरत है। यह सब सत्याग्रह के विलक्षण उदाहरण हैं। 1958 में जॉन डी.बोंडुरात ने कहा था, गांधी ने जो सर्वाधिक प्रभावशाली धरोहर भारत को सौंपी है वह सत्याग्रह है। इस अस्त्र में परिवर्तन लाने की प्रबल शक्ति है। सत्याग्रह उन सभी लोगों की एक जरूरत भरी मांग थी जो किसी न किसी तरह की दुख अनुभव करते थे। हर प्रकार का विद्रोह चाहे वह कितना भी संगठित हो या जिसका उद्देश्य कुछ भी रहा हो, सत्याग्रह आंदोलन ही कहलाता था। पूरी तरह से जानकारी एवं सरोकार रखने वाले भारतीय आज सत्याग्रह के उपयोग एवं अर्थ को भले ही दूसरे अर्थ में प्रयुक्त करते हैं पर फिर भी उस में आशा है। इस नाम को सरकार के तमाम विरोधी लोगों को वर्णित करते हुए तथा संगठित हिंसा से रहित प्रायः किसी भी तरह के सामाजिक और राजनीतिक कार्य को व्याख्या करने हेतु आज भी संभाल कर रखा हुआ है।

गांधी ने सत्याग्रह के प्रभाव के संदर्भ में मैक्स मूलर के कथन का उल्लेख किया है, सत्य की पुनरावृत्ति तब तक आवश्यक है जब तक ऐसे लोग मौजूद हैं जो उस में विश्वास नहीं करते, जब तक लोगों का उस पर विश्वास न हो जाए। मैं इस विचार में पूरी तरह आस्था रखता हूँ। एक अन्य अवसर पर गाँधीजी ने कहा था मैं पिछले 50 सालों से लगातार अहिंसा एवं उसकी संभावनाओं को वैज्ञानिक स्पष्टता के साथ व्यवहार में लाता रहा हूँ। मैंने अपने जीवन के हर कदम पर घरेलू, आर्थिक एवं राजनीतिक हर क्षेत्र में इसका इस्तेमाल किया है। मैंने कोई भी ऐसा अवसर नहीं देखा जब वह विफल रहा हूँ। जहां कहीं भी यह विफल होता प्रतीत होता है वहां इसकी विफलता का कारण मेरी ही अपूर्णता है। मैं अपनी पूर्णता का कोई दावा नहीं करता। परंतु मैं इस बात का दावा करता हूँ कि मैं सत्य का अन्वेषक हूँ। उसका जो ईश्वर का दूसरा नाम है। इस अन्वेषण के दौरान ही अहिंसा की खोज से मेरा सामना हुआ, इसी का प्रचार करना मेरे जीवन का लक्ष्य है।

इस पीड़ित संसार के लिए अहिंसा के सीधे रास्ते के अतिरिक्त और कोई आशा नहीं बची है। मेरे जैसे करोड़ों अपने जीवन में सत्य को प्रभावित करने में असफल रह जाएं यह उनकी अपनी असफलता होगी। इस शाश्वत नियम की विफलता कदापि नहीं है।

निष्कर्षतः हम कर सकते हैं कि गांधीजी के सत्याग्रह सैद्धांतिक और व्यावहारिक दृष्टिकोण से आज भी महत्वपूर्ण और प्रासंगिक है। आज वैश्वीकरण के युग में विश्व के लोगों को अनेक चुनौतियों का सामना करना पड़ रहा है। दुनिया के अनेक देश परमाणु अस्त्रों से संपन्न हैं और दूसरे देशों में इसे प्राप्त करने की होड़ लगी है। दुनिया तृतीय विश्व युद्ध के कगार पर खड़ी है। ऐसी परिस्थिति में गांधी के सत्य और अहिंसा से संपन्न सत्याग्रह ही मानवता को बचा सकता है। इसके लिए नैतिक और चरित्रवान लोगों की जरूरत है। संपूर्ण संसार में गरीबी, बेरोजगारी, भुखमरी, पर्यावरण संकट, युद्ध, आतंकवाद, मानव अधिकारों का हनन, जलवायु परिवर्तन, कोरोना वायरस महामारी से बचाव और सामाजिक-आर्थिक चुनौतियों का समाधान गाँधीवादी सिद्धांतों में निहित है। 21वीं सदी के लोगों को गाँधीवाद से सीखने के लिए बहुत कुछ बाकी है।

संदर्भ ग्रंथ सूची

1. हरिजन, सितंबर 1947
2. यंग इंडिया, जनवरी 1922
3. एमके गांधी, सत्याग्रह पृष्ठ 115
4. M. K Gandhi, Autobiography part 4 Lesson19
5. केजी मशरूवाला, गांधी विचार दोहन पृष्ठ 70
6. राजमोहन गांधी, मोहनदास विकिंग 2006 पृष्ठ 124
7. Bhikhu Parekh, A Very Short Introduction, OUP,1997
8. आउटलुक 11 सितंबर 2006
9. John D. bondurant , The conquest of violence The Gandhian philosophy of conflict barnes and Nobles,1988

Assessing the Poverty Facets of Persons with Disability in India: A Capability Deprivation Approach

Shaikh Mohammad Kaish Abdul Gafoor*

ABSTRACT

The idea that persons with disabilities, hereafter referred to as PWDs should have every incentive to invest in human and physical capital accumulation and to adopt new technologies to improve their lifestyle has been well recognized from within the Disability scholarship. However, disabled people in India experience a quality of life so much poorer than everyone else, that poverty makes disability a worrisome experience for them. Since Sen's attempt throughout his writings in this particular direction has been to push for public action in order to eliminate the more dramatic forms of human miseries such as Poverty, this paper, with the help of 'Capability Deprivation' approach, critically traces the contours of disability debates within poverty discourse that has dominated the outlines of policy formation in India. It thus should augment our understanding of the nature and causes of poverty and deprivation by shifting primary attention away from means (income) to ends that PWDs have reason to pursue (Sen 1999: 90).

As the paper aims to suggest, that disability and Poverty in their conceptual manifestations are not the stagnant experiences as has always been oversimplified in the mainstream academic scholarship. With the help of current available statistics, the paper also attempts to argue that the resources generated out of recent economic growth in India have not adequately been utilized in terms of relieving the massive social deprivations for PWDs. The present exploratory study largely based on the secondary literature, thus endeavours to conclude that this largely neglected group of Absolute Poverty should rouse government's attention in availing various social transfers and policy schemes, which is well within the capacity of the Indian budgetary and economic growth of the country.

Keywords: Persons with Disabilities, Poverty, Capability Deprivation, Multiple Vulnerabilities, Indian Economy.

INTRODUCTION

This is a critical study of Disability and Poverty status in India. In today's world, even though every single country is facing the problems related to poverty of one or the other kind, India however, has an exceptional cocktail of lethal disparities in so many dimensions including predominantly the massive poverty rate among disabled individuals as well as major disparities of class, nationalities, region and gender amongst others. Despite an attempts been initiated by the political leadership in trying to outlaw the social stratifications, Indian case of poverty persist, both in terms of the centrality of class hierarchy and in terms of their continuous stranglehold on marginalised groups. Comparatively, the problem of crushing misery has not been as ruthless as for example like the one

*Doctoral Research Scholar, Centre for Russian and Central Asian Studies, SIS, JNU, New Delhi-110067.

in Central African countries, where subjugation of a disabled life is fairly comprehensive. Moreover, a stranglehold of mutually reinforcing poverty of various kinds in India is causing an extremely oppressive social arrangement for PWDs, a divided minority of the population.

Nevertheless, turning our attention specifically to the liaison of poverty, it should be noted that the predominant characteristic of the Indian political configuration in the disability sector has been determined by the initiation of an accessible infrastructure, disability support services, and employment and job reservations, including the disability rights concerns in the recent years. The given theme had mostly disappeared from the economic and political schedule during the post-independence period, as we shall explore in the next few pages of this study. However, an emergence of neoliberal economy since 1990s has provided at least some impetus for the Indian governments to uplift the standard of PWDs in country's march forward. We consequently attempt to figure out India's exclusive eminence in tackling poverty prevention and rehabilitation mechanisms for the PWDs, jointly by the nature of its challenges and approaches to dealing with them, as well as its efforts of rising to structural and attitudinal barriers in the given socio-political and economic milieu of the country.

In addition, recognising the importance of securing the bare minimum for PWDs, it is indispensable to take account of the factors such as the level of India's economic-political maturity in the first place, followed by the concerns and challenges of PWDs in the fields of education, employment, technological aids and appliances, accessibility, residence and rehabilitation to name the few. As mentioned before, it is one of the major claims in this study that for the majority of disabled Indians, admittance to basic amenities such as education, healthcare facilities, accessible transportation, livelihood opportunities and social inclusion to a great extent has been obfuscated by the negative feelings of society and the attitudes of charity and mercy of the Indian state towards PWDs, equivalently complimented by an inadequate political/economic structures creating hindrance in the realization of social inclusion endeavour in its fullest potential.

Conceptualising Disability and Poverty through the Capability Deprivation Approach

As many would imagine, both disability and poverty discourses are not a straightforward imitative projects. In an exceedingly capitalistic economic arrangement, we are bombarded by vociferous rhetoric on 'the priority of economic growth', with scanty thought given to health, education and other basic aspects of the formation of Human capabilities. This line of thinking is somewhere diluting our foggy understanding of how human life and human potentialities can actually exist together and can be sustained in the longer run. In this conscientious realm, what allows Capability approach to appropriate the ideological and political space so completely that it can speak of the value of an individual and human potentiality in the same breath. Hence, defining disability is a complex exercise, since it comprises of "a functioning of complex and dynamic interactions between physical (biological), social, psychological, personal and situational, cultural, ideological, spiritual, economic and discursive dimensions among others" (Grech 2015: IX).

Analogous to the existing models of disability paradigm, Sen's Capability Approach also has much to offer to the fundamental considerations of disability. He intends to do so by invoking two significant aspects of social choice theory namely, (primary goods) to which he looks at in terms of "general purpose means that help anyone to promote his or her ends" (Sen 1999: 72), and (well-being), which can truly be achieved through an accurate functioning of human capabilities. Besides primary goods and functioning, The capability approach also considers the agency role of individuals as an autonomous actors and decision-makers. Since Functioning is the mainstay of capability, two of the above constituents help Sen to guide a new paradigm shift in the measurement of Disability – from disability in terms of biological, individual and social constrains As surmised by the conventional disability activists, to disability in terms of 'functioning or capability deprivation'.

Thus, the topic of disability at its fundamental level should be assessed and analysed from the standpoint of what people are able to do and be, as explicitly been articulated in his magnum opus, *Equality of What* by Sen (1979). Rephrasing the above suggestion more bluntly, in Sen's view, appraisal of disability "should not solely be based on people's command of resources, sense of happiness or even desired fulfilment, but should include features of the way people actually live" (Gore 1997: 236). It sharply designates "the difference between means and ends and between substantive freedoms (capabilities) and outcomes (achieved functioning)" (Sen 1999; Robins 2005).

Throughout his writings however Sen Makes no further illustrations with regard to what it means to live a qualitative life by fabricating a list of preferable basic capabilities. In fact, he suggests that "arriving at an agreed range for social evaluation requires consistent public deliberation and a democratic understanding and acceptance" (Sen 2007: 78- 79). Since different sets of basic entitlements will be relevant to different groups and in distinct settings, Sen avoids preparing a definitive list of functionings for all.

In contrast to Sen's unequivocal linking of capabilities with reasoning, Martha Nussbaum triggers the Aristotelian notion of truly human functioning which is familiar with that of a life with human dignity. She introduces the 'threshold level of capabilities' beneath which it is assumed that, "since truly human functioning is not available to citizens, the social goal should be outlined in terms of getting citizens above this capability threshold" (Nussbaum 2006: 71). In distinction to Sen., she prioritizes 'capability over functioning' because she considers it as the adequate political goal (Kleschin 2013). This is so because of the immense importance she attaches to the practical reasoning which in turn suffuses all other functioning. Therefore, unlike Sen, she presents us a list of 'central human capabilities'. In her opinion, these essential human entitlements should constitutionally be safeguarded to ensure a decent and dignified human life especially for poor, disabled people, and women who often lack a voice and the power to address their own needs, and the universality of these entitlements must be secured by means of an overlapping consensus (Nussbaum 2006).

Besides disability, the manifestation of the capabilities approach consolidated by Sen and Nussbaum, has also extended the understandings of human misery and poverty. Given that there is a strong correlation between disability and poverty, Poverty leads to increased disability, and disability in turn leads to vicious cycle of poverty (Lee 1999; Welch 2002: 2). Those living in chronic poverty often have virtually no access to land, healthcare, healthy food, shelter, education, employment, and have to put up with hazardous working conditions. As a result of this, Not only do disabled people confront illness, injury and impairments, But according to an estimation, one hundred million people worldwide have impairments which are caused by malnutrition, inadequate health care, accidents, natural disasters, violence and conflict, HIV/AIDS, inadequate infrastructure and unsafe transport and unsanitary living and working conditions, and are therefore 'preventable' (Lee, 1999). Furthermore, The WHO (1992) estimated that up to 70% of childhood blindness and 50% of hearing impairment in Africa and Asia were preventable or treatable (DFID 2000; Yeo 2001: 15). Accordingly, Almost all the eight Millennium Development Goals (MDGs) adopted by the UN Member States in 2000 are concern to disability in one way or the other (Thomas 2005: 7).

Nevertheless, Sen's attempt throughout his writings in this particular direction has been to push for public action in order to eliminate the more dramatic forms of Poverty such as absolute, relative, income based, consumption based, and entitlement based among others (Mabughi and Selim 2006: 181). He instead looks at Poverty through the prism of 'Capability Deprivations', that is "Poverty is the deprivation of one or more rudimentary capabilities, without which well-being cannot be realized" (Sen 1999: 90), and not through the 'Standard Money-metric approaches' such as (the World Bank's assessment of the poverty by \$1 a day) (Yeo 2001; Selwyn 2011). According to Sen, the real extent of deprivation may be underestimated if we merely wonder about the size of incomes

or basic needs of the people, which simply pays lip service to the enhancement of the human choices (Sen 1992: 113). Poverty in terms of mere income as an illustration, may not sometimes ensure the human comfort, for instance “A person who has a disability may have a larger basket of primary goods and yet have less chance to lead a normal life than an able-bodied person with a smaller basket of primary goods” (Sen 1999: 74). Therefore, poverty can be of a transient or chronic nature, that varies across individuals, social groupings and their subjective understandings, and does not preclude resilience or resistance to it (Grech 2015: X).

While delineating the trajectory for capability approach, Sen informs that the principal focal point of the poverty paradigm must at the first place be concerted to the enrichment and the expansion of the capabilities of the poor that includes fundamental capabilities such as adequate health care facilities, quality education, nutritive food and shelter among others (Sen 1999: 87/88). On top of these rudimentary capabilities, there lies a set of relative capabilities in the form of human dignity and respect, which consist of active public participation, lucrative employment guaranties, social equalities, cultural diversities and the ability to appear in public without shame, which are indispensable to expand people’s choices and consequently allows individual’s achievement of freedom (Laderchi et al. 2003; Selwyn 2011: 269). Thus, poverty from the standpoint of Capability Deprivation is also an individual’s constructed reality.

Sen therefore argues for example that freedom has to be both the principle end and the means of human well-being, which is an intrinsic value of the capabilities, and the accomplishment of it depends predominantly on the people’s ability to function. He proposes to the elimination of both ‘absolute’ and ‘relative’ forms of poverty through the Capability Approach that contemplates the confined scope of earlier economic interpretations of poverty, which certainly required an inclusive and redistributive economic configuration. It thus should augment our “understanding of the nature and causes of poverty and deprivation by shifting primary attention away from means (income, commodities, utility) to ends that people have reason to pursue, and correspondingly, to the freedom to be able to satisfy these ends” (Sen 1999; Alkire and Emma Santos 2013: 90, 246). After all, Justice according to the capability approach not only insists for people to rise above capability deprivation, but to do so through processes that are empowering for them (Drydyk 2012: 32).

EXAMINING THE BASIC POVERTY DEPRIVATIONS AMONG PWDS IN INDIA

We stand poised at the beginning of the twenty first century, where many believe that this century will be one where past discrepancies related to disability and poverty will be surpassed. Disability, conventionally regarded a limitation in actions or activities due to a physical, mental or emotional phenomenon (Welch 2002: 2), is viewed within this epochal consciousness as belonging strictly to the biological/ personal tragedy, something that stands to be overcome in this new epoch. Of course, in India, certain recent developments have also contributed to this conclusion. Prime among these are the government of India ratifying the ‘United Nations Convention on Rights of Persons With Disabilities’ (UNCRPD) in October 2007, and the enactment of the ‘Rights of Persons With Disabilities Act (RPWD) 2016’ largely based on the Standard Rules set out by the UNCRPD. The act has been passed by the Parliament and came into force with effect from April 2017. In its appearance the act seems to be quite progressive in the sense that, the previous act of Persons With Disabilities (Equal Opportunities, Full Participation and Protection of Rights) 1995 considered only seven types of disabilities, whereas newly introduced RPWD act 2016 describes twenty one different types of disabilities classified under six broad categories. Even the reservation for PWDS in government jobs and in the education institutions has been increased from 3% to 4% and from 3% to 5% respectively.

we must also consider the fact that poverty among PWDs in India is not a stagnant phenomenon that straitjackets itself and divides disabled households into categories of poor and non-poor. Rather, we should measure this particular category from a standpoint that differentiates multi-faceted Indian poverty against the static form of poverty. This framework not merely can unveil a suitable correlation of disability analyses of poverty at the first place, but also can provide “a coherent elucidation of the social construction of deprivations, and fitting policy programs to meet those needs” (Townsend 1985: 667-668).

As a result, trusted statistical data pertaining to poverty circulation in the country is exceptionally important in modern times, as its accurate measure may provide policy makers to lay the appropriate social policies in the interests of the poor. However, in the absence of sound quantitative and methodological approaches in calculating poverty in India, estimates of the number of disabled people differ considerably. According to the 2011 Census for instance, 27 million (almost 2.21%) persons in India have disabilities of various kind, including persons with visual, hearing, speech, loco motor and mental disabilities, which is significantly lower than the global prevalence estimate of 15% (WHO and World Bank 2011). Moreover, for the most part of this study, we have deployed two reliable sources namely: the Census of India and the National Sample Survey Organisation (NSSO). Since both of them use different approaches to measure poverty and disability rates in the country, they differ in their outcomes as well. The 2001 Census as an illustration counted the visually challenged as 10.6 million persons, whereas NSSO estimated 2.8 million persons of the total disabled population in the country (Mitra and Sambamoorthi 2006: 4020).

Simon Maxwell (1998) once noted that, “people become poor because they are excluded from social institutions where access is based on status, privilege, race and gender”. This all-pervading Exclusion leads to alienation and distance from the mainstream world, lack of resources, lower expectations, poor health and education among disabled individuals (Yeo 2001: 9). In this sense, Poverty is not merely about rates of income but also about wider social exclusion and helplessness. Among the various barriers that can cause their inclusion, are physical (e.g. inaccessible infrastructures and transportation), institutional (e.g. discriminatory practices), attitudinal (e.g. stigmas and taboos) and social and psychological barriers (ignorance, myths, prejudice, stereotyping and misconceptions about their disabilities, low self-esteem, fear and over-protective environment) etc. What is noteworthy here is the fact that, as Hurst (1999) puts it, “the discrimination, oppression, violence and abuse faced by disabled people does not respect national boundaries, national wealth or national poverty”. The difference however is, “if, for the disabled in the West, the matters of identity, dignity, access, and inclusion are of critical importance, then in India, the matters of survival, poverty, exclusion, and despair become critical” (Reddy 2011: 304).

Current inclination towards rapid economic growth in India is causing understandable enthusiasm between and among deprived segments in the country. A share of not more than 20 to 30 percent of the middle class population primarily by the income standard has somehow enhanced beyond what was expected after the neoliberal economic restructuring since 1991. Unfortunately, this has not been the case for other socially deprived sections of the Indian population such as scheduled caste (SC), Scheduled tribes (ST), Other Backward Classes (OBC), economically deprived regions, women, religious and ethnic minorities along with others. When two or more of these characteristics along with disability are combined, the risk of poverty and exclusion mount significantly.

Though the dimension of poverty can be considered in different spaces such as incomes, resources or functionings as we have seen before, to understand this phenomenon however, we also need to go beyond the role of mere statistics and examine its process of dissemination in the disability community in India. See for example, the quantification of poverty based on the consumption

level for persons with disabilities does not represent an equivalent standard of living at par with the general population, because their extra costs of living (in terms of additional health services, assistive devices, personal assistance whether purchased or provided by family members, and additional transportation costs) are not effectively been included (Mont and Cuong 2013; Deb 2016). It is therefore instead of starting with an abstract understanding of poverty and then analyzing the particular case of disability, we will begin by conceding what seem to be two fundamental facts about poverty around the world. One, the fundamentally economic nature of the phenomenon and two, the deprivation in basic capabilities such as education, health, income and employment situations that poverty can arise in.

EDUCATION

Since it has been viewed as a universal solution to the development of human potential and thereby the economy, literacy dynamics receive perhaps the most decisive component in the lives of the PWDs in all over the world. Since it is seen as a mean to advance the human well-being and reducing social hardships, Education obtains a pre-eminent concentration in the MDGs targets approved by the Indian government. And yet, the added inspection point to the much gloomier image for the PWDs. While the rhetoric of 'inclusive education' and 'education for all' is the new Mantra of the UNCRPD, in practice, some 90% of disabled children, especially girls, do not attend school in the global South, and 61 million children of primary school age are out of school (UNESCO, 2012). In India nonetheless, Despite the literacy has much more significance in the lives of PWDs, the literacy rate in rural and urban disabled people As per the 2001 Census, was only 41% and 60% respectively (Mishra and Gupta 2006). They further point out that, amongst the various disabilities, the rate of illiteracy is highest among persons with mental illness.

Besides healthcare services industry in India, education in recent years has also remained as one of the most affected segments because of the market economy. As per the Standard labour economics, "investments in education will be more limited for children with disabilities due to lower expected returns from education in terms of employment outcomes" (Mitra et al. 2011: 6). The adequate financing of this sector has not only been partially left over from the state, but also the fact that the institutional arrangement does not adequately respond to the society's added aspirations and their rising demands with the passing times. A quick dwindling in the disabled student numbers in the higher education elucidates the rationale behind downfall in resource efficiency indicators, such as use of class capacity, average number of students per university, and lower student-teacher ratio. As a result, the rate of employment and the decrease in the number of employees continued mounting further among PWDs. However, with government of India's programs like Sarva Shiksha Abhiyan, which focuses on inclusive education, the number of educated PWDs is gradually increasing. With the rising technological advances in assistive devices, more and more disabled people are now turning towards formal education. This is apparent in its two successive outcomes namely: in modern times, formal education and vocational training are largely seen as a launching pad for PWD's well-being in the country, and the private sector's outflow on literacy is been encouraged through various policy initiatives by the Indian state. And in spite of this, India has consistently been lacking behind in the universal literacy table when it comes to comparing highest educational attainment of PWDs.

HEALTH

The health of the individual, in accumulation of the community health remarkably depends on the socio-economic nurturing of the country. Consequently, along with education, health is expected

to obtain equal importance in the policy formulations across the political gamut. However, fiscal volatility in the country's steps forward has significantly hampered the finances in the health sector as well in India, as has been highlighted by the number of scholars in the past. Besides disabled women and children, it is predominantly disabled elder citizens who have suffered the most from this protracted phase of transition.

As we know by now, disability in India brings multiple deprivations in the lives of the disabled individuals with it. For example, in the absence of extra cost measures, PWDs experience precarious healthcare conditions partly also because of their impairments. A study recently has found out that, Disabled's lives are more prone to diseases than any other section of the Indian society. We can offer number of reasons for this such as inaccessible transportation and health infrastructure, high rate of illiteracy, inadequate finances and so on. It is as a result, the prevalence of diseases such as cholera, tuberculosis, sexually transmitted diseases along with number of others resulting together in the stressful circumstances for a hefty section of the disabled population. Thus, today what is required on the part of the Indian state is a satisfactory reaction to affordability, accessibility and quality of medical care to its disabled citizens on the one hand; and on the other the all-encompassing programmes with ample funding and maximum participation of disabled masses in realising the importance of protecting their health.

EMPLOYMENT

Since the post-independent era, a progressive shift of emphasis in India towards encouraging employment opportunities for disabled people has taken place. Initially there was a focus on state-run institutions followed by preference for sheltered employment schemes, and more recently, the focus is mainly directed towards mainstream inclusive employment policies for PWDS. However, existing institutional discriminations inherent in the state and the market apparatuses do not take sufficient account of these inclusive employment policies, since markets as an illustration respond to purchasing power rather than to need (Harriss-White (1999). Quite Similarly, in setting up of inclusive priorities and formulating employment policies for PWDs, even Indian policy makers for the most part, have tended to infer disability exclusively in terms of medical, charity model and consequently, they could not see them as a productive individuals capable of formal employment and family/community responsibilities. As a result, productive needs of the PWDs still remain peripheral to the Indian government's agenda.

What is more surprising is the fact that, a diminutive and yet significant share of disabled population, which is somehow educated as per the Indian standards, remain poor mainly because of the inadequate levels of private jobs as stipulated both by the previous and existing RPWD acts. Even public sector employment reservations have also yielded poor outcomes partly because of the Low educational attainment and poor employment prospects. Inaccessible working places-conditions, along with higher reservation wage and a lower market wage for PWDs, are further causing mounting inflation and high unemployment rate in India, which are said to exacerbate the existing condition still further (Mitra and Sambamoorthi 2006: 199). Along with this, in the midst of economic woes, since PWDs through discriminatory processes, are still excluded from the labour market practises, more Indian disabled are predicted to thrashed under the below poverty line (Yeo 2001: 5).

From 1991 onwards, the category of extreme poor in India is constantly remained stagnant mainly because of the unemployment and by this we mean a significant decrease in wage levels and social outflows. As per the NSSO data, at least 48% of all PWD workers were receiving pay beneath the minimum wages in 2011 partly because of the fact that, The number of disabled is proportionately higher in rural India, they have no knowledge of English and computers which

is important for employability as a result of which, they are significantly disconnected from skills and markets (Filmer 2008; Shenoy 2011). It is also at the same time, the employment rates are three times higher for men than women (51 per cent vs 16.1 per cent) and higher in rural areas compared to urban areas (38.4 percent vs 34.9 per cent) among disabled population. The poverty rate for working- age people with disabilities is nearly two and a half times higher than that for people without disabilities, and due to the unemployment trend going on in the country; it is expected to rise further.

In the absence of the aforementioned basic capabilities, the human potentiality in its spirit hinders to a great extent. As an effect of which, people's participation in the labour market gets affected considerably and that in turn limits their purchasing ability as well. People having lower income than the bare subsistence level for instance, live well behind in the race of capitalist market at par with those who receive greater socially expected services. It also obstructs them to find a respectable position in the social and the cultural exchanges of the society. This can well be illustrated by an example of residents of India's metropolitan cities such as Delhi and Mumbai, who despite having an income that is relatively above the minimum level, consider themselves being poor, obviously because of the fact that their demands are much higher than those of rural residents.

As a result of this mishmash between the multiple vulnerabilities along with disability, PWDs in India are witnessing difficult livelihood situations due to lack of work and high level of unemployment, unparalleled rates of poverty, homelessness, illiteracy, coupled with high levels of social exclusion and discriminations. A range of market economic restructuring such as the abolition of subsidies from most basic commodities like food, healthcare services, education and rehabilitation among others, the exploit of freely intermittent market prices, and privatization of certain state enterprises are further diluting PWD's future aspirations. All of these aspects together impacted into rising absolute income poverty and housing poverty, gratuitous social and economic inequality, lofty regional unsettlements between city and countryside and massive breakdown in quality and standard of living for the disabled population. This is by no means to suggest that their standard of living has not been improved at all, but the pace of change has been excruciatingly slow and has barely altered their abysmal living conditions.

CONCLUSION

It is apparent from the above discussion that, given the enormity of a country like India, the provision of disability support services and rights issues have to be contextualised within the larger picture of deprivation and marginalisation. The uniqueness of the capability deprivation perspective however is that, it helps us contextualise both disability and poverty away from their traditional contracted interpretations as we have seen above. This paper accordingly has attempted to argue among other things that, it is not only that the new income generated by the economic growth in India, has been very unequally shared but also the resources newly created have not adequately been utilized in terms of relieving the massive social deprivations for PWDs. In order to exhibit their discontent and protest against the worsening of their situation, it is no wonder then that more and more disabled Indians are outrageously occupying the Indian streets for their constitutional guaranteed rights and freedoms. However, recent protests by the disabled community over the proper implementation of much awaited RPWD act 2016 is only the tip of the iceberg. What is more important is to note that these protests may inevitably continue and intensify more in the near future, since outcomes for people with disabilities in India are not constant with the aims of its disability legislation (Menon et Al. 2012). Therefore, it is immensely important that this slightest group of Absolute Poverty should

rouse government's attention in availing various social transfers and policy schemes, which is well within the capacity of the Indian budgetary and economic growth.

REFERENCES

- Alkire, S. and M. E. Santos (2013), "A Multidimensional Approach: Poverty Measurement & Beyond", *Social Indicators Research*, 112 (2): 239-257.
- Deb, S. (2016), *The Nexus between Disability and Poverty: Analysis Based on States Data in India*, the 34th IARIW General Conference, Dresden.
- Department for International Development (2000), *Disability, Poverty and Development*, London: DFID.
- Drydyk, J. (2012), "A Capability Approach to Justice as a Virtue", *Ethical Theory and Moral Practice*, 15 (1): 23-38.
- Filmer, D. (2008), "Disability, Poverty, and Schooling in Developing Countries: Results from 11 Household Surveys", *The World Bank Economic Review*, 22 (1): 141-163.
- Gore, C. (1997), "Irreducibly Social Goods and the Informational Basis of Sen's Capabilities Approach", *Journal of International Development*, 9: (2), 235-250.
- Grech, S. (2015), *Disability and Poverty in the Global South: Renegotiating Development in Guatemala*, Palgrave: macmillan.
- Harriss-White, B. (1999), "Onto a Loser: Disability in India", In Harriss-White, B. And S. Subramanian (eds.) *Welfare in India: Essays on India's Social Sector in Honor of S. Guhan*, New Delhi: Sage Publications.
- Hurst, Rachel (1999), "Disabled People's Organisations and Developments: Strategies for Change", in Stone Emma (ed.) *Disability and Development*, Leeds: Disability Press, 25-35.
- Kleschin, L. (2013), "Employing the Capability Approach in Conceptualizing Sustainable Development", *Journal of Human Development and Capabilities*, 14: (4), 483-502.
- Laderchi, C. R.; R. Saith and F. Stewart (2003), "Does it Matter that we do not Agree on the Definition of Poverty? A Comparison of Four Approaches", *Oxford Development Studies*, 31: 243-274.
- Lee, H. (1999), *Disability as a Development Issue and How to Integrate a Disability Perspective into the SCO*, Discussion paper for Oxfam, Oxford: Oxfam.
- Mabughi, N. and Tarek Selim (2006), "Poverty as Social Deprivation: A Survey", *Review of Social Economy*, 64 (2): 181-204.
- Mishra, A.K. and R. Gupta (2006), "Disability Index: A Measure of Deprivation among Disabled", *Economic and Political Weekly*, 41 (38): 4026-4029.
- Mitra, S. (2006), "The Capability Approach and Disability", *Journal of disability policy studies*, 16 (4): 236-247.
- Mitra, S. & U. Sambamoorthi (2006), "Employment of Persons With Disabilities: Evidence from the National Sample Survey", *Economic and Political Weekly*, 41 (3): 199-203.
- Mont D. And N. V. Cuong (2011), "Disability and Poverty in Vietnam", *The World Bank Economic Review*, 25 (2), 323-359.
- Nussbaum, M. (2006), *Frontiers of Justice*, Cambridge, MA: Harvard University Press.
- Raghava Reddy, C. (2011), "From Impairment to Disability and Beyond: Critical Explorations in Disability Studies", *Sociological Bulletin*, 60 (2): 287-306.
- Robeyns, I. (2005), "The Capability Approach: A Theoretical Survey", *Journal of Human Development and Capabilities*, 6: (1), 93-114.
- Selwyn, B. (2011), "Liberty Limited? A Sympathetic Re-Engagement with Amartya Sen's Development as Freedom", *Economic and Political Weekly*, 46: (37), 13-16.
- Sen, A. K. (2007), "Children and Human Rights", *Indian Journal of Human Development*, 1: (2), 235-245.
- Sen, A. K. (1999), *Development as Freedom*, Oxford: Oxford University Press.
- Sen, A. K. (1992), *Inequality Re-examined*, Cambridge: Harvard University Press.
- Sen, A. K. (1979). *Collective Choice and Social Welfare*, Amsterdam: North-Holland Press.
- Shenoy, M. (2011), *Persons with Disability and the Indian Labor Market: Challenges and Opportunities*, Regional Office for Asia and the Pacific, Bangkok: International Labor Organisation.

- Thomas, P. (2005), *Disability, Poverty and the Millennium Development Goals: Relevance, Challenges and Opportunities for DFID*, Cornell: Cornell University Press.
- Townsend P. (1985), "A Sociological Approach to the Measurement of Poverty: A Rejoinder to Professor Amartya Sen", *Oxford Economic Papers*, 37 (4): 659-668.
- United Nations Economic, Social and Cultural Organisation (2012), *Global Monitoring Report: Education for All*, Oxford University Press: Paris.
- Welch, P. (2002), *Applying the Capabilities Approach in Examining Disability, Poverty and Gender*, Cambridge: (Promoting Women's Capabilities: Examining Nussbaum's Capability Approach).
- World Health Organization (2002), *International Classification of Functioning, Disability and Health*, Geneva: Author.
- World Health Organization, The World Bank (2011), *World Report on Disability*, World Health Organization: Geneva.
- Yeo, R. (2001), *Chronic poverty and disability*, Chronic Poverty Research Centre Working Paper 4. Manchester: Institute of Development Policy and Management.

India's Ascendancy in the Changing World Dynamics: Measuring the Nexus between Governance and Foreign Policy Imperatives

Shaikh Mohammad Kaish Abdul Gafoor*

ABSTRACT

With the turn of the new Millennium, states across the world have no longer remained a secluded autonomous units internationally. they are integrated into the so called 'global village', and their actions or strategies performed at a global level, produce similar impact for people living across the world. as a result, the concept of governance has obtained more nuanced ramifications in the study of international relations. In other words, Though the nucleus of governance for decades has remained intact, the process of rapid globalization has made governance more complex than ever before. In Addition, a healthy governed state also obtains a crucial precondition of a state's increasing international stature. Thus, besides managing political, social and economic sectors of a particular country nationally, a well functioning Governance also contributes in shaping its foreign policy configurations internationally.

In this regard, The proposed study in the first section, seeks to critically analyze the role of governance in the making of Indian foreign policy. The second section briefly attempts to outline the contemporary challenges and future prospects of the Indian foreign policy, which can be delineated in the three orbits. Issues and challenges pertaining to the India's neighbouring countries, and also with that of the other Asian nations can be identified in the first orbit. The second orbit consists of India's strategic relationship with extant major powers of the world such as the United States, China, Russia and number of others. The third orbit comprises of India's engagements with the primary international institutions including that of the global financial institutions. The paper also ventures to indicate that, more India increases its influence globally, more the interface between the international and the domestic becomes imperative

INTRODUCTION

The 20first century has witnessed momentous changes in the foreign policy making across the globe. This transformation has partly occurred due to rising importance of the multi-faceted concept of governance that has altered itself to address the global events. Although the nucleus of governance has remained the same, the forces of globalization have provided more nuanced meanings to the subject of governance. For a rising power like India, governance occupies a significant element in exterminating the socioeconomic problems as well as In formulating a successful foreign policy of the nation. Since the astounding victory of the National Democratic Alliance in 2014, the nature of India's domestic governance is projected to alter fundamentally, thereby enabling India to respond differently to new challenges and opportunities arising in the post-11 2001 world order.

India's projection of economic and democratic progresses and its engagements with the global institutions and superpowers are structurally entwined to a great extent. Democracy in India for instance has put down its firmer roots and economic growth has accelerated despite meagre quality

*Doctoral Research Scholar, Centre for Russian and Central Asian Studies, SIS, JNU, New Delhi-110067.

of governance (Malone et al. 2015). India's absorption with the global economy since 1991 has also generated inconceivable profit, which is expected to step up further in the near future. Consequently, India's leaders have started seeing their nation as a proactive global player, rather than a country mired with poor infrastructure and mass poverty at the domestic echelon. Therefore, The question to start the proceeding with is: What are the domestic and external factors which contribute or constrict the ascendance of India in the 21st century?

In this regard, it would be prudent to ask these following interlinked questions in order to assess the role of governance in the Indian foreign policy at this juncture: 1. Does India hold a positive influence over connectivity and developments in its Asian neighbourhood? 2. On what grounds India should behave as a rising international power in the 21st century? And 3. Can India's engagement with the multilateral organisations be characterised as tactical or strategic? These questions are examined in terms of India's current standing in the 21st century, which can broadly be characterised in three orbits. The first orbit encompasses the extended neighbourhood in South Asia, where there is an urgent need to understand that India's engagements with its immediate neighbours pertaining to connectivity and cooperation lack basic infrastructure, financial investments and human capital development in the region. The subsequent orbit is related to India's engagement with the existing superpowers of the world such as United States, China and Russia. And the third orbit consists of India's standing in the global institutions such as United Nations, International Monetary Fund, World Bank, World Trade Organisation, BRICS etc.

ASSESSING THE IMPACT OF GOVERNANCE IN THE INDIAN FOREIGN POLICY

James N. Rosenau (1969: 247) noted that, we should not "ignore the existence of complex linkage between national and international system". Today, the process of globalization has resulted among other things, in a greater level of interdependence between the politically, geographically and economically parted states (Ohmae 1996). States as independent entities across the globe are strongly connected with each other under the influence of 'global village'. Since a better governed state is considered as the backbone of a state's burgeoning international stature in the modern interdependent world, the hydra-headed concept of governance has thus been able to expand its enchantment somewhat successfully. In other words, besides political and social sectors, governance also focuses on the country's foreign policy aspects in order to produce comprehensive results at the international level. Steady progress in the domestic governance is therefore viewed as a facilitating precursor for the consistent foreign policy development (Bindra 2004).

The concept of governance has variously been defined by scholars in the literature. The World Bank as a case in point previously defined governance as "the exercise of political power in the management of a country's affairs" (World Bank 1992: 3). In its subsequent publications, more emphasis is being allotted to the socio-economic aspects of governance, through which human lives are coordinated at various echelons. However, The World Bank's conception of governance drew substantial criticism from the scholars for its concealed effort of imposing a Western industrialized and liberal democratic model on the developing countries (Leftwich 1993; Hyden 1992). However, Andrew Heywood (2011: 124) elucidates governance as "a formal and institutional processes that uphold order and facilitate collective action in a particular country". The capacity to make collective decisions and the ability to enforce them are some of the central features of governance, which are more adequately highlighted in the Krahnmann's definition, where he tries to spell out governance as: "as the structures and processes that enable various actors to coordinate their inter-reliant needs and interests through the making and implementation of policies" (Krahnmann 2003: 131).

Nevertheless, some of these indefinite and ambiguous definitions of governance has resulted into normative interpretation of the concept (Wilson 2000: 53). the involvement of governance can be observed at local, provincial, national, regional and global levels, and some of its essential characteristics include transparent and accountable government, democracy and the rule of law, respect for human rights and development, Impartial judiciary and autonomous media among others. Since Decentralization is observed as one of the means to achieve an efficient government at the local level, In countries like India, decentralization of the unitary structure into local governing bodies is further accredited as a status of 'good governance' (Wilson 2000: 53). Occasionally, The concept of governance is also viewed as a relation or interaction among institutions such as government, markets, networks, hierarchies and civil society. In light of the above considerations, one may conclude that instead of viewing it as a set of normative propositions, governance should best be understood as a complex of processes, through which a country's internal as well as external affairs are coordinated.

Besides governance, the concept of foreign policy is considered as one of the virtuous activity of a sovereign state. a former US Secretary of State, Henry A. Kissinger (1969: 165) once said that "foreign policy begins where domestic policy ends". It is basically an art of 'statecraft' through which a national government administers its relations with other international actors (Heywood 2011: 130). It is therefore been described as 'high' politics, in distinction to the 'low' politics of the state. However, With the advancement of globalization and interdependent world order, the concept of 'foreign policy' has also drastically been transformed over the period. It is no longer regarded as a discrete activity, completely dissociated from the domestic politics of a particular nation. Further pressures have been generated by the post-sovereign governance And non-state actors such as NGOs, TNCs, terrorist groups and so on. As a result, Due to its increasing dependency on the domestic affairs In the global politics, foreign policy-making in recent times has developed as a cohesive, and yet a proficient organ of the government.

In India, Foreign policy as an autonomous constituent emerged as a response to the nation-building and identity-construction (Dalmia and Malone 2012; Mitra and Schottli 2007). In opposition to the Europe's experience of nation- building process, Where most of the nations historically appeared before the state, Indian consolidation of the nation-building commenced after the establishment of the Indian state in 1947. Soon after independence, India, under the leadership of Pundit Jawaharlal Nehru Went on to have a modified version of state planning and control over the economy, which echoed equally in its foreign policy orientation (Baru 1983: 34-46). Ironically however, India has not received as much recognition as it deserves as a nation with huge democratic and economic potentialities in the past. The scholars of that time such as George Tanham (1992) thus concluded that "India has no grand plan, no strategic vision for its foreign policy in a post-Cold War world".

With a turn of the new millennium, an archetypal shift in India's foreign policy priorities has taken place. In consonance with the process of economic globalisation, particularly since 2000 onwards, Indian foreign policy has swiftly moved from its traditional ideological concerns of 'non-alignment' and third world solidarity, to pragmatic thinking (Ranjan 2014). While Addressing to the General Assembly of the United Nations in 2004, Former Prime Minister Dr. Manmohan Singh highlighted new realities of the world order, by referring to the complex process of globalisation with which India has still to come to terms with (Ministry of External Affairs 2004).

Although thirty years of economic reform has provided some potency to the Indian economy, many of its fundamental challenges such as unemployment, poverty, Malnutrition, ethnic separatism, corruption, exclusion and discrimination have still remained unaddressed. More worrying aspects for India today are the enduring challenges of the internal insurgencies (Malone 2011). In fact, these long-standing concerns of our country are further exasperated by the newer challenges such

as rising economic and social inequalities, unequal access to resources, growing informal sector, mounting cost of health and education and declining investment in human capital among others.

In order to bring about consistency in policy formation and its implementation at both national and international level, India requires a robust government. Along with the consistent economic growth (Panagariya 2008; Acharya and Mohan 2010). In the whole Asia, since its inception, India has been an exceptional exemplar of a country changing within the framework of democracy in an orderly manner. However, the series of unstable coalition governments since 1989 have proven incapable to make a decisive footprints in this regard (Andersen 2001; Chitalkar and Malone 2011: 83). The present government, under the leadership of Prime Minister Modi, which could successfully secured its full majority at the centre both in 2014 as well as in 2019, seems more stable than its predecessors. As a result, the NDA government did not feel shy of taking bold decisions like surgical strikes and demonetization in 2016. While the ongoing NDA government has proved cohesive since its formation at the centre, it nevertheless has been trying to grapple with the significant challenges that could threaten the very fabric of the Indian polity in days to come. It is therefore Shivshankar Menon concluded that the systemic shortfalls in the domestic governance will inhibit India becoming an expeditionary power to shape the external environment (MENON 2016).

It is at the same time, India's international engagements with neighbours, major partners, institutions, collaborations, blocks and regional groupings are also undergoing manifold changes. Its foreign policy in the 21st century can thus be marked as a 'pragmatic realism', where self-interest now clearly trumps solidarity. In this world of seemingly colluding interest both at nationally and at internationally, India's emergence on the international landscape anticipates a renewed foreign policy homework.

First Orbit

It is almost an oxymoron in the sense that, it sometimes becomes easy for the makers of foreign policy to deal with the great powers in the world. In fact, it is the smaller ones who give them all the trouble by creating an endless process of pin pricks. Moreover, India is trying hard to maintain its strategic goal of facilitating the domestic transformation by simultaneously energising the engagements not only with its immediate neighbourhood but also with its extended neighbourhood. This practice of expanding its diplomatic influence in the continent was vigorously pursued initially during PM Vajpayee's government, and it subsequently was carried out in the successive government under former Prime Minister Manmohan Singh. India, by focusing on the pragmatic policy of strategic cooperation has thus far able to establish itself as one of the key players in the region. However, in matters of economic as well as infrastructural connectivity, India faces stiff competition from its Asian counterpart called China. Comparable to the Chinese economy, India has yet to demonstrate its financial credibility in the region.

Despite the fact that South Asia shares a common history, culture and developmental challenges, it still remains one of the least integrated regions of the world. It is becoming all the more difficult for India to assume primacy in the region, since political differences have a national security angle to them (Raghavan 2016: 10). Though India may emphasize on the Bangladesh-Bhutan-India-Nepal (BBIN) corridor as an indication of sub-regional integration, but New Delhi's plans for regional connectivity cannot merely be realised through its positive economic growth, political settlement in the region matters a great deal too.

India's strategic success, and indeed that of the Asian continent depends largely on its ability to provide a conducive environment of economic cooperation and security consolidation. Besides this, strengthening the maritime security along with the other Asian countries is equally important for India

in guaranteeing the sea lines of communication, which is vital for the continued economic affluence of the area. Energy is another crucial factor that is needed to cater to the rising demands of India's developmental needs. India, by 2013 had already become the third largest energy consumer in the world (Moonakal 2018). Consequently, India's foreign policy priorities— rightly so – have focused on deepening ties with the West Asian and the Central Asian states.

Second Orbit

Looking beyond the Asian continent, India, with the help of its positive economic outlook at the global level, is also trying hard to establish reciprocal relationships with the major powers of the 21st century, foremost among which are the United States, China and Russia. India has started situating itself tactically within this orbit in the recent times. However, the foremost challenge before India is to locate its fundamental parameters of engagement or disengagement within the big power politics.

Congregating interest and shared values of liberal democracy and market economy are the foundations of India's relation with the United States, which is mostly reputable for its beneficial stakes in each other's progress. In 2008 for instance, India and the US reached an agreement on civil nuclear cooperation, which further led to improving the tone of the bilateral relationship. Following the footsteps of Dr. Manmohan Singh, Prime Minister Modi has initiated a new architecture of energy security and sustainable development participation with the US. Moreover, unlike many countries from the developing world including that of India, the US has a tremendously effervescent foreign policy that allows ingenuity and flexibility to its external apparatus (Jacob and Layton 2009). At the same time, one must always keep in mind that over-reliance on American goodwill may sometimes prove counter-productive, as has happened with the US-Pakistan relationship in the past (Kux 2001). The US, too, is not fully satisfied with India's conservative positions over many issues such as Syria, Iran, Myanmar, Palestine, climate change and multilateral trade regime etc. How the two world's oldest and world's largest democracies adjust on these issues will shape the future course of action for their relationship in the longer run (Pant 2008; 2016).

The relationship with China in the recent past has received increased attention from both the sides. Due in part to its deeper rivalry with Japan and the US, China has started viewing India as a potential swing state in the region. Moreover, the April 2018 informal summit of Wuhan between PM Modi and Xi Jinping has shown that both countries are striving towards stabilising relations for mutual gain. By the end of 2015 for instance, the Sino-Indian trade had already reached to \$70 billion, and is likely to augment in the foreseeable future (Pant 2016: 38). However, in the past, India's neighbourhood policy, particularly with its big Northern neighbour has faced more setbacks than success (Malone 2011; Noorani 2010). The recent June–August 2020 Doklam stand-off has demonstrated how tenuous is the peace along the Sino-Indian border. Thus, in order to deal with mutual public perceptions, which are becoming mutually hostile, the two countries have to encounter two grossly underdeveloped areas namely, people linkages and cultural ties at the earliest (Sen 2017; Pant 2016: 32).

Third Orbit

India, along with Brazil, Germany, and Japan is constantly been demanding for permanent seat at the Security Council of the United Nations. However, the nature of the claim on India's part – a claim of superpower status or a claim of leadership for representing the developing world - is remained unanswered till the date. Its upward transition in the multilateral platforms resonates second only to that of China. Due to its encouraging economic performance and nuclear capability, India's voice carries more weight today in the multilateral forums. Nonetheless, as far as India's

representation in the regional and sub-regional associations are concerned, it shares one of the most active foreign policy missions along with the Western countries. Since the impact of these regional organizations is on the rise, India's active participation in these institutions is predicted to blow up in the coming future. However, the global institutional platforms such as International Monetary fund, G-20, BRICS, World Bank and World Trade Organisation are the forums, where world's 80 percent of the economic policies are formulated. Ironically, almost all the above mentioned global forums are reasonably criticised for their biased attitudes towards developing countries, and over the matters of participation and domination, growth and equity, power and representation.

Terrorism and separatist tendencies both within and outside the country are persistently posing security threats to the global peace and stability. Anticipated fear of intersection between terrorism and the proliferation of weapons of mass destruction further complicates the security both nationally and globally. The frightening prospects of Naxalite-Maoist insurgency within the country, along with its neighbourhood that still remains a hot bed of terrorist activities, continue to pose direct threat to its national security. India being a prolonged sufferer of these activities for many decades, continues to collaborate with the global security institutions to deal with this threat.

CONCLUSION

Aforementioned discussion obliges us to conclude that, More India asserts its status as a rising superpower at the global level, more the distinction between the international and domestic is expected to become blur. This fluid interface in fact is a need of the hour. For India to demand its justified superpower status within the comedy of nations, a stable and competent domestic political and economic set up is considered indispensable. It should also be noted at the same time that, international ambitions cannot solely be built on the basis of domestic governance of a particular country. Rather one needs to understand that international power always aspires for building international stakes from within the domestic sphere, which can be built up with the help of an equitable economic growth, equally complimented with the robust law and order.

For India to emerge as one of the forerunners of liberal democracy and open market economy in the near future, bureaucratic red tapism contrary to an efficient and an accountable administration needs to wound up at the earliest. Another important factor in India's emergence as one of the global superpowers in the 21st century along with China and the United States, is its optimistic economic growth, which should be sustained in the longer run (Pillalamarri 2018). Besides economy, as Sen argues, "the understanding and use of India's rich argumentative tradition are also critically important for the success of democracy, the defence of its secular politics, the removal of inequalities and the pursuit of sub-continental peace" (Sen 2005). It may once again be reiterated to remind ourselves that, it is India's potential to be a great economic and military power has invited the attention of the world, and not its righteousness and morality (Ranjan 2014). In order to confront these above listed anxieties at the foreign policy level, the idea of governance is both pivotal and obligatory. Thus there is an urgent need to give the domestic scenario a new shape and bring it line with India's rising global aspirations.

REFERENCES

- Acharya, S. and R. Mohan (eds.), (2010), *India's Economy: Performance and Challenges* New Delhi: Oxford University Press.
- Andersen, W. (2001), "Recent Trends in Indian Foreign Policy", *Asian Survey*, 41 (5): 765-776.
- Baru, S. (1983), "Self-Reliance to Dependence in Indian Economic Development", *Social Scientist*, (12): 34-46.
- Bindra, S.S. (2004), "Domestic Milieu of Indian Foreign Policy Making Process: Theoretical Perspective", *The Indian Journal of Political Science*, 65 (2): 245-258.

- Chitalkar, P. and D.M. Malone (2011), "Democracy, Politics and India's Foreign Policy", *Canadian Foreign Policy Journal*, 17 (1): 75-91.
- Dalmia, T. and D.M. Malone (2012), "Historical Influences on India's Foreign Policy", *International Journal*, 67 (4): 1029-1049.
- Heywood, A. (2011), *Global Politics, London: PALGRAVE MACMILLAN*.
- Hyden, Gordon (1992), "Governance and the Study of Politics", in Hyden Gordon and Michael Bratton (eds.) *Governance and Politics in Africa*, Boulder Co: Lynne Rienner.
- Jacob, H. and K. Layton (2009), "UPA's Foreign Policy: A Critique", *Economic and Political Weekly*, 44 (25): 13-15.
- Kissinger, A. Henry (1969), "Domestic Structure and Foreign Policy", in James N. Rosenau (ed.) *International Politics and Foreign Policy: A Reader in Research and Theory*, New York: Oxford University Press, 261-262.
- Krahmman, E. (2003), "National, Regional, and Global Governance: One Phenomenon or Many", *Global Governance*, 9 (3): 323-346.
- Kux, Dennis (2001), *The United States and Pakistan, 1947-2000: Disenchanted Allies*, Maryland: John Hopkins University Press.
- Leftwich, A. (1992), "Governance, Democracy and Development in the Third World", *Third World Quarterly*, 14 (3): 610-612.
- Malone, D.M. (2011), *Does the Elephant Dance? Contemporary Indian Foreign Policy*, Oxford: Oxford University Press 2011
- Malone, D.M., C. Raja Mohan and S. Raghavan (Eds.), (2015), *The Oxford Hand Book of Indian Foreign Policy*, Oxford: Oxford University Press.
- Menon, S. (2015), *Choices: Inside the Making of India S Foreign Policy*, Washington D.C.: Brookings Institution Press.
- Ministry of External Affairs (2005), "Prime Minister's Address at the 59th Session of United Nations General Assembly", Ministry of External Affairs, Government of India 23 September, URL: <http://meaindia.nic.in/speech/2004/09/23ss01.htm>
- Mitra, S.K. and J. Schottli (2007), "The New Dynamics of Indian Foreign Policy and Its Ambiguities", *Irish Studies in International Affairs*, 18 (1): 19-34.
- Moonakal, N.A. (2018), "India and the Evolving Geopolitics of the Middle East: India's "Link West" Policy has seen Both Continuity and Change", [Online: Web] Accessed 22 December 2018, URL: <https://thedi diplomat.com/2018/12/india-and-the-evolving-geopolitics-of-the-middle-east/>
- Noorani A.G. (2010), "Fateful Handshakes", *Frontline*, (4): 85-87.
- Ohmae, K. (1996), *The End of the Nation State*, Oxford: Oxford University Press.
- Panagariya, A. (2008), *India: The Emerging Giant*, New York: Oxford University Press.
- Pant, H.V. (2008), *Contemporary Debates in Indian Foreign and Security Policy: India Negotiates Its Rise in the International System*, New York: Palgrave macmillan.
- Pant, H.V. (2016), *Indian Foreign Policy: An Overview*, Manchester: Manchester University Press.
- Raghavan, S. (2016), "Asian Connectivity: Regional Integration and India's Role", *Economic & Political weekly*, 52 (13): 53-58.
- Ranjan, Rachit (2014), "Engaging India with the World: Foreign Policy Imperatives in an Emerging World Order", [Online: Web] Accessed 22 December 2018, URL: <https://www.globalpolicyjournal.com/blog/09/12/2014/engaging-india-world-foreign-policy-imperatives-emerging-world-order>
- Rosenau, J.A. (1969), (ed.) *International Politics and Foreign Policy: A Reader in Research and Theory*, New York: Oxford University Press, 368-373.
- Sen, A.K. (2005), *The Argumentative Indian: Writings on Indian History, Culture and Identity*, New York: Farrar, Straus and Giroux.
- Sen, A.K. (2017), *A Country of First Boys: and Other Essays*, Oxford: Oxford University Press.
- Tanham, G.K. (1992), *Indian Strategic Thought: An Interpretive Essay*, Santa Monica CA: Rand.
- Wilson, R.H. (2000), "Understanding Local Governance: an International Perspective", *Sao Paulo*, 40 (2): 51-63.
- World Bank. (1992), *Governance and development*, Washington DC : The World Bank.

ICT, Meta Cognition and Style of Learning & Thinking

Dr. Santosh Sharma* and Shinam Batra**

“The illiterate of the 21st century will not be those who cannot read and write, but those who cannot learn, unlearn and relearn” (Toffler)

ABSTRACT

In today's era to cope with rapid changes of the twenty-first century, innovation, technology and research are indispensable tools of education. Failure to innovate by and large means repeating yesterday's educational programmes and strategies, tomorrow will only further jeopardize education's reputation as contributor. Educational innovations are imperative and would no doubt be effective if they are research-based and imbued with technology of education (i.e. systematic approach to the teaching-learning process); and technology in education (e.g. use of hardwares and softwares) also need to apprise regarding dimensions of ICT.

DIMENSIONS OF ICT

ICT empowerment could be facilitated through awareness and motivation.

Awareness requires a person to have understanding of how computers impact their day to day life as well as the larger society while competence is the ability to handle various computer operations.

ICT awareness involves knowing about the existence and importance of the ICT tools and their application. ICT awareness is essential in order to increase the usage of ICT facilities. ICT awareness or literacy is defined as the knowledge and use of digital technology, communications tools and network to access, manage, integrate, evaluate, and create information in order to function in a knowledge society.

Thus, it is the set of skills and understanding required by people to enable meaningful use of ICT appropriate to their needs.

ICT RESOURCES USED BY STUDENTS

ICT is not a single technology like the traditional technologies. They are a Combination of hardware and software, media and delivery systems. ICT tools enable anytime, anywhere access to information and resources.

Some of them are named below:

- Multimedia personal computer (PC), laptop and notebook
- Application softwares such as word processing, spreadsheets, power point, simulation and speed recognition
- Multimedia projector (LCD) to communicate to a large group
- Local area network (LAN), metropolitan area network (MAN), wide area network (WAN)
- Digital video camera
- Multimedia PC /laptop with video card and web camera or digital video camera

*Director, Distance Education, Professor, Faculty of Education, S.V. Subharti University, Meerut.

**Research Scholar

- Computer database and data processing mechanism, CDROM and DVD
- Digital libraries
- E-mail, Internet and World wide web (WWW)
- Hypermedia and Hypertext resources
- Computer-mediated conferencing - video and audio conferencing
- Video text, tele-text, Interactive video text, Interactive video disk (IVD) and Interactive remote instruction (IRI)
- Virtual classroom and virtual reality

METACOGNITION AND ICT

Metacognitive knowledge and skill makes student aware when to use appropriate technology, how to learn with technology and how to use technology for pedagogical purposes. i.e. where technology can be beneficial for student's learning; what learning context in which technology becomes important to use and why; what technology features that support students learning the most; and which technological tool is appropriate to use and why. One way to develop this technological knowledge is to allow students to monitor and reflect on their own learning when they are engaged in learning activities. Research indicates that ICT awareness will help students to become critical thinkers, able to search out, understand, analyze, and synthesize information. Use of ICT in the classroom is a solution of individual differences, where learners learn with own pace, interest and desires. ICT based learning is a permanent learning store in memory bank. It will be retrieved any time, any moment, anywhere and help the learner in the right direction.

LEARNING & THINKING STYLE AND ICT

The present era is full of information dominated by the digital technology. The technology is more pervasive and user-friendly has dominated our lives more and more.

21st Century education is seen as the natural source for the creation of technological literacy and the development of new technological skills as well as other skills that are needed in the new millennium like problem-solving skills, collaboration skills, critical reading and information retrieval etc. For new technologies like ICT, the creation of these new skills has meant the introduction of ICT into schools and the introduction of computer literacy or media literacy courses as well as new teaching and learning methods that befits the optimum use of such technologies. ICT helps in establishing a better dialogue between pedagogy and technology; practice and research; policies practice and theory. ICT is a very comprehensive expression that involves managing of large quantities of information and communicating it to the concerned people.

ICT leads towards the involvement of new epistemologies and pedagogies as the teachers and students have new ICT tools to work with. ICT expands access to education, motivate to learn, facilitate the acquisitions of basic skills and can transform the learning and thinking style that helps to improve the quality of education. ICT has tremendous potential for education. It enables a teacher to reach out widely, efficiently and effectively by helping them to be more modern and dynamic.

Information and Communication Technologies have enabled the convergence of a wide array of technology-based and technology -mediated resources for teaching-learning. The researcher understands that it has, therefore, become possible to employ ICT as an omnibus support system for education. The potential of ICT to respond to the various challenges the Indian education system poses are:

ICT can be beneficially leveraged to disseminate information and catalyze adaptation, adoption, translation and distribution of educational resources distributed across various media. There is an

urgent need to digitize and make available educational audio and video resources, which exist in different languages. ICT can be very gainfully used for digitizing and disseminating existing print resources like books, documents, handouts, charts and posters which have been used extensively in the school system in order to enhance its reach and use.

ICT has potential to make learning more experiential. Moreover, a large amount of data, visuals available on any topic can be brought to the classroom from all over the world. That is why ICT has been considered an emerging area with lots of potential for making educational process more meaningful. Hence it is known by the researcher that various ICT based classroom has changed transaction procedure, strategies involved during teaching learning and achievement of students and also change style of learning and thinking among students.

Some of the findings on the basis of ICT and Style of Learning and Thinking are also mentioned there.

- Students studying through Educomp project have high Enactive learning style in comparison to other ICT projects.
- Students studying through the project ICT@KV have high Figural learning style in comparison to other ICT projects.
- Students studying through Tata ClassEdge project have high Verbal learning style in comparison to other ICT projects.
- Students studying through TeachNext project have high reproductive learning style in comparison to other ICT projects.
- Students studying project Educomp project have high Constructive learning style in comparison to other ICT projects.

As it is generally believed that ICT empower teachers and learners, promote change and foster the development of '21st-century skills', but data to support these beliefs are still limited". Indeed, data on the nature and extent of these issues/ remain limited in most places because of the lack of monitoring and evaluation tools and methodologies dealing with the use of ICTs in schools and their impact on teaching and learning. Without evaluation, the implementation of further new projects and initiatives will be in vain.

CONCLUSION

It is understood that Student's success is promoted when students gain greater awareness of their own thinking and learning styles, i.e., when they engage in metacognition, when they think about their thinking, when they self-monitor or check their comprehension, and when they self-regulate their learning strategies. ICT results in transformation from teacher-oriented learning to that of exploratory self-learning. The ICT integration in teacher education is the need of the hour for quality education programs.

Metacognition compels students to think How and What learning with technology. How technology appropriate for achieving learning outcomes? How technology likely to improve learning? This research article light on the significant areas of metacognition, ICT awareness and academic awareness in a broad perspective. It would add the knowledge of academic institutions, public and social institutions. Hence the significance of research article is seen as a holistic approach towards the development of the society.

Researches depicts that high-achiever students tend to reflect on their thought processes during learning and are aware of the cognitive strategies they use i.e. they engage in 'meta-cognition' or think about their own thinking. Successful students 'self-monitor' their academic performance that is they maintain awareness of whether or not they are actually learning what they are attempting

to learn and they self-regulate or adjust their learning strategies with the help of ICT and enhance their academic achievement.

REFERENCE

- Akir, Ziad I. (2017). Impact of ICT on teaching and training: A qualitative systematic view. *Dissertation Abstract International*, 67(7), Jan. 2007
- Albirini, A. A. (2017). Teacher's attitudes toward information and communication technologies: the case of Syrian EFL teachers. *Journal of Computers and Education*, 47, 373-398.
- Bhalla, J. (2018). Computer use by school teachers in teaching-learning process. *Journal of Education and Training Studies*, 1(2), 174-185.
- Bhat, M. A. Learning by ICT in Association to their Learning Styles: An Attitudinal Study of High School Students.
- Manochehr, N. N. (2018). The influence of learning styles on learners in e-learning environments: An empirical study. *Computers in Higher Education Economics Review*, 18(1), 10-14.

Innovations in Learner Support Using ICT

Dr. Santosh Sharma* and Shinam Batra**

ABSTRACT

We live in highly digitalized world. The application for every service is available on smart phone and desktop. In education also from admission to counselling and placement services are available on a click of digital button and this plays very important role especially for Open and Distance learner. It seems very comfortable when we got answer of our enquiry on the smart phone. Our time, energy and money is efficiently saved. Books are now e-books and MOOCs are the new virtual gateways of knowledge and academic certificate accomplishments. Virtual Institutions are replacing physical Institutions of education. The bar of time and space is disappearing. Now the question remains is of achievement and accomplishments through ICT in education. This paper conceptually tries to evolve a innovation in learners support in terms of its power of providing equality and equity in education and side by side its effectiveness in paving ways for achievement and accomplishments in terms of graded success in acquiring quality education needed for success and happiness in life.

INTRODUCTION

ICT is guiding the world today. Access of ICT for e-services becomes very easy. ICT is a process of creation, saving, retrieval and dissemination of e-services. ICT in education must be for equity and equality in education. especially for open and distance learner. NCF 2005 talks about the use of ICT in education for the quality improvement and implementation of Government e- policies'. E-inclusion solely depends on ICT of education.

One of the major objectives of the education community is to explore how ICT and digitalization services can create adaptive open learning environments. The National Curriculum Framework-2005, which operationalizes and rationalizes the teaching-learning effort in schools, advocates that technology used as a tool to disseminate information tends to facilitate the teacher. It expresses a firm belief that teachers and children must be considered not merely as users but also as active collaborators' of technology in educational processes. It must be the mutual interactivity rather than one-way passive reception that would make the technology for educational. More than any other previous technologies, ICT and e-services are providing learners to access gigantic storages of knowledge beyond the school library. ICT and digitalized are shifting the emphasis in learning environments from teacher-centered to learner-centered; where teachers role move from being the key source of information and transmitter of knowledge to becoming guides and facilitators for student learning; and where the role of students shifts from one of passively receiving information to being actively involved and interactive in their own learning. So Emerging Technology is very significant for open and distance learners to improve the quality Education.

Following Initiatives have been taken by the Government to provide Leaner Support in the form of Emerging technology to improve quality of Education

*Director, Distance Education, Professor Faculty of Education, S.V.Subharti University, Meerut

**Research Scholar

NMEICT

The National Mission on Education through Information and Communication Technology (NMEICT) has been envisaged as a Centrally Sponsored Scheme to leverage the potential of ICT, in teaching and learning process for the benefit of all the learners in Higher Education Institutions in any time any where mode.

National Digital Library of India

Ministry of Human Resource Development under its National Mission on Education through Information and Communication Technology has initiated the National Digital Library (NDL) pilot project to develop a framework of virtual repository of learning resources with a single-window search facility.

NROER

National Repository of Open Educational Resources (NROER) is a collaborative platform, which brings together everyone interested in school and teacher education. Initiated by the Department of School Education and Literacy, MHRD and managed by CIET, NCERT, offers digital and digitizable resources (audio, video, interactive images and documents) in different languages along with online activities.

Saransh Portal

Saransh is a tool for comprehensive self-review and analysis for CBSE affiliated schools and parents. It enables them to analyze students' performance in order to take remedial measures. Saransh brings schools, teachers and parents closer, so that they can monitor the progress of students and help them improve their performance.

E-Pathshala

E-Pathshala has been developed by NCERT for showcasing and disseminating all educational e-resources including textbooks, audio, video, periodicals and a variety of other print and non-print materials through website and mobile app. The platform addresses the dual challenge of reaching out to a diverse clientele and bridging the digital divide.

e-PG Pathshala

High quality, curriculum-based, interactive content in different subjects across all disciplines of social sciences, arts, fine arts & humanities, natural & mathematical sciences, linguistics and languages at PG level is being developed under this initiative named e- PG Pathshala.

Online Labs (OLABS)

Online Labs (OLabs) for school lab experiments provides students with the ease and convenience of conducting experiments over the internet. It has been developed to supplement the traditional physical labs and bridge the constraints of time and geographical distances. This not only reduces the costs incurred for conducting experiments in real time but gives a student the flexibility to explore and repeat experiments till they are thorough.

e-BASTA

C-DAC has created a framework to make school books accessible in digital form as e-books to be read and used on tablets and laptops. The main idea is to bring various publishers (free as well as commercial) and schools together on one platform.

GIS In School

A geographic information system (GIS) is a system designed to capture, store, manipulate, analyze, manage, and present spatial or geographic data. This is a Web GIS application to enable planning for the access, enrolment, retention, quality and monitoring aspects, integration of school infrastructure, facilities, budget & expenditure, child & teacher information, attendance, mid-day-meal program, results, school complexes along with required visuals, integrating.

SWAYAM PRABHA

Educational Contents through for operationalizing 32 Direct to Home (DTH) Television Channels for providing high quality educational content to all teachers, students and citizens across the country interested in lifelong learning.

SWAYAM

Swayam is a programme initiated by Government of India and designed to achieve the three cardinal principles of education policy viz. access, equity and equality. The objective of this effort is to take the best teaching learning resources to all, including the most disadvantaged. SWAYAM seeks to bridge the digital divide for students who have hitherto remained untouched by the digital revolution and have not been able to join mainstream of the knowledge economy.

This is done through a platform that facilitates hosting of all the courses, taught in classrooms from Class 9 till post-graduation to be accessed by anyone, anywhere at any time. All the courses are interactive, prepared by the best teachers in the country and are available, free of cost to any learner. More than 1,000 specially chosen faculty and teachers from across the country have participated in preparing these courses.

The courses hosted on SWAYAM are in 4 quadrants – (1) video lecture, (2) specially prepared reading material that can be downloaded/printed (3) self-assessment tests through tests and quizzes and (4) an online discussion forum for clearing the doubts. Steps have been taken to enrich the learning experience by using audio-video and multi-media and state of the art pedagogy / technology.

In order to ensure that best quality content is produced and delivered, nine National Coordinators have been appointed. They are:

1. AICTE (All India Council for Technical Education) for self-paced and international courses
2. NPTEL (National Programme on Technology Enhanced Learning) for Engineering
3. UGC (University Grants Commission) for non technical post-graduation education
4. CEC (Consortium for Educational Communication) for under-graduate education
5. NCERT (National Council of Educational Research and Training) for school education
6. NIOS (National Institute of Open Schooling) for school education
7. IGNOU (Indira Gandhi National Open University) for out-of-school students
8. IIMB (Indian Institute of Management, Bangalore) for management studies
9. NITTTR (National Institute of Technical Teachers Training and Research) for Teacher Training programme

Courses delivered through SWAYAM are available free of cost to the learners, however learners wanting a SWAYAM certificate should register for the final proctored exams that come at a fee and attend in-person at designated centres on specified dates. Eligibility for the certificate will be announced on the course page and learners will get certificates only if this criteria is matched.

NATIONAL POLICY ON ICT IN SCHOOL EDUCATION

To devise, catalyze, support and sustain ICT and ICT enabled activities and processes in order to improve access, quality and efficiency in the school system. It aims at preparing youth to participate creatively in the establishment, sustenance and growth of a knowledge society leading to all round socioeconomic development of the nation and global competitiveness.

National ICT Curriculum

National ICT Curriculum aims at realizing the goals of the National Policy of ICT in Schools Education and the National Curriculum Framework.

Shala Darpan

Shaala Darpan is an e-Governance platform for all Kendriya Vidyalayas in the country. It aims to improve quality of learning, efficiency of school administration, governance of schools & service delivery to key stakeholders namely students, parents, teachers, community and schools. Parents will get entire information at a united platform about their children in respect of attendance status, performance, health challenges and entire academic record from I to XII.

Digital India Program

It is a program launched by Government of India having a vision of transferring India in a digitally empowering society and knowledge economy.

The Digital India Program is based on basically 3 key vision areas:

Digital Infrastructure as a Utility to Every Citizen

- Availability of high speed internet as a core utility for delivery of services to citizens
- Cradle to grave digital identity that is unique, lifelong, online and authenticable to every citizen
- Mobile phone & bank account enabling citizen participation in digital & financial space
- Easy access to a Common Service Centre
- Shareable private space on a public cloud
- Safe and secure cyber-space

NATIONAL KNOWLEDGE NETWORK

National Knowledge Network (NKN) project is aimed at establishing a strong and robust Indian network which will be capable of providing secure and reliable connectivity. Globally, frontier research and innovation are shifting towards multidisciplinary and collaborative paradigm and require substantial communication and computational power. In India, NKN with its multi-gigabit capability aims to connect all universities, research institutions, libraries, laboratories, healthcare and agricultural institutions across the country to address such paradigm shift.

National Award for Teachers Using ICT for Innovation in Teacher Education

To promote computer enabled learning and usage of ICT in teaching, In Government, Government aided Secondary and Higher Secondary Schools has provision for instituting the National Award for innovative use of ICT in teaching learning for Pre Service and In Service Teacher.

Emerging Technology for innovation in Learner Support to improve quality Education

Magic hand of emerging technology will create positive impact in the life of stakeholders of education especially of teachers and students as of following scope:

Easy Accessibility of technology for innovation in Learner Support to improve quality Education

ICT is successful only when it is easily accessible to all the stakeholders in education despite of age, caste, creed and equal opportunity would be provided to all with a sense of responsibility

Easy Availability of technology for innovation in learner Support to improve quality Education

Accessibility is possible after the proper availability of ICT so it should be free for all the stakeholders in education and should be available for 24*7 with a better internet speed which is still just a dream as most of the time and in many areas server remains down which hampers many activities.

Adoptability and Adaptability of technology to improve quality Education

ICT should be prevailed in the education in such a manner that It must be for all the stakeholders and they feel comfortable in adopting it in their educational life and can adapt them well where in most of the remote areas it is still a burden for the for all the stakeholders in education.

Technology for innovative Training to improve quality Education

Only infrastructure alone is not enough but proper training to all the stakeholders in using it and adapting with it is prime concern so that they can feel comfortable in digitalization world.

Technology for innovative Creatibility to improve quality Education

ICT can reach to new horizons when all the stakeholders may use it to create new productive things and ample information can be attained through ICT which enhances the knowledge of people but adaptability should be preferred if it is used for some new and productive creation.

Technology for Applicability to improve quality Education

ICT should be based on applicability. All the stakeholders could be able to apply it directly in their day to day educational life for various purposes.

Technology for Practicability to improve quality Education

Applicability of ICT depends upon the practicability that is whether it is practicable in real life or just virtualizes the things and takes people away from their real world.

Technology to solve educational Issues to improve quality Education

Most important issue for any country is its education system. So, digitalization should bring power to solve various educational issues like understanding difficult concepts in discussing lively with experts, managing administration etc.

Technology for Transferability to improve quality Education

ICT should contain such powers that it can be transferable from one app to other whatever and whenever required without much difficulty.

Technology for Transparency to improve quality Education

ICT can prove to be a great source of transparency in almost every field like education, business, medical etc. Hence, this can prove to be a boon in eliminating corruption and all types of evils from the society.

Uses of Technology for innovation in learner Support to improve Quality Education-2020

- Collaborative use of technology in educational processes support teacher work to make more effective than individual though teachers and students may need support in form of trainings and infrastructure in collaborating effectively.
- Diagnostic and Remedial use of technology and digitalization services can be particularly effective for lower achievement students, those with special educational needs and those from disadvantaged backgrounds in providing e- inclusive environment to enable them to map up with their peers.
- In collaborative interventions, technology is used as a tool and not as master to supplement the classroom teaching rather than of thinking as a replacement for it.
- Online capacity building programmes for teachers is an important component of successful ICT approaches. The implication is that such collaborative support should go beyond teaching skills in technology use and focus on the effective pedagogical use of the digitalized e-services to support teaching and learning objectives.

Overall the key implication is that the technology is solely a *catalyst* for change. Focusing on the change (and the process of change) in terms of learning is essential in supporting and collaborative effective use of digitalization services.

It can be concluded that technology is an important part of educational processes in twenty first century and is proved to be a boon in the life of students by providing them equity and equality in education through Distance and Open Education.. Although digitalized e-platforms are provided by the government educational institutions and NGOs but we still need some extraordinary collaborative efforts which should be sensible enough to understand the varied needs of educational area and other aligned sectors related to educational field. For it just launching is not enough at all but requires management, prevailing sustainable efforts and support in order to reach in advantages.

REFERENCES

- Davies, J. and Graff, M. (2005 Performance in e-learning: online participation and student grades *British Journal of Educational Technology* 36. 4: 657 – 663.

- Dunleavy, M. Dexter, S. & Heinecke W.F. What added value does a 1:1 student to laptop ratio bring to technology-supported teaching and learning? *Journal of Computer Assisted Learning* 23: 440–452.
- Fuchs, T. & Woessmann, L. (2004) *Computers and student learning: bivariate and multivariate evidence on the availability and use of computers at home and at school* CESIFO Working Paper No. 1321 Category 4: Labour Markets (Nov. 2004).
- Higgins, S., Beauchamp, G. & Miller, D. (2007) Reviewing the literature on interactive whiteboards *Learning, Media and Technology*, 32.3: 213–225.

Battling Burnout: How a Work-Life Balance can Help

Dr. Vineeti Kumari*

According to the World Health Organization (WHO), occupational burnout is a syndrome resulting from chronic work-related stress, with symptoms characterized by “feelings of energy depletion or exhaustion; increased mental distance from one’s job, or feelings of negativism or cynicism related to one’s job; and reduced professional efficacy. While burnout may influence health and can be a reason for people contacting health services, it is not itself classified by the WHO as a medical condition.

In 1974, Herbert Freudenberger became the first researcher to publish in a psychology-related journal a paper that used the term “burnout.” The paper was based on his observations of the volunteer staff (including himself) at a free clinic for drug addicts.^[2] He characterized burnout by a set of symptoms that includes exhaustion resulting from work’s excessive demands as well as physical symptoms such as headaches and sleeplessness, “quickness to anger,” and closed thinking. He observed that the burned-out worker “looks, acts, and seems depressed.” After the publication of Freudenberger’s original paper, interest in occupational burnout grew. Because the phrase “burnt-out” was part of the title of a 1961 Graham Greene novel *A Burnt-Out Case*, which dealt with a doctor working in the Belgian Congo with patients who had leprosy, the phrase was likely in use outside the psychology literature before Freudenberger employed it.^[3] Wolfgang Kaskcha has written on the early documentation of the subject.

Christina Maslach described burnout in terms of emotional exhaustion, depersonalization (treating clients, students, customers, or colleagues in a distant and/or cynical way), and reduced feelings of work-related personal accomplishment. In 1981, Maslach and Susan Jackson published instrument for assessing burnout, the Maslach Burnout Inventory (MBI). It is the first such instrument of its kind and the most widely used burnout instrument Originally focused on human service professionals (e.g., teachers, social workers), the MBI’s application has been broadened; the instrument or variants of the instrument are now employed with job incumbents working in many other occupations The WHO adopted a conceptualization of burnout that is consistent with Maslach’s, although the organization does not treat burnout as a disorder.

Today, there is robust evidence that burnout reflects a depressive condition

DIAGNOSIS

Classification

Burnout is not recognized as a distinct disorder in the current revision (dating from 2013) of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5).¹ Its definitions for Adjustment Disorders, & Unspecified Trauma- and Stressor-Related Disorder in some cases reflect the condition.

The Royal Dutch Medical Association treats “burnout” as a defined subtype of adjustment disorder. In The Netherlands burnout is included in handbooks and medical staff are trained in its diagnosis and treatment. Regarding the International Statistical Classification of Diseases and Related Health Problems (ICD), the ICD-10 edition (current 1994-2021) classifies “burn-out” as a type of non-medical life-management difficulty under code Z73.0. It is considered to be one of the “factors influencing health status and contact with health services” and “should not be used” for

*+2 teacher (Psychology), +2 Bipin H/S School, Bettiah (West Champaran) Bihar

“primary mortality coding” It is also considered one of the “problems related to life-management difficulty”.¹ The condition is only further defined as being a “state of vital exhaustion”

The ICD-10 also contains a medical condition category of “F43.8 Other reactions to severe stress (sometimes known as neurasthenia), which some (including the Swedish National Board of Health and Welfare) believe defines the more serious cases of burnout. Swedish sufferers of severe burnout are treated as having this medical condition. This category is in the same group as adjustment disorder and posttraumatic stress disorder, other conditions caused by excessive stress that continue once the stressors have been removed.

Burn-out is a syndrome conceptualized as resulting from chronic workplace stress that has not been successfully managed. It is characterized by three dimensions: 1) feelings of energy depletion or exhaustion; 2) increased mental distance from one’s job, or feelings of negativism or cynicism related to one’s job; and 3) reduced professional efficacy. Burn-out refers specifically to phenomena in the occupational context and should not be applied to describe experiences in other areas of life

Instruments

In 1981, Maslach and Jackson developed the first widely used instrument for assessing burnout, namely, the Maslach Burnout Inventory (MBI). Consistent with Maslach’s conceptualization, the MBI operationalizes burnout as a three-dimensional syndrome consisting of emotional exhaustion, depersonalization, and reduced personal accomplishment. Other researchers have argued that burnout should be limited to fatigue and exhaustion Exhaustion is considered to be burnout’s core.

There are, however, other conceptualizations of burnout that differ from the conceptualization suggested by Maslach and adopted by the WHO. Shirom and Melamed with their Shirom-Melamed Burnout Measure (SMBM) conceptualize burnout in terms of physical exhaustion, cognitive weariness, and emotional exhaustion. An examination of the SMBM’s emotional exhaustion subscale, however, indicates that the subscale more clearly embodies Maslach’s concept of depersonalization than her concept of emotional exhaustion.^[8] Demerouti and Bakker, with their Oldenburg Burnout Inventory, conceptualize burnout in terms of exhaustion and disengagement. There are still other conceptualizations as well that are embodied in these instruments: the Copenhagen Burnout Inventory, the Hamburg Burnout Inventory, Malach-Pines’s Burnout Measure and more. Kristensen et al. and Malach-Pines (who also published as Pines) advanced the view that burnout can also occur in connection to life outside of work. For example, Malach-Pines developed a burnout measure keyed the role of spouse.

In 1999, Wilmar Schaufeli and Arnold Bakker released the *Utrecht Work Engagement Scale* (UWES). The UWES measures vigour, dedication and absorption; positive counterparts to the values measured by the MBI.

In 2010, researchers from Mayo Clinic used portions of the MBI, along with other comprehensive assessments, to develop the Well-Being Index, a nine-item self-assessment tool designed to measure burnout and other dimensions of distress in healthcare workers specifically. The core of all of these conceptualizations, including that of Freudenberg, is exhaustion. Alternatively, burnout is also now seen as involving the full array of depressive symptoms (e.g., low mood, cognitive alterations, sleep disturbance). Marked differences among researchers’ conceptualizations of what constitutes burnout have underlined the need for a consensus definition. A new instrument, called the Occupational Depression Inventory (ODI) quantifies the severity of work-attributed depressive symptoms and establishes provisional diagnoses of job-ascribed depression.

Subtypes

In 1991, Barry A. Farber in his research on teachers proposed that there are three types of burnout:

- “wearout” and “brown-out,” where someone gives up having had too much stress and/or too little reward
- “classic/frenetic burnout,” where someone works harder and harder, trying to resolve the stressful situation and/or seek suitable reward for their work
- “underchallenged burnout,” where someone has low stress, but the work is unrewarding.

Farber found evidence that the most idealistic teachers who enter the profession are the most likely to suffer burnout.

Caregiver burnout

Bodies such as the United States government’s Centers for Disease Control and Prevention the American Diabetes Association,^[51] and *Diabetes Singapore*^[52] identify and promote the phenomenon of “diabetes burnout.” This relates to the self-care of people with diabetes, particularly those with type-2 diabetes. “Diabetes burnout speaks to the physical and emotional exhaustion that people with diabetes experience when they have to deal with caring for themselves on a day-to-day basis. When you have to do so many things to stay in control then it does take a toll on your emotions... Once they get frustrated, some of them give up and stop (maintaining) a healthy diet, taking their medications regularly, going for exercises and this will result in poor diabetes control.

Autistic burnout

“Autistic burnout” is a term used to describe burnout when it occurs in people with Autistic Spectrum Disorder (ASD). In this population, in addition to the typical symptoms it can cause “autistic regression,” an increase of autistic symptoms. It is “regression” in the sense that the afflicted has typically had a similarly high level of symptoms in the distant past, and the burnout is perceived to be regressing them to this earlier state. It is also known as “decompensation”, because the compensations the person usually makes are no longer being made.

Such burnout sometimes leads to permanent disability or suicidal behavior. It need not be caused by workplace stress, but can also be caused by the stress of social interaction or other sources. Spoon theory is sometimes used to understand people in this situation

RELATIONSHIP WITH OTHER CONDITIONS

A growing body of evidence suggests that burnout is etiologically, clinically, and nosologically similar to depression. In a study that directly compared depressive symptoms in burned out workers and clinically depressed patients, no diagnostically significant differences were found between the two groups; burned out workers reported as many depressive symptoms as clinically depressed patients. Moreover, a study by Bianchi, Schonfeld, and Laurent (2014) showed that about 90% of workers with full-blown burnout meet diagnostic criteria for depression. The view that burnout is a form of depression has found support in several recent studies. Some authors have recommended that the nosological concept of burnout be revised or even abandoned entirely given that it is not a distinct disorder and that there is no agreement on burnout’s diagnostic criteria. Postpartum depression is a form of depression recognised by the DSM that differs mainly from major depressive disorder in that it has a specific trigger.

Liu and van LieW wrote that “the term burnout is used so frequently that it has lost much of its original meaning. As originally used, burnout meant a mild degree of stress-induced unhappiness. The solutions ranged from a vacation to a sabbatical. Ultimately, it was used to describe everything from fatigue to a major depression and now seems to have become an alternative word for depression, but with a less serious significance” (p. 434). They also argue that burning out can trigger four distinct kinds of depression, each with their own recommended treatment. These are adjustment disorder with depressed mood, major depressive disorder, dysthymia, and bipolar disorder.

Tamar Kakiashvili et al., however, argued that while there are significant overlaps in symptoms between burnout and major depressive disorder (aka “depression”). There is some endocrine evidence to suggest that the biological basis of burnout is different to typical depression. They argued that antidepressants should not be used by people with burnout as they make the underlying hypothalamic–pituitary–adrenal axis dysfunction worse.

Test	Major depressive disorder	Atypical depression	PTSD	Chronic Fatigue Syndrome	Burnout
Cortisol awakening response	↑	↓ ^[71]	↓	↓ ^{[72][73]}	- or ↓
Adrenocorticotrophic hormone (ACTH)	↑			- ^[74]	- or ↓
Dehydroepiandrosterone sulphate (DHEA-S)	↓		↑ or ↓	↓ ^[75]	↑

Despite its name, atypical depression, which is seen in the above table, is not a rare form of depression; the cortisol profile of atypical depression, in contrast to that of melancholic depression, is similar to the cortisol profile in burnout.^[63] Commentators advanced the view that burnout differs from depression because the cortisol profile of burnout differs from that of melancholic depression; however, as the above table indicates, burnout’s cortisol profile is similar to that of atypical depression

It has also been hypothesised that chronic fatigue syndrome is caused by burnout. It is suggested that the “burning out” of the body’s stress symptom (by any of a wide range of causes) can lead to chronic fatigue. “Occupational burnout” is known for its exhausting effect on sufferers. Overtraining syndrome, a similar but lesser exhausting condition to CFS has been conceptualised as adjustment disorder, a common diagnosis for those burnt out.

RISK FACTORS

Evidence suggests that the etiology of burnout is multifactorial, with dispositional factors playing an important, long-overlooked role. Cognitive dispositional factors implicated in depression have also been found to be implicated in burnout. One cause of burnout includes stressors that a person is unable to cope with fully. Burnout is thought to occur when a mismatch is present between the nature of the job and the job the person is actually doing. A common indication of this mismatch is work overload, which sometimes involves a worker who survives a round of layoffs, but after the layoffs the worker finds that he or she is doing too much with too few resources. Overload may occur in the context of downsizing, which often does not narrow an organization’s goals, but requires fewer employees to meet those goals. The research on downsizing, however, indicates that downsizing has more destructive effects on the health of the workers who survive the layoffs than mere burnout; these health effects include increased levels of sickness and greater risk of mortality.

The job demands-resources model has implications for burnout, as measured by the Oldenburg Burnout Inventory (OLBI). Physical and psychological job demands were concurrently associated with the exhaustion, as measured by the OLBI. Lack of job resources was associated with the disengagement component of the OLBI.

Maslach, Schaufeli and Leiter identified six risk factors for burnout: mismatch in workload, mismatch in control, lack of appropriate awards, loss of a sense of positive connection with others in the workplace, perceived lack of fairness, and conflict between values.

EFFECTS

Some research indicates that burnout is associated with reduced job performance coronary heart disease, and mental health problems. Examples of emotional symptoms of occupational burnout include a lack of interest in the work being done, a decrease in work performance levels, feelings of helplessness, and trouble sleeping. With regard to mental health problems, research on dentists and physicians suggests that what is meant by burnout is a depressive syndrome. Thus reduced job performance and cardiovascular risk could be related to burnout because of burnout's tie to depression. Behavioral signs of occupational burnout are demonstrated through cynicism within workplace relationships with coworkers, clients, and the organization itself.

Other effects of burnout can manifest as lower energy and productivity levels, with workers observed to be consistently late for work and feeling a sense of dread upon arriving. They can suffer concentration problems, forgetfulness, increased frustration, and/or feelings of being overwhelmed. They may complain and feel negative, or feel apathetic and believe they have little impact on their coworkers and environment. Occupational burnout is also associated with absenteeism, other time missed from work, and thoughts of quitting.

Chronic burnout is also associated with cognitive impairments in memory and attention

Research suggests that burnout can manifest differently between genders, with higher levels of depersonalisation among men and increased emotional exhaustion among women

TREATMENT AND PREVENTION

Health condition treatment and prevention methods are often classified as “primary prevention” (stopping the condition occurring), “secondary prevention” (removing the condition that has occurred) and “tertiary prevention” (helping people live with the condition).

Primary prevention

Maslach believes that the only way to truly prevent burnout is through a combination of organizational change and education for the individual.

Maslach and Leiter postulated that burnout occurs when there is a disconnection between the organization and the individual with regard to what they called the six areas of worklife: workload, control, reward, community, fairness, and values.^[9] Resolving these discrepancies requires integrated action on the part of both the individual and the organization.^[9] With regard to workload, assuring that a worker has adequate resources to meet demands as well as ensuring a satisfactory work–life balance could help revitalize employees' energy. With regard to values, clearly stated ethical organizational values are important for ensuring employee commitment. Supportive leadership and relationships with colleagues are also helpful. One approach for addressing these discrepancies focuses specifically on the fairness area. In one study employees met weekly to discuss and attempt to resolve perceived inequities in their job. The intervention was associated

with decreases in exhaustion over time but not cynicism or inefficacy, suggesting that a broader approach is required.

Hätinen et al. suggest “improving job-person fit by focusing attention on the relationship between the person and the job situation, rather than either of these in isolation, seems to be the most promising way of dealing with burnout.”¹ They also note that “at the individual level, cognitive-behavioural strategies have the best potential for success.”

Burnout prevention programs have traditionally focused on cognitive-behavioral therapy (CBT), cognitive restructuring, didactic stress management, and relaxation. CBT, relaxation techniques (including physical techniques and mental techniques), and schedule changes are the best-supported techniques for reducing or preventing burnout in a health-care setting. Mindfulness therapy has been shown to be an effective preventative for occupational burnout in medical practitioners. Combining both organizational and individual-level activities may be the most beneficial approach to reducing symptoms. A Cochrane review, however, reported that evidence for the efficacy of CBT in healthcare workers is of low quality, indicating that it is no better than alternative interventions. For the purpose of preventing occupational burnout, various stress management interventions have been shown to help improve employee health and well-being in the workplace and lower stress levels. Training employees in ways to manage stress in the workplace have also been shown to be effective in preventing burnout. One study suggests that social-cognitive processes such as commitment to work, self-efficacy, learned resourcefulness, and hope may insulate individuals from experiencing occupational burnout.¹ Increasing a worker’s control over his or her job is another intervention has been shown to help counteract exhaustion and cynicism in the workplace. Additional prevention methods include: starting the day with a relaxing ritual; yoga; adopting healthy eating, exercising, and sleeping habits; setting boundaries; taking breaks from technology; nourishing one’s creative side, and learning how to manage stress. Barry A. Farber suggests strategies like setting more achievable goals, focusing on the value of the work, and finding better ways of doing the job, can all be helpful ways of helping the stressed. People who don’t mind the stress but want more reward can benefit from reassessing their work-life balance and implementing stress reduction techniques like meditation and exercise. Others with low stress, but are underwhelmed and bored with work, can benefit from seeking greater challenge.

Secondary and tertiary prevention

Hätinen et al. list a number of common treatments, including treatment of any outstanding medical conditions, stress management, time management, depression treatment, psychotherapies, ergonomic improvement and other physiological and occupational therapy, physical exercise and relaxation. They have found that is more effective to have a greater focus on “group discussions on work related issues”, and discussion about “work and private life interface” and other personal needs with psychologists and workplace representatives

Jac JL van der Klink and Frank JH van Dijk suggest stress inoculation training, cognitive restructuring, graded activity and “time contingency” (progressing based on a timeline rather than patient’s comfort) are effective methods of treatment. Kakiashvili et al. say that “medical treatment of burnout is mostly symptomatic: it involves measures to prevent and treat the symptoms.” They say the use of anxiolytics and sedatives to treat burnout related stress is effective, but does nothing to change the sources of stress. They say the poor sleep often caused by burnout (and the subsequent fatigue) is best treated with hypnotics and CBT (within which they include “sleep hygiene, education, relaxation training, stimulus control, and cognitive therapy”). They advise against the use of antidepressants as they worsen the hypothalamic–pituitary–adrenal axis dysfunction at the core of burnout. They also

believe “vitamins and minerals are crucial in addressing adrenal and HPA axis dysfunction”, noting the importance of specific nutrients.

Light therapy (similar to that used for Seasonal Affective Disorder) may be effective.

Burnout also often causes a decline in the ability to update information in working memory. This is not easily treated with CBT

One reason it is difficult to treat the three standard symptoms of burnout (exhaustion, cynicism, and inefficacy), is because they respond to the same preventive or treatment activities in different ways.

Exhaustion is more easily treated than cynicism and professional inefficacy, which tend to be more resistant to treatment. Research suggests that intervention actually may worsen the professional efficacy of a person who originally exhibited low professional efficacy. Employee rehabilitation is a tertiary preventive intervention which means the strategies used in rehabilitation are meant to alleviate burnout symptoms in individuals who are already affected without curing them. Such rehabilitation of the working population includes multidisciplinary activities with the intent of maintaining and improving employees’ working ability and ensuring a supply of skilled and capable labor in society.

Further reading

1. “Burn-out an “occupational phenomenon”: *International Classification of Diseases*”. WHO. 28 May 2019. Retrieved 2019-06-01.
2. Freudenberger, H.J. (1974). “Staff burnout”. *Journal of Social Issues*. 30: 159–165. doi:10.1111/j.1540-4560.1974.tb00706.x.
3. Greene, Graham (1961). *A Burnt-Out Case*. William Heinemann Ltd. pp. cover title. ISBN 978-0140185393.
4. Kaschka, Wolfgang P (Nov 2011). “Burnout: A Fashionable Diagnosis”. *Deutsches Ärzteblatt International*. 108 (46): 781–787. doi:10.3238/arztebl.2011.0781. PMC 3230825. PMID 22163259.
5. Maslach, C.; Jackson, S.E; Leiter, M.P. (1996). “*MBI: The Maslach Burnout Inventory: Manual*”. Palo Alto: Consulting Psychologists Press.

State Policy on Education in Bihar-A Progressive Step Towards Development

Dr. Aparna Kumari*

INTRODUCTORY

1.1 Education needs to evolve and transform in different ages to meet the challenges of the times. If it has diversified with the advent of new technology and to meet the contemporary needs of economy, it has extended its reach and coverage since the introduction of democracy. Further, a society generally develops its system of education to express and promote its unique socio-cultural identity.

1.2 The society and economy of Bihar is passing through a prolonged phase of transition, in which education can become an important factor of social transformation in desirable direction broadly outlined in the Indian constitution. Given its uniqueness, a nationally defined policy may not be the most appropriate for it, obviating the need of a separate policy largely, of course, in the national framework.

NATIONAL POLICIES

1.3 The National Policy of 1968 marked a significant step in the history of education in post-Independence India. It aimed to promote national progress, a sense of common citizenship and culture, and to strengthen national integration. It laid stress on the need for a radical reconstruction of the education system, to improve its quality at all stages, and gave much greater attention to science and technology, the cultivation of moral values and a closer relation between education and the life of the people.

1.4 Perhaps its most notable developments have a considerable expansion, though once again much short of the constitutional promise of universalisation up to fourteen years, and the acceptance of a common structure of education throughout the Country with the introduction of the 10+2+3 system by most States. A beginning was also made in restructuring of courses at the undergraduate level. Centres of Advanced Studies were set up for post-graduate education and research.

1.5 While these achievements are impressive by themselves, the general formulations incorporated in the 1968 Policy did not, however, get translated into a detailed strategy of implementation, accompanied by the assignment of specific responsibilities and financial and organisational support. As a result, problems of access, quality, quantity, utility and financial outlay, accumulated over the years, assumed massive proportions,

1.6 After nearly two decades of the 1968 policy, in January 1985 the Government of India formulated for the country a New Education Policy. It was based on a comprehensive appraisal of earlier policy and a countrywide debate. But contrary to the promise of the 1986 policy, the old issues not only remained unresolved, but piled on further.

*+2 Teacher (Home Science) Rajkiyekrit Uchch Madhyamik +2 High School, Chhajjan Mohini block, Khurhani, District Muzaffarpur(Bihar)

1.7 Education in India stands at the crossroads today, Bihar being the most notorious case. Neither normal linear expansion nor the existing pace and nature of improvement can meet the needs of the situation. India's political and social life is passing through a phase, which poses the danger of erosion to long-accepted values. The goals of secularism, socialism, democracy and professional ethics are coming under increasing strain.

1.8 A human being is a positive asset and a precious national resource, which needs to be cherished, nurtured and developed with tenderness, and care, coupled with dynamism. Each individual's growth presents a different range of problems and possibilities at every. Education is a catalytic agent in this complex and dynamic growth process of the individual, community and the nation, which needs to be planned and executed with great sensitivity.

1.9 The rural areas, which accommodate the largest share of population in Bihar, have poor infrastructure and social services. For just development in the state it is imperative to train and educate rural youth, while taking determined measures to promote diversification and dispersal of employment opportunities.

1.10 The growth of our population, which is very high in Bihar, needs to be brought down significantly over the coming decades according to a set of scholars, while some economists and social scientists take the derivative of social sector benefits as reasons for growth and which anyway could be used as human resource. The largest single factor that could help achieve the objective of reducing population growth or improving its quality is the spread of literacy and education among women.

1.11 Life in the coming decades is likely to bring new tensions together with unprecedented opportunities. To enable the people to benefit in the new environment will require new designs of human resource development. The coming generations should have the ability to internalise new ideas constantly and creatively. They have to be imbued with a strong commitment to humane values and to social justice. All this implies better education.

1.12 Besides, a variety of new challenges and social needs make it imperative for the Government to formulate and implement a new Education Policy for the state as in the country. After 1986, Convention of Child Rights was held in 1989, the ideas of human development and sustainable development got globally recognized, and the Vienna Declaration was announced in 1993. After the socio-political turbulence of 1989-90, several education-related programmes were announced, culminating in elementary education being made a fundamental right, with a law put in place in 2009, which strengthens other laws related to child protection. As the impact of all these is still marginal, more so in Bihar, a well-thought out policy-framework is highly desirable.

PART II : THE GOALS AND OBJECTIVES OF EDUCATION

2.1 In our national perception, education is essentially for all. This is fundamental to our all-round development, material and non-material, individual and social.

2.2 Education has an acculturating as well as transformative role. It refines sensitivities and perceptions that contribute to social cohesion, a scientific temper and independence of mind and spirit - thus furthering the goals of justice, socialism, secularism and democracy enshrined in our Constitution.

2.3 Education develops manpower for different levels of the economy. It is also the foundation on which research and development flourish, being the ultimate guarantee of national self-reliance.

2.4 In sum, Education is a unique and most valuable investment in the present and the future of individuals and society at large. This cardinal principle should guide the financial provisioning and organizational modes in the State Policy on Education.

PART III : PUBLIC SYSTEM OF EDUCATION

3.1 The Constitution entrusts the State the task of providing universal elementary education, which needs be extended to education up to eighteen years, with the launch of Rashtriya Madhyamik Shiksha Abhiyan and emphasis on skill development. Hence the commitment to strengthen the Public System of Education.

3.2 The concept of a Public System of Education implies that, up to a given level, all students, irrespective of caste, creed, location or sex, have access to education of a comparable quality. To achieve this, the Government will initiate appropriately funded programmes. Effective measures will be taken in the direction of the Common School System recommended in the 1968 Policy.

3.3 The Public System of Education will be based on a national & state curricular framework, which contains a common core along with other components that are flexible. The common core will include, among other things, the history of India's freedom movement, the constitutional principles and other contents essential to nurturing an enlightened outlook. These elements will cut across subject areas and will be designed to promote values such as India's common cultural heritage, and awareness of egalitarianism, democracy and secularism, equality of the sexes, protection of the environment, removal of social barriers, observance of the small family norm and inculcation of the scientific temper. All educational programmes will be carried on in conformity with secular values.

3.4 To promote equality and deepening of democracy, it will be necessary to provide for equal opportunity to all not only in access, but also in the conditions for success. Besides, awareness of the inherent equality of all will be created through the core curriculum. The purpose is to remove prejudices and complexes transmitted through the social environment and the accident of birth. Steps will also be taken to foster among students an understanding of the diverse cultural and social systems of the people living in different parts of the state and country.

3.5 In higher education in general, and technical education in particular, steps will be taken to facilitate, along with high quality state-level institutions, inter-regional mobility by providing equal access to every Indian of requisite merit, regardless of his origins. The autonomous character of universities and other institutions of higher education is to be respected and underscored.

3.6 In the areas of research and development, and education in science and technology, special measures will be taken to establish network arrangements between different institutions in the state and the country to pool their resources and participate in projects of national importance.

3.7 Life-long education is a cherished goal of the educational process. This presupposes universal school education. Opportunities will be provided to the youth, housewives, agricultural and industrial workers and professionals to continue the education of their choice, at the pace suited to them. The future thrust of supplementation of higher education and development of new skills will be in the direction of open and distance learning.

3.8 The institutions which will be strengthened to play an important role in giving shape to higher education are the State Council of Education, the University Service Commission, and the College Service Commission. These, together with the State Council of Education Research and Training, the State Educational Management and Administration, will be involved in implementing the Education Policy.

A Meaningful Partnership

3.13 The Constitutional Amendment of 1976, which includes Education in the Concurrent List, was a far-reaching step whose implications-substantive, financial and administrative-require a new sharing of responsibility between the Union Government and the States in respect of this vital area of

national life. While the role and responsibility of the States in regard to education remains essentially unchanged, the Union Government accepts a larger responsibility to reinforce the integrative character of education, to maintain quality and standards (including those of the teaching profession at all levels), to study and monitor the educational requirements of the country as a whole in regard to manpower for development, to cater to the needs of research and advanced study and, in general, to promote excellence at all levels of the educational pyramid throughout the country. Concurrency signifies a partnership, which is at once meaningful and challenging; the State Policy will also be oriented towards giving effect to it in letter and spirit.

PART IV : EDUCATION FOR EQUALITY

Disparities

4.1 The new Policy will lay special emphasis on the removal of disparities and to equalise educational opportunity by attending to the specific needs of those who have been denied equality so far.

Education for Women's Equality

4.2 Education will be used as an agent of basic change in the status of woman. In order to neutralise the accumulated distortions of the past, there will be a well-conceived edge in favour of women. Education System will play a positive, interventionist role in the empowerment of women. It will foster the development of new values through redesigned curricula, textbooks, the training and orientation of teachers, decision-makers and administrators, and the active involvement of educational institutions.

Women's studies will be promoted as a part of various courses and educational institutions encouraged to take up active programmes to further women's development.

4.3 The removal of women's illiteracy and obstacles inhibiting their access to, and retention in, elementary education will receive overriding priority, through provision of special support services, setting of time targets, and effective monitoring. Major emphasis will be laid on women's participation in vocational, technical and professional education at different levels.

The Education of Scheduled Castes and Scheduled Tribes

4.4 The central focus in the SCs' and STs' educational development is their equalisation with the non-SC population at all stages and levels of education, in all areas and in all the contexts.

4.5 The measures contemplated for this purpose include:

- (i) Incentives to indigent families to send their children to school regularly till they reach the age of 18. This will include Pre-matric Scholarship scheme for children of families engaged in occupations such as scavenging, flaying and tanning to be made applicable from Class I onwards. All children of such families, regardless of incomes, will be covered by this scheme and time-bound programmes targeted on them will be undertaken;
- (ii) Constant micro-planning and verification to ensure that the enrolment, retention and successful completion of courses by SC students do not fall at any stage, and provision of remedial courses to improve their prospects for further education and employment.
- (iii) Provision of facilities for SC students in students' hostels at district headquarters, according to a phased programme;
- (iv) Location of school buildings, Balwadis and Adult Education Centres in such a way as to facilitate full participation of the Scheduled Castes;

- (v) Constant innovation in finding new methods to increase the participation of the Scheduled Castes in the educational process,
- (vi) The socio-cultural milieu of the STs has its distinctive characteristics including, in many cases, their own spoken languages. This underlines the need to develop the curricula and devise instructional materials in tribal languages at the initial stages, with arrangements for switching over to the regional language, and
- (vii) Recruitment of teachers from Scheduled Castes and encouragement and training of educated and promising Scheduled Tribe youths to take up teaching in tribal areas.

Minorities

4.6 Some minority groups are educationally deprived or backward. Greater attention will be paid to the education of these groups in the interests of equality and social justice. This will naturally include the Constitutional guarantees given to them to establish and administer their own educational institutions, and protection to their languages and culture. Simultaneously, objectivity will be reflected in the preparation of textbooks and in all school activities, and all possible measures will be taken to promote an integration based on appreciation of common national goals and ideals, in conformity with the core curriculum.

Disabled

4.7 The objective should be to integrate the physically and mentally disabled with the general community as equal partners, to prepare them for normal growth and to enable them to face life with courage and confidence. The following measures will be taken in this regard:

- (i) Wherever it is feasible, the education of children with motor handicaps and other mild handicaps will be common with that of others.
- (ii) Special schools with hostels will be provided, as far as possible at district headquarters, for the severely handicapped children.
- (iii) Adequate arrangements will be made to give vocational training to the disabled.
- (iv) Teachers' training programmes will be reoriented, in particular for teachers of primary classes, to deal with the special difficulties of the handicapped children; and
- (v) Voluntary effort for the education of the disabled, will be encouraged in every possible manner.

Adult Education

4.8 The ability to read and write is the main instrument of learning. Hence the crucial importance of adult education, including adult literacy. The whole nation had pledged itself, through the National Literacy Mission, to the eradication of illiteracy, particularly in the 15-35 age group through various means, with special emphasis on total literacy campaigns. The pledge remains unredeemed, and needs expeditious completion. Since involvement of the participants of the literacy campaigns in the development programmes is of crucial importance, the National Literacy Mission will be geared to the national goals such as alleviation of poverty, national integration, environmental conservation, observance of the small family norm, promotion of women's equality, universalisation of primary education, basic health-care, etc. It will also facilitate energisation of the cultural creativity of the people and their active participation in development processes.

4.13 Comprehensive programmes of post-literacy and continuing education needs to be strengthened with continuous upgradation of skills so as to produce manpower resources of the kind and the number required by the society.

PART V : REORGANISATION OF EDUCATION AT DIFFERENT STAGES

Early Childhood Care & Education

5.1 Early Childhood Care and Education (ECCE) is weak component of our education system. Recognising the holistic nature of child development, viz., nutrition, health and social, mental, physical, moral and emotional development, ECCE was to receive high priority and be suitably integrated with the Integrated Child Development Services programme, wherever possible. This promise of the last policy needs to be redeemed in Bihar, where care at home is minimal in most of the households. Introduction of at least one year of Bal Varga in schools, as recommended by CSS Commission Report will be a good idea.

5.2 Programmes of ECCE will be child-oriented, focused around play and the individuality of the child. Formal methods should be discouraged at this stage, and the local community be fully involved..

5.3 A full integration of child care and pre-primary education will be brought about, both as a feeder and a strengthening factor for primary education and for human resource development in general. In continuation of this stage, the School Health Programme will be strengthened.

Elementary Education

5.4 After a century of struggle elementary education was made a fundamental right in 2002, for which an Act came in 2009. It came into force on 1st April, 2010. The new thrust in elementary education is the implementation of the Act, which should have been completed by March 2013, except completion of teachers' training. Under a time-bound programme the norms and standards given in the schedule must be completed within the next two years. Simultaneously, requisite number of teacher training institutions should be opened, preferably in the state sector, in the DIETs, PTECs, and constituent colleges under the universities.

Child-Centred Approach

5.5 A warm, welcoming and encouraging approach, in which all concerned share a concern for the needs of each child, is the best motivation for the child to attend school and learn. A child-centred and activity-based process of learning should be adopted at the primary stage. First generation learners should be allowed to set their own pace and be given supplementary remedial instruction. As the child grows, the component of cognitive learning will be increased and skills organised through practice. The policy of non-detention at the primary stage will be retained, introducing a sound and realistic system of continuous & comprehensive evaluation as disaggregated as feasible. Corporal punishment will be firmly excluded from the educational system and minimum number of school hours maintained.

School Facilities

5.6 Rights of Child (Free & Compulsory Education) Act, 2009 mentioned in 5.4 confers a fundamental right, and the norms and standards are laid down in the schedule for every school. Under a time-bound programme all of these norms and standards given in the schedule must be completed within the next two years in every school, private or public. Further, facilities should be gradually improved beyond the prescriptions of the Act, as these are as yet minimalist only. Besides proper training of teachers, modern teaching and technological aids should be used to improve the learning environment of schools as soon as possible.

5.7 Effective steps will be taken to up grade framework for the state curriculum largely, though not restricted to, the national core curriculum. It should be based on the needs of the learners and

related to the local environment. Learning material of high quality will be developed and provided free of charge to all pupils. Participatory learning environment, and activities such as games and sports, cultural programmes, excursions, etc. should form part of curriculum.

5.8 The state government, supported by the central government, has to take over-all responsibility of the educational sector. Panchayati Raj institutions involved in the proper functioning of elementary schools, along with School Management Committees provided in the Act.

Neighbourhood & Common School System

5.9 The State Education Policy will devolve upon the Panchayats and urban local bodies the powers and functions to ensure quality for everyone adopting an array of meticulously formulated strategies based on micro-planning, and applied at the grass roots level all over the state. While ensuring a proper execution of the idea of neighbourhood school given in the Act, the system as a whole should move towards a common school system framework accepted by both the previous national policies.

Secondary Education

5.10 Secondary education begins to expose students to the differentiated roles of science, the humanities and social sciences. This is also an appropriate stage to provide children with a sense of history and national perspective and give them opportunities to understand their constitutional duties and rights as citizens. Access to secondary education will be made universal, with emphasis on enrolment of girls, SCs and STs, particularly in science, commerce and vocational streams.

Up Gradation

5.11 Boards of Secondary Education will be reorganised and vested with autonomy so that their ability to improve the quality of secondary education is enhanced. Effort will be made to provide computer literacy in as many secondary level institutions as possible so that the children are equipped with necessary computer skills to be effective in the emerging technological world. A proper understanding of the work ethos and of the values of a humane and composite culture will be brought about through appropriately formulated curricula. Vocationalisation through specialised institutions or through the refashioning of secondary education will, at this stage, provide valuable manpower for economic growth.

Vocationalisation & Skill Development

5.12 The introduction of systematic, well planned and rigorously implemented programmes of vocational education and skill development is crucial in the proposed educational reorganisation. These elements are meant to develop a healthy attitude amongst students towards work and life, to enhance individual employability, to reduce the mis-match between the demand and supply of skilled manpower, and to provide an alternative for those intending to pursue higher education without particular interest or purpose. Efforts will be made to provide children at the higher secondary level with generic vocational courses which cut across several occupational fields and which are not occupation specific.

5.13 Vocational Education will also be a distinct stream, intended to prepare students for identified occupations spanning several areas of activity. These courses will ordinarily be provided after the secondary stage, but keeping the scheme flexible, they may also be made available after class VIII.

5.14 Health planning and health service management should optimally interlock with the education and training of appropriate categories of health manpower through health-related vocational courses.

Health education at the primary and middle levels will ensure the commitment of the individual to family and community health, and lead to health-related vocational courses at the +2 stage of higher secondary education. Efforts will be made to devise similar vocational courses based on Agriculture, Marketing, Social Services, etc. An emphasis in vocational education will also be on development of attitudes, knowledge, and skills for entrepreneurship and self-employment.

5.15 The establishment of vocational courses or institutions will be the responsibility of the Government as well as employers in the public and private sectors; the Government will, however, take special steps to cater to the needs of women, rural and tribal students and the deprived sections of society. Appropriate programmes will also be started for the handicapped.

5.16 Graduates of vocational courses will be given opportunities, under predetermined conditions, for professional growth, career improvement and lateral entry into courses of general, technical and professional education through appropriate bridge courses. Tertiary level courses will be organised for the young who graduate from the higher secondary courses of the academic stream and may also require vocational courses.

5.17 It is proposed that vocational courses cover 20 per cent of higher secondary students by 2020 and 40 per cent by 2030. Steps will be taken to see that a substantial majority of the products of vocational courses are employed or become self-employed. Review of the courses offered would be regularly undertaken. Government will also review its recruitment policy to encourage diversification at the secondary level.

Higher Education

5.18 Higher education provides people with an opportunity to reflect on the critical social, economic, political, cultural, moral and spiritual issues facing humanity. It may contribute to healthy equitable development through generation of new ideas and dissemination of specialised knowledge and skills. It is therefore a crucial factor for survival and growth. Being at the apex of the educational pyramid, it has also a key role in producing teachers for the education system. In the context of the unprecedented explosion of knowledge, higher education has to become dynamic as never before, constantly entering uncharted areas. For all these reasons, it is imperative to respect autonomy of institutions, except possibly in financial matters, where concurrent control may be innovatively designed, without infringing on functional and academic autonomy.

5.19 Urgent steps will be taken to expand the number of colleges and universities for larger access and increasing GER to at least 25 percent over the coming five years. Teachers' recruitment must be expedited to save the system from degradation and decline.

5.20 Courses and programmes will be redesigned to meet the demands of specialisation better. Emphasis will be laid on linguistic competence. There will be increasing flexibility in the combination of courses. A major effort will be directed towards the transformation of teaching methods. Audiovisual aids and electronic equipment will be introduced; development of science and technology curricula and material, research, and teacher orientation will receive attention. This will require preparation of teachers at the beginning of the service as well as continuing education thereafter. Teachers' performance will be systematically assessed.

5.21 State level planning and co-ordination of higher education will be done through the State Council of Higher Education. Provision will be made for minimum facilities and admission will be regulated according to capacity.

5.22 Research in the universities will be provided enhanced support and steps will be taken to ensure its high quality. Suitable mechanisms will be set up by the State Council of Higher Education for co-ordinating research in the universities, particularly in thrust areas of science

and technology, with research undertaken by other agencies. An effort will be made to encourage the setting up of national research facilities within the university system, with proper forms of autonomous management.

5.23 Research in the humanities and social sciences will receive adequate support. To fulfil the need for the synthesis of knowledge, inter-disciplinary research will be encouraged. Efforts will be made to delve into India's ancient fund of knowledge, both classical and indigenous local and to relate it to contemporary reality.

5.24 In the interest of greater co-ordination and consistency in policy, sharing of facilities and developing inter-disciplinary research, a national body covering higher education in general, agricultural, medical, technical, legal and other professional fields will be set up.

Open University and Distance Learning

5.25 The open learning system has been initiated in order to augment opportunities for higher education, as an instrument of democratising education and to make it a lifelong process. The flexibility and innovativeness of the open learning system are particularly suited to the diverse requirements of the citizens of our country, including those who had joined the vocational stream.

5.26 Nalanda Open University was established to fulfill these objectives, but it generally continues with traditional courses. It should be strengthened to provide a large variety of courses, particularly for vocationalization.

Rural University

5.27 The new pattern of the Rural University will be developed on the lines of Mahatma Gandhi's revolutionary ideas on education, initially launched in Bihar, so as to take up the challenges of micro-planning at grassroots levels for the transformation of rural areas. Institutions and programmes of Gandhian basic education will be restructured and adequately supported, commencing from the centenary year of Champaran satyagraha.

Access to Environmental Justice: A Critical Assessment of the Role of the National Green Tribunal in India

Pankaj Kumar*

ABSTRACT

A weak enforcement system yields low level compliance with environmental law. PIL, a tool in the Indian Judicial System, allowed courts to exercise judicial activism to expand the scope of environmental jurisprudence. However, it resulted in a tremendous work overload for the Court which has led to criticism from various quarter. A “National Green Tribunal” has come up purely to consider these cases. It is an unique institutions and has a wider jurisdictions to not only take up issue of environmental violations but it also ensures natural justice by providing for compensation, relief and restoration of the ecology in accordance with the polluter pays principle, as well as powers to enforce the precautionary principle. Access to justice can be simply defined as “The ability of people to seek and obtain a remedy through formal or informal institutions of justice, and in conformity with human rights standards”. Access to justice in environmental matters has gained ascendancy as an effective mechanism for holding governments accountable and ensuring that environmental laws and regulations are enforced. While accessibility is there in many countries legal claims to these courts have also shown that they can be expensive, time consuming, and inefficient in resolving environmental disputes. My Paper will demonstrate that demand for greater access to justice combined with the growing complexity of environmental laws are some of the key factors that have led to the growth of Environmental courts and tribunals; and in this context the NGT. Through certain judgments I will highlight how effective has NGT been in ensuring access to environmental justice to the people and how is this justice measured and availed by the court to the people? And above all how NGT does purports to meet the twin challenge of development vis-à-vis environment while also highlighting how do tribunals fare in terms of courts/green courts?

THEME

It has been 10 years since the National Green Tribunal or NGT¹ came into force, a tribunal that is seen ushering in environmental clearances and disposing off environment related case at an appreciatively large number all within a limited time period. The disposable rates of about 67% of cases speak volume about the tribunal when we see that judiciary is stuffed with eye popping number of cases that is still awaiting trial.

The Constitutional directive under Article 48A & Fundamental Duties under 51(A) (g) establishes normative prescriptions that “the State shall endeavor to protect and improve the environment and to safeguard the forests and wild life of the country” and every citizen shall be duty bound “to protect and improve the natural environment including forests, lakes, rivers and wild life, and to

*Ph.D Scholar, Centre for the Study of Law and Governance, Jawaharlal Nehru University, Delhi E-mail – pankaj.roy21@yahoo.in

have compassion for living creature.” To achieve this goal the Indian courts have taken a proactive stance for environmental compliance. The Supreme Court has used its discretionary environmental power under article 142 to achieve these goals wherever the law was inadequately defined and has broadened the fundamental rights to mean “right to a wholesome environment” and in the doing so has elaborated upon Article 21 which translates to “right to life”².

Soon after the Stockholm Convention in June 1972, India passed several acts related to water, environment, wildlife protection, public Liability Insurance etc. However despite the best intentions these acts had a weak enforcement system, which in turn led to low level of compliance with these laws. But the court adopted an effective ingenuity in the form of ‘Public Interest Litigation’³, a tool in the Indian Judicial System, which allowed courts to exercise judicial activism to expand the scope of environmental jurisprudence. The large number of environment cases that had arisen was tackled by the Supreme Court by constituting ‘green benches’. PIL or Public Interest Litigation became an important tool which of all things also included citizen’s suits or simply a letter written to court that is treated as petition for ‘proceeding with enforcement action’⁴.

This vigorous pursuit led to a series of path breaking public interest litigations (PIL) successes- which included reformer M.C. Mehta’s case protecting the Taj Mahal from acid air pollution (*M.C. Mehta Vs Union of India and Shriram Foods and Fertilizer [1986 (2) SCC 176]*) and advocate Sanjay Parikh’s case to control hazardous waste dumping throughout India. However the downhill of such aggressive insistence led to accumulation of many cases and subsequently tremendous overwork for the courts which was facing shortage of judges for so long. This added to the piling on, which led to criticism from various quarter but most scathingly from the Governments which saw its jurisdiction being interfered with, the media, the BAR association and civil societies. In light of these the court had to abandon its aggressive pursuit of environmental justice, but it was still burdened with overwhelming environment related caseload and an ineffective, monitoring, and enforcement of the constitutional remedies it had ordered. It in turn had to demand for a special court to deal with the issue of environment.

On October 18, 2010 NGT was established. However it was not smooth sailing for the creation of NGT. Its creation is a result of many failures and setbacks often accompanied by innovational legislation. Subsequent legislations sought to establish a stronger framework for enforcement with the passage of National Environmental Tribunal Act (1995) and National Environmental Appellate Authority Act (1997). However neither of these acts was notified- a necessary prerequisite for any act to become law- upon passage and therefore could not be implemented. In 2000, the Supreme Court recommended the Law Commission to consider constitution of specialized courts due to the inadequacy of enforcement mechanisms. The Law Commission tabled the ‘186th Report’⁵ on the Proposal to Constitute Environmental Courts. This report had noted, “The National Environmental Appellate Authority (NEAA) constituted under the NEAA Act, 1997, for the limited purpose of providing a forum to review the administrative decisions on Environment Impact Assessment, had very little work”. The Law Commission proposed the construction of specialized Environment Courts, recently implemented through The National Green Tribunal Act, 2010. This act replaced the National Environmental Tribunal Act of 1995 and National Environmental Appellate Authority Act of 1997.

When the NGT Act of 2010 was finally enacted by Parliament in October that year and notified as a law. It was promptly challenged in December 2010 in a PIL at the Madras High Court by Naveen Kumar, a law student, on the grounds that the tribunal lacked judicial independence from the Government. Three months after the PIL was filed, the Madras High Court stayed all appointments to the tribunal on exactly these grounds. It was only after the centre’s intervention that the SC lifted the stay and allowed NGT to operate pending disposal of the appeal. Two years later the legality of NGT was challenged once again by the MP bar association on the similar ground which is still

pending. Things take interesting turn once the Supreme Court lifted the stay. At that time the centre had claimed that it had the capacity to operationalize 6 benches of the tribunal. In the next six months all these claims were laid bare when at least three judges of the tribunal quit in protest citing inadequate resources in order to carry out their assignments.

UNIQUENESS OF NGT AS A SPECIALIZED ENVIRONMENT TRIBUNAL

The National Green Tribunal has an all encompassing features that make it unique. Its power lies not only with cases pertaining to environmental laws, but it is competent authority under the act to provide for relief and restitution of ecology in accordance with the polluter pays principle, as well as having the power to enforce the precautionary principle, while striving for sustainable development. Unlike in the past when the court trusted the wisdom of the executives to take decisions correctly as contrary to taking correct decisions the NGT has further improved upon the power of the HC and the SC, by doing 'merit review' rather than 'judicial review'. Implying that the tribunal has the possibility of reviewing its decision based on the new evidences as provided by the litigant, thus being in a position where it will not be curtailed by its first degree of jurisdiction. By this procedure the tribunal is catapulted into a primary decision maker and have a better insight and in- depth inquiry into not just the law, but also delves into the technicalities of a particular decision.

Prior to an environmentally dedicated tribunal the Indian courts had a tough time interrogating the cases that came up for hearing. The first case that saw a need to have non-legal expert members, from the specialized field to oversee and understand the sensitive nature of the environment issues was in *M.C Mehta Vs Union of India (1986)*⁶ in which the court observed that a fairly regular number of cases involve issues of "environmental pollution, ecological destruction and conflicts over natural resources are increasingly coming up for adjudication and these cases involve assessment and evolution of scientific and technical data". The court conceded that the cases covered "an intricate question relating to science and engineering" and the court did not have the requisite expertise (Upadhyay 2000).

NGT has tried to correct this shortcoming. The NGT is composed of 40 members of which 20 are judicial and 20 are experts' members in their respective fields and in matters and environment. It is because of this balanced mix of members that NGT has been able to scrap off many an ill-gotten and unscientific clearances which clearly was a result of unholy nexus between the client and patron. The tribunal principal motto is "to provide speedy environmental justice and help reduce the burden of litigation in the higher courts"⁷. In its endeavor it shall not be restricted by Code of Civil Procedure, 1908, but shall be guided by principles of 'natural justice'. What is interesting and an astounding feature is that the tribunal shall strive to dispose off a case within a time period of 6 months of filing of the same. Initially it has been set up in 5 places Bhopal, Pune, Kolkata and Chennai with the principle bench located at New Delhi, with the provision of having functional circuit benches in few places.

NGT- ENSURING ACCESSIBILITY AND DELIVERING JUSTICE.

India is a federal country with clear cut division of power, but when one looks at it in its working one might not be wrong in assumption that judiciary has marched a "steal over all the organ" (Sathe 1994). Unintentionally the judiciary has surged ahead by doing the work that government was assigned to do. In a cryptic tone the court observed that "work which was required to be done by the government has to be carried out by the court" (AIR 1996 SC 2715 at 2724). The courts in turn responded well by articulating a rich environmental jurisprudence based on the interpretation of article 21 as well as adopting the notion of ' public trust doctrine'⁸. The court also innovated itself

by appointing a “Central Empowered Committee”⁹ (CEC), a panel of 47 members to help it with the hearing of forestry cases.

International law is replete with provisions of environmental democracy of which there emerges a broad consensus upon three rights which are dubbed as “access rights” which include access to information, access to participation in decision-making, and access to justice (Sands & Werksman, 1995). These rights are direly felt by those living at the bottom of the power structure. Access to justice has always been a mechanism to press for government accountability and as a forum to ‘seek redress and remedy for environmental harm’ (Foti.J. 2008)¹⁰. While accessibility to the courts has never been a problem, it is the process of getting justice through these courts has broken many a back as it is often found to be expensive, time-taking and inefficacious in providing desired justice. The NGT has come as a savior. The NGT follows a hassle free procedure of filing an appeal against any order that is in contravention of seven laws that NGT is empowered to deal with. Similar procedure is laid down if anyone wants to claim for compensation. A nominal fee of 1000 Rs is to be tendered to avail its justice. What is commendable that a person can directly approach the tribunal in any case where the environment issue is concerned as all the civil courts have been debarred from taking up such litigation. This homogenizing of all the environmental cases has benefited the common man immensely. The NGT has tried to enhance the third generation right by a zealous “confluence”¹¹ of the environmental rights with human rights.

NGT is only a decade old but it has made its presence felt in many of the path breaking judgments that it has given in this short period. Some of the most impressive judgements include *M.P. Patil v. Union of India*¹² which led to uncovering of truths behind how an environmental clearance was garnered by the National Thermal Power Corporation. The judgment was enriched by the Tribunals insistence on the view to rehabilitate those affected by such large projects. Similarly in *Braj Foundation v. Govt. of U.P*¹³ the tribunal while quashing the Braj foundation contention that the government should honour the Memorandum of Understanding (MoU) and afforest the Vrindavan forest, the Tribunal observed that MoU was not legally enforceable and government was in no way to be dictated for its forestation policy. The tribunal also declared 100 metre stretches on either side of Braj Parikarma rout as “no development zone”.

The principal bench of Delhi while hearing a petition in *Vardhaman Kaushik v. Union of India*¹⁴ the court took note of the menace of ever growing pollution level in the NCR. The tribunal entrusted a committee to chart out an action plan and in the meanwhile directing that vehicles prior of 15 years not to be plied on the roads, also banning the burning of plastics and similar materials. The tribunal also ordered for creation of pedestrian paths in all the major markets roads in Delhi, also it highlighted and demanded the need for cycling track to be constructed. Moreover the stoppage of overloaded truck was to be stringently dealt with. Taking up the issue further the Tribunal in next hearing ordered for fining of all vehicles that were parked on the roads to the amount of 1000 Rs, and asked the corporation for construction of car parking in such areas.

The tribunal also had to prove its legitimacy apart from being a protector of the environment when in *Kalpavriksh v. Union of India*¹⁵ the petitioner had challenged and wanted to know its jurisdiction, the tribunal asserted that its jurisdiction was not limited to only civil cases which raised the substantial question of environment and arise from the implementation of the Acts stated in Schedule I of the NGT Act. The tribunal in turn broadened the meaning of the term ‘implementation’ which it ruled must “neither be too constrained nor too expansive nor keep in view all the Notifications, Rules and Regulations promulgated under the Act”. In a similar vein the *Tribunal at its Own Motion v. Ministry of Environment & Forests*¹⁶ the tribunal had to rule that wildlife is a part of the environment and it could not be purely the domain of ministry of environment and any factors and action that has the tendency to cause damage to wildlife could not be exempted from the cognizance of the NGT.

The Tribunal has also shown the way forward involving the pollution of river waters. In *Krishan Kant Singh v. National Ganga River Basin*¹⁷ the tribunal directed the polluting industrial units to stop their sewage flow and in another victory for the tribunal the NGRBA on the order of SC has handed over the ‘Ganga’ to the NGT to get rid of all the pollutants as the court observed that pollution control board had failed in their duty to take action against polluting industry. In another case filed by Manoj Mishra an environmentalist who challenged the office memorandums (OMS) of the Environment Ministry by which the unauthorized expansion of temple complex located on Yamuna river was in progress after construction had already started which was being carried out post- facto and in clear violation of the EIA notification. Based on these OMS many a project in Tamil Nadu were clearly in violation of the EIA rule which states that for a new construction to be expanded a new set of environmental clearance has to be taken. The tribunal wondered ‘what is the point of taking clearance when the project has already begun?’ NGT imposed a fine ranging from 1.8 crore to 36 crore on these projects which had tried to side with the above mentioned case. The Tribunal highlighted the Environment Ministry about its casual attitude towards giving Environmental clearances. In *Manoj Misra v. Union of India*¹⁸ the tribunal gave a list of 28 directives with the insight of protecting river Yamuna.

The NGT in proactive move has sought to look into the issue of air pollution in Delhi. Firstly in a brave move it banned all diesel and petrol vehicles older than 15 years- thus by a very layman estimates close to 10 lakhs vehicles off the road. In a series of moves on a similar issue the NGT in a startling observation directed the central government of its effort to better the poor air quality of Delhi; it chastised the centre when its additional solicitor general tried to pass on the buck of poor air quality due to the burning of dry leaves. In an earlier petition filed by an NGO the tribunal had asked the centre to find out the reasons for low air quality in Delhi. The government instead of finding the reason tried to mislead the tribunal, which led to tribunal banning all the diesel vehicles that were over 10 years old from plying. This resulted in a series of events and government challenged the verdict of the tribunal. Appealing against the verdict Union Road Transport Ministry tried its best by citing a report of IIT- Delhi which tried to show that bad quality of air was not due to diesel vehicle. The tribunal on the other hand highlighted many lacuna in the report and castigated the ministry and for not submitting a ‘well reasoned’ and ‘comprehensive’ report on the issue¹⁹. It embarrassed the IIT by slamming it for being against the ban order and also chastised it by saying that ‘merely because you are IIT, you can’t always be right’. The court enthusiastically also gave out suggestion to better the air quality by providing for computerized check post at 9 entry points for vehicles entering Delhi. It has asked the government to cap the number of vehicles that can be registered every year. To have an effective public transport system so that it is accessible and not congested. Government should provide incentives such as replacement or scrappage, tax exemption, or interest subsidy, so that people give up on their old vehicle to buy new one thus having better mileage and less pollution. Moreover it led to a creation of joint action plan by four states namely Delhi, Haryana, UP, and Rajasthan to curb air pollution in NCR.

In another conservatory case the NGT fined a sum of Rs 5 Lakh on Shangri-La, a five star Hotel based in Delhi and another 2 lakh Rs each on two Eros hotels for its inability to have a functioning rainwater harvesting structures. On a similar drive the tribunal fined many a hospitals and malls for not having these structures in their buildings. It also issuedailable warrants to few other establishments and to few a show cause notices for failing to appear before it despite being summoned. In an aggressive posture the tribunal has sought response from the Directorate General of Foreign Trade (DGFT) on a plea filed by toxics link an NGO – which in its affidavit before the tribunal has alleged that ‘tonnes of e- wastes are being dumped on Indian shore which is in clear violation of the e- waste management rules notified in 2011’. By raising important issues of toxic e- waste- which is still being governed by the colonial law as review of the act has not been taken

up even after 6 decades of independence- the tribunal has indeed broadened the ambit of harmful effect of dumping of electronic products/ goods for the land as well as the people.

In another bold move that has led to 'ambiguous reaction' the NGT has 'banned rafting camps along the Shivpuri- Rishikesh stretch'²⁰. In a petition filed by Social Action for Forest and Environment (SAFE) a non- profit organization before the NGT the SAFE has sought action against all these camps that do not adhere and follow regulations. The ban has come as a rude shock for many people associated with this sector and also has serious implications on their livelihood and survival but the Tribunal keeping in mind the 2010 review of 36 camping sites by the wildlife Institute of India which stated that 14 sites posed danger to the wildlife and their habitat. The NGT ban may seem a bit too harsh as a major English Daily dubbed the judgment as 'throwing out the baby with the bath water'²¹. But in the hindsight the ban was long overdue.

It is not only that principal bench had given some major verdict; some of the key verdict that has major ramifications has been pronounced by the tribunal's regional benches. In the famous *K.K.Royson case*²² the South Bench tribunal relaxed the notion of locus standi and observed that when it comes to effects faced due to environmental or ecological destruction it affected everyone equally and therefore every concerned person had the right to initiate action thus broadening the ambit of victim. This position of the tribunal was also highlighted in *Samata v. Union of India* case, another important contribution of this case was to whether to act or not if the EIA had not been published in the local vernacular. The tribunal settled this issue by directing the Expert Appraisal Committee to act in larger public interest and to see the coexistence of development vis -a vis environment.

In tackling all these cases the tribunal had to face a lot of resistance but what is worth mentioning behind all its judgments the apex court of the land stood by it. NGT proactive crackdown on all environmental violations led to it being patted by none other than the chief justice of India (CJI) H L Dattu who openly praised this overzealous tribunal. Amid murmurs that the court was overstepping its brief and giving orders way beyond its jurisdiction the CJI while dismissing a petition against the NGT order observed that "the Green Tribunals are in reality reacting to the need of the people today". The Supreme Court is in fact quite happy that NGT has been on a green crusade and the court endorses the NGT'S zeal in giving relief to the people from pollution.

CONCLUSION

To conclude it would be pertinent to highlight the active role played by our courts in taking up the mantle of protector of environment. In its efforts it was aided by a host of movements that sprung up to resist the arbitrary development of the country at the cost of nature. By directly relating it with the all encompassing article 21 the court has made this drive for environmental protection into an effective mechanism to tackle the development overreach and accurately assess the project that the government seeks to undertake. The tribunal has so far played a balancing role while deciding and designing the framework for the use of natural resources, it has tried to have a consensus of the people on whose behalf it is adjudicating and it is of firm opinion that sustainable development can only be achieved through deliberation and discussion among the shared stakeholders and participatory democracy is best poised to combat this. It is for precisely these reasons NGT has come to be seen as a saviour of many people whose voices could not be heard by those at the upper echelons of power. It has come as a saving grace. The aim should be to preserve and cultivate it more.

Today's world has seen a mushrooming of the environmental courts and tribunals (ECTs). Over 350s of these ECTs can be seen operating in many countries, all trying to ensure environmental justice through its suitability working conditions found in their respective countries. Whether these courts have delivered 'good' environmental verdict is subjective and is often viewed through "eye-of

the- beholder” and hence proves difficulty in measuring its effectuality. However when one looks at its disposable rates, NGT has done much better. It had 6017 cases instituted and 3458 cases were disposed of- a rate of about 60 percent, as of August 2014. So the critics citing backlog of cases as an excuse to dismantle NGT their criticism should not be taken seriously. But the working of ECTs cannot be understated as it has in a way revolutionized the field of environmental law and tribunal has become the latest institution that provides a process- as Australian court so succinctly puts it- that is “just, quick, and cheap” (Preston 2008,).

In the 10 years since it was formed much has transpired between NGT and Ministry of Environment forest & Climate Change (MoEF&CC). NGT has in many cases reprimanded the ministry for being absent during hearings. In some cases fined few officials and cautioned them against such practices. The ministry has repeatedly contended that NGT has been overstepping in its jurisdiction. (Indian Express, Nov 2013). The NGT has done a good work as there is a positive outlook for this tribunal. Those who can access it has a feeling that justice will be done and speedily. Based on NGT reputation of being a no-nonsense tribunal there is a fear among industry and often they get their EIA assessment done prior to starting their industries. But NGT is also not bereft of its problem. Firstly there is unusually time constraint to fill a case. The time limit of 3 months is akin to denial of justice opines critics. And secondly with the provision of NGT functioning only as 5 benches in different zones there is problem of filing cases as sometimes the regional benches are thousands of kilometers away, as other courts have been debarred from taking up issues, their only hope is NGT. This is neither easy nor affordable. These problems have the tendency to affect the poorest the most.

On the other hand the most glaring problem faced by tribunal is on the front of perceptual and also aided by real challenges. There is a negative portrayal of NGT crusade for environment concern as being in limelight and trying to usurp the power of all other institutions including the courts. With these kinds of images the task of handing effective delivery of environmental justice will lose its sheen. NGT has to take everyone along in its honorable intention of fighting environmental challenges. It needs the support of various institutions to tackle these problems. The other perceptual issue that NGT must correct is that it is taking up frivolous and anti-people cases. For instance, in one case, the tribunal’s principal Bench ordered the closure of 12 eating joints in Delhi’s Hauz Khas area for not having applied for consent to operate. It is a different matter that one needs to question the very basis for restaurants to take the consent of pollution control boards. But if this judgment of NGT were to be applied across the country, then we would have to effectively close down most restaurants. In another case, NGT took strong exception to the nailing of bus stop signs onto trees by the Delhi Transport Corporation. People are questioning how such cases fall under “substantial question relating to the environment”. NGT will have to guard against such decisions.²³

ENDNOTES

1. NGT Act 2010
2. Constitution of India, Fundamental Rights Chapter 3
3. Prashant Bhushan, ‘Supreme Court and PIL: Changing Perspectives under Liberalisation’ *Economic and Political Weekly* Vol. 39, No. 18 May 1-7, 2004, pp. 1770-1774
4. Law Commission of India. 2003. *Proposal to Constitute Environmental Courts. 186th Report of the Law Commission of India* (Sept.2003). Available from <http://lawcommissionofindia.nic.in/reports/186th%20report.pdf>.
5. www.ielrc.org/content/e0007.pdf 2000(5)SCALE69, (2000)6SCC213, [2000]Supp1SCR389
6. The National Green Tribunal Act, 2010,
7. www.ielrc.org/content/e0007.pdf 2000(5)SCALE69, (2000)6SCC213, [2000]Supp1SCR389.

8. The Central Information Commission has ruled vide order CIC/AD/C/2009/000137 on 12 March 2009 that the CEC is a Public Authority as defined under provisions of the *Right to Information Act* of 2005.
9. Foti, J., and The Access Initiative Staff (TAI). 2008. *Voice and Choice: Opening the Door to Environmental Democracy*. Washington, D.C.: The Access Initiative / World Resources Institute.
10. Available from <http://www.law.du.edu/index.php/ect-study>.
11. Appeal Number 12 of 2012 dated 13-3-2014.
12. Application No. 278 of 2013 and MA No. 110 of 2014 dated 5-8-2014.
13. Original Application No. 21 of 2014.
14. Application No. 116 (THC) of 2013 dated 17-7-2014.
15. Original Application No. 16 of 2013 (CZ) dated 4-4-2014.
16. Application No. 299 of 2013 dated 31-5-2014.
17. Original Application No. 6 of 2012 and MAs Nos. 967 of 2013 & 275 of 2014 dated 13-1-2015.
18. Times of India 'Gaps in IIT emission study:NGT' see, <http://timesofindia.indiatimes.com/city/delhi/Gaps-in-IIT-emission-study-NGT/articleshow/47336392.cms>, accessed on April 20, 2020
19. 'NGT denies permission to rafting camps' see <http://economictimes.indiatimes.com/news/politics-and-nation/ngt-denies-permission-to-rafting-camps-in-rishikesh/articleshow/48295874.cms>, accessed on April 28 2020
20. 'Ban on river rafting robs Delhi of weekend' see <http://timesofindia.indiatimes.com/india/Ban-on-river-rafting-robs-Delhi-of-weekend-getaway/articleshow/48313300.cms>, accessed on April 28, 2020.
21. *K.K. Royson v. Govt. of India*, Appeals Nos. 172, 173, 174 of 2013 (SZ) and Appeals Nos. 1 and 19 of 2014 (SZ) and Appeal No. 172 of 2013 (SZ) dated 29-5-2014⁴.

Rural Health Care-Towards A Healthy Rural Bihar

Ajay Kumar Sah*

1. SHSB at State level and District Health Societies (in all 38 districts) formed & registered.
2. ASHA: A total of 69124 ASHAs selected against a target of 87,135. ASHA trained in Module I - 63802 and trained in Module II, III,IV -14222 / 87135
3. SPMU, DPMU & BPMU: The State Level consultants in SHSB are in place and more recruitments are underway so as to ensure quality control. DPMU (3 in each district) has been recruited in 33 out of 38 districts. 477 Block Health Managers and 533 Block Accountants under NRHM are already in position. The orientation training for all has been completed.
4. Free drug distribution of essential drugs started from 1st July 2006 and 24 hours presence of doctors ensured in all facilities up to PHC level resulting in unprecedented increase in OPD patients. 10-30 times increase has been reported.
In the Primary Health Centres of the State, Free Distribution of 33 drugs in OPD and 37 drugs in IPD is being done and in the District/main Hospital of the district 33 drugs are being distributed free in the OPD and 107 drugs in the IPD. The process of expanding the number of drugs being distributed in OPDs and IPDs in the Medical College Hospitals to the District Hospitals till the Additional Primary Health Centres is in process as such- 41 essential drugs for the OPD patients and 193 essential drugs for the IPD patients from District Hospitals till Primary Health Centres/Additional Primary Health Centres, 99 essential drugs in the OPD and 172 essential drugs in the IPD for the 6 Government Medical College Hospitals, 48 drugs/materials for the 6 Government Medical College Hospitals.
5. Routine Immunization: Full immunization percentage increased from 10.7 % (NFHS-I 1992-93) to 33% (NFHS 3) to 53.8 % (ISB, 2009).
6. Against a total figure of 11000 posts of ANM (R), appointment of ANM (R) - 6000 posts of ANM(R) have been filled up.5000 new appointments have to be made.
7. Rogi Kalyan Samitis formed in all health facilities till PHC level, registration of RKS completed in 513 of 653 RKS.
8. Training Programmes: Training of EmOC, Life Saving Anesthesia Training, IMNCI, ASHA, DPMUs, BPMUs, SBA training, Immunization and Neonatal resuscitation started. This includes the regular monitoring and corrective actions taken.
9. ANM/GNM training Schools-Out of 22 ANM schools and 6 GNM schools, 22 ANM schools have been restarted and are fully operational. Currently approx. 600 students enrolled. In year 2010, it is being ensured that ANM and GNM schools train students up to their optimum capacity. Besides, efforts have been made to strengthen the overall structure of these schools in the state including hiring contractual staff for filling up vacant faculty position. The posts of Deputy Director - Nursing and Asstt. Deputy Director –Nursing has been created in the Directorate. A centre of excellence for nursing is being established at Indira Gandhi Institute of Medical Sciences, Patna—the premier health institution of the State.

*Research Scholar, Department of Economics, Jai Prakash University, Chapra (Bihar)

- 10. Institutional delivery has increased manifold
- 11. Additionally in the year 2009-10, rate contracting of equipments for Child (SNCU & NSU) and Maternal Health (Labour room) for District, Sub-Divisional, CHC and PHC hospitals has been achieved, and districts have started placing orders for the same, which will pave the way for availability of the same in the Districts.
- 12. In 34 districts, IDSP unit is functional.
- 13. Free Radiology and Pathology services have been offered to all Government patients.

DETAILED PROGRESS OF ACTIVITIES

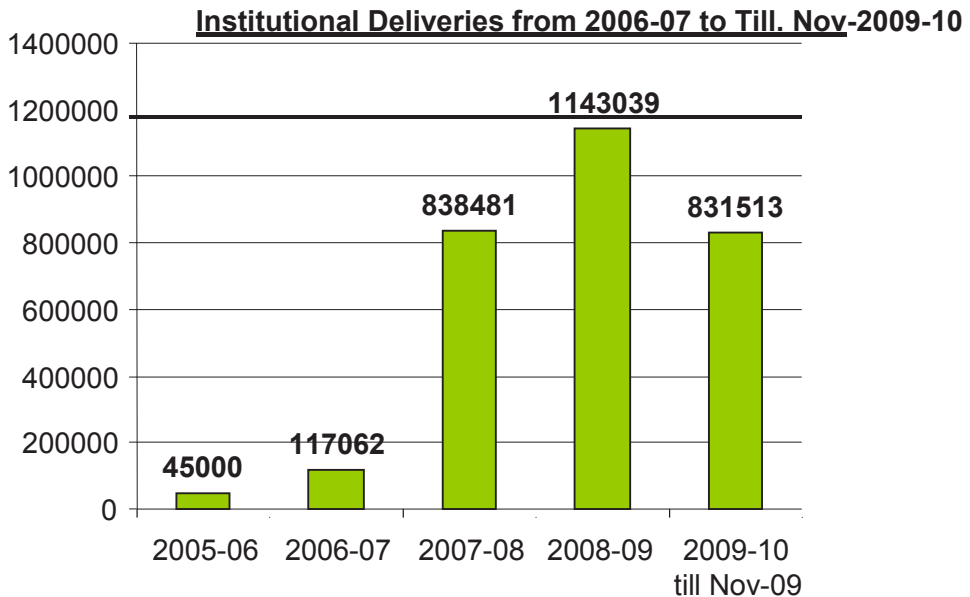
Various programmes have been initiated by the Department of Health, Government of Bihar which has improved the health scenario in the State and has made primary health care accessible and available to the rural masses. The **patient load/turnout** in Government hospitals has increased in the OPDs from 105 lakhs in year 2006-07 to 160 lakhs in 2008-09, similarly the load in IPDs has increased from 7.98 lakhs in 2007-08 to 14.0 lakhs in 2008-09.

The capacity to manage the program in the state has significantly strengthened. There is a significant increase in institutional delivery in Government hospitals. The availability of human resources has increased substantially at different levels of health institutions. Several PPP interventions have been implemented to increase the reach to the people. By and large the improved infrastructure, strengthened facilities and people’s confidence in availability and accessibility to public health facilities has improved considerably.

Maternal Health

24 x 7 Health Services is available in 480 Primary Health Centres of the State.

The total no. of **institutional delivery** has increased from 45000 in the year 2005-06 to 1143039 in 2008-09, while the total no. of deliveries from April to November 2009 is 8,31,513. The percentage of increment has been from 22% in 2005-06 to 27.7% in 2007-08.

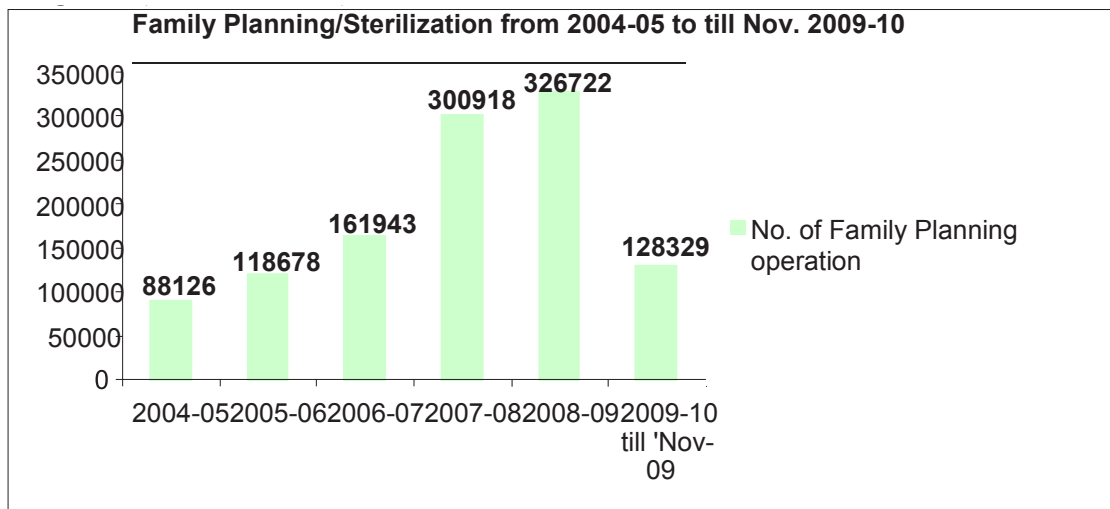


Antenatal Care has increased from 15.9 % in 1998-99 to 26.4 % in 2007-08. Due to the Breastfeeding campaign, the proportion of children breastfed within 1 hour rose from about 5% in 2002-04 to 16.2% in 2007-2008.

Maternal Death Audit was initiated in one district on a pilot basis wherein verbal autopsy of 89 deaths were conducted, data analyzed and shared. State wide system for improving reporting of maternal deaths planned.

Population Stabilisation

Every year about 27,00,000 children are born. The total no. of Family Planning operations has increased from 118678 in 2005-06 to 326722 in 2008-09, and from Apr. to Nov. 2009 a total of 128329 operations have been done. Contraceptive use has increased from 23.1 percent (NFHS-I 1992-93) to 28.4 percent (DLHS-III-2007-08).



Availability of Free Medicine in OPD and IPD

In the Primary Health Centres of the State, Free Distribution of 33 drugs in OPD and 37 drugs in IPD is being done and in the District/main Hospital of the district 33 drugs are being distributed free in the OPD and 107 drugs in the IPD. The process of expanding the number of drugs being distributed in OPDs and IPDs in the Medical College Hospitals to the District Hospitals till the Additional Primary Health Centres is in process as such-41 essential drugs for the OPD patients and 193 essential drugs for the IPD patients from District Hospitals till Primary Health Centres/ Additional Primary Health Centres, 99 essential drugs in the OPD and 172 essential drugs in the IPD for the 6 Government Medical College Hospitals, 48 drugs/materials for the 6 Government Medical College Hospitals.

Equipment Procurement

- To strengthen Labour Rooms in the Government Hospitals, State Health Society is ensuring the availability of ten equipments in these units. All the Labour Rooms are being modernized.

- To equip the Government Hospitals with Beds, the State Health Society is providing three types of beds- Fowler Deluxe Bed, Fowler Bed and Semi Fowler Bed.
- State Health Society has already awarded contracts for procurement of equipments for SNCUs and NSUs.
- Establishment of the Bihar Procurement Corporation on the Tamil Nadu Medical Services Corporation model is in the final stage.

Institutional Framework of NRHM

Under NRHM about 3608 Village Health and Sanitation Committees have been formed in the State in the current year, and the constitution of the remaining is being done on a priority basis. 513 Registered Rogi Kalyan Samitis or Hospital Welfare Societies are operational at various facility levels.

69124 ASHAs (Accredited Social Health Activists) have been selected for ensuring village level interventions.

De-centralised Planning

De-centralised Planning under NRHM has been undertaken in FY 2009-10 for the 1st time in Bihar and this year Block Planning has also been undertaken. It is envisaged that once the VHSCs are in place, village planning may also be initiated in the coming year.

HEALTH INFRASTRUCTURE STATUS

Health Institutions	Present
Medical Colleges	9
District Hospital	25
Sub-Divisional Hospital	22
Community Health Centre	70
Primary Health Centre	533
Additional PHC	1243
Sub-Centre	8858

Human Resource

Manpower Management in the health sector has been undertaken vide various initiatives like re-organizing & rationalizing the existing manpower, ensuring power to transfer doctors delegated to Civil Surgeons, Web enabled system to capture district level cadre information, appointment of 1763 contractual doctors done, dynamic ACP being rolled out, cadre modified for doctors, cadre rules notified for paramedics and health educator, OT assistant, clerks, pharmacists, lab technicians, X-ray technicians cadre rules to be finalized soon, and draft publication readied for x-ray technicians, OT assistants and clerks.

According to IPHS norms, Bihar should have at least 18 medical colleges as against 9 currently run and the total output of doctors from all the medical colleges is 510 MBBS and 100 specialists for the state.

Current Status in Manpower

Medical Officers	:	3860
Contractual Doctors	:	1763
Staff Nurses	:	3900
ANM	:	10055
ANM-R (Contractual)	:	6000
Health Managers	:	477
Block Accountant	:	533
ASHA Health worker	:	69124

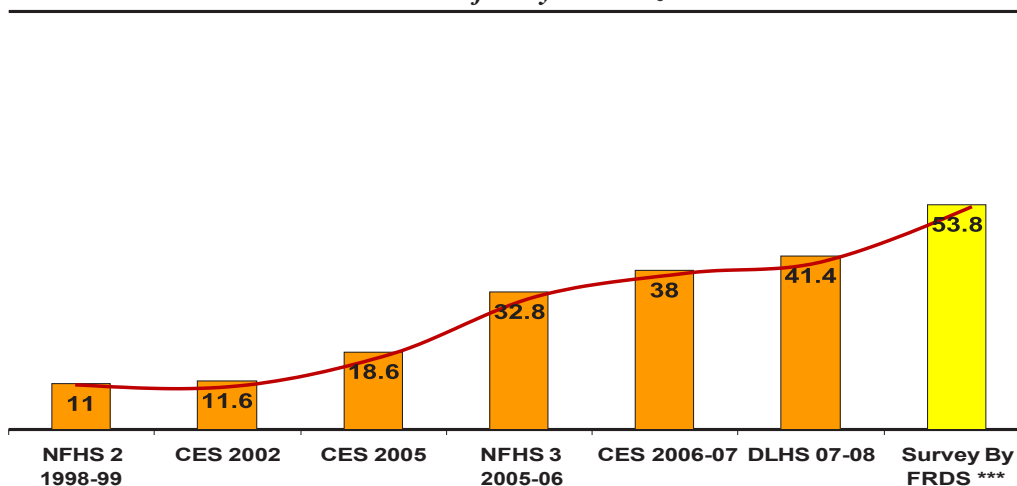
Private Specialists

From District Hospitals to PHC provision of Private Specialists in Eye, ENT, Orthopedics, Pediatrics, Gynae and Surgery @ Rs.500/day/doctor is being ensured and under this renowned doctors of the regional areas are contributing towards availability of quality services.

Child Health

In **Immunisation**, % of Full Immunization coverage has increased from 10.7 % (1992-93) to 53.8 % (ISB, 2009). Under Immunisation, various initiatives were introduced like alternate vaccine delivery (Couriers) for reaching vaccines, 3-rounds of Mobile Hard-to-reach RI campaigns were conducted in early 2006 to reach communities which hitherto never had access to RI services, the Year 2006 was declared as Immunization year and Wednesdays and Fridays were designated as immunization days. Furthermore in October 2008, **Muskaan ek Abhiyaan** was launched which included initial survey and tracking of Pregnant and Newborn till full immunization is achieved and realized partnership between ICDS and Health at all levels. There were twice weekly sessions at HSC and AWC and performance- based incentive schemes for Health Workers and Mobilisers was introduced under the scheme.

Evaluated % of Fully Immunized Child in Bihar



Sick Neonatal Care Units are functional in 6 district hospitals and is further being expanded to 26 more districts while Newborn corners have been established in 45 PHCs. Neonatal Stabilisation Units are being established in 398 Primary Health Centres of the State. Integrated Management of Neonatal Care Initiative (IMNCI) is being implemented in 24 districts and nearly 60% newborns are visited within 24 hrs by the trained worker.

Vitamin A campaign has ensured coverage increase from 8.9% in year 2004 to 95.03% in 2009.

PUBLIC PRIVATE PARTNERSHIP INITIATIVES

Mobile Medical Units (MMU)

Scheme of 1 MMU per district was launched on 13th July 2009 and at present a total of 12 MMUs are functional in Bihar. In an MMU the following staff is made available -Specialist Doctor, Nurse, X-ray Tec., Lab. Attendant, Para Medic/ Pharmacist-cum Van Supervisor and OT Assistant. Services being provided per MMU are Free OPD, Free Drugs, Gynae/ANC clinic, Eye check up, ENT check up, HIV testing, Pathology, Radiological tests, IEC, Medical camps etc.

Dial 108-Emergency Referral Services

A pilot project was launched in Patna under PPP for Emergency transport. It's operation started from 03 June 2009. 2 kinds of Ambulance services are being provided – 5 Advanced Life Saving and 5 Basic Life Saving ambulance services have been provided. The basic facilities that are being provided are – Drugs, Oxygen, Heart monitor, ventilator and other Supportive Medical System. All this at a very low cost chargeable to the patient @Rs.300/- and additionally free/lower rates are charged from the poor patients. The agency operating the facility is paid a monthly fee for the service. On calling 108, it's service is ensured within 15-20 minutes. This is a scheme which has provided a visible face to NRHM in Bihar and has added to the goodwill of the Health Department.

Diagnostic Services

Free Diagnostic (Pathology and Radiology) Services to all Government Patients is being provided to the people of Bihar right from PHCs to District Hospitals. Free Diagnostic Services is being provided to all BPL patients in the Medical College Hospitals.

Basic Pathology Services

Private Sector Partner operates, maintains and reports through 24-hours Diagnostic centers. Coverage of this service is 25 District Hospitals, 23 Sub-Divisional Hospitals, 76 Referral Hospitals and 398 PHCs of Bihar. 19 districts each have been divided among two agencies for Pathology and agency pay nominal monthly rent for space in DH & SDH.

Basic Radiology Facilities

38 districts have been given to one agency to operate, maintain and generate X-ray films. 134 units are functional. Space has been provided against nominal rent. It functions under the overall supervision of the Hospital Management Society (RKS) of the respective Hospital. USG facility is also being ensured here and reporting on the same has to be done through a Central Reporting System at State Headquarter level, where Radiologists shall report on USG films.

Ultra-Modern Diagnostic facility

SHSB has set up Ultra-Modern Diagnostic facility through private partners at Government Medical College and Hospitals and Regional Diagnostic Centres (Divisional HQ) levels wherein specialized pathology, bio-medical, ECG, MRI, CT Scan, Mammography etc services are being provided. The services are free for BPL Government patients and under NRHM the Hospital Welfare Societies are reimbursing the cost to the private partner, while for other Government patients the rate chargeable is as per AIIMS, New Delhi rate.

Urban Health Centres

Urban Health Centres have been established to provide support to the Government's Health Programmes under which free OPD facility is provided. 3 Urban Health Centres have been started in three districts- Nalanda, Patna and Samastipur, and 5 more are being operationalised in Nalanda and Muzaffarpur districts. The total number of patients seen in these Urban Health Centres is 20635 (Nov'08-Sept.'09).

Blood Storage Unit (BSU)

27 Blood Banks have been set up in different districts. 21 Blood Banks run through PPP (17 to Red Cross Society & 4 to others). Equipments for Blood Storage Centres have been supplied to all FRUs.

Trauma Centre

The process of establishing Trauma Centre has been initiated in 9 districts of the State (from the perspective of National Highways).

Bedsheets-Cleanliness Initiative

Different Coloured Bed sheets are being ensured per day in each hospital. Promotion of Handloom Industry by procuring only handloom bed sheets for this purpose has also been ensured.

Hospital Maintenance

Maintenance of hospital premises, Generator Facility, Cleanliness of Hospitals, Washing, Diet is being ensured through private partners in each district

Institutional Arrangements and Organizational Development

Along with Health department the ICDS, PHED and Panchayat are helping in implementing the NRHM Programme. The coordination has been placed at State level, District Level and Block Level. At the Grassroot level linkage between ASHA, ANM with AWW has been strengthened especially under the Muskaan programme. PHED department has taken up the training of ASHA.

Trainings are being regularly conducted under different programmes in the state. The state has already started the trainings of IMNCI. The State is trying to operationalise 22 ANM schools. Repair and renovation of these schools are already in progress and are expected to be operationalised in this year.

Most of the districts have their own Drug warehouse, however it is being planned to upgrade the Drug Warehouses so that a comprehensive, consolidated and computerized warehouse system is available.

The state has a unique system of collecting data from each PHC level. The state has established a data centre in the state and has centres in District and at PHC. These data centres collect data from each PHC through mobile phone and feed in the computer. The computerized data is later given to the respective Programme Officers.

Financial Management

Government of India's funds are released to the state through two separate channels, i.e; through the state budget and directly through the State Health Society. Further the Department's outlay for the procurement of vaccines, drugs, equipments etc; is spent centrally and assistance to the state has been in the form of kind.

In 2009-10 the Gol had approved an amount of Rs. 1280.70 crores under RCH II. To decentralise the process, SHSB undertook the task of 'Allocation of Funds for Districts for FY 2009-10' for all the components of NRHM-RCH Flexible Pool (A), Mission Flexipool/Additionalities (B), RI and Pulse Polio (C) & Disease Control Programmes (D). The State Programme Officers were assigned the task of allocating funds for the complete year to the districts based on the unit cost and requirement of the district. The annual fund allocation was done for all the programmes which were grouped under Part A, B, C & D. The DPMU team was then called at the State Headquarter level for a workshop and they undertook the exercise of **allocating the funds for the four quarters**. In this workshop each State Programme Officer detailed the districts on the unit costs for each district, which assisted the districts in allocating funds for the quarters.

This quarterly allocation was then taken back to the districts and after necessary corrections and vetting by the concerned District Programme Officers, necessary approval of the District Magistrate and Civil Surgeon was taken. This was then communicated to the State. Based on the requirement from the districts and the final approval from Government of India, the fund allocation was finalised for the 4 quarters and the annual targets for the districts were finalized.

To further expedite the Districts in Fund Utilisation and to do away with lack of clear instructions and guidelines on fund utilization, the State Programme Officers prepared **detailed Financial Guidelines for each Budget head**, which covered aspects like purpose of the head, outcome, unit cost, responsible official, financial protocol etc. Prior to approving the guidelines, District Programme Managers from about 10-12 districts were called for a meeting at the State level, wherein these Financial Guidelines were vetted by them and modifications suggested by them were incorporated and then the Financial Guidelines were approved.

In this process a new financial system was introduced. The purpose for introducing this new system was-

- De-centralisation of Resources and Power to the Districts and below
- Transparency in the Fund allocation
- Need based fund allocation
- Better utilization of funds
- Better Fund Accountability of the Districts and PHCs

The salient features of this new system are –

- District allocation for Major and Minor heads for the complete year communicated to the districts
- Districts empowered to re-allocate funds within the sub-heads of the Major sections, keeping in mind the annual target. Thus districts can prioritise their needs and meet them at the district level.
- Funds released to districts and subsequently to other levels for the Major heads for each quarter depending on 80% SOE submission

- Non-performing district's funds to be re-allocated mid-year to the performing districts, thus State would be able to meet the utilization target and performance would be awarded

To sensitise and for handholding of the districts and PHCs, the new financial systems were disseminated among the Civil Surgeons in the monthly meetings, with the DPMUs and with the Development Partners. Furthermore two day workshops were held in the districts where the Districts disseminated the new financial system and guidelines for each programme to the Blocks etc and further got the facilities to allocate funds for each quarter, based on the annual allocation prepared by them in consultation with the District Programme Officers.

FURTHER READING

- Ghosh, Saswata, Md. Zakaria Siddique, Anamitra Barik and Sunil Bhaumik (2015), "Determinants of Skilled Delivery Assistance in a Rural Population: Findings from an HDSS Site of Rural West Bengal, India", *Maternal and Child Health Journal*, 19(11):2470-2479.
- Goli, Srinivas, Moradhvai, Anu Rammohan, Shruti and Jalandhar Pradhan (2016), "High Spending on Maternity Care in India: What are the Factors Explaining It?", *PLoS One*, Vol 11.
- Keshri, VR (2018), 'Government Stewardship for Health Care: A Scoping Review of Regulatory Frameworks for Health Care Providers', Working Paper 03/2018, The Centre for Health Policy, Asian Development Research Institute, Patna, Bihar.
- McDougal, Lotus, Yamini Atmavilas, Katherine Hay, Jay G Silverman, Usha K Tarigopula and Anita Raj (2017), "Making the Continuum of Care Work for Mothers and Infants: Does Gender Equity Matter? Findings from a Quasi-experimental Study in Bihar, India", *PLoS One*, 12(2).
- Mohanty, Sanjay K and Anshul Kastor (2017), "Out-of-pocket Expenditure and Catastrophic Health Spending on Maternal Care in Public and Private Health Centres in India: A Comparative Study of Pre and Post National Health Mission Period", *Health Economics Review*, 7(31):1-15.
- Mahapatra, S, A Raj, A Das and T Mahapatra (2018), 'Distribution and Determinants of Caesarean Section Deliveries in Rural Bihar', Working Paper 05/2018, The Centre for Health Policy, Asian Development Research Institute, Patna, Bihar.

Effects of National Rural Health Mission on Maternal Health in Rural Bihar

Ajay Kumar Sah*

Bihar is a socioeconomically backward state with a persistently poor record with respect to maternal and child health indicators. Based on data from the National Sample Surveys on healthcare, this article evaluates the impact of the National Rural Health Mission (NRHM) on improving utilisation of maternal healthcare services in Bihar. It shows that NRHM has been effective in augmenting the utilisation of these services and reducing out-of-pocket expenditure on institutional deliveries in public facilities.

Bihar is a socioeconomically backward state with a persistently poor record with respect to maternal and child health (MCH) indicators. At the start of the National Rural Health Mission (NRHM)¹ in 2005, it was identified as a state requiring special focus and placed among the 'empowered action group (EAG) states'². Although NRHM has been acknowledged to be a success at the national level, it is important to assess the progress made at the regional level, particularly in EAG states like Bihar and tailor-make suitable mopping-up strategies for each of these states.

THE STUDY

In this article, we attempt to analyse the level of maternal healthcare utilisation in the state of Bihar, with three main objectives:

- Identify the factors affecting the utilisation of maternal care services and choice of facility between the pre- and post-NRHM periods;
- Assess the effectiveness of *Janani Suraksha Yojana*³ (JSY) in enhancing institutional delivery, particularly in public facilities; and
- Estimate the out-of-pocket expenditure (OOPE) on maternal care⁴ (on institutional delivery and all the three components of care – antenatal care (ANC), institutional delivery, and postnatal care (PNC) separately) in the pre- and post-NRHM periods according to type of facility (public and private). Also identify the factors affecting OOPE.

We use the unit-level data collected using Schedule 25 of the 60th (2004) and 71st (2014) rounds of the National Sample Survey (NSS) to carry out the analysis⁵. These two years represent pre-NRHM and post-NRHM periods, respectively.

RESULTS

Table 1 describes the receipt of ANC, delivery, and PNC, and the magnitude of OOPE in the pre- and post-NRHM periods by type of provider. The uptake of every component of maternal care increased dramatically between 2004 and 2014 in Bihar. For example, receipt of ANC services increased from 54.8% to 96.2%, while the uptake of institutional delivery increased nearly four-times – from a mere 18.5% to 70.8% during the study period.

*Research Scholar, Department of Economics, Jai Prakash University, Chapra(Bihar)

Table 1: Uptake of maternal care and OOPE (%) in Bihar by type of provider, 2004 and 2014

Variable	2004			2014		
	Public	Private	Total	Public	Private	Total
Antenatal care (ANC)	9.0	45.8	54.8	69.7	26.5	96.2
Institutional delivery	4.1	14.4	18.5	52.5	18.3	70.8
Postnatal care (PNC)	9.9	44.2	54.1	48.3	30.4	78.7
All three maternal care services	0.4	7.4	10.7	26.0	8.4	46.4
OOPE on institutional delivery (at 2004-05 constant price) (in US\$)	34	32	32	25	126	52
OOPE on all three maternal care services (at 2004-05 constant price) (in US\$)	12	51	15	37	221	58

The utilisation of public health facilities in seeking maternal care increased manifold during 2004-2014, whereas the utilisation of private facilities either declined or increased marginally during the same period. For example, institutional delivery in public facilities increased by 13 times (4.1% to 52.5%), while it increased marginally in private facilities – from 14.4% to 18.3%. The uptake of ANC increased nearly eight times in public facilities, while it declined from 45.8% to 26.5% in private facilities. Simultaneously, the utilisation of all three maternal care services from public facilities increased substantially from 0.4% to 26% during 2004-2014, while it increased marginally from 7.4% to 8.4% in private facilities during the study period.

The Table also reveals that, although the OOPE on institutional delivery in public facilities declined from US\$34 to US\$25, it increased nearly four times from US\$32 to US\$126 in the private facilities during 2004-2014. However, OOPE on all the three components of maternal care increased three-fold (from US\$12 to US\$37) in public facilities and more than four-fold (from US\$51 to US\$221) in private facilities.

We found that the likelihood of institutional delivery has increased by 11.73 times during 2004-2014 even after controlling for a range of potential confounders. The probability of institutional delivery has also increased significantly with age, urban residence, secondary or higher levels of educational attainment, and an increased level of household affluence; however, it has declined among minorities and socially marginalised sections.

It has also been revealed that urban, educated, and affluent women are significantly more likely to deliver in private facilities, while older women and those belonging to minority communities and socially marginalised sections, are significantly less likely to deliver in private facilities. Compared to public facilities, the probability of institutional delivery in private facilities declined by 90% during 2004-2014.

Table 2 reports the results obtained from decomposition⁶, which reveals that 94% of the increase in institutional delivery – broken into 96% increase in public institutions and 36% decline in private institutions – can be attributed to JSY, the year of survey, and omitted variables. Given that institutional delivery in Bihar had increased by only 10 percentage points in the 13 years before the implementation of JSY, while it has increased by almost three times in the next decade (when NRHM was introduced), we may argue that, without JSY, the substantial increase of institutional delivery could not have been possible in Bihar.

Table 2: Understanding effects of *Janani Suraksha Yojana (JSY)* on child birth in Bihar: A decomposition analysis

	Institutional delivery		Delivery in public sector		Delivery in private sector	
	Absolute	Percentage	Absolute	Percentage	Absolute	Percentage
Difference between years	0.518	100%	0.480	100%	0.039	100%
Weight = 1						
Explained by model	0.039	7.48%	0.022	4.68%	0.012	31.93%
Unexplained (partly attributed to NRHM)	0.479	92.52%	0.457	95.32%	0.026	68.07%
Weight = 0						
Explained by model	0.022	4.24%	0.016	3.30%	0.015	38.90%
Unexplained (partly attributed to NRHM)	0.496	95.76%	0.464	96.70%	0.024	61.10%

Our findings suggest that the OOPE on institutional delivery in the post-NRHM period in public facilities was 30% lower than that of the pre-NRHM period; however, the OOPE on all the three components of maternal care in the post-NRHM period in public facilities have increased by 13% compared to the pre-NRHM period. Compared to OOPE in public facilities for institutional delivery in the pre-NRHM period, likelihood of OOPE in private facilities in post-NRHM period increased by 249%, such increase for all three maternal care components was found even more – by 322%. These indicate that OOPE in private facilities for childbirth and other maternal care related expenditure have increased substantially between 2004 and 2014.

DISCUSSION

The salient findings of this research are as follows. First, institutional delivery – even after controlling other potential confounding variables – has increased by 11.73 times in Bihar between 2004 and 2014, while delivery in private facilities declined as much as by 90% compared to public facilities in the same period. Secondly, the JSY has been successful, particularly in bringing pregnant women in public facilities for delivery. We found that 96% increase in delivery in public institutions can be attributed to JSY, the year of survey, and omitted variables, of which year of survey plays a minimal role. Thirdly, although the OOPE on all three components of maternal care increased by 13% compared to the pre-NRHM period, the OOPE on institutional delivery in the post-NRHM period in public facilities declined by 30% even after controlling for a range of confounding variables. Finally, the OOPE on maternal healthcare in private facilities in the post-NRHM period experienced a quantum jump in the resource-poor state of Bihar.

Our study, however, points out a significant inequity regarding the choice of providers in the utilisation of maternal healthcare in Bihar. Women belonging to the urban, educated, affluent sections, and upper-caste Hindu households are more likely to opt for institutional delivery in both public and private facilities, compared to their rural, non-literate, poor, Scheduled Castes/Tribes, and non-Hindu counterparts.

These findings reiterate concerns related to quality of care in the public facilities and affordability of services in the private facilities (Ghosh *et al.* 2015, Mohanty and Kastor 2017). It may also be noted that though the uptake of ANC and institutional delivery increased significantly in public facilities, the utilisation of all three maternal healthcare services did not increase commensurately, neither in public nor in private facilities. This raises questions about the status of continuum of care of maternal health care services in Bihar, voiced in other studies (McDougal *et al.* 2017), and underlines the need for reorganisation of the scope of JSY in the future.

Our findings also suggest that although the OOPE on institutional delivery declined in public facilities in Bihar during the study period, an overall increase in OOPE on institutional delivery was entirely driven by manifold increase in OOPE in private facilities. This is consistent with the trend observed at the national level (Mohanty and Kastor 2017, Goli *et al.* 2016). Further, the OOPE on ANC and PNC has increased in the post-NRHM period, even in public facilities. This possibly indicates a rise in the cost of transportation, non-availability of drugs and diagnostic tests, and other informal payments in such facilities in Bihar. The overall increase in OOPE on delivery care may be attributed to the fact that a significantly higher proportion of caesarean sections are conducted in private facilities in Bihar, compared to public facilities (Mahapatra *et al.* 2018).

Based on the present findings, it may be concluded that the NRHM has been effective in Bihar in augmenting the utilisation of maternal care services and reducing OOPE on institutional deliveries in public facilities. Ensuring horizontal equity and continuum of care remain major challenges before the state. The latter may be addressed if the cash incentive under the NRHM to providers and service recipients are provided only if continuum of care is fulfilled. Further, private healthcare providers should be regulated in regard to pricing and quality of care, which in turn necessitates the vigorous implementation of Clinical Establishment Act (CEA) in Bihar (Keshri 2018). Additionally, provisioning of transportation to public facilities to ensure better access, ensuring availability of drugs and diagnostics tests within public facilities, and improvements in the quality of care would be essential for optimal utilisation of public facilities.

NOTES

1. National Rural Health Mission (NRHM) was launched in 2005 to provide affordable healthcare in rural areas, improve healthcare quality, and reduce maternal and infant mortality. In 2013, the mission was rebranded as the National Health Mission (NHM) with two components, NRHM and National Urban Health Mission (NUHM).
2. In India, the eight socioeconomically backward states of Bihar, Chhattisgarh, Jharkhand, Madhya Pradesh, Orissa, Rajasthan, Uttaranchal, and Uttar Pradesh – referred to as the ‘Empowered Action Group’ (EAG) states – lag behind in terms of demographic transition and have the highest infant mortality rates in the country.
3. *Janani Suraksha Yojana* (JSY) is a safe motherhood intervention, launched in 2005 under the National Health Mission. It is being implemented with the objective of reducing maternal and neonatal mortality by promoting institutional delivery among poor pregnant women.
4. OOPE is defined as the expenditure incurred by a woman during the uptake of different components of maternal care net of reimbursement.
5. The study was supported by a grant from the Bill and Melinda Gates Foundation.
6. The process of splitting a component of a statistical model into its constituent parts by using certain statistical techniques.

Women Empowerment Through Jeevika Programme in Bihar

Sanjay Kumar Kushwaha*

INTRODUCTION

This policy note examines the cultural impact of an anti-poverty development intervention, *Jeevika*, in one of the poorest and most patriarchal parts of India (rural Bihar). We try to understand the process by which this intervention induced a cascading set of changes that led to the empowerment of women. Using three years of qualitative data from four villages in rural Bihar, we argue that *Jeevika*, by giving economically and socially disadvantaged women access to a well-defined network of people and new systems of 'knowledge', broke down long-standing normative restrictions and significantly shifted gender boundaries in these villages.

SIGNIFICANCE

Jeevika, a poverty alleviation project assisted by the World Bank and implemented by the Government of Bihar provides a particularly interesting venue for examining the relationship between development and culture for three reasons. First, primarily targeted towards women and structured to induce rapid economic and cultural change, *Jeevika* began operations in five districts in 2006 and is projected to cover all thirty-four districts of Bihar and 12.5 million households by 2022. A project of this size gives us the opportunity to understand how large-scale cultural change can be brought about. Second, *Jeevika* operates in rural Bihar, a particularly 'hard context' – the state is one of the poorest in India, the population is almost 50% illiterate, and gender and caste hierarchies are oppressive – making cultural change very hard. Third, the quantitative analysis of Phase I of *Jeevika* suggests that it had considerable impact on women's empowerment measured as physical mobility, participation in decision-making, political participation, and confidence in undertaking collective action - overall, suggesting that, compared to *Jeevika*'s success in achieving its targeted economic impacts, its social impact on achieving women's empowerment were "substantially deeper". In this paper we dig further to ask – what are the *processes* of change with respect to culture and gender that remain invisible in the quantitative study, but result in the social impact captured by it.

ABOUT THE PROJECT

Jeevika or the Bihar Rural Livelihoods Project, is a community-based anti-poverty intervention of the Bihar government. It was initiated in 2006 by a low-interest loan and "technical assistance" from the World Bank to the Government of Bihar. The intervention's main economic objective was livelihood expansion and poverty alleviation. It also aimed to establish self-managed institutions for a majority of participant households – these were the SHGs (self-help groups). The target population was women from the poorest of poor families. *Jeevika* mobilized them into bankable

*Research Scholar, Department of Economics, Jai Prakash University, Chapra (Bihar)

women's (SHGs) of 10-15 women. They were then federated into Village Organizations (VOs), a group of 10-15 SHGs, and finally into Cluster-Level Federations (CLFs) that spanned 35-45 VOs. The project was first piloted in six districts in 2006. It is expected to be in operation in all thirty-eight districts of Bihar by 2022, covering 12.5 million households.

Methodology

The four villages (two treatment and two control) studied here are a subset of a sample of four hundred villages (two hundred treatment and two hundred non-treatment) that were the subject of a survey in 2011 conducted across four thousand households. The survey asked retrospective questions on changes observed by respondents between 2006 and 2011. We used propensity score matching methods to match two pairs of treatment and control villages and tracked them over three years (from 2011 to 2015) by collecting qualitative data to understand the process of change. For the purpose of keeping their identity anonymous, we have named the villages Ramganj (treatment) and Virganj (control), both in Madhubani district and villages Saifpur (treatment) and Bhimpur (Control), both in Muzaffarpur district (see table 1). This allows us to compare the village with the intervention with its "untreated" statistical clone, allowing us to draw causal inferences about effects induced by *Jeevika*.

Qualitative data were collected through a variety of methods: a) personal interviews (open-ended structured and unstructured) and conversations with program participants and non-participants; b) focus group discussions with participants and non-participants; c) passive observation of group meetings, trainings, workshops, mobilization drives and interactions at several levels (village, block, district); d) structured interviews with *Jeevika* staff at all levels in all villages; and finally e) interviews and focus groups with men and other key stakeholders in the village (religious heads, village council members, moneylenders, subsidized food shop dealers, landlords, and other public officials). The interviews, observations and focus group discussions were guided by a set of themes that were modified throughout the data collection. The interviews were conducted in the local language (Hindi and Maithili) by researchers, transcribed in English, and coded in QSR NVivo (a qualitative data analysis software). During the coding, some themes were preselected to match the themes of the questions asked, but we also allowed themes to emerge from the data in an inductive mode. These multiple cycles of data, coupled with the matched experimental design, allow us to understand cause-effect relations and the mechanisms of change over time.

Argument

We find that, by giving women privileged access to a) *symbolic resources* (that facilitate the formation of a new identity anchored in the SHG, rather than caste or kinship), b) *physical resources* (such as group money, access to credit and passbooks), and c) an associated *institutional environment* (SHGs, VOs, CLFs, etc), *Jeevika* cultivated new cultural competencies and capabilities that defied the traditional conventions of gender. Combined together, they give economically and socially disadvantaged women access to a well-defined network of people (women cutting across caste and religious boundaries, and both within and outside the village) and access to new systems of 'knowledge' with which they can challenge old generationally transmitted cultural systems that are more concerned with preserving boundaries rather than disrupting them. These changes manifest themselves most dramatically in the process of collective arbitration – as more women enter spheres of activity outside the household and participate in civic, political and financial institutions they *further* break down long-standing normative restrictions that were constitutive of the symbolic boundary of

gender, thereby significantly changing both men's *and* women's ideas of what it means to be a woman. Figure 1 shows this argument in a diagram.

Data Analysis

Greater mobility

In both treatment and control villages, traditional restrictions placed on women were getting relaxed due to increased male out-migration, which resulted in greater exposure to comparatively egalitarian ideologies. Also, the absence of migrant men had in some cases opened up scope for women to fill in gaps in local labor markets (as agricultural laborers) and compelled them to step into the public sphere (of markets and local institutions) when needed for their household. Local democratic politics had also created scope for women to participate in village-level politics through casting their ballots, attending discussions in village assemblies, and running for political office.

Beyond these organic changes, in the treatment villages *Jeevika* was able to induce a process of more sharply accelerated change. By forming women into SHGs, *Jeevika* had been able to expand the framing of women's identities from being exclusively based on the conventional categories of kinship and caste to include new collective groupings that were meant to transcend traditional social boundaries. The conceptions of '*gareeb didi*', poor woman/ sister, and '*saksham didi*', capable woman/ sister, were propagated by the intervention as *symbolic resources* that could facilitate a new form of solidarity exclusively among women and that could propel women forward, breaking through the shackles of normative injunctions.

Moreover, *Jeevika* infused the environment within which women lived with new elements: *physical resources* such as group money, collections for loan repayments and mandatory savings, that women got to regularly handle, count and account for (even though within the household they may not have control over or handle the loan monies); and passbooks to keep track of money. The *institutional environment* was radically transformed with the creation of new entities: women's groups; village organizations; and the cluster federation, each inaugurating institutional spaces by instituting weekly and semi-monthly meetings. Women's access to existing financial institutions, like banks, had also opened up. The rituals of these new institutional spaces – singing the group song, manner of introduction – aimed to serve multiple purposes: to dis-embed identity from caste and kinship and anchor it in the group and to inscribe new values and meanings. While some practices entailed physical modifications and habituations – how to conduct oneself in a meeting, when and how to sit, when to stand, how to articulate one's claims and arguments – other practices, like handling money, had cognitive effects. Thus, participation in *Jeevika* led to cultivation of new cultural competencies and capabilities.

By formally restricting microcredit to women (even though these loans were transferred within the household by women to men), this intervention created an invaluable opportunity for women to participate (more) equally and to be acknowledged as equally competent to similar men at a socially valued task. This task was not simply to access money in the form of loans (because simply accessing loans does not require much skill and one can access loans from money lenders) but the associated institutional task of managing credit at the group level, including taking financial decisions on the disbursement of group loans, managing repayments, and the general financial management of the groups. These tasks were perceived in this context as masculine tasks, because they required circulation in the public world of institutions, broad based interactions and being mobile, and a certain type of cognitive ability, capacities that women were typically thought to be deficient in.

Greater political participation

Over time, these influences instilled new preferences and dispositions, which were most evident from the instances of collective arbitration by the women. The most dramatic transformation of

preference and dispositions were observed in a select group of these women who had developed the aspiration to enter mainstream political institutions. That this had happened without any institutional encouragement or support (policy of political non-interference) was a testament to the causal influence of changed preferences and dispositions as a result of being habituated into the meanings and values promoted by the intervention and that infused the physical objects, symbolic resources, and the institutional spaces created by it.

As more women entered spheres of activity outside domesticity and the household and participated in civic, political and financial institutions they broke down long-standing normative restrictions that were constitutive of the symbolic boundary of gender. Conceptions of women as “womanly” (coy, docile, incapable) and men as “manly” (the antithesis) were challenged and new conceptions were expressed. Initially these new conceptions were often cloaked in sarcasm and ridicule. But, as the intervention progressed, politically powerful men had started treating women SHG members as a group to be contended and negotiated with (even if initially for winning their en bloc vote). Men had thus yielded to the identity of women as SHG-members as separate from their old caste and family identities (see Figure 1 for a summary of the main tenets of the argument).

Uneven nature of change

Change of gender norms in the treatment villages was a vital contribution of this intervention and one that had happened even in the absence of any significant poverty reduction impact. But this process of induced change was an uneven and contentious one, with women who were at the vanguard of change facing the bulk of the abuse and disapproval. Importantly, changes in norms were not uniform, and there were class and gender differences in the pace of change. Compared to upper castes, lower castes were less immune from change because of their economic needs, which often forced the men to migrate and the women to perform the role of household heads and to participate in such development interventions. Sometimes, norms changed faster among women (barring class differences) than among men when women were at the frontline of new discursive messages from development interventions, messages that reinterpreted the meaning of actions. Among men, husbands of joiners had become gradually open to altering their normative expectations about gendered behavior through the course of their wives’ participation in the intervention compared to husbands of non-joiners and men in control villages. Whether these normative changes can sustain beyond the time period of the intervention is a question that cannot be answered with any certainty. Indeed there are plenty of historical examples from countries like Iran, Afghanistan, Nepal, and Sri Lanka where women broke out of normative restrictions to participate shoulder-to-shoulder with men in revolutions and civil wars for decades, only to have their rights and freedoms from pre-revolutionary and revolutionary periods revoked and cast back to conventional lives and sidelined from political institutions after successful revolutions.

REFLECTIONS

In *Jeevika* the process of normative change occurred iteratively by the collective violation of classical behavioral injunctions on women, which were for the most part tolerated without public sanctioning (although there are cases of household-level opposition and violence) because of the lure of the financial incentive of less expensive credit, which led to the gradual receding of the symbolic boundaries of gender. Internalized schemas relevant to gender, i.e. notions of women’s worth that had implications for women’s status in society, were seriously challenged by the intervention.

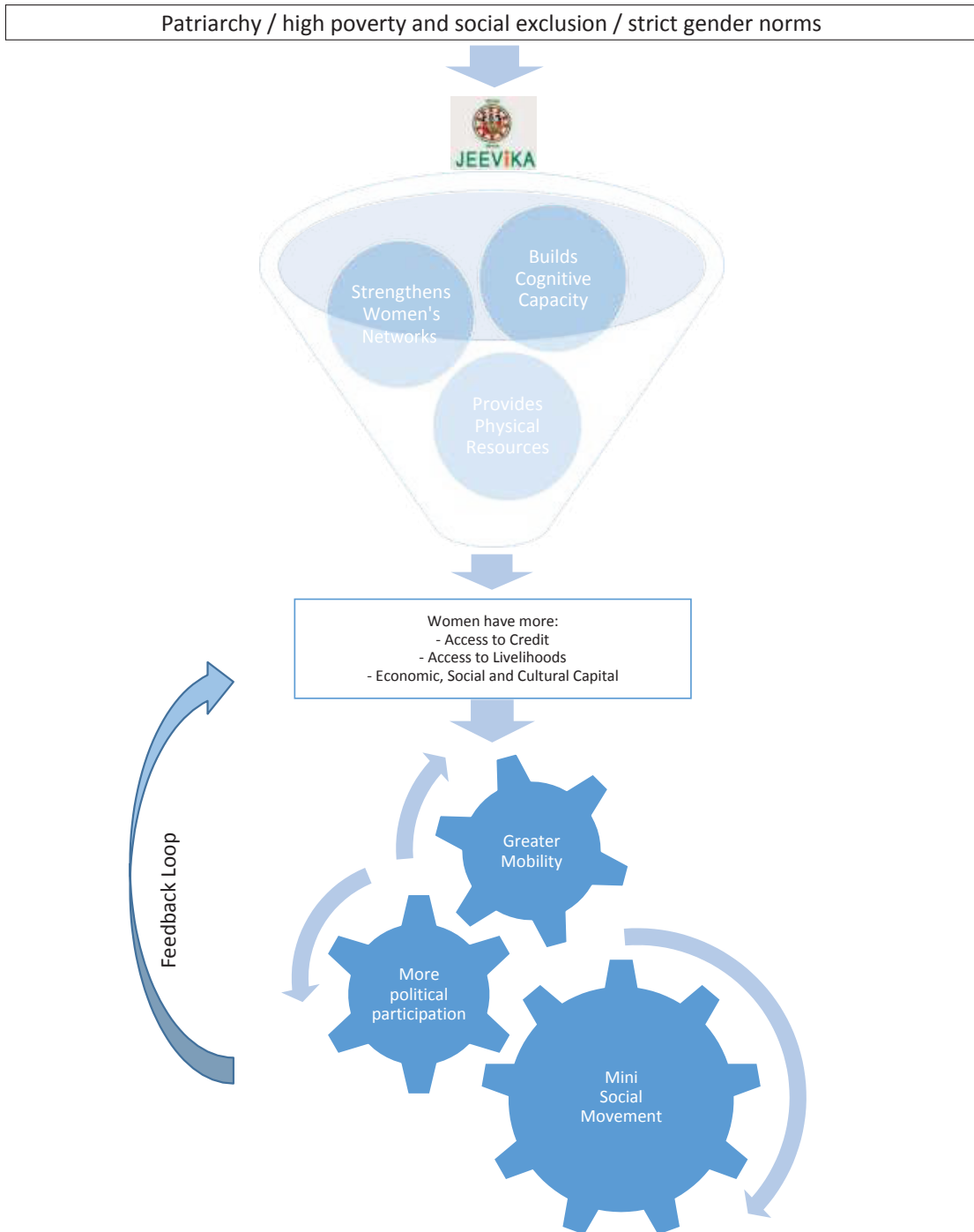


Figure 1: How Jeevika Induces Culture Change

Women in Bihar

Sanjay Kumar Kushwaha*

According to the National Human Development Report 2001, at the national level, Gender Equality Index (GEI) increased from 62% in the early 80s to 67.6% in the early 90s. Implied that on an average the attainments of women on human development indicators were only two-third of those of men. The Report further says that in the 90s, Himanchal Pradesh had the highest equality rate, whereas Bihar was at the bottom and witnessed a decline in absolute terms over the earlier period. In general, women were better off in the Southern India than in the Indo-Gangetic plains comprising mainly the States of Bihar and Uttar Pradesh. States like Tamil Nadu and Andhra Pradesh in the south and Haryana and Jammu Kashmir in the north have made considerable progress in improving the status of women. The Report further asserts that, in general, states that have done well in improving their female literacy levels are also the ones that have substantially improved their gender equality. And, on the whole, gender disparities across the states have declined over the period.

Table-1: HDI and GDI for major states

STATE	A.K.		HDI				GDI (1992-93)	
	Value	Ranking	Value	Ranking	Value	Ranking	Value	Ranking
SHIVKUMAR								
1997 HDR of					1997 UNFPA (1992-93)			
South Asia 1997								
Value		Ranking	Value	Ranking	Value	Ranking	Value	Ranking
Andhra Pradesh	0.400	9	0.393	9	0.413	9	0.371	8
Assam	0.379	10	0.374	10	0.395	10	0.347	10
Bihar	0.354	13	0.350	12	0.340	15	0.306	14
Gujarat	0.467	5	0.458	5	0.478	6	0.437	3
Harayana	0.489	4	0.476	4	0.506	5	0.370	9
Karnataka	0.448	7	0.442	7	0.468	7	0.417	5
Kerala	0.603	1	0.597	1	0.628	1	0.565	1
Madhya Pradesh	0.349	14	0.341	15	0.367	13	0.312	12
Maharashtra	0.523	3	0.513	3	0.555	2	0.492	2

*Research Scholar, Department of Economics, Jai Prakash University, Chapra(Bihar)

STATE	A.K.		HDI				GDI (1992-93)	
Orissa	0.373	11	0.368	11	0.372	11	0.329	11
Punjab	0.529	2	0.516	2	0.549	3	0.424	4
Rajasthan	0.356	12	0.354	13	0.371	12	0.309	13
Tamil Nadu	0.438	8	0.432	8	0.511	4	0.402	6
Uttar Pradesh	0.348	15	0.343	14	0.355	14	0.293	15
West Bengal	0.459	6	0.452	6	0.454	8	0.399	7
India	0.423	-	0.436	-	0.428	-	0.388	-

Source: (Human Development Report, 2001)

Bihar that ranks third in population among the major states of India has a very low ranking in terms of human development. In a comparison of 15 major states, the undivided Bihar ranked 12 in its Human Development Index (HDI) and 15 in Gender Development Index (GDI) (*Human Development Report, 2001*). These indices imply that Bihar, in terms of expansion and use of capabilities, for both men and women, depicts a dismal scenario. The consequence of being a low Human Development Index (HDI) state is far worse for women as reflected in the lowest GDI position of the state. It means that women suffer not only as a result of being from the families that have lower access to opportunities and capabilities but also on account of their gender which culturally deprives them of social and economic opportunities (*In Table 1 above is presented a comparison of HDI and GDI for different states of India*).

In Table 2 below is presented the general profile of women in Bihar as an introductory guide.

Table 2: Women in Bihar: A General profile

Aspects 1990s	Early 1990s	Late	Gender Gap	
			(a)	(b)
(a)		(b)	(a)	(b)
Life Expectancy at Birth (SRS)	58.0	58.2	1.9	2.0
Infant Mortality Rates/000 (SRS)	72	73	4.0	3.0
Sex Ratio (Decennial Census)/000	907	921		
Sex Ratio by age (NFHS)	0-4 yrs	981	953	
5-14 yrs	934	943		
15-29 yrs	1043	1062		
30-49 yrs	935	897		
50-64 yrs	879	890		
65+	792	700		

Aspects 1990s	Early 1990s	Late	Gender Gap	
All	907	921		
Literacy and Education				
Literacy Rates (Decennial Census)	22.0	33.6	29.4	26.8
% Completed Primary Schooling (NFHS)	7.3	9.3	6.2	4.9
% Completed High Schooling and above (NFHS)	6.6	6.1	14.0	13.5
% School attendance 6-10 years (NFHS)	38.5	55.0	22.1	14.3
% School attendance 11-14 years (NFHS)	37.9	52.6	30.9	19.8

Source: NFHS

SEX- RATIO

The sex ratio in Bihar since 1901 had always remained higher than that for the country as a whole till 1981. However, the sex ratio of 911 for the composite state of Bihar and 907 of divided Bihar, recorded in 1991, is much below the national sex ratio of 927. In the Census of India 2001, sex ratio of Bihar at 921 is still lower as compared to the national sex ratio which is 933. *In the Table 3* below we present the district wise sex ratio of the state since 1901 to 2001.

Table-3: District-wise Sex ratio in Bihar

Sl. No.	State/District	Sex - ratio (Number of females per 1000 males)										
		1901	1911	1921	1931	1941	1951	1961	1971	1981	1991	2001
1	2	3	4	5	6	7	8	9	10	11	12	13
1.	Bihar	1061	1051	1020	995	1002	1000	1005	957	948	907	921
2.	East	1022	1026	1004	985	976	1005	1005	942	925	883	898
Champanan												
5.	Madhubani	1056	1074	1051	1015	1036	1063	1056	991	982	932	943
8.	Kishanganj	962	963	941	936	949	863	873	907	922	933	940
9.	Vaishali	1089	1092	1079	1037	1048	1065	1069	1017	994	921	921

Source: NFHS

It can be clearly seen that the ratio has been favourable to females till 1961 except in the year 1931 when it came down to 995. After 1961, sex ratio has always remained unfavorable to females and the general trend during this period, over the decades, is that of decreasing sex ratio with exceptions of increases in 1961 and 2001. There has been an increase of 14 points in the sex ratio of Bihar at 2001 Census (921) as compared to 1991 Census (907). It can further be seen from the above table that Gopalganj, Siwan, Saran and Nawada are the districts where sex-ratio had always remained favourable to the females' right up to 1981. Siwan has continued this trend

even till 2001. On the other hand several other districts have registered a favorable trend till 1961 and thereafter the sex ratio has shown a declining trend. However, according to the 2001 figures, with the sole exception of Bhojpur all the other districts have registered an increasing trend. The situation of Vaisahali district in this regard has remained unchanged. Ironically, the sex ratio in the capital city of Patna (873) has been the lowest.

The urban and rural divide in sex-ratio is also striking. According to the 2001 Census the female-male ratio stands at 921 in rural areas and 844 in urban areas. As expected the lower presence of women in urban areas is due to the larger male in-migration for the purpose of wage employment. However, the female to male sex ratio records an improvement from 907 in 1991 to 921 in 2001. But the child sex-ratio displays an alarming drop. The sex ratio among the 0-6 years population has declined by 15 points over the decade (from 953 in 1991 to 938 in 2001). Prevalence of gender discriminatory practices such as infanticide, feticide, lack of nutrition and poor health care accounts for such skewed demographic balances. Further, the child sex ratio ranges from 885 to 974 among the districts of Bihar.

HEALTH

The consumption of a wide variety of nutritious food is important for women's health. This also has an important bearing on a woman's ability to work, especially in the context where major part of work constitutes physical labour. According to NFHS-3, women in Bihar consume vegetables most often. More than three-quarters of women consume vegetables on a daily basis. Pulses and beans are also part of the everyday diet for three quarter of women. On the other hand, very few women eat fruits, eggs, chicken, meat, or fish on a daily basis.

Women from scheduled castes, scheduled tribes, and other backward classes have relatively poor diets compared with the diets of other women. Women from scheduled tribes have a diet particularly deficient in dairy products. Poverty has a strong negative effect on the consumption of nutritious food. In general there is a high prevalence of nutritional deficiency among women in Bihar. Nutritional problems are particularly serious for women in SC/ST and Minority category, women employed by someone else or working on a family farm or in a family business. The standard of living is negatively related to chronic energy deficiency. Women from households with a low standard of living are more than two times as likely to have a low BMI (Body Mass Index) as women from households with a high standard of living. Currently married women are somewhat less likely than women who are currently not married to have a low BMI. According to NFHS 3, anemia is particularly high for women who are widowed, divorced, separated, or deserted, women from the scheduled castes, and women in the lowest wealth quintile; however, at least three out of five women are anemic in every population sub-group in Bihar.

Reproductive and Maternal Health Care

Women in Bihar tend to marry at an early age. 46% women in the age group of 15-19 are already married. Age at marriage is much lower in rural areas than in urban areas. In rural areas, one-half (50%) of women in the age group 15-19 are married, compared with only about one-quarter (24%) in urban areas. 59% of women who are now in the age group of 45-49 married before they were 15, compared with 24% of women in the age group of 15-19. Although this indicates that the proportion of women who marry young is declining rapidly, the majority of women in Bihar still marry before reaching the legal minimum age of 18 years. On average, women are five years younger than the men they marry. Early marriage inevitably leads to early child bearing. Early marriage and frequent childbearing naturally places a higher burden on woman's health. This is reflected in both

the low female-male ratios across districts and high maternal mortality rates in the state. Its impact on the unbridled economic participation by women can hardly be underestimated.

It must be further stressed that caste and community factor plays a very important role in determining women's health status. Socio-cultural and economic factors dictate the scale of women's entitlement and access to curative health care. This is quite apparent in the case of Schedule caste women with regard to the antenatal care. Antenatal care forms an important component of the Reproductive and Child Health programme and Safe Motherhood initiatives. Scores of SC women have their productive life shortened as a consequence of pregnancy and child birth related complications. According to the NFHS data over 70 % of the Scheduled Caste women received no antenatal check up at all. The corresponding figure for the non-scheduled population was about 50%.

Fertility and Family Planning

From the information provided in NFHS-2 and NFHS-3, a picture emerges of women marrying early, having their first child soon after marriage, and having two or more children in close succession by the time they reach their late-20s. At that point, about one-third of women get sterilized. The median age for female sterilization has been declining in recent years and is now 27.7 years. Very few women use modern spacing methods that could help them delay their first births and increase intervals between pregnancies.

EDUCATION

Education, according to NHDR (National Human Development Report) 2001, enhances individual's capacity to make best choices to improve their living condition. The process of education and attainments has an impact on all aspects of life. It captures capability of acquiring knowledge, communication, and participation in community life. Education has not only been an important precondition for sustained economic growth, both in the developed and the developing countries, but it has also played a critical facilitative role in the demographic, social and political transition of these societies. Male literacy rate is almost double (60.32%) the female literacy rate (33.57%) in Bihar, according to Census of India 2001. ***The sex-wise comparative literacy rates for males and females over last six decades (1951 to 2001) can be viewed in the table 4 below-***

Table-4: Literacy Rate 1951-2001

Year	Persons	Males	Females
1	2	3	4
1951.	13.49	22.68	4.22
1961.	21.95	35.85	8.11
1971.	23.17	35.86	9.86
1981.	32.32	47.11	16.61
1991.	37.49	51.37	21.99
2001.	47.53	60.32	33.57

Source: NSS

In Table 5 below, comparative literacy rates for males and females in the 4 districts of Bihar during 1991 and 2001 Censuses have been presented:

Table-5: Literacy rates by sex for State and the Districts of East Champaran, Vaishali, Madhubani & Kishanganj

Sl. No	State/District	Literacy Rate						Literacy Gap	
		Persons		Males		Females		1991	2001
1991			2001	1991	2001	1991	2001		
1	2	3	4	5	6	7	8	9	10
1.	Bihar State	37.49	47.53	51.37	60.32	21.99	33.57	29.38	26.75
2.	Purba Champaran	27.59	38.14	39.65	50.14	13.69	24.65	25.96	25.49
3.	Madhubani	33.22	42.35	48.49	57.26	16.75	26.56	31.74	30.70
4.	Kishanganj	22.22	31.02	33.12	42.80	10.38	18.49	22.74	24.31
5.	Vaishali	40.56	51.63	55.62	64.00	24.08	38.14	31.54	25.86

Source: NSS

Table-6: Districts in decreasing order of female

Literacy rates, 2001 Census		
Rank in 2001	District	Literacy Rate
1.	Patna	52.17
2.	Munger	47.97
3.	Rohtas	46.62
4.	Bhojpur	42.81
5.	Aurangabad	42.04
6.	Buxar	40.36
7.	Jehanabad	40.08
8.	Nalanda	39.03
9.	Kaimur	38.90
10.	Bhagalpur	38.83
11	Vaishali	38.14
12.	Gaya	37.40
13.	Siwan	37.26
14.	Begusarai	36.21
15.	Saran	35.74

Literacy rates, 2001 Census		
Rank in 2001	District	Literacy Rate
16.	Muzaffarpur	35.20
17.	Lakhisarai	34.26
18.	Sheikpura	34.13
19.	Gopalganj	32.81
20.	Samastipur	32.69
21.	Nawada	32.64
22.	Darbhanga	30.35
23.	Khagaria	29.62
24.	Banka	29.10
25.	Sheohar	27.43
26.	Jamui	26.92
27	Madhubani	26.56
28.	Sitamarhi	26.35
29.	Paschim Champaran	25.85
30.	Saharsa	25.31
31	East Champaran	24.65
32.	Katihar	24.03
33.	Purnia	23.72
34.	Madhepura	22.31
35.	Araria	22.14
36.	Supaul	21.02
37	Kishanganj	18.49

Source: NSS

Female literates as a percentage are found to be lowest in Kishanganj district (18.49). In the **table 8** on previous page districts of Bihar are arranged in decreasing order of females' literacy rate, during 2001 Census. It can be seen from the Table that the four districts comprising our research area, viz., the districts of Vaishali, Madhubani, East Champaran and Kishanganj stands at 11th, 27th, 31st and 37th position in respect to literacy rate of females.

EMPOWERMENT

The much talked about **Bihar Panchayat Raj Amendment Bill, 2006**, passed by the Assembly at the recently concluded budget session, can indeed be considered as a great step forward by the new regime in Bihar. Following the Bill, women are enjoying 50 % reservation in all posts of three-tier

Panchayati Raj system. The Bill aims at ensuring greater participation of women in developmental activities, as well as polity of the state. Effects of empowerment in the long run generally entails an enhanced work participation by women and the extent to which women enjoy autonomy, as measured by their participation in household decision-making, freedom of movement, and access to money they can spend as they wish. It further implies women's attitudes towards the acceptance of spousal violence under specific circumstances and their experience of physical violence.

AUTONOMY

Autonomy is a complex concept and it evades any definition and macro level data aggregation. In the case of Bihar, micro level studies reveal that 14 % of married women are not involved in any decision making and percentage of women not involved in any decision making is higher in south Bihar plains. Their access to money is also limited. The decision on what to cook lies with women in a majority of cases, however, their mobility outside the household and family is highly restricted, with only around 20% women not requiring permission to go to the market or visit friends/relatives, etc. Lack of autonomy has many implications such as low female work participation rate (FWPR), lower access to education and health and restrictions on involvement in public sphere.

The **table 7** presents the percentage distribution of ever-married women by person who are able to make specific household decisions.

Table-7: Household Decision Making

Household decision only husband household		Respondent	Husband only	Respondent with	Others in household only	Respondent with others in	Total %
Obtaining health care for herself		23.0	33.6	32.9	9.3	1.2	100.0
Purchasing jewellery or other items		6.9	25.6	49.2	16.0	2.3	100.0
	major			household			
Going and staying with her parents or siblings		8.2	22.6	52.2	15.1	1.9	100.0
How the money she earns will be used		N/A	N/A	N/A	N/A	N/A	0.0
How many children to have		N/A	N/A	N/A	N/A	N/A	0.0
Obtaining health care for herself		22.4	28.5	30.5	15.3	3.3	100.0

Household decision only husband household		Respondent	Husband only	Respondent with	Others in household only	Respondent with others in	Total %
Purchasing jewellery or other items		10.3	26.1	39.4	19.6	4.6	100.0
	major			household			
Going and staying with her parents or siblings		9.5	23.1	43.9	19.4	4.1	100.0
How the money she earns will be used		N/A	N/A	N/A	N/A	N/A	N/A
How many children to have		N/A	N/A	N/A	N/A	N/A	N/A
Obtaining health care for herself		22.5	29.2	30.9	14.4	3.0	100.0
	major			household			
Purchasing jewellery or other items		9.8	26.1	40.8	19.1	4.3	100.0
	major			household			
Going and staying with her parents or siblings		9.3	23.0	45.1	18.7	3.8	100.0
How the money she earns will be used		N/A	N/A	N/A	N/A	N/A	N/A
How many children to have		N/A	N/A	N/A	N/A	N/A	N/A

Though NFHS-3 data does not indicate about the economic autonomy enjoyed by the women as reflected through the way they use money they earn. However, according to the NFHS-2 data it was reported that only half of the women who earn decide on their own as to how the money will be utilised, and more than one-fifth (22 %) made this decision together with their husbands or other members of the household. One-fourth of these women (26 %) were not involved in decisions about how the money they earn will be used. The proportions who did not participate in such decisions were higher in rural areas (27 %) than in urban areas (15 %).

VIOLENCE AGAINST WOMEN

It has been brought out that Crimes against women (CAW) is increasing much more than overall crimes at the all India level. This holds true in the case of Bihar too. The category of crime, which contributes most for the increase, is cruelty at home (One third of CAW) by husband and his relatives (Section 498A IPC). The other category where reportage has been increasing for the state of Bihar is dowry deaths. In 1996, only 390 cases were registered, this has increased to 807 dowry death cases in 1999

Table-8: Crimes against Women Reported from Bihar - 1995 to 1999

Year	1995	1996	1997	1998	1999
Rape	744	848	830	833	809
Kidnapping/ Abduction	557	645	682	751	652
Dowry Deaths	0	390	616	791	807
Molestation	0	336	367	236	248
Sexual Harassment	0	80	38	73	30
Torture	0	491	701	1025	1005
CAW	1301	2790	3234	3709	3551
Total	78459	86162	87219	84198	87050

Source: NCRB

INSTITUTIONAL EFFORTS TO REACH WOMEN

(a) Efforts made by the government

It is important to note that there is no specific department for women and child development in the state and that most of the women specific and pro-women programmes are carried out by the Department of Welfare. There are nearly 40 schemes that can be classified as women oriented. Out of these, the Department of Welfare is undertaking half of these programmes. Then comes the Department of Health and Family Welfare, which has approximately 10 women oriented programmes. There are some other departments such as Education, Agriculture, Rural Development, and Science & Technology, which also have few women oriented programmes. Most of the programmes are related to education followed by protective and welfare services. A major decline can be seen in the entrepreneurship development programmes by the Department of Labour.

Although the allocation for women entrepreneurship programmes at All India level has had a substantial increase of 38 percent in 2000-2001, in Bihar much of programme witnessed a decline for the same period. Several other schemes which has had an indirect impact on the socio-economic conditions of women are schemes for poverty alleviation and employment generation. Similarly, several other programmes such as pension schemes, rehabilitation and welfare programmes, water supply and sanitation etc. being administered by different

departments have a strong impact on women's welfare. The two important pro-women schemes run by the department of urban development are *Swaran Jayanti Sahri Rojga Yojna* and *Bhangi Mukti Abhiyan*, and both suffer from lower budgetary allocations. The participation of other departments is from negligible to nil. Hence, it seems that far from being mainstreamed, gender equality concerns continue to be the responsibility of a few departments.

One stream of government programme focuses on providing either loans to groups who divide it amongst their members according to their absorptive capacity or imparting short duration skill training which will eventually result in enhanced earning capacity through self-employment and cooperative formation. This has resulted in the proliferation of many SHGs (Self Help Groups) all across the state.

(b) Non-Government Efforts

Bihar has a tradition of voluntary, non-governmental initiatives in the field of social development. The 1990s has seen a proliferation of NGOs attempting to, in most cases work on rural and urban development issues while also including a gender component in their objective. The number of women that NGOs collectively reach is, however, small.

ECONOMIC EMPOWERMENT

Given the link between gender and poverty, it has been accepted that economic empowerment provides a stronger scaffold to build the overall empowerment of women extending to social and political spheres. The SHG model of economic empowerment with all its limitations has proved to improve women's physical mobility and autonomy to a considerable extent besides providing income security to the household during contingencies. The state needs to take a more pro-active role in promoting such groups, facilitating linkages with banks, institutionalizing groups at various levels through apex bodies etc.

Women's Access to Land and Other Resources in Bihar

Women are intrinsically linked to land, being the producers and providers of food and nutritional security and managers of natural resources such as water, fuel-wood and fodder. In Bihar, rural women are increasingly becoming the primary cultivators, as men switch to non-farm activities or migrate in search of greener pastures. Yet, as in many rural societies, patriarchal customs debar women from holding land in their own names. The lack of a title becomes an obstacle when women apply for credit to improve their holdings and yields. Women are often bypassed in land reform or redistribution processes. When people are relocated after displacement by government projects, women's land rights are rarely acknowledged. Even when such rights are recognized and women are granted land, powerful local interests usually ensure that they cannot till it, particularly if the women belong to traditionally discriminated groups. In the personal sphere, discrimination is the norm within families and people routinely dispossess daughters, giving the land to sons. Widows, divorcees, deserted wives, unmarried and other single women rarely get land rights and they are always dependent upon their families.

Self - Help Groups (Shgs) in Bihar

At present, certain progress is visible in Bihar towards mobilization of rural poor women through the SHGs. A study conducted by UNICEF suggests that there are a limited number of SHGs in the state of Bihar. Moreover, 60 % of even these limited numbers of SHGs are concentrated in the 7 districts of Patna, Nalanda, Gaya, Jamui, Muzaffarpur, Khagaria and West Champaran. Among four districts under purview in the present study, while Kishanganj and East Champaran did not report any SHG very few were reported from Madhubani and Vaishali districts. From the above

discussion we can conclude that basic thrust of development efforts in Bihar should be aimed at removing social backwardness and gender disparity without waiting for economic growth which would require much longer efforts. Indeed, one could expect the development process to be faster in Bihar, if through properly designed projects, one could improve the status of women in Bihar and empower them, which would then remove much of the social backwardness and finally, it will create the social capital for the development to be a self-sustaining process.

Table-9: Number of SHGs Promoted by responding Mother NGOs

Number of Mother NGOs	Number of SHGs		
TYPE OF SHGs	Listed	Responded	Promoted by
responding Mother NGOs			
DISTRICT			
PATNA	17	17 (100.0)	745 (14.8)
NALANDA	25	15 (60.0)	402 (8.0)
BHOGPUR	11	5 (45.0)	170(3.4)
ROHTAS	15	8953.0)	207 (5.9)
GAYA	14	10 (63.0)	416 (8.3)
NAWADA	23	16 (69.0)	125 (2.5)
JAMUI	12	7 (58.00)	159 (3.2)
KHAGARIA	15	13 (86.0)	245 (4.9)
BANKA	11	11 (100.0)	93 (1.9)
SARAN	13	9 (69.0)	121 (2.4)
MUZAFFARPUR	14	14 (100.0)	573 (11.4)
SITAMARHI	6	6 (100.0)	270 (5.4)
W.CHAMPARAN	6	6 (100.0)	549 (10.9)
DARBHANGA	7	4 (57.00)	131 (2.6)
MADHUBANI	21	10 (48.0)	160 (3.2)
SAMASTIPUR	11	6 (51.0)	94 (1.9)
SAHARSA	5	5 (100.0)	116 (2.3)
OTHER	81	26 (32.0)	359 (7.1)
DISTRICTS			
ALL SHGs	302	188 (62.1)	5027 (100.0)

Source: ADRI

Social and Psychological Causes of Criminal Behaviour

Rambha Kumari*

ABSTRACT

When crime is really the merchandise of rational alternative, the bad person commits the act for reasons of non-public gain or gratification. His or her behavior is beneath his or her complete management. however and to what degree, however, may different factors get into and compromise his or her ability to exercise free will? The response to the current question has are available in the shape of incalculable theories, every purporting to elucidate criminal behavior in terms of specific factors. loosely, criminal behavior theories involve 3 classes of factors: psychological, biological, and social. In fact, human behavior is that the product of advanced interactions among several factors. instead of providing a outline of myriad theories, this analysis paper focuses on the most factors concerned within the expression and suppression of criminal behaviors. As objectively scientific as we tend to could prefer to regard them, theories of criminal behavior square measure hardly resistant to the vicissitudes of the prevailing culture. Indeed, the cycles of biological vs. psychological vs. social science theories of crime appear to rise and fall in waves, consistent with the prevailing political and economic climate of the days.

Keywords: *the offender, rational choice, criminal behavior, sociological theories of crime*

INTRODUCTION

There is a vast criminological literature that identifies a wide range of environmental factors as causally linked to criminal behavior. These include developmental, social, and economic factors. For example, poverty is often cited as a socioeconomic condition linked to crime. The stress, strain, and frustration experienced by those lacking the financial resources to meet their needs and fulfill their desires through legitimate means renders them more inclined to commit crime than affluent individuals with ready access to legitimate means. Poor nutrition is an especially troubling aspect of poverty.

Nutritional deficiencies can result in or exacerbate problems such as learning disabilities and poor impulse control. Such cognitive dysfunctions have been identified as precursors to delinquency and adult criminality. Thus, one's position in the social structure of society—as operationalized by variables such as level of income—can be a significant contributing factor in the criminal activities of some individuals by virtue of its impact on brain function.

SOCIAL FACTORS IN CRIMINAL BEHAVIOR

There is a comprehensive literature on a "cycle of violence" that predisposes victims of childhood abuse and neglect to participate in adult violent actions, thus transmitting violence from one generation to the next. The consequences of being bullied during formative years have been studied by other studies, showing that victims in turn become victimizers. These neurobiological consequences may

*Research Scholar E-mail: rambhakumari119@gmail.com

be an adaptive mechanism for living in that dangerous environment. In general, it is an individual's psychological and biological nature that dictates how and to what degree his conduct is influenced by external forces. In order to make a person more or less vulnerable to adverse social conditions, psychological and biological factors interact. This should not be taken to minimise the impact on criminal activity of social influences, since they actually play an important role, but rather to illustrate the fact that the influence they have depends on psychological and biological activity.

PSYCHOLOGICAL FACTORS IN CRIMINAL BEHAVIOR

By virtue of the requirement of *mens rea*, criminal courts are concerned with the psychological elements that underlie criminal behavior. Research teaches, however, that the psychology of the offender emanates from a biological substrate. And, one's psychological states affect various aspects of his or her biology. Mind and brain have an indelible connection. An individual's psychological state or mental status—whether at the scene of a crime or in a courtroom—involves biological mechanisms. The relationship between criminal behavior and mental disorder is complex. Individuals who experience false perceptions are considered to have a major mental disorder, or psychosis. Recent research has linked schizophrenia, a psychosis, to an increased risk of committing violent crime—usually against significant others in their lives. While it is understandable how someone who is out of touch with reality can harm another as a result, the majority of psychotic individuals do not commit crimes. The concept of emotional intelligence holds considerable promise for a more comprehensive understanding of chronic criminality. Those with low emotional intelligence—people who lack insight into their own behavior and empathy toward others—are less inhibited about violating the rights of others. Injury to the (ventromedial) prefrontal cortex has been linked to the onset of reckless and antisocial behavior (including violence) without remorse, suggesting our moral compass is rooted in specific frontal lobe functions that for the chronic offender are defective.

Research on hallucinations in schizophrenics reveals that the basis for their false perceptions is brain dysfunction. For example, the occurrence of auditory hallucinations coincides with the firing of neurons in brain regions normally involved in processing sound—but in this case in the absence of sound. Instead of asking the nebulous question, “Why does a schizophrenic hear voices?” we are now positioned to ask why neurons in particular regions of the brain misfire in the absence of external stimuli. Thus, the impetus for violence in a schizophrenic individual—when he attacks because the voices say the other person intends harm—appears to arise out of aberrant neural activity.

Of the mental disorders currently recognized by clinicians and researchers, most are not deemed psychoses. Rather, they are disorders of personality, impulse control, and the like. Psychopathy, a form of personality disorder, is exhibited as a cluster of specific affective, interpersonal, and socially deviant behaviors. Although psychopaths make up only about 1% of the general population, they are estimated to comprise approximately 25% of prison populations. The nature of their disorder—lacking remorse for their antisocial actions and emotional empathy for those whose rights they violate—makes them especially well suited for criminal activity. While most psychopaths are not criminal (nonetheless behaving in ways that disregard consideration for others), of those who are, recidivism rates tend to be significantly higher than for non-psychopathic offenders.

BIOLOGICAL FACTORS IN CRIMINAL BEHAVIOR

The numerous and different social and psychological factors that expand the risk of criminal behavior are mediated by way of organic processes.

Proper food plan is quintessential to top-quality brain function. For example, complicated carbohydrates are broken down to make glucose—the basic gas for the brain. Many vitamins are

concerned in changing that glucose into energy. A deficiency in any one of these indispensable vitamins compromises talent function by using decreasing the on hand energy. The frontal lobes of the brain, responsible for rational thinking, organizing behavior, and moderating emotional impulses, require approximately twice the power as the more primitive regions. If power degrees are depleted, higher functions become impaired leaving lower talent undertaking uninhibited. Effectively, our emotions will have their way with us.

Beyond basic power needs, specific vitamins are required for the synthesis of neurotransmitters. It is, therefore, understandable how malnutrition compromises cognitive characteristic and, in so doing, allows antisocial and aggressive behaviors. Exposure to poisonous retailers in the environment such as pesticides and lead can lengthen or impair an individual's intellectual improvement and as a result have an effect on conduct and its regulation. In this regard, teratogens—factors that intervene with everyday embryonic development—have a specifically necessary role in predisposing some folks to a existence of crime. The legacy of cognitive deficits and behavioral sequelae due to, for example, prenatal exposure to drugs and alcohol, are properly documented in the literature.

Hormones function in lots the same way as neurotransmitters barring they are launched into the bloodstream alternatively than between neurons. Abnormally high ranges of circulating testosterone—a intercourse hormone associated with the power to dominate and compete— have been linked to excessive aggression. The phenomenon of “roid rage” in body builders who use anabolic steroids and showcase extreme and uncontrollable violence attests to this effect. Such observations, as properly as lookup on stress hormones correlating, for example, low ranges of salivary cortisol with severe and chronic aggression, show the importance of hormonal contributions to crook behavior.

A variety of methodologies—examining twins and adoptees, chromosomal abnormalities, and DNA polymorphisms—have been applied to evaluate the function of genetic factors in criminal conduct and aggression. Although it is no longer expected that a “crime gene” will ever be discovered, it is clear there are genes that code for particular neurochemicals linked to one of a kind kinds of behavior. To illustrate, a specific—albeit rare—mutation has been identified in a gene that holds the recipe for a unique enzyme recognized to affect the degree of sure neurotransmitters in the brain.

This defect has been linked to a propensity toward impulsive and excessive aggression and violence in every of the guys of the family who has this mutation. Neurotransmitters are accountable for conducting electrochemical impulses within and throughout areas of the intelligence (as nicely as for the duration of the body). Many psychiatric disorders have been linked to imbalances in neurotransmitter systems. Serotonin is worried in a wide variety of talent functions, along with legislation of emotional states. In laboratory experiments, lowering the serotonin ranges effects in the onset of impulsive and aggressive behavior. That abuse and neglect in childhood can end result in permanently reduced stages of serotonin is consequently an important commentary for our perception of the etiology of violence.

CONCLUSION

Studies in behavioral genetics support the contention that aggressive behavior is moderately heritable. Aggressive behaviors confer advantage to the males of a species as they compete for territory and access to females. Evolutionary psychology holds that aggressive traits that increase reproductive success will be selected and carried across successive generations. Primatologist Ronald Nadler contends that sexual aggression is inherent in the behavioral repertoires of great apes—animals that are among our closest biological affiliates. Human males, as a function of their drive to procreate, would be naturally inclined to have sex with as many different partners as possible, maximizing the probability that the species will survive and also that their own genes will

be transmitted to the next generation. The fact that most males do not rape is in large measure due to their socialization; rapists are males who have not been effectively socialized in this regard. We can appreciate through this example how specific psychosocial risk factors (e.g., low intelligence) can increase the probability of criminal and violent behavior—in this case, rape.

REFERENCES

- Sharma H, Chandola HM, Singh G, Basisht G. Utilization of Ayurveda in health care: An approach for prevention, health promotion, and treatment of disease. Part 1-Ayurveda, the science of life. *J Altern Complement Med* 2007;13:1011-9.
- Charaka S, Sharma, Priyavrat, translators. Charak. *Sarira Sthanam*, 36. vol. 1. Delhi: Chaukhambha Orientalia; 1981. p. 435.
- Srikantha Murthy KR, translator. Vagbhata's *Astanga Hrdayam*. 3rd ed, vol. 1. Varanasi: Krishnadas Academy; 1996. p. 181. *Sutrasthana*, 74-79.
- Sharma PV, Caraka Samhita. Varanasi: Chowkhamba Prakashan; 1981. p. 434-9.
- Mukherjee R. Concept of personality type in West and in Ayurveda. *Indian J Trad Knowledge* 2007;6-3:432-8.
- Paranjpe AC. Challenges and opportunities for Indian psychology. In: Joshi K, Cornellsen M, editors. *Consciousness, Indian Psychology and Yoga*. New Delhi: Centre for Studies in Civilizations; 2004. p. 205-23.
- Hankey A. A test of the systems analysis underlying the scientific theory of Ayurveda's Tridosha. *J Altern Complement Med* 2005;11:385-90.
- Bhushan P, Kalpana J, Arvind C. Classification of human population based on HLA Gene polymorphism and the concept of Prakriti in Ayurveda. *J Altern Complement Med* 2005;11:349-53.

Psychoanalytic Approach of Personality

Rambha Kumari*

ABSTRACT

As a human being each one of us appears certain particular designs of considering, feeling and acting. They speak to who we are and give the premise of our interaction with other people. In existence we regularly discover individuals who are called “aggressive”, “jolly”, “happy” and so on. These are impressions of individuals which we carry with us and utilize whereas connection with them. It is in this sense that we regularly utilize the word ‘personality’. The consider of identity has too pulled in the consideration of clinicians and they have created different hypotheses of identity. Too, they have created certain instruments to evaluate people’s identity. The identity related data is utilized in selecting people for different occupations, giving direction to individuals within the require of mental offer assistance, and mapping their potential. Hence, the ponder of identity contributes to diverse zones of human conduct. The interesting impression that a individual makes on others is similarly imperative in understanding persona

Keywords: *aggressive”, “jolly”, “happy, people’s personality, theoretical perspective.*

INTRODUCTION

Identity is the more or less steady and persevering association of a person’s character, disposition, judgment skills, and physical make-up that decide his one of a kind alteration to his environment... Identity as a rule alludes to the unmistakable designs of conduct (counting contemplations and feelings) that characterize each individual’s adjustments to the circumstances of his life or her life. Identity is as a rule characterized as individual’s one of a kind and moderately steady designs of conduct, considerations and feelings. Understanding identity has demonstrated to be a troublesome and challenging errand. It’s so complex that no single hypothesis is able to cover the entire identity. The diverse speculations approach the structure and working of identity from diverse positions. There are numerous hypotheses of identity each gives diverse answers almost the way they treat the issues almost identity working. In specific, they give diverse clarifications approximately the part of conscious/unconscious variables, determinism/freedom in functioning, role of early experience, role of genetic factors, uniqueness/universality etc. In the present lesson you will learn about four major theoretical perspectives of personality. They include psychoanalytic, trait, humanistic and social-cognitive perspectives.

THE PSYCHOANALYTIC PERSPECTIVE

Established by Sigmund Freud, this hypothesis emphasizes the impact of the oblivious, the significance of sexual and forceful instinctual, and early childhood involvement on a individual. This hypothesis has been exceptionally compelling not as it were in brain research but moreover in scholarly circles, craftsmanship, psychiatry and movies. Numerous of Freud’ s thoughts have ended up portion and allocate of each day utilization. Freud begun his career as a neurologist. His hypothesis created within the course of his perceptions of his patients, as well as, self-analysis.

*Research Scholar E-mail: rambhakumari119@gmail.com

He used free affiliation to assist his patients recuperate overlooked recollections. Freud found that intellect is like an ice sheet and we have constrained cognizant awareness. Freud proposed that mental powers work at three levels of mindfulness.

Freud proposed that psychological forces operate at three levels of awareness:

1. Conscious level: The thoughts, feelings, and sensations that one is aware of at the present moment.
2. Preconscious level: It contains information of which one is not currently aware, however, they can easily enter conscious mind
3. Unconscious level: It consists of thought, feelings, wishes, drives etc. of which we are not aware. It, however, influences our conscious level of activity.

PERSONALITY DEVELOPMENT

Based on case-history of patients, Freud came to a resolution that character improvement happens through a grouping of psychosexual stages. In these stages the Id's delight looking for inclination centers around various territories of body. Psychogenetic model of improvement Freud (1900/1953) recommended that kid advancement continues through a progression of stages identified with physical turn of events, and that grown-up character is impacted by how emergencies are settled at each stage. Each stage is named after an erogenous zone, or zone of the body that can encounter joy from the climate. Unnecessary delight or dissatisfaction at any one phase can bring about the obsession of moxie and ensuing interruption to ordinary character improvement.

1. Oral stage (birth to year and a half) At the start of this stage kids are exceptionally reliant on their moms and get joy from sucking and gulping. Freud proposed that kids who become focused at this early oral stage get joy in adulthood from exercises, for example, gorging, smoking, drinking and kissing. Freud called those focused at this level oral-forceful or oral-vicious.
2. Butt-centric stage (year and a half to three years) At this stage delight is picked up from the removal and maintenance of defecation. This is likewise a phase at which kids begin to investigate their current circumstance however experience control and order from their folks. As indicated by Freud, obsession at this stage may bring about individuals being chaotic and liberal – butt-centric expulsive characters, or being mean and deliberate – exacting characters.
3. Phallic stage (three to five years) It is at the phallic stage that youngsters find delight from contacting their private parts. They additionally become mindful that they are in rivalry with kin and their dad for their mom's consideration. Freud accepted that young men become progressively appended to their mom at this stage and disdain the presence of their dad.

These feelings produce anxiety or fear of punishment from the father – or castration anxiety. In order to protect themselves against this anxiety, boys identify with their fathers. Freud called boys' desire for their mother the Oedipus complex, because of the similarity to the ancient Greek play in which Oedipus unwittingly kills his father and marries his mother. Freud argued for a rather different process in girls. He believed that girls reject their mother at the phallic stage, owing to resentment that they have been born without a penis. They then feel increasing attraction to their father, who has the penis they lack. Penis envy is not resolved until women have a male child, thereby symbolically obtaining a penis. This process was also named after an ancient Greek play – Electra. In Greek mythology, Electra was famous for her devotion to her father, and sought revenge against her mother for her father's death. Fixation at the phallic phase and failure to resolve the Electra or Oedipus complex was viewed as the cause of sexual and/or relationship difficulties in later life.

Concept of personality: Indian perspective

Eastern influence on Western thought goes back at least to the time of the ancient Greeks and Romans. Alexander the Great (4th century BCE) made it as far as northern India, and the Roman philosopher Plotinus made a trip to study the philosophies of the region in 242 CE. Theosophical movement in the 19th century that a real interest in Eastern thought (including Buddhism) emerged. The Indian authors have always realized that the Supreme is the Infinite and perceived that to the soul in Nature the Infinite must always present itself in an infinite variety of aspects. The insights in understanding human nature as per Indian thoughts is derived from various Indian philosophical traditions like Vedanta, Samkhya, Yoga, Jainism, Buddhism, and other Researchers and Scholars in India have attempted to explain these concepts.

This concept is very indigenous to the Indian description of personality and temperament. In Indian psychological thought the term 'personality' has not been used in strict sense, instead the concept of Swabhaava referred in scriptures, covers all aspects of personality. Swabhaava is the essential quality. It is that speed of spirit which manifests itself as the essential quality in all becoming. "Dharma, says the Gita, is action governed by Swabhaava, the essential law of one's nature. And this Swabhaava is at its core the pure quality of the spirit in its inherent power of conscious Will, and in its characteristic force of action."

Sri Aurobindo in his "Essays on the Gita" used the term "spiritual personality" too. According to him "We have before us three powers, the Purushottama as the Supreme truth into which we have to grow, the Self and the Jiva. The supreme spiritual nature of being, the Para Prakriti, free from any limitation by the conditioning ignorance, is the nature of Purushottama. In the impersonal self, there is the same divine nature, but there it is in its state of eternal rest, equilibrium, inactivity, Nivriti.

Finally for activity, for Pravriti, the Para Prakriti becomes spiritual personality, the Jiva." The spiritual personality is explained as expression of actions of supreme power, the loss of doership in actions is another facet of spiritual personality. The yoga is instrumental in leading to egolessness and desirelessness, without which the development of impersonality is not possible.

Triguna and Personality Psychology

The idea of Guna goes back to Atharva Veda, it was examined in Bhagawat Gita and later remembered for Sankhya Darsana. The idea of Triguna has been used to clarify the idea of character in present day period too. Indian specialists have additionally thought on this idea of Triguna in their works. The improvement of cognizance is clearly established in this idea of Triguna. These are known as (sattva) called as soundness; rajas called as actuation and tamas called as dormancy. Manas has been credited the capacities which are mental capacities and mental cycles (Mnaovritti manopravrtti). They are viewed as appearances of Triguna Bhagawad Gita, at better places gives the models of profoundly created human potential in its entirety. It additionally portrays three gunas and says that we as a whole are blends of these gunas (qualities) which are Tamas, Rajas, and Sattwa. Paranjpe considers jiva, svabha_{va} and prakrti, ahamka_{ra}, and A_tman, and Purus'a as the most important concepts identified with character and self, which can help in creating indigenous character hypotheses. Following are clarifications given about the three credits of human character. These three gunas lead to various types of disposition. This is basically impacted by both physiological and mental boundaries.

REFERENCES

- Aurobindo S. Essays on the Gita, vol. 13. Calcutta: Arya Publishing House, College Street; 1942.
- Aurobindo S. The Life Divine, SABCL, vol. 18. Pondicherry: Sri Aurobindo Ashram; 1990. p. 267, 344.

- Bhushan P, Kalpana J, Arvind C. Classification of human population based on HLA Gene polymorphism and the concept of Prakriti in Ayurveda. *J Altern Complement Med* 2005;11:349-53.
- Das RC. Standardization of the Gita inventory of personality. *J Indian Psychol* 1991;9:47-55.
- Hall CS, Lindzey G. *Theories of Personality*, 3rd ed.. New York: John Wiley and Sons; 1978. p. 350-1.
- Charaka S, Sharma, Priyavrat, translators. *Charak. Sarira Sthanam*, 36. vol. 1. Delhi: Chaukhambha Orientalia; 1981. p. 435.
- Srikantha Murthy KR, translator. *Vagbhata's Astanga Hridayam*. 3rd ed, vol. 1. Varanasi: Krishnadas Academy; 1996. p. 181. *Sutrasthana*, 74-79.
- Joshi RR. A bio-statistical approach to Ayurveda: Quantifying the Tridosha. *J Altern Complement Med* 2004;10:879-89.
- Kapur M, Hirisave U, Reddy MV, Barnabas I, Singhal D. Study of infant temperament: An Indian perspective. *Indian J Clin Psychol* 1997;24:171-7.
- Kapur M. Psychological theories and practices in ayurveda. In: Rao RK, Paranjpe AC, Dalal AK, editors. *Handbook of Indian Psychology*. New Delhi: Cambridge University Press India Pvt. Ltd; 2008. p. 299-312.
- Krishnan B. Typological conceptions in ancient Indian thought. In: Mishra G, Mohanty AK, editors. *Perspectives on Indigenous Psychology*. New Delhi: Concept Publishing Company; 2002. p. 292-304.
- Kumar SK. Indian Indigenous Concepts and Perspectives: Developments and Future Possibilities. In: Mishra G, Mohanty AK, editors. *Perspectives on Indigenous Psychology*. New Delhi: Concept Publishing Company; 2002. p. 93-165.
- Mukherjee R. Concept of personality type in West and in Ayurveda. *Indian J Trad Knowledge* 2007;6-3:432-8.
- Pannaga KM, Kumar KS. The concept of Triguna: A critical analysis and synthesis. *Psychol Stud* 2007;2:103-13.
- Rao NH. *Pancabhuta theory*. Varanasi: Chowkhamba Krishnadas Academy; 2003. pp. 45-56

History of Women: Rights, Feminism and Renaissance

Satyabhama Chandra*

ABSTRACT

The present paper explores the historicity of the relationship of women with the importance of political rights keeping feministic identity as basic tenet eventually to enjoy a long-awaited renaissance for marking a paradigm shift from the oppression to the emancipation. The question of feminism is often interwoven with the women's movement is pre-existing phenomenon in the world is complementary to each other. On the contrary, women's movement has preceded the rise of Feminism in India. The latter is the collective force of political, social, and cultural movement draws from the experience of the earlier one, and is concerned with the demand of opting equal rights. Women's movement had its origin in the 19th century in the form of social reform after imbibing the occident idea of liberty, equality and fraternity had been changed to political movement in post-independence period taking gender norm, dowry, land rights, gender violence, Dalit, marginalized women's right, political participation, and women's representation in policy matters as issues. Initiating women's studies (now gender studies) seems to heave a sigh of relief for virtually validating this movement, face another challenge against the fear of losing its importance in Indian political scenario despite its sincere attempt to educate women. Women's movement has pursued its relevance to strengthen the economic growth of India.

Keywords: Women's Movement; Feminism; World Body; Women's Organisation

INTRODUCTION

The present paper undergoes a retrospective journey to extract some historical findings on the genesis of women's movement and ascent of feminism before long in the context of Indian subcontinent. Feminism is a consensus of the Longue durée women's movement, bringing it towards more clarity on gender inequalities and equal rights for women with an attempt to elevate women from the mere gender identity by virtue of their sex. The term Feminism is probably used against the phenotypical expression of femaleness happens to a male patient, who has either rudimentary or cessation of male reproductive organ is mentioned in a French medical text book in 1871 (Fraise, 2002). On the contrary, writer an anti-Feminist Alexander Dumas related it with the maleness in females. Following Seneca Falls Convention of 1848, the term became almost synonymous with the United States women's movement on rights and gained momentum is reflected in literatures, where authoresses such as Elizabeth Cady Stanton and Mary Wollstonecraft and like raised voice against injustices, inferior status and so on. Feminism in Indian context is understood as a political stance, which is virtually used to change the position of women in the society (Kishwar 1999).

Since the late 19th century, the tempo of feminism under the wrap of women's movement (here after called feminist movement) is not consistent, rather repeatedly interrupted. Such peaks and

*Department of Psychology, A.P.S.M. College, Barauni, Bihar, India E-Mail: schandra20287@gmail.com

troughs trend of the feminist movement has emerged out characteristically into three waves (Pilcher and Whelehan, 2004, p. 52). The first wave (mid 19th and early 20th century) focused upon the rights to suffrage and got the verdict in favour of the Suffragettes campaigned for the women's vote in Britain on the no restriction of exercising franchise over eighteen (Phillips, 2004). After a gap of about 30 years, the second wave comes into force in two different timelines such as 1960s and 1970s. This time, the movement was morphed into women's inequality as the end to discrimination (Phillips 2004; Hanish 1971; Du Bois 1997), which addresses areas of family, work place, and sexuality. The commencement of the third wave of feminism (early 1990s) came into force as a response of some shortcomings generated from the second wave. Amongst them is the overemphasizing the meaning of femininity and its imposition on the movement par se by upper middle class white women. Contrary to the wave hypotheses, India is the witness of women's movement in pre-independence period comprises first (1850-1915) and second (1915-1947) phase and feminist movement comprises the third phase (1947- Present).

EARLY PRE-INDEPENDENCE PERIOD (1850-1915)

Social reform movement in pre-independence period of India, women took part along with others was mainly because of making Indian society free from the social aberrations acts as hindrance for women to excel, such as polygamy, casteism, sati, child marriage, illiteracy (Pande, 2009, p. 27). Colonial Government's support and co-operation to boost up the movement is not due to altruistic reason but to permeate into the core area of Indian society under the guise of colonial hegemony to transform the social fabric of the subcontinent (Panikkar 1975). The crux of the women's movement in this period is to elevate the women through legislation, imparting education, and political decision-making (Pande 2015). The limitation of this movement is that it did not antagonize patriarchal hegemony as opposed to the colonial hegemony. Rather, women, who were primarily affinally related, used to raise voice against the colonial influence on culture under the tacit influence of reformers, amongst them, almost all were male reformers. The latter groups encouraged their kin, siblings and daughters to be duly educate for being a potential housewives, governors of the house rather being self-sufficient (Pande and Kameshwari 1987). Nevertheless, women's social and political crisis apart from the movement were appropriately addressed by Raja Ram Mohan Roy to uproot the sati, Rabindra Nath Tagore for protecting the Hindu widows and establishing girl's school, Keshav Chandra Sen for legally stopping the early marriage below the 14 year or so and finally Ishwar Chandra Vidya Sagar for enhancing the literacy of women. Besides, several women's organizations such as Pandita Rama Bai's Sharda Sadan (1892) in Poona, Shri Zorastrian Mandal in Bombay (1903), Maternity and Child Welfare League in Baroda (1914), Bhagini Samaj in Poona (1916), Women's Indian Association (1917), the National Council of Women in India (1920), All India Women's Conference (1926) to name a few render political and economic cushion to improve the condition of women (Forbes 2000).

LATE PRE-INDEPENDENCE PERIOD (1915-1947)

As India approaches towards self-sufficiency in terms of taking handover from the British Raj to achieve the status of sovereignty, women's social reform movement is simultaneously transformed into combined movement on gender equality and Nationalism against the colonial rule through the emergence of Women's India Association(WIA), National Council of Women in India (NCWI) and All India Women's Conference (AIWC) within the period of 1917 and 1927, immediately after World War I. Women's movement in this period was further extended through their engagement into the non-violent civil disobedience movement against the Raj under the leadership of Gandhi was thus

merged into the freedom movement to eventually appraise the swaraj to open new vistas of gender mainstreaming as was found in the spontaneous participation of five thousand women at Lahore in 1930 under the strong leadership of Ms. Rani Zutshi and ms. Parvati (daughter of Lala Lajpat Rai) as strong proponent of women's movement. Meanwhile, contribution of Saraladevi's Bharat Stree Mahamandal since 1910, added extra mileage to glide women's movement towards finest version of incipient form of feminism was further strengthened through the active participation of Sarojini Naidu and Kamala Devi Chattopadhyay and other right thinking women during this time.

POST-INDEPENDENCE PERIOD: 1947 TO PRESENT

With the granting of sovereign status, women's movement under the wrap of the freedom movement has seamlessly phased in the feministic movement under the aegis of the National Federation of Indian Women (NFIW) (affiliated to the women's International Democratic Federation) to elevate the status of women through enactment of laws, for instance, the Marriage Act of 1954 and the Hindu Code Bill of 1955-56, the Hindu Succession Act, 1956, the Hindu Minority and Guardianship Act, 1956, the Dowry Prohibition Act, 1961, the Maternity Benefits Act, 1961; implementing policies; encouraging education; rights to suffrage; and gender mainstreaming through Article 15(3) (India, 1949).

In a national policy on education (1986) adopted by the Indian parliament, a separate chapter was incorporated in the policy for women's education was in action just before launching of UN's maiden programme of 'Education for All' in 1990 echoes the seriousness of the Indian Government for the concern of women is the revelation of the recommendation of Equality Report of 1974 -"A Blue Print of Action Points and National plan of Action for Women 1976" (Government of India, 1975), covering education, health, family planning and nutrition, employment, social welfare and legal status and provisions to shift from 'development' to 'empowerment' as growth enhancer in the national economy mentioned in **the sixth** (1980-85), the seventh (1985-1989), the eighth Five Year Plan (1992-97), the Ninth Five Year Plan (1997-2002) for disadvantaged groups, the Tenth Five Year Plan (2002-2007) for meeting gender equality goals, the Eleventh Five Year Plan (2007-2012) for gender empowerment and equity, the Twelfth Five Year Plan (2012-2017) for health, education, and the urgency of Women's Studies in the university level of the Social Science curricula as suggested by the University Grants Commission (UGC), under the Union Ministry of Human resources.

LATE TWENTIETH CENTURY SCENARIO

1975 is the year of 'dress rehearsal' of worldwide feministic movement including India was spread like a wild fire with the involvement of quite a good number of world bodies : World Bank, International Labour Organisation (ILO), United Nations (UNs), United Nations Family Planning Association (UNFPA), World Health Organization (WHO) including governments in the countries of Global North such as UK and France to name a few has been diversified in many directions ranging from the gender violence to marginalized status of 'social exclusion' is further accelerated by the globalization. Hence, movements against Liquor (Pande 2005c; Pande 2002), missing girl children (Pande, 2004b), violence against women (Pande et al., 2008) are the post effect of the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) adopted by the UN General Assembly in Resolution 34/180 of 18 December 1979, Beijing Platform of Action (1995) with reference to the UN Fourth World Women's Conference in Beijing, The National Federation of Dalit Women (NFDW), National Commission of Women (New Delhi), Self Employed Women's Association (SEWA), National Council of Women (Pune), Joint Women's

Program (Delhi), and Kali for Women (Delhi) in association with the 73rd and 74th amendments as a mark of women empowerment of seat reservation in panchayats and municipalities elections (Government of India, 2008).

CONCLUSION

UGC has initiated to execute the program of Women's Studies and incorporating them in the curricula of Social Sciences for teaching and research in various Universities under the strong the recommendations of the First National Conference on Women's Studies, held in Bombay in 1981 and the UNESCO workshop in 1982 (Pande 2005a, pp.125). Unfortunately, the project on Women's Studies was discontinued by UGC on September 2017, was on suspension mode despite the protest of Association of Women's Studies (IAWS). Hence, it is the women's movement in India that has been the force behind the long struggle of women's advancement from subordination to gender equality and finally to women's empowerment.

ACKNOWLEDGMENTS

The author would like to thank Dr. Md. Tanwir Yunus, Department of Education, Vinoba Bhave University, Hazaribagh, Jharkhand for the excellent research support provided for putting this manuscript together.

REFERENCES

- Du bois, Ellen Carol. Harriot Stanton Blatch and the Winning of Woman Suffrage. New Haven: Yale University Press, 1997. Also see <http://scholar.alexanderstreet.com/pages/viewpage.action?pagelId=2259>. Accessed on 27/03/2009
- Forbes Geraldine. Women in Modern India. Cambridge: Cambridge University Press, 2000.
- Fraisse, Geneviève. "As quoted". In: FREEDMAN, Jane. Feminisms. New Delhi: Viva Books, 2002 [1995].
- Government of India. Ministry of Panchayati Raj. Study on Elected Women Representatives in Panchayati Raj Institutions. New Delhi, 2008.
- Government of India. Ministry of Education and Social Welfare. Towards Equality. Report of the Committee on the Status of Women in India. New Delhi, 1975.
- Hanisch, Carol. "The personal is political". In: AGEL, Jerome. The radical therapist. New York: Ballantine Books, 1971. p. 152-157.
- Índia. Constituição. Artigo 15, número 3. "Nada neste artigo impedirá o Estado de fazer qualquer provisão especial para as mulheres e crianças", 1949. Disponível em: <http://www.estudos-biblicos.net/const-india.html>.
- Kishwar, Madhu. Off the Beaten Track Rethinking Gender Justice for Indian Women. New Delhi: Oxford University Press, 1999.
- Pande Rekha and Kameshwari J. "Women's Discourse on Education" (a preliminary reading of the speeches delivered at the Annual Conferences of the Andhra Mahila Sabha in 1913 and 1914). Proceedings of Indian History Congress. Goa: PIHC, 1987. p. 390-396.
- Pande, Rekha. "Mapping the Terrain of Activism in The Feminist and The Women's Movement in India". Labrys, etudes féministes/Estudos Feministas, Special Issue on Indian Feminism, 2015.
- Pande Rekha. "Feminism and the Women's Movement in India: A Historical Perspective". Journal of Women's Studies, Bangalore, v. 1, n. 1, 2009, p. 22-39.
- Pande Rekha et al. "Narratives of domestic violence, reconstructing Masculinities and Feminities". In: SINGH, Manjit; SINGH, D. P. (Ed.). Violence – impact and intervention. New Delhi: Atlantic Publishers and Distributors, 2008. p. 121-140.

- Pande Rekha. *Religious Movements in Medieval India*. New Delhi: Gyan Publishing House, 2005a.
- Pande Rekha. "Solidarity, Patriarchy and Empowerment – Women's Struggle against Arrack in India". In: RICCIUTELLI, Luciana; MILES, Angela; McFADDEN, Margaret M. (Ed.). *Feminist Politics, Activism and Vision, Local and Global Challenges*. New York: Zed Publications, 2005c. p. 212-226.
- Pande Rekha. "The Girl Child in India". *Review of Women's Studies*, v. XIV, n. 2, p. 149-173, 2004b.
- Pande Rekha. "The public face of a private domestic violence". *International Feminist Journal of Politics*. U.K., Routledge, v. 4, n. 3, 2002, p. 342-367.
- Panikkar, K. N. "Presidential Address" (Section III). *Proceedings of the Indian History Congress*, v. 36. Aligarh: PIHC, 1975.
- Phillips Melanie. *The Ascent of Woman: A History of the Suffragette Movement and the Ideas Behind It*. London: Abacus, 2004.
- Pilcher, Jane and Whelehan Imelda. *50 Key Concepts in Gender Studies*. New Delhi: Sage Publications, 2004.

Role of Indian National Congress (INC) in Anti-Apartheid Struggle in South Africa

Dr. Rajesh Kumar*

ABSTRACT

This paper examines how Indian National Congress (INC) played a significant role against racial discrimination and apartheid laws of South African racist government? Pre-independence period, the INC was the main political party who raised the voice against racial discrimination in South Africa. Post-Independence, how INC rise the voice at Multilateral fora against the racial discrimination in South Africa. INC passed several resolutions in their party meetings and played a crucial role against colonialism, racial discrimination and apartheid policy. INC and other political parties' leaders participated in the debate on apartheid in the Indian Parliament (Rajya Sabha and Lok Sabha) and passed several resolutions against apartheid policy and rise the voice for immediate release of Nelson Mandela and all political prisoners.

Keywords: South Africa, Apartheid Policy, Racial Discrimination, Indian National Congress (INC)

During the 18th and 19th centuries, both India and South Africa were colonies of British Empire and both countries were exploited by the British in terms of socially, politically, culturally and economically. For this reason, both had a common goal against Colonialism, racial discrimination and struggle for independence. Although India did not have faced racist laws like South Africa. But the problem of racial discrimination and apartheid laws was a global challenge for the liberty, equality and fraternity.

PRE-INDEPENDENCE INDIAN NATIONAL CONGRESS (INC) IN ANTI-APARTHEID STRUGGLE

When India was struggling for their freedom, the Indian National Congress (INC) naturally extended its sympathy and support to freedom struggle in other parts of the world. The INC dissociated itself from British policy and supported the struggles for freedom of Asian countries and African countries (Moola 1976: 3). The INC was cosmopolitan in character from its birth considered as a 'first major party in Asia and Africa who challenged the imperialism' and colonialism politically and ideologically (Trimizi 1989: 1) and it had a broader vision and roadmap for eliminating colonialism, imperialism and racial discrimination in Africa countries as well as Asian countries. INC played a leading role against the imperialism and racial discrimination.

Before India got independence, Mohan Das Karamchand Gandhi, raised the voice against racial discrimination for Indians in South Africa. Gandhi played a major role to create the consciousness among Africans and Indians to fight against racial discriminatory laws during his two-decade stay in South Africa. Gandhi discovered a new method called "*Satyagraha*" (Non-Violent) which was successfully led in South Africa against the racial discrimination and later It was successfully used for freedom struggle of India.

*Ph.D., JNU, E-mail: rajeshraj.jnu@gmail.com

In 1894, Gandhi formed the Natal Indian Congress (NIC) and also it was beginning to corresponding with the INC leaders like, Dadabhai Naoroji and others, to making them to awakening of the plight of Indians in South Africa. (Tirimizi 1989: 4-5). The INC leader Gopal Krishna Gokhale interested in South Africa politics since 1896, when Gandhi wrote a letter to him Gandhi continued writing letters to Dada Bhai Naoroji, Gopal Krishan Gokhale and other INC leaders (Tirimizi 1989: 4-5). On 14 October 1912, Gopal Krishna Gokhale visited South Africa and met Prime Minister, General Louis Botha; General J. C. Smuts (then Minister of Finance, Defence and Mines) and Abraham Fischer (Minister of the Interior) on behalf of Indian delegation. Smuts promised that all discriminatory laws against Indians would be removed but the promise was never kept nor respected by him. After then Satyagraha was resumed against the discrimination on Indians in 1913 (<https://www.sahistory.org.za/>).

Sarojini Naidu visited South Africa in 1924 and submitted a report on the situation of Indians in Africa. The reports were considered and promoted as a significant document by INC and created its new department called the "Department of Foreign Affairs" at Kanpur session in 1925 (*Report of the Indian National Congress*, Kanpur, 1925; Tirimizi 1989: 11). According to All India Congress Committee's (AICC) Paper: "The foreign department of INC consequently sent a 20 Negro individuals and agencies all over Africa, informing them of the desire of the INC to establish close relations with race and nations fighting against oppression and exploitation" (*All India Congress Committee paper*, 1936; Tirimizi 1989: 11).

When India was fighting for freedom struggle, then, that time many INC leaders raised the voice for the liberation of African countries. Dadabhai Naoroji, Gopal Krishna Gokhale, Sarojini Naidu, Jawaharlal Nehru and other prominent leaders, INC all time raised the issue against the racial discrimination behalf of People of Indian Origin (PIO) And this movement was led under the leadership of Mahatma Gandhi and Jawaharlal Nehru. The INC was not only mobilized individuals even they success to pass a strong international message against anti-apartheid struggle in South Africa' (Khan 1998: 63).

The INC leaders also raised the question of racial discrimination and the rights of PIO in the Imperial War Conferences of 1917 and 1918 and the Imperial Conference of 1921 (Khan 1998: 6). Nehru participated in the 'International Congress of Oppressed Nationalities' held in Brussels in February 1927. This participation was a landmark in the evolution of the Indian outlook on world affairs (Prasad 2011: 812-813). During the Brussels conference, Congress had taken a stand against the Imperialism. (Reddy 1991: 24). After the conference Nehru convinced that the struggle against apartheid in South Africa would be more efficient if the blacks, coloured and Indians fought together unitedly (Saxena 1989: 6). Sarojini Naidu was the first INC leader who raised the issue for equal rights with racial issue and emerging colonial dictate. (Padhi & Dash 2004: 254).

In 1927, Madras session of INC deserved a special mention which condemned the policies of racial discrimination, colonialism, and imperialism (*The Indian National Congress, Congress Bulletin* 1927: 36-37; Khan 1998: 6). As most of the basic principles of Indian foreign policy were decided during the freedom struggle, the policy towards Africa always in positive direction and in support of black people and against the racial discrimination; (a) Support for the struggle against racial discrimination in South Africa (b) Support for the struggle for decolonization of African states and (c) Support to Afro-Asian solidarity. (Khan 1998: 12).

Till 1946, Gandhi was not agreed for a joint struggle (Indians and Blacks people) to fight against racial discrimination in South Africa. But Jawaharlal Nehru was also having the different opinion from Gandhi that Black Africans and Indians should stand together against the White regime in South Africa. While, Gandhi contradicted himself once more: "However much one may sympathies with the Bantus, Indians cannot make common cause with them" (Chhabra 1989: 68). In 1939, when a resolution proposed by Gandhi at INC's Wardha session. In that session Ram Manohar Lohia and

Jawaharlal Nehru argued that Indians and Non-European (Africans and Coloureds) should stand together against the racist regime in South Africa but Gandhi strongly opposed to this logic and denied any amendment to this resolution (Desai & Vahed 2015: 302-303). Sir Syed Raza Ali, former Indian Agent-General in South Africa criticised Gandhi and said, "AICC made a serious blunder by deleting the Joint front of Non-European from the resolution" (Reddy 1991: 25). However, Gandhi changed his view when passive resistance movement again begins in South Africa in 1946 and Dr. Yusuf Dadoo and Dr. G. M. Naicker visited India in 1947 to meet Gandhi on this issue. (Zaidi 1981a: 31).

POST-INDEPENDENCE INDIAN NATIONAL CONGRESS (INC) IN ANTI-APARTHEID STRUGGLE

After independence, in the INC's resolution at Jaipur session in 1948) "The principles on which the foreign policy of India should be based on world peace, freedom of all nations, racial equality and the ending of imperialism and colonialism. In particular, the INC interested the freedom of the nations and peoples of Asia and Africa who suffered under various forms of Colonialism for many generations." (*INC Resolutions on Foreign Policy* 1966a: 3). The AICC (Calcutta session, March 1952) regrets that South African racist regime had rejected the direction of UN General Assembly concerning the PIO in South Africa and continued to implement its policy of Apartheid ruthlessly (*INC Resolutions on Foreign Policy* 1966a: 10). The AICC welcomed the decision of the Supreme Court of South Africa declaring the South African Governments policy to introduced coloured voters in a separate electoral roll was invalid. The AICC trusted on the South African Government would put an end to the policy of segregation. The AICC Committee also welcomes the co-operation of Africans and Indians in not submitted to such legislative and administrative measures which condemned them to servitude. However, The Committee trusted that both bills pursued peaceful and non-violent methods (*INC Resolutions on Foreign Policy* 1966a: 11).

The INC (Hyderabad session, January 1953) congratulated the *Satyagrahis* for their unity and struggle those who cooperated with them for the basic right and principle of humanity. INC also believed that South Africans of Indian origin people would not only continue it together but also be able to gain full support from the world and share their sacrifices to make a better and equal society for all. The resolution of INC called all civilized peoples of the world who believed in secularity and humanism to look upon the unique mode of struggle for racial equality, fraternity and tolerant society in South Africa. (*INC Resolutions on Foreign Policy* 1966a: 17). The AICC (Indore, 1953) also send its fraternal greetings and good wishes to all those Africans and PIO who were participating in Satyagraha movement and they should fight non-violently for the basic human right of racial equality against the white domination (*INC Resolutions on Foreign Policy* 1966a: 21). The working Committee of INC (New Delhi, December 1953) opposed the colonial government in many countries of Asia and Africa. On many occasions, INC gave its moral support other peoples' struggle for freedom. That struggle was not only for political independence but also for racial change and advancement which also identified with a challenge to the theory and practice of racial discrimination in South Africa, where the doctrine of racial domination had been made into a State policy. (*INC Resolutions on Foreign Policy* 1966a: 22-23). The Working Committee of the opinion that any racial discrimination was an insult not only to those who actively suffer under it but also to all others who can come within its scope (*INC Resolutions on Foreign Policy* 1966a: 24). The working committee had hoped that the domination of one race over another should be ended and built societies without racism and peoples can live in friendly cooperation, respecting each other, and the majority of the people of the country have a predominant view in their own government and their future (*INC Resolutions on Foreign Policy* 1966a: 25).

The INC (Kalyani session, January 1954) have a long history and the INC legacy stood for the freedom of all countries and more especially for the elimination of colonial domination and racial discrimination. The INC welcomed the achievement of freedom by many Afro-Asian countries. The INC urged the Indian government for cooperated the freedom of Asia and Africa and oppose the racial discrimination (*INC Resolutions on Foreign Policy* 1966a: 26-27).

The AICC (Berhampur session, May 1955) welcomed the decision of Asian and African countries at Bandung conference that was based on 'economic and cultural co-operation', 'promotion of world peace and co-operation' and the total prohibition of 'Weapons of Mass Destruction and for Disarmament' (*INC Resolutions on Foreign Policy* 1966a: 36). The INC (Amritsar session, February 1956) also welcomed Sudan as an independent sovereign Republic. The INC regrets that some countries which stand for democracy and freedom gave their active or passive support to the continuation of the grossest forms of racial discrimination and suppression in South Africa. This kind of racism was a complete denial of democracy and civilised behaviour and even of decency and could never be tolerated by the people of Asia and Africa. It was a challenge to democratic principles and to the Charter of the United Nations. The INC hopes that the countries of Europe and America would take steps for an end to racialism and colonialism (*INC Resolutions on Foreign Policy* 1966a: 47).

In the Nagpur session (1959) of INC, Congress leader Jagjiwan Ram brought out the resolution on 'International Affairs' and told "unless the cold war and colonialism end, peace would continue as significant processes for humanism". In this session A. K. Sen said: "India always regarded her national interest and their socio-political movement as part of the struggle for the liberation of all oppressed people in Asian and African countries" (Zaidi 1981b: 314). Govind Ballabh Pant stated that: "South African Government had continued to flout the UN Charter on human rights and had not given effect to the resolution of the United Nations. India had great sympathy for the people of South Africa who were suffering on account of the racial and other policies of the Union Government, which were against all canons of civilised society" (Zaidi 1981b: 378). The INC welcomed the independence of Guinea and full sympathy and support of Algeria and Cyprus in their freedom struggle in Nagpur session. INC hoped that all remaining colonial territories of Africa can countries gained independent from the end of colonialism, racial discrimination and apartheid soon. The INC reiterated its solidarity with the PIO, as well as all others, in South Africa in their struggle against racial discrimination (*INC Resolutions on Foreign Policy* 1966a: 58-59).

In June 1960, Jawaharlal Nehru, delivered a statement on the presidential speech in AICC meeting, "The apartheid policy of South Africa had been universally condemned, but it still clings to the same. It's ugly demonstration had shocked the world, and the foreign countries had been strongly affected by the barbarous shootings on the unarmed people at Sharpeville" (Zaidi 1982: 132-133).

The AICC (Jaipur session, 1963) deeply deplore the ruthless policy of racist regime which was deprived a large number of African and PIO (people of Indian Origin) from their homes, possessions, occupations dignity and honor and assigning to them the status of inferior citizens and outcasts in the land of their birth and being. The AICC was also confident that the government of India would support the principles of the Charter of UN for end of apartheid policy in South Africa (*INC Resolutions on Foreign Policy* 1966b: 76-77).

The INC (Bhubneshwar session, January 1964) reiterates its full support for world peace, cooperation and solidarity with non-alignment countries and the opposition to colonialism and racism. The INC welcomed the decisions taken by the UN against colonialism and apartheid policy and fully supports the policy and actions of our Government in this regard. The Congress congratulated and send greeting to the people of the independent countries of African nationalist and their membership of the UN (*India and the African Liberation Struggle* 1976: 127). In the Durgapur session of INC in 1965, Swarn Singh said, "I am convinced that South Africa could be compelled to change the

apartheid policy if the big powers enforced an arms and trade blockade against her” (Zaidi 1983b: 66). In the Jaipur session of INC in 1966, Congress leader K. Kamaraj said: “We have stood against policies of racial discrimination and have spearheaded the glorious struggle in the United Nations for the total elimination of racial discrimination” (Zaidi 1983b: 213).

In the AICC meeting (New Delhi, June 1967), INC again reiterated its firm stands for the ending of all forms of imperialist domination, colonial exploitation, and racial discrimination and expresses solidarity with all those who were struggling against these policies. INC consistently opposed racial domination and discrimination in all its forms of any nation and the suppression of basic human rights (Zaidi 1983b: 356). The AICC meeting (Shimla, October 1971), shows that the racist regimes still continued the apartheid policy after the unanimous resolution adopted by the United Nations against apartheid. The INC had always worked for the elimination of colonialism and for ending racist regimes. But it is a matter of regret and misfortune that South Africa still continues to practice apartheid under a racist regime (Zaidi 1984a: 281).

The INC’s (Calcutta session, 1972) President Dr. Shankar Dayal Sharma addresses the meeting and said: “We are on the side of the people of South Africa who are fighting against Apartheid. We send our message of wholehearted solidarity to the heroic people of Zimbabwe who are valiantly struggling for their freedom against the white minority regime” (Zaidi 1984b: 124). The AICC (New Delhi, September 1973) expresses its solidarity with the people struggling against these evils, more especially in Mozambique, Angola, South Africa, Zimbabwe, Guinea-Bissau, and Namibia and supported the liberation of colonies and the ending of imperialist and racist regimes. (Zaidi 1984b: 202, 501 & 561)

On the occasion of Africa Day Celebration (New Delhi, May 1974) Mrs. Indira Gandhi as president of INC said: “We support freedom struggle because we believe that our future freedom was bound up with them because we believe that while any country is not free, we ourselves—and a face no people, even those living in the so-called free countries—could be truly free” (Gandhi 2002: 110). The INC (Chandigarh session, 1975) condemns the armed intervention of South Africa in Angolan territory. In Africa, the heroic struggle against colonialism, apartheid and discrimination have reached a critical stage in Zimbabwe, Namibia, and South Africa to which the Congress reiterates its full support (Zaidi 1984c: 378 & 505).

The AICC (New Delhi, 1976) welcomed the Prime Minister Indira Gandhi's visit to Africa. The AICC pledged support to the struggle of Namibia people under the leadership of SWAPO for liberation from illegal occupation by the racist regime of South Africa. The AICC condemns the massacres in Soweto and its townships and reaffirms its solidarity with the courageous people of South Africa under the leadership of the ANC in their struggle to end apartheid and to achieve majority rules (Zaidi 1984d: 130 & 163). The Congress Working Committee (CWC) condemns the attitude of certain major powers which in contravention of the decision of the UN and continued the trade and economic relations with the South African racist regime (Zaidi 1984d: 317). In 1979, the AICC rejected the so-called elections held under Smith regime in Rhodesia and expressed solidarity with the Rhodesia and SWAPO’s people who were fighting against the racist regime of South Africa (Zaidi 1985: 220-221).

On November 14, 1980, when Nelson Mandela awarded ‘Jawaharlal Nehru Award for International Understanding’ by the Indian Council for Cultural Relations (ICCR) that time Nelson Mandela was in Prison on Robben Island. So, Mandela wrote a letter and said: “The AICC one of the premier national liberation movements of the colonial world, we to begin to assess our situation in a global context” (*Africa Quarterly* 2002: 126). The INC (Calcutta session, December 1983) adopted a resolution; the Congress strongly deplores the continued oppression of the people of Namibia by the racist regime in South Africa (Zaidi 1985: 418). AICC saluted champion of freedom,

Nelson Mandela, who was languishing behind bars (Zaidi 1985: 437). The AICC had endorsed the New Delhi declaration of the Extraordinary Meeting with the ministers of the Non-Aligned countries, they appreciated the Prime Minister's action on Namibian question on full diplomatic recognition to SWAPO. The AICC urged the world community to employ the effective sanction and public pressure to compel the racist regime of South Africa to recognize Namibia's right to self-determination and to withdraw from territory occupied by the cynical defiance of the UN (Zaidi 1985: 154-55 & 255).

The AICC (Madras, April 1988) appreciated to the Prime Minister Rajiv Gandhi's initiations to established "AFRICA fund" and a good response and welcomed by all freedom-loving peoples (Zaidi 1994a: 110-111). In the meeting of AICC (New Delhi, November 1988), Rajiv Gandhi played an important role in calling for comprehensive mandatory sanctions against South Africa to ensure the speedy liquidation of the abhorrent system of apartheid (Zaidi 1994a: 140 & 161).

In 1991, the Lok Sabha Election Manifesto of INC declared that Congress would continue moral and material support for the elimination of apartheid in South Africa. The INC (Tirupati session, April 1992) welcomed the recent referendum towards the ending of all racial discrimination in South Africa. This must lead to the immediate establishment of a non-racial interim Government that can steer South Africa to a true democracy, based on the principle of 'one person one vote', and equal representation for all South Africans, whatever their racial origins. INC expresses the hope that the forthcoming centenary year apartheid would finally end and the citizen of South Africa could play their rightful role in their country and in the world (Zaidi 1994b: 230). In the AICC meeting (Faridabad, March 1993), INC again expressed the hope for the dismantling of apartheid and the establishment of a non-racial democracy.

INDIAN YOUTH CONGRESS (IYC) IN ANTI-APARTHEID STRUGGLE

Indian Youth Congress (IYC), the youth wing of INC, also played a major role in the fight against apartheid. The role of the IYC in the anti-apartheid struggle was indefatigable and extensive. The IYC provided a base for the resurgence in the people's movement against apartheid. Under the leadership of Anand Sharma, the IYC took up the cause of South Africa through mass campaigns to highlight the suffering of the people. In November 1985, the IYC convened a non-aligned youth conference in New Delhi, which was attended by representative delegations from 81 countries. Prime Minister Rajiv Gandhi inaugurated the conference. Nelson Mandela's daughter, Zonani slipped out of the country to attend the conference. Her presence along with Yasser Arafat helped attract universal attention and drew sharp focus to the issue of apartheid (Gupta 2003: 11-12).

The IYC actively followed up this conference with mobilising the students and the youth of India through public rallies and meetings in various parts of India. Renowned leaders like Moosa Moola, the ANC chief representative in India, and Anand Sharma besides some young parliamentarians and student leaders addressed these conferences. On January 8-9, 1987, IYC had organized the "International Youth Conference against Apartheid" on the occasion of the seventy-fifth anniversary of the ANC in New Delhi. It was the historical event because the delegations from 84 countries, regional and International organizations participated in this conference. A message from prison by Nelson Mandela and the presence of champions of the struggle such as Trevor Huddleston, ANC Secretary General Alfred Nzo and the Chairman of the UN Special Committee Against Apartheid Gen. Joseph Garba held the entire attention of the international community (Gupta 2003: 13).

On the occasion of the 75th Anniversary of ANC, the IYC president Anand Sharma proposed to convene an international conference against apartheid. The proposal was strongly endorsed by the Prime Minister Rajiv Gandhi (Gupta 2003: 12).

RESOLUTION ON APARTHEID IN INDIAN PARLIAMENT

During 1985, Parliament session of Lok Sabha and Rajya Sabha, from different political parties' members of parliament gave the speech on Apartheid issue, appreciated the Indian government's role against apartheid and condemned the racist regime. Many members of parliament like Narasimha Prasad Nanda (Odessa), Mulka Govinda Reddy (Andhra Pradesh), M. R. Krishna of (Andhra Pradesh), Madhav Rao Scindhia (Madhya Pradesh), Smt. Maimoona Sultan, Shri S. B. Sidnal, Bhagatram Manohar, V. Gopalasamy and V. Venka and other MPs participated in the debate on apartheid. During the question & answer session of the parliamentary session, many political parties' leaders and a member of parliaments asked many questions to the Minister of External Affairs Sri P. V. Narasimha Rao and the Minister of State for External Affairs, Sri K. R. Narayanan. After the debate on apartheid policy in Indian Parliament, resolutions were adopted by the Lok Sabha on August 19, 1985, and the Rajya Sabha on August 20, 1985.

According to document of the "Lok Sabha and Rajya Sabha" (*Lok Sabha Debate* August 19, 1985, & *Rajya Sabha Debate* August 20, 1985) debate, the House unanimously resolves:

1. To condemn the inhuman policy of apartheid of the racist regime of South Africa.
2. To denounce the attempts of the South African authorities to divide the African, Asian and other peoples of South Africa, struggling for their fundamental rights.
3. To appeal to all the freedom-loving forces of the world to remain united in the struggle against apartheid.
4. To call upon all governments to impose effective and comprehensive mandatory sanctions against South Africa.
5. To call for the unconditional release of the brave patriot Nelson Mandela and other freedom fighters.
6. To continue to extend all support to the freedom struggle of the people of South Africa and to espouse their cause in all relevant international forums.
7. To call upon the people of Indian origin in South Africa to continue their struggle in the solidarity with their South Africa from brethren in their common cause against apartheid.

CONCLUSION

When India was fighting for her own freedom struggle, the INC was the main Indian political party which supported the African liberation struggle. Before independence, the INC leader Jawaharlal Nehru raised the issue of racial discrimination at Imperial War Conference and other international forums. Pre-Independence and Post-Independence the INC passed several resolutions against colonialism, imperialism, racial discrimination and apartheid laws and expressed full sympathy with the people of South Africa, who were suffering under the South African racist government. The All India Congress Committee (AICC) and the INC's working committee also passed many resolutions in support of the Liberation Struggle in South Africa and expressed sympathy with the non-white oppressed people. The INC gave moral and material aid for the liberation struggle of the South Africa. The INC leaders like Jawaharlal Nehru, Indira Gandhi and Rajiv Gandhi, Anand Sharma and others INC's leaders played a significant role at multilateral fora against the apartheid regime and demanded the expulsion of the South Africa from the UN and the Commonwealth. Many other INC's leaders too raised the issue of apartheid in South Africa and participated in debates on apartheid in Indian Parliament which passed a resolution against apartheid and demanded the immediate release of Nelson Mandela and all political prisoners. Indian Youth Congress (IYC) also actively played an important role to mobilise the people in the anti-apartheid movement.

REFERENCES

- *Africa Quarterly* 2002. (Special Commemorative Issue on: India and Liberation Struggles in Africa). New Delhi: Indian Council for Cultural Relations 42, 2.
- All India Congress Committee paper file No FD 8 (1936), Nehru Memorial Museum and Library, New Delhi.
- Chhabra, Hari Sharan 1989. *Nehru and Resurgent Africa*. New Delhi: Africa Publication.
- Desai, A. & G. Vahed 2015. *The South African Gandhi: Stretcher-Bearer of Empire*, New Delhi: Navayana.
- Gandhi, Indira 2002. India and Africa. *Africa Quarterly* 42, 2: 109-113.
- Gupta, Vijay (eds.) 2003. *Dhanyvaad India: A Tribute to the Heroes and Heroines of India who supported the Liberation Struggle of South Africa*, New Delhi.
- *India and the African Liberation Struggle*, 1976. New Delhi: Indian National Congress.
- *Indian National Congress Resolutions on Foreign Policy 1947-1957*, 1966a. New Delhi: AICC.
- *Indian National Congress Resolutions on Foreign Policy 1947-1966*, 1966b. New Delhi: AICC.
- Khan, M. Muslim 1998. *50 Years of India's foreign policy towards Southern Africa*. Delhi: Devika Publications.
- *Lok Sabha Debates*, 13 April 1961.
- *Lok Sabha Debate*, 19 August 1985.
- Moola, Moosa 1976. Significance of the Contribution of India: The Struggle against Apartheid, UN No. 17/76, July 1976.
- Padhi, B. & G. Dash 2004. *Dismantling Apartheid in South Africa. Impact of International Diplomacy*. New Delhi: New Horizon Publisher.
- Prasad, Bimal 2011. Foreign Policy in the Making. In *A Centenary History of the Indian National Congress, 1885-1985, Vol. III*. New Delhi: Academic Foundation.
- *Rajya Sabha Debate*, 20 August 1985.
- Reddy, E.S. (eds.) 1991. *India and South Africa: A collection of Paper, Occasional Papers Series No. 1*, Durban: The University of Durban-Westville. [Online: Web] Accessed 02 February 2016, URL: <http://www.anc.org.za/ancdocs/history/solidarity/indiasa1.html>
- *Report of the Indian National Congress*, Kanpur, 1925.
- Saxana, S.C. 1989. Nehru and Africa. LECTURED DELIVERED IN NATIONAL SEMINAR ON NEHRU AND AFRICA ON 27-28 SEPTEMBER 1989 AT DEPARTMENT OF AFRICAN STUDIES, UNIVERSITY OF DELHI: NEW DELHI.
- The Indian National Congress 1927. *Congress Bulletin*. Allahabad: All India Congress Committee.
- Tirimizi, S. A. A. 1989. *Congress and Africa 1892-1947. Congress Resolution on Africa*. Delhi: Meridian Publication.
- Zaidi, A.M. & S.G. Zaidi (eds.) 1981a. *The Encyclopaedia of the Indian National Congress, vol. 13: 1946-50, India wins Freedom*. New Delhi: S. Chand & Company Ltd.
- Zaidi, A.M. & S.G. Zaidi (eds.) 1981b. *The Encyclopaedia of the Indian National Congress, vol. 16: 1958-59, Search for Ideological Clarity*. New Delhi: S. Chand & Company Ltd.
- Zaidi, A.M. & S.G. Zaidi (ed.) (1982), *The Encyclopaedia of the Indian National Congress, vol. 17: 1960-61, The National Integration*, New Delhi: S. Chand & Company Ltd.
- Zaidi, A.M. & S.G. Zaidi (eds.) 1983b. *The Encyclopaedia of the Indian National Congress, vol. 19: 1965-67, The Ten-Point Programme*. New Delhi: S. Chand & Company Ltd.
- Zaidi, A.M. & S.G. Zaidi (eds.) 1984a. *The Encyclopaedia of the Indian National Congress, vol. 21: 1970-71, The split and the Aftermath*, New Delhi: S. Chand & Company Ltd.
- Zaidi, A.M. & S.G. Zaidi (eds.) 1984b. *The Encyclopaedia of the Indian National Congress, vol. 22: 1972-73, At War with Poverty*. New Delhi: S. Chand & Company Ltd.
- Zaidi, A.M. & S.G. Zaidi (eds.) 1984c. *The Encyclopaedia of the Indian National Congress, vol. 23: 1974-75, The Lengthening Shadows*. New Delhi: S. Chand & Company Ltd.
- Zaidi, A.M. & S.G. Zaidi (eds.) 1984d. *The Encyclopaedia of the Indian National Congress, vol. 24: 1976-77, Amid Encircling Gloom*. New Delhi: S. Chand & Company Ltd.

- Zaidi, A.M. & S.G. Zaidi (eds.) 1985. *The Encyclopaedia of the Indian National Congress, vol. 25: 1978-83, The Return of Priyadarshini*. New Delhi: S. Chand & Company Ltd.
- Zaidi, A.M. & S.G. Zaidi (eds.) 1994a. *The Encyclopaedia of the Indian National Congress, vol. 27: 1986-90, The Congress and The Conglomerate*. New Delhi: S. Chand & Company Ltd.
- Zaidi, A.M. & S.G. Zaidi (ed.) (1994b), *The Encyclopaedia of the Indian National Congress, vol. 28: 1991-93, The Diabolical Conspiracies*, New Delhi: S. Chand & Company Ltd.
- <https://www.sahistory.org.za/>.

Urbanisation and Tourism Induced Urban Waste in Jammu and Kashmir: A Case Study of Dal Lake and Vaishno Devi Watersheds

Shokat Chowdhary*

ABSTRACT

The state of Jammu and Kashmir has very delicate ecology and an important tourist destination in India. Though Tourism has brought economic prosperity to the state but has also damaged the delicate ecosystem in the fragile Himalayan ecology. The unplanned urbanisation and migration for better economic opportunities further aggravated the Problem. Millions of tonnes of solid and liquid waste is generated which is not being adequately managed and this has virulent effects on the Himalayan ecology. The Vaishno Devi and Dal Lake are two important watersheds and are being suffered by the unscientific urban development and inadequately urban waste management.

Keywords: Urbanisation, Watershed and Waste

INTRODUCTION

Urbanization is the movements of people from small communities to generally larger ones; virtually activities are primarily concerned in government activities, trade, manufacture or allied interests (Thompson (1955). Urbanisation is a distinguished process, whereby both inhabitants and the land are transformed themselves. So, it is a change in both i.e. among the people and the area occupied by them (Kundu 2006). The tourism induced urbanisation has led to growth of smaller towns in Jammu and Kashmir and environmental pollution both solid and Liquid (Bala. R et al (1982).

The main concentration of urban population is found along the river Jhelum. The small towns in Jammu and Kashmir cities are facing environmental problems or environmental degradation because of the large influx of tourism and becoming stumbling because by reducing their carrying capacity (Lawrence W, (1996). Tourism has both negative and positive aspects, on the one side, it is encouraged the economic development and impetus foreign exchange, on the other side, damage the delicate and fragile ecosystem by disturbing its carrying capacity (Rashid A M (2013). The Kashmir valley is on the verge of ecological degradation because of continuously increasing pressure, resulted, deforestation, polluting rivers, directly discharge of effluent in Jhelum river, encroaching in the enclave of endangered species (Hangul), all these are alarming and adumbrate the changing scenario of land use pattern and have had put the life of millions in jeopardise. They also asserted that, the Karewas, which was once supported innumerable horticulture, today is being produced only a few. The wetland ecosystem is also on the brink of extinction (Lone and et al, (2003).

*Ph.D Research Scholar, Centre for the Study of Regional Development (CSR/D/SSS), School of Social Sciences, Jawaharlal Nehru University, New Delhi, India. E-mail: Shokatjnu@gmail.com

OBJECTIVES

1. To Analyse the Tourism pattern in Dal Lake watershed and Vaishno Devi watershed in Jammu and Kashmir.
2. To analyse and compare the solid waste generation in Dal Lake and Vaishno Devi watershed in Jammu and Kashmir.

SOURCE OF DATA

The data has been taken from the Directorate of Tourism Jammu and Kashmir and National Sample Survey 2013 and 2014.

RESULTS AND DISCUSSION

The State of Jammu and Kashmir has occupied a special place in the eyes of tourist worldwide, which has an endowed pleasant weather, picturesque landscape, dense forest Torrent Rivers, fresh water lakes, green pasture land or meadows and thus, all work together to make Kashmir a Paradise on earth. Kashmir has served a tourist attraction since time memorial but western incursions and political turmoil has made it unstable and the Kashmir is being benumbed from the state of being peace. It has been seen from the literature that whoever came to Kashmir through western Himalayas has settled there and made their abode. The tourism plays a paramount role in the Jammu and Kashmir's economy. It has created lakhs of employments in the urban localities in the Kashmir valley and in district Reasi (*Pilgrimage tourists in Vaishno Devi*) as well. For a tourist economy, there is substantial need to develop the tourism related infrastructure like Roads, Railways, telecommunication, Hotels, Guesthouses and other commercial activities. Due to development of all these things, there have been undesirable changes happening in the fragile mountain's ecology, which is very delicate to handle. It is therefore, unplanned development, generation of wastes and encroachment in the delicate mountain's environment which is facing acute problems especially in the urban areas. Though, tourism is playing an important role in Jammu and Kashmir's economy, it is also creating very severe problems.

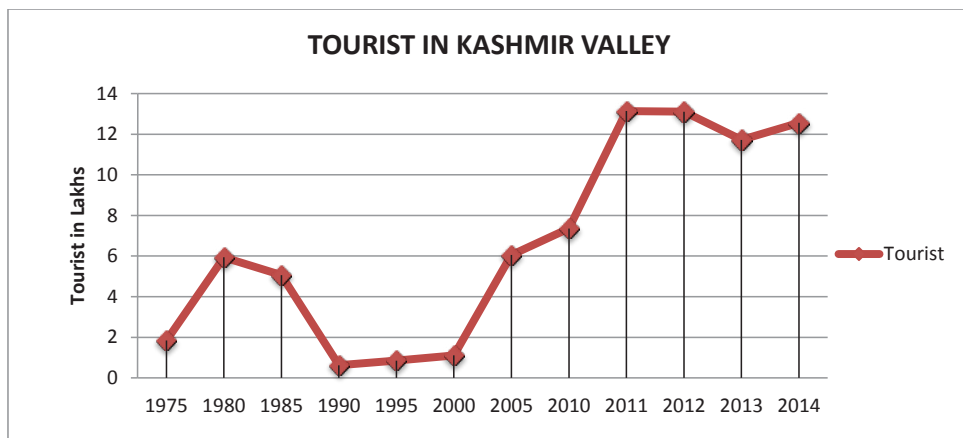


Figure: 1.1 Number of Tourists Arrival in Kashmir Valley (1975 – 2014)

Source: Directorate of Tourism Jammu and Kashmir

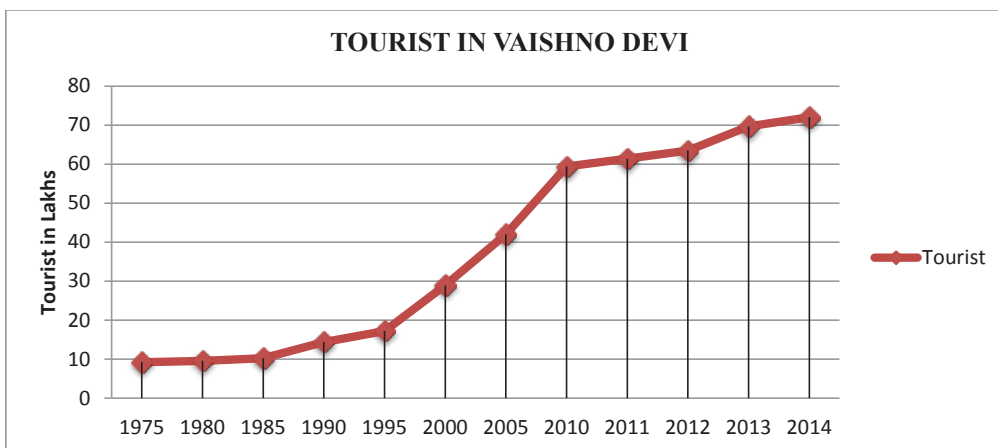


Figure 1.2: Number of Tourists Arrival in Vaishno Devi (1975 – 2014)

Source: Directorate of Tourism Jammu and Kashmir.

There is a continuous increase in the pilgrimage tourist in Vaishno Devi, which was over one million in 1975 has increased to 6 million in 2010 and 7.2 million in 2014. After analysing both the figures, it has found that tourist in Vaishno Devi, are 6.2 times more than the tourist in Kashmir. The tourists in Vaishno Devi are pilgrimage tourists while Kashmir has leisure tourists. Another important fact came into surface is that, during the insurgency period (1989) and Political unrest (2012), Vaishno Devi remained unaffected and grew very fast, even in those circumstances but Kashmir's tourism affected the most.

TOURIST INFRASTRUCTURE AND ENERGY CONSUMPTION IN DAL LAKE WATERSHED

The healthy tourist industry is dependent on healthy tourist infrastructure like well connectivity, adequate services and well accommodations, which is very important and serves as the basic requirement for the tourists. At the Dal Lake watershed area, which encompasses Hotels, Guesthouse, Houseboats etc. and these are the accommodation units in this watershed. The government of the state is taking very appropriate steps to improve the tourism infrastructure, so that more and more tourists come to state and state's economy will increase. The state government is providing subsidised loans to people to establish self-employed businesses especially hotels, guest houses and even for constructing houseboats and all this are improving the tourist infrastructure of the state.

Table 1.1: Number of Accommodation Units in the Dal Lake Watershed in 2014

Type	Hotel	Rooms				Beds	
		Single	Double	Total	Average	Total	Average
Hotel	227	61	5675	5736	25.01	11411	50
Guest House	236	47	1888	1935	8.19	3823	16.52

Type	Hotel	Rooms				Beds	
		Single	Double	Total	Average	Total	Average
Houseboat	805	0	2097	2097	2.6	4194	5.02
Total	1268	108	9660	9768	7.7	19428	15.45

Source: Directorate of Tourism Jammu and Kashmir.

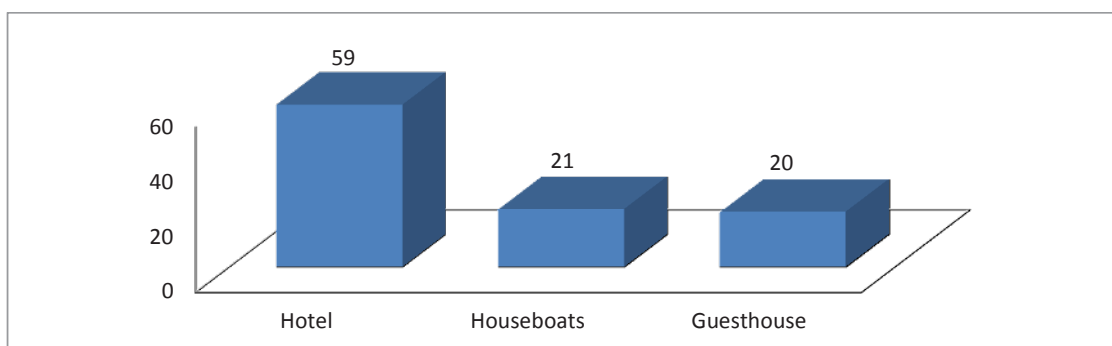


Figure 1.3: Percentage of Different Accommodation in the Dal Lake Watershed in 2014

Source: Directorate of Tourism, Jammu and Kashmir.

Table 1.2: Consumption of Energy in Accommodation Sector in Dal Lake Watershed in 2014

S No.	Energy Consumption in Accommodation Sector at Dal Lake						
	Category	LPG/LT./Month		Kerosene		Firewood Kg/Month	
		Total	Average	Total	Average	Total	Average
1	Hotel	60609	267	41541	183	305769	1347
2	Guest House	26904	114	20060	85	200600	850
3	Houseboat	33810	42	16100	20	322000	400
Total Accommodations		121323	96	77701	61	828369	653

Source: National Sample Survey 2014.

TOURIST INFRASTRUCTURE AND ENERGY CONSUMPTION IN VAISHNO DEVI WATERSHED

The literature as well as data reveals that over 90 per cent of tourists in Jammu and Kashmir come to Vaishno Devi and rest in Kashmir and Ladakh. It is one of the biggest pilgrimage destinations

in India. The government of Jammu and Kashmir has established a statutory body in 1986 to manage and control the pilgrimage or Yatra and its donations, which is officially known as *Shri Mata Vaishno Devi Shrine Board*. All the donation and charity in Vaishno Devi shrine is used to improve the facilities and other tourist infrastructure like government Dharamshalas for pilgrimage accommodations, construction of roads, free food (langar) etc. The table is showing the accommodation units in Vaishno Devi, where hotels and Dharamshalas are the largest accommodation units in the Vaishno Devi watershed.

Table 1.3: Number of Accommodation Units in the Vaishno Devi Watershed in 2014

Type	Hotel	Rooms				Beds	
		Single	Double	Total	Average	Total	Average
Hotel	542	347	15675	16124	32.56	21583	67
Guest House	361	68	2888	2946	12.19	3823	18.52
Dharmshala	82	0	22097	22097	8.36	18432	32.43
Total	985	415	40560	41167	9.7	42838	18.45

Source: Directorate of Tourism, Jammu and Kashmir.

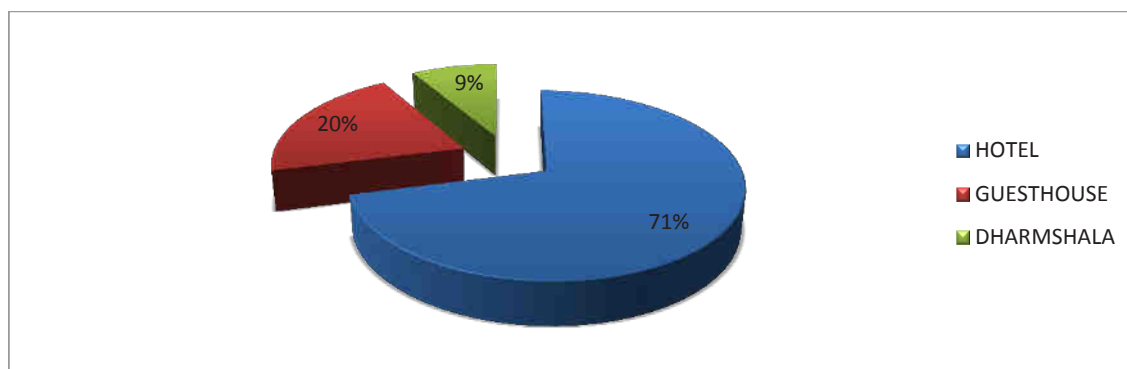


Figure 1.4: Percentage of Different Accommodations in Vaishno Devi Watershed in 2014

Source: Directorate of Tourism, Jammu and Kashmir.

Table 1.4: Consumption of Energy in Accommodation Sectors in Vaishno Devi Watershed in 2013.

S No.	Energy Consumption in Accommodation Sector at Vaishno Devi						
	Category	LPG/LT./Month		Kerosene		Firewood Kg/Month	
		Total	Average	Total	Average	Total	Average
1	Hotel	170609	267	41541	183	205769	1347
2	Guest House	36904	114	20060	85	100600	850
3	Dharmshala	43810	142	16100	20	322000	400

Source: National Sample Survey 2014.

TOURISM AND WASTE GENERATION IN KASHMIR VALLEY

The tourism in Kashmir valley on one side plays a substantial role in elevating and augmenting its economy but on another side directly/indirectly generating waste both solid and liquid. The generation of waste in the fragile mountain's environment is further aggravated the problems. The solid waste is considered as the menace type of pollution which is not easily decomposed and it is imperative to manage this waste in a sustainable way, to decrease the growing burden in this mountain's ecology. In the developed countries, the generated waste is recycled and managed in a very optimum way by using advanced technology but being a developing country, India is facing problems in managing the waste in general and Jammu and Kashmir in particular. According to the *International Hotel Environment Initiative Report* in 2002, hotels are the biggest generator of waste. Due to this aggravating problem of waste generation, a new service came into being, known as Solid Waste Management (SWM) to keep cities healthy and clean.

Solid waste

The solid waste is one of the major sources of pollution in the present days. In every first class city, the local government is responsible to keep the city healthy, clean and green. In the early time, the population was low or sparse and the waste generated by them was disposed- off easily because of availability of plenty of land and very low population; with increase in no. of towns and cities over the period of time, the population has accumulated or concentrated in cities and the land is limited, thus, the waste generated by the population of the cities is dumped in or nearby the cities and this lead to environmental degradation. The solid waste is composed of different things and it is difficult to decompose. In present times, high growth of population, consumerism, the trend of *use and through* products and other increasing demands of the growing population, all lead to generation of huge quantity of wastes and thus, need an efficient solid management policy to manage the solid waste in an optimum way. The Kashmir valley attracts millions of tourists every year and to provide services to all of them, service centres like hotels, guesthouse, houseboats, shops, Dhabas, restaurants and others recreational services and all this generates solid and liquid wastes. It is therefore, solid waste management is one of the most delicate environmental issues in Jammu and Kashmir.

Table 1.5: Annual Composition of Solid Waste from Hotels and Guesthouses in Dal Lake Watershed in 2013.

Material Category A		Hotel Category (Mt.)				Average	Guest House	Average Percentage Composition Of Hotel and Guesthouse	
		B	C	D					
Compostable	Fruit Waste	27.33	17.56	24.12	6.77	75.78	68.34	143	778 (60.68)
	Left Over Food	176.56	40.37	52.46	14.48	282.4	94.32	376	
	Vegetable Waste	92.43	28.85	34.54	7.23	162.6	52.21	215.23	
	Garden Clipping	9.22	4.23	5.33	18.48	37.45	6.23	43.73	

Material Category A		Hotel Category (Mt.)				Average	Guest House	Average Percentage Composition Of Hotel and Guesthouse	
		B	C	D					
Recyclable	Metal	23.45	5.18	6.36	2.45	37.31	12.56	50.33	253 (20.34)
	Glass	17.43	17.63	10.34	1.34	46.41	15.42	62.34	
	Recyclable Paper	7.34	3.54	3.61	1.34	15.54	5.32	21.34	
	Recyclable Plastics	11.34	5.67	19.34	6.38	42.46	78.35	121.34	
	Non-Recyclable Plastic	8.34	2.46	5.27	6.36	19.35	5.41	34.57	250 (19.35)

Source: National Sample Survey, 2013

The solid waste generation in Vaishno Devi is not different from the Dal lake watershed. The production of waste in Vaishno Devi is more than its counterpart (Dal Lake). Here also, hotels are biggest waste generator. The generation of fruit waste is highest in the A category hotels i.e. 42 metric tonnes followed by C category (35 mt.) and B category (20 mt), so, on an average over 80 metric tonnes of fruit wastes generated by the hotels and 71 mt. by the guesthouses. The second compostable waste is leftover food; again A category hotels are the biggest generator of this kind of wastes (206 mt.) followed by B category (51 mt.) and D category (26 mt.) and 306 mt. is the combined leftover food generated by the hotels and 94 mt. by the guesthouses. The 182 mt. of vegetable solid waste is generated by the hotel and over 93 mt. by the guesthouses.

Table 1.6: Annual Composition of Solid Waste from Hotels and Guesthouse in Vaishno Devi Watershed in 2013

Material Category A		Hotel Category (Mt.)				Average	Guest House	Average Percentage Composition Of Hotel and Guesthouse	
		B	C	D					
Compostable	Fruit Waste	42.13	20.56	35.12	10.17	79.22	71.34	156	882 (69.68)
	Left Over Food	206.56	51.37	22.46	26.48	306.41	94.32	410	
	Vegetable Waste	124.43	89.85	55.54	12.23	182.60	93.21	258.23	
	Garden Clipping	14.22	42.23	5.33	18.48	47.45	16.23	62.73	

Material Category A		Hotel Category (Mt.)				Average	Guest House	Average Percentage Composition Of Hotel and Guesthouse	
		B	C	D					
Recyclable	Metal	23.45	5.18	6.36	2.45	37.31	12.56	50.33	253 (16.34)
	Glass	30.43	22.63	10.34	1.34	46.41	18.42	81.34	
	Recyclable Paper	9.34	4.54	3.61	2.34	18.54	15.32	31.34	
	Recyclable Plastics	29.34	15.67	39.34	16.38	42.46	88.35	145.34	
Others	Non-Recyclable Plastic	23.34	2.46	6.27	8.36	29.35	15.41	44.57	250 (14.35)

Source: National Sample Survey Organisation, 2013

The recyclable is quite dangerous than compostable waste because it is not easy to decompose, but the good thing is that it is generated a lower quantity than compostable waste. Over 253 mt. of recyclable waste i.e. metals, plastics and glasses was produced by the hotels and 115 mt. by the guesthouses in Vaishno Devi area in 2013.

Vaishno Devi is the biggest tourist's destination in Jammu and Kashmir and thus, generator of greater quantity of waste. The figure 7.3.6 indicates that the compostable waste has the highest proportion i.e. 70 per cent followed by recyclable i.e.16 per cent and 14 per cent is miscellaneous. The condition of Dal lake watershed is quite different from the Vaishno Devi watershed. The Dal lake watershed produced 61 percent compostable (biodegradable waste) followed by 20 per cent recyclable and 16 per cent miscellaneous. After analysing the above data it can be said that higher the tourist, higher is the compostable waste and therefore, Vaishno Devi watershed has more waste generated as compared to Dal Lake Watershed.

CONCLUSION

The urbanisation is a growing phenomenon and must be tackled by scientific approach. The growing pressure of tourists in these two watersheds is harbingering that over the time their capacity to adjust the tourists would surpass. There is going to be an energy shortage in these watersheds if sustainable steps won't be taken on time. Millions of tonnes of waste are generated every year which is not managed sustainably. A comprehensive, holistic and sustainable approach is the need of the hour to deal with urbanisation, tourists' infrastructure and management of the waste.

REFERENCES

- Kundu, Amitabh., (2006) "Trends and Patterns of Urbanization and their Economic Implications" in "India Infrastructure Report, 2006". Pp. 27-41.
- Ahmad, Aijazuddin, Daniel Noin and Barren Slopes (edit.), (1997),"Demographic Transition: The Third World Scenario", Rawat PublicatiOJ1S, New Delhi.
- Anderson, N. (1964): "Our Industrial Urban Civilization", (ed. Ishwaran, K.) Asia Publication House, Delhi, p. 3

- Bhattacharya, P.C., (2002), "Urbanisation in Developing Countries", Economic and Political Weekly, Vol. 37, No. 41, pp. 4219-4228.
- Bala. R. (1982), "Studies in India's urbanization" Tata McGraw Hill, Publication Company, Bombay.
- Davis Kingsley (1962): "Urbanization in India – Past and Future", in Turner, R. (ed.) India's Urban Future, University of California Press, and Berkley
- Lone et al (2003): "Urban Environment Management: Local Government and Community Action", New Delhi: Concept Publications Co.
- Lawrence, S W P (1895) "The valley of Kashmir", H. Frowde.
- Thomson. A. (1955), "Urbanization, City Structure and Urban Land Policy", Urban India, Vol-3, No.1, P.26
- Wirth, L. (1957), "Urbanization as a way of life", pp. 46-63, in P.K. Hatt and A.G. Reiss J. (eds.). Cities and Society, Galencue, Ill: Free Press, p. 47

Independence of Judiciary in India: A Critical Analysis

Minati Kalo*

ABSTRACT

The creation of a culture of judicial independence is of central significance for both national domestic legal systems as well as for the international courts and tribunals. It is well known fact that the independence of the judiciary is the basic requisite for ensuring a free and fair society under the rule of law. Rule of law that is responsible for good governance of the country can be secured through unbiased judiciary. Whenever there is a talk regarding the independence of the judiciary, there is also a talk of the restrictions that must be imposed on the judiciary as an institution and on the individual judges that forms a part of the judiciary. In order to ensure smooth functioning of the system there must be a right blend of the two. At the same time judicial independence plays an important role in maintaining the democratic set-up of any country. An impartial and independent judicial system alone can protect the rights of the citizens against the arbitrary powers of the executive or legislature. It is important for individual freedom that the judges give their verdict without fear or favor. It refers to an environment where the judge can pass impartial judgment. The crucial issue to be examined is how far the appointment procedure secures the personal independence of judges. The search for a proper system of appointment will have to address this fundamental question if the public is to be persuaded to accept the appointment system in the name of protecting the "independence of judiciary". In developed countries people are always taking part in the decision making process. But in India judiciary has not been able to create interaction with citizen. Because of that independence of Judiciary remains weak and powerless to make any significant impact in delivering timely justice. So we need to create forum for interaction between judiciary and society and create avenue for society to be involved in judicial processes. The basic objective of the paper is to critically analysis the Independence of Judiciary in India and also focus on the status of Independence of Judiciary in India.

Keywords: Judiciary, Independence, Rule of Law, Judgement etc.

INTRODUCTION

"There can be no difference of opinion in the house that our Judiciary must both be independent of the executive and must also be competent in itself and the question is how these two objects could be secured"

Dr. B.R. Ambedkar, Constitutional Assembly Debate, 24th May 1949.

Indian Judiciary, a multilayered structure of delivery system, as enshrined in the Constitution, the Judiciary holds a vital importance in the system. It also acts as a check on executive and legislature and maintains check and balances in every area of democracy. Within hierarchy, acts as a good

*Ph.D Research Scholar, Centre for South Asian Studies (CSAS/ SIS), Jawaharlal Nehru University, New Delhi (India).
E-mail: minati.jnu@gmail.com

system for justice deliver, since it helps in appeals and re appeal leading to better options available within the parties. Also has been a great tool of check over democratic elections, internal state disputes, constitutional guard and what not. But since the time immemorial, it has been criticized for its failure to that justice delivery system only which is its soul goal.

Independence of Judiciary is vital for democratic practice all over the world. An independent and impartial judiciary can protect the rights of the individual and provide equal justice without fear or favour. Therefore it is very necessary that the judiciary should be allowed to perform its functions in an atmosphere of independence and free from all kinds of political pressure. Prof. Willoughby went so far as to claim that this is the “Primary function of government”. Though it is the weakest department of government in so far as it has no control on the police force and no control over the purse strings of the state, yet its moral importance is very great. The strength of the judiciary lies in the command that it has over the hearts and minds of men. It is the guardian of the conscience of the people as well as of the laws of the land. Independence of Judiciary is the *sin quo non* of democracy. The purpose of democracy is not served merely by getting laws enacted by democratically constituted bodies. With increasing volume of laws and with their growing complexity, judicial independence is of considerable value. In a country like India where we have to establish tradition of democracy, independence of the judiciary is of basic importance (Prasad, 1964).

It is also a well-known fact that the independence of the judiciary is the basic requisite for ensuring a free and fair society under the rule of law. Rule of law that is responsible for good governance of the country can be secured through unbiased judiciary. The doctrine of Separation of Powers which was brought into existence to draw upon the boundaries for the functioning of all the three organs of the state: Legislature, Executive and the Judiciary, provides for a responsibility to the judiciary to act as a watchdog and to check whether the executive and the legislature are functioning within their limits under the constitution and not interfering in each other’s functioning. This task given to the judiciary to supervise the doctrine of separation of powers cannot be carried on in true spirit if the judiciary is not independent in itself. An independent judiciary supports the base of doctrine of separation of powers to a large extent. It is theoretically very easy to talk about the independence of the judiciary as for which the provisions are provided for in our constitution but these provisions introduced by the framers of our constitution can only initiate towards the independence of the judiciary. The major task lies in creating a favorable environment for the functioning of the judiciary in which all the other state organs functions in cooperation so that the independence of the judiciary can be achieved practically. The independence of the judiciary has also to be guarded against the changing economic, political and social scenario. Whenever there is a talk regarding the independence of the judiciary, there is also a talk of the restrictions that must be imposed on the judiciary as an institution and on the individual judges that forms a part of the judiciary. In order to ensure smooth functioning of the system there must be a right blend of the two (Kumar, 2014).

MEANING AND IMPORTANCE OF INDEPENDENCE OF JUDICIARY

The creation of a culture of judicial independence is of central significance both for national domestic legal system as well as for the international courts and tribunals. Judicial independence is a dual concept. It not only means freedom from extraneous influences but it also means an independent approach by the individual judge. A judge must be also able to think independently for himself. He should not be swayed by the argument of one side and just close his eyes to the argument of the other side. He must be independently capable of evaluating the arguments of both sides and come to a right conclusion. He should be self-reliant and not submissive. Judges must develop a judicial temperament. Judicial temperament is defined as objectivity growing in wisdom. It is equanimity devoid

of passion or ego of the self. It is an attitude of mind, a quality that integrates the entire personality of the judge. Without favorable conditions necessary for the growth of independent judiciary, such an open mindedness and uprightness cannot be had (Prasad, 1964).

Independence of Judiciary truly means that the judges are in a position to render justice in accordance with their oath of office and only in accordance with their own sense of justice without submitting to any kind of pressure or influence from executive and legislature or from the parties themselves or from the superiors and colleagues. There are four meaning of judicial independence:- Firstly **Substantive independence of the Judges** which means a functional or decisional independence that the independence of the judges to arrive at their decisions without submitting to any inside or outside pressure. Secondly **Personal Independence** where the judges are not independent on government in any way in which might influence them in reaching at decisions in particular case. Thirdly **Collective Independence** which means institutional administrative and financial independence of the judiciary as a whole vis-à-vis other branches of the government. Lastly **Internal Independence** of the Judges or judicial offices from any kind of order, indication or pressure from his judicial superiors and colleagues in deciding cases.

The independence of the judiciary is not a new concept but its meaning is still imprecise. The starting and the central point of the concept is apparently the doctrine of the separation of powers.¹ Therefore, primarily it means the independence of the judiciary from the executive and the legislature. But that amounts to only the independence of the judiciary as an institution from the other two institutions of the state without regard to the independence of judges in the exercise of their functions as judges. In that case it does not achieve much. The independence of the judiciary does not mean just the creation of an autonomous institution free from the control and

Influence of the executive and the legislature. The underlying purpose of the independence of the judiciary is that judges must be able to decide a dispute before them according to law, uninfluenced by any other factor. For that reason the independence of the judiciary is the independence of each and every judge. But whether such independence will be ensured to the judge only as a member of an institution or irrespective of it is one of the important considerations in determining and understanding the meaning of the independence of the judiciary (Singh, 2000).

Shetreet in his work tries to explain the words “Independence” and “Judiciary” separately, and says that the judiciary is “the organ of the government not forming a part of the executive or the legislative, which is not subject to personal, substantive and collective control, and which performs the primary function of adjudication”. The final outcome that can be derived from Shetreet’s writings is that the independence of the judiciary as an institution and the independence of the individual judges both have to go hand in hand as the independence of the judiciary as an institution is not possible without the independence of the individual judges and is the institution of the judiciary is not independent, there is no question of the independence of the individual judge (Kumar, 2014).

Shetreet's treatment also establishes that the independence of the judiciary means and includes the independence of the judiciary as a collective body or organ of the government from its two other organs as well as independence of each and every member of the judiciary-the judges-in the performance of their roles as judges. Without the former the latter cannot be secured and without the latter the former does not serve much purpose. Therefore, the two, even if separable, must be pursued together. A system which ignores one or the other cannot make much progress towards, much less achieve, the independence of the judiciary (Singh, 2000).

The Constitution of India secures justice to all its citizens apart from securing liberty, equality and promoting fraternity. In Indian democracy, the Supreme Court plays important role of safeguarding the fundamental rights of citizens. Justice which is the soul of a democratic society must be administered without fear or favor. Integrity, Impartiality and Intelligence are some of the important characteristic

of independent judiciary in a democratic setup (Mol, 2011). Independence of judiciary depends on some certain conditions like mode of appoint judges, security of their tenure, high social status, adequate emoluments, separation of executive from judiciary. Following are some of the conditions.

Appointment of Judges- The mode of Appointment of the judges also has considerable influence over the independence of the judiciary. The election of judges by the people or the legislature is not conducive to the achievement of judicial independence. The Collegium system² is no more transparent or clean, highly bitten by corruption, nepotism and other personal biases. The selection has always been quite a talk of the town.

High Social Status- The judge must be accorded a high social status. This will ensure the flow of competent and qualified persons to the profession and will ensure the integrity and impartiality of the judges. This is why in India and elsewhere, a person may be punished for contempt of court, if he in any way disregards the dignity of the court or the judges.³

Adequate Emoluments- According to Bryce, the honesty and independence of a judge also depends upon the emoluments that his office carries. Judges should be paid sufficiently high salaries in order to attract men of outstanding ability and character. An adequate salary places judges beyond the reach of corruption. Apart from adequate salaries, it is also necessary that their salaries should not be altered to their disadvantages during their terms of office. In India salaries of judges are specified in the Constitution.

Separation of Executive from the Judiciary- The impartiality of Judiciary is only possible when there is separation of functions between executive and judiciary. The judiciary should be kept free from the influence of the executive. It should enjoy the power of reviewing functions, which concerns the executive. If the judiciary is under the executive, then the judges cannot be impartial.⁴

Importance on merit- For maintaining the independence of judiciary, it is quite essential that judges should be appointed on merit. The appointment should be based on certain definite qualifications. They should have thorough knowledge of law.

Security of Service- The judge can remain independent only when they enjoy security of service. A judge may not be able to deliver a decision against a person or organization that has the authority to remove him. Therefore, the judges should have security of job to be able to discharge their duties impartiality and independently.

Powers and Jurisdiction of Supreme Court- Parliament can only add to the powers and jurisdiction of the Supreme Court but cannot curtail them. In the civil cases, Parliament may change the pecuniary limit for the appeals to the Supreme Court. Parliament may enhance the appellate jurisdiction of the Supreme Court. It may confer the supplementary powers on the Supreme Court to enable it work more effectively. It may confer power to issue directions, orders or writs for any purpose other than those mentioned in Art. 32 Powers of the Supreme Court cannot be taken away and making judiciary independent.

NEED FOR THE INDEPENDENCE OF JUDICIARY

The basic need for the independence of the judiciary rests upon the following points:

- **To check the functioning of the organs:** Judiciary acts as a watchdog by ensuring that all the organs of the state function within their respective areas and according to the provisions of the constitution. Judiciary acts as a guardian of the constitution and also aids in securing the doctrine of separation of powers.
- **Interpreting the provisions of the constitution:** It was well known to the framers of the constitution that in future the ambiguity will arise with the provisions of the constitution so they ensured that the judiciary must be independent and self-competent to interpret the

provision of the constitution in such a way to clear the ambiguity but such an interpretation must be unbiased i.e. free from any pressure from any organs like executive. If the judiciary is not independent, the other organs may pressurize the judiciary to interpret the provision of the constitution according to them. Judiciary is given the job to interpret the constitution according to the constitutional philosophy and the constitutional norms.

- **Disputes referred to the judiciary:** It is expected of the Judiciary to deliver judicial justice and not partial or committed justice. By committed justice we mean to say that when a judge emphasizes on a particular aspect while giving justice and not considering all the aspects involved in a particular situation. Similarly judiciary must act in an unbiased manner.

DOCTRINE OF SEPARATION OF POWER

According to Montesquieu Power tends to corrupts, and absolute power tends to corrupts absolutely. Absolute power results in tyranny, corruption and abuse of power. This Universal truth forms the very basis of the theory of separation of powers and is applicable in all times. The traditional classification of the organs of the government has been into the legislative, the executive and the judicial, but this classification considered to be too simple to suit modern conditions.

The keystone of the Democratic arch is the Doctrine of Separation of Powers.⁵ It is a theory on the functional division of governmental power, which was first expounded by Montesquieu, a French political philosopher of the Age of Enlightenment, having roots in the Greek philosopher Aristotle, the father of Political Science. The evolution of the State from its beginnings in the “State of Nature”, as described in the Theory of Social Contract of Hobbes, Locke, and Rousseau, and the formation of what we perceive as a democracy today- a State where man loses natural liberty, and gains civil liberty, was fortified by the implementation of Montesquieu Doctrine of Separation of Powers. Structurally, the division of governmental power was attributed to three organs, each with a separate function, the Legislature or law making body, the Executive, or the body that administered laws and gave effect to them, and the Judiciary that interpreted the law. Montesquieu, who was a great advocate of human dignity, formulated the Doctrine of Separation of Powers to uphold the liberty of the individuals that made up the State. Montesquieu believed that the application of the Doctrine would prevent the concentration of power in one particular organ of governance, as concentration of power posed a threat to political liberty. When the executive and legislative powers were vested in one organ, there could be no liberty, because the same organ would enact oppressive laws and execute them tyrannically. If judicial and legislative powers were exercised jointly, the life and liberty of individuals in the State would be jeopardized for the judge would then be the legislator (Naganand, 2012).

In India, not only is there a functional overlapping but there is also personnel overlapping. The Supreme Court has the power to declare as void the laws passed by the legislature and the actions taken by the executive if they violate any provision of the Constitution or the law passed by the legislature in case of executive actions. Even the power to amend the Constitution by parliament is subject to the scrutiny of the court. The court can declare any amendment void if it changes the basic structure of the constitution. The President of India in whom the executive authority of India is vested exercises law making power in the shape of the ordinance making power and also the judicial powers. The council of ministers is collectively responsible to the legislature. The legislature, besides exercising law-making powers, also exercises judicial powers in case of breach of its privilege, impeachment of the President and the removal of the judges. The executive may further affect the functioning of the judiciary by making appointments to the office of Chief justice and other judges.

INDEPENDENCE OF JUDICIARY: AN ANALYSIS

It is in the backdrop of the prescribed international standards and judicial system prevailing in India and in others parts of the world, that an understanding of Independence of the Judiciary in its true sense is possible. In the words of Churchill, "Our aim is not to make our judges wealthy men, but to satisfy their needs and to maintain a modest and a dignified way of life suited to the gravity, and indeed, the majesty, of the duties they discharge". Independence of the Judiciary stems from the Judiciary being politically shielded from the reprehensible influence of other branches of government, or from personal or adherent interests. Nations across the world are seen to deal with Judicial Independence in their own unique way.

The judiciary has no other power except the power given to them by the people by reposing faith and trust in its independence and impartiality. The people have given the judiciary that responsibility because it is thought that exercise of power has to be controlled so that in the hands of any organ of the state, there should not be destruction of the very values which it intends to promote. The judiciary ensures that the executive is more loyal to the existing constitution and to the constitutional arrangements. The judiciary thus, is meant to uphold the constitutional values and protect the citizens against encroachment on their constitutional rights.

Sometime a tension between the executive and judiciary comes to the surface but such tensions arising out of each being watchful if encroachment into the province of other is the best guarantee that the citizens can have against the abuse of power (Malviya, 2013).

The crucial issue to be examined is how far the appointment procedure secures the personal independence of judges. The search for a proper system of appointment will have to address this fundamental question if the public is to be persuaded to accept the appointment system in the name of protecting the "independence of judiciary". If judicial independence is about freedom from all pressures in the exercise of the adjudicative function, how can the appointment process secure it? Are matters of impartiality, integrity, propriety, equality, competence, etc. on which personal independence is dependent better assessed in a transparent, participatory commission system with pre-defined norms and procedures than in an opaque system managed by judges alone? This was the larger issue contested in the Supreme Court, for which the judgment did not provide clear answers. The court is now trying to figure out how the collegiums can be retained and still secure independence and accountability on which it failed to prove its superiority to the earlier model (Menon, 2016).

Moreover, the independence of the judges is better assured through the democratic process of their selection. Such methods are essential in countries like India where already administrative pressures have begun to build up against the judiciary. It is everybody's experience what great difficulty a judge or a magistrate has to surmount when he has to beat down the resistance of the police to the grant of bail to an accused. And where the police officers themselves are accused of offences against the citizen, the administration takes leave of all scruples and exerts pressure on the judge. Independence of the judiciary can neither be an exercise in semantics nor an indulgence in a formal approach. Appointment by the people is the only alternative to the degenerating dependence of the judicial office on the executive (Chatterje, 1973)

Independence of Judiciary has to be confined within the four corners of the Constitution and cannot go beyond the Constitution. If there is one principle which runs through the entire fabric of the Constitution, it is the principle of rule of law and under the Constitution; it is the Judiciary which is entrusted with the task of keeping every organ of the state within the limits of law and thereby making rule of law effective and meaningful. The Judiciary cannot act in isolation. This is the principle of Independence of the Judiciary which is vital for the establishment of real participatory democracy. Maintenance of the Rule of law is a dynamic concept for the delivery of social justice to the vulnerable

sections of the community. The power of judicial review conceded to the judiciary is the safest possible safeguard for the independence of Judiciary. This conception of independence of judiciary has been amply described in a case decided by the Supreme Court in *S.P. Gupta vs. Govt. of India* as under:

“The concept of Independence of the Judiciary is a noble concept which inspires the Constitutional Scheme and Constitutes the foundation on which rests the edifice of our democratic polity. If there is one principle which runs through the entire fabric of the Constitution, it is the principle of the rule of law and under the Constitution it is the Judiciary which is entrusted with the task of keeping every organ of the state within the limits of the law and thereby making the rule of law meaningful and effective... But it is necessary to remind ourselves that the concept of the Independence of the Judiciary is not limited only to independence from executive pressure or influence but it is a much wider concept which takes within its sweep independence from many other pressures and prejudices. It has many dimensions, namely fearlessness of other power centers, economic or political, and freedom from prejudices acquired and nourished by the class to which the Judges belong” (Deshpande, 2009).

This Judicial verdict about Independence of Judiciary is still valid and this conception of Independence of Judiciary has been widely recognized and accepted throughout the world where democracy is in existence. Not only the Nations but the United Nations Organization has also recognized this independence of judiciary. Two important resolutions were passed by the General assembly of the UN, one in respect of judicial and Lawyers independence and other Basic Principles on the Independence of the Judiciary and a Jurists committee was also appointed by the General assembly to monitor the process of Independence of Judiciary in the member Countries. Further this concept of independence of Judiciary was confirmed in the Vienna Declaration about the Programme of Action for maintenance of independence of Judiciary.

The Process of appointment of the judges to the higher judiciary is a crucial point in respect of independence of judiciary. In *S.P. Gupta's* case, it was observed that so far as the framers of the Indian Constitution are concerned, they had deliberately rejected the complete separation of the judicial system from the executive control. The Indian Constitution has devised the wholesome and effective mechanism for the appointment of the judges which strikes a just balance between the judicial and executive powers so that while the final appointment vests in the highest authority of the executive, the power is subject to a mandatory consultative process which by the convention is entitled to great weight by the President. In this process, the principle of check and balance at every stage has been kept in mind by the fathers of the Constitution.

CONCLUSION

Today the judiciary is not only required to resolve disputes between citizens inter se but also between the citizen and the state. In view of the changing pattern of the disputes which are required to be resolved it becomes necessary to have special courts and tribunals. Today we have a number of such special courts and tribunals functioning in the country dealing with questions relating to family disputes, taxation, accident claims, labour disputes, government employees, consumer protection, monopolies and restrictive trade practices etc. on the account of increasing awareness of the people about their rights there has been considerable increase in litigation resulting in delay in dispensation of justice by the courts. This has led to resort to alternative avenues for expeditious adjudication of disputes. One such mode which has been evolved with considerable success is Lok Adalats where the parties are able to amicably resolve disputes pending in courts.

It is imperative for Judiciary in India to constantly evolve in order to sustain Judicial Independence. Independence of the Judiciary is not genuflexion, nor is it opposition to Government; it is a “Constitutional Religion”. It is a live wire of our judicial system, where if the wire were snapped, the doomsday

of the judiciary would not be far-off. The independence of the judiciary as is clear from the above discussion hold a prominent position as far as the institution of judiciary is concerned. It is clear from the historical overview that judicial independence has faced many obstacles in the past, especially in relation to the appointment and the transfer of judges. Courts have always tried to uphold the independence of judiciary and have always said that the independence of the judiciary is a basic feature of the Constitution. Courts have said so because the independence of judiciary is the prerequisite for the smooth functioning of the Constitution and for a realization of a democratic society, based on the rule of law. The interpretation in the Judges Case giving primacy to the executive, as we have discussed has led to the appointment of at least some Judges against the opinion of the Chief Justice of India. The decision of the Judges Case was could never have been intended by the framers of the Constitution as they always set the task of keeping judiciary free from executive and making it self-competent.

Whenever there is a mention of the independence of the judiciary, there is always a concern about the latent dangers of the judicial independence and there arises the importance of “Judicial Accountability”. The recent development in this regard is the recommendation of the Law Commission for the inclusion of a whistleblower provision, aimed at protecting those making complaints against judges, in a draft bill dealing with the removal of judges of the Supreme Court and High Courts. Introduction of such a bill by the Law Commission is a major step in the direction of making changes to the rigid procedure in our constitution for the removing of the judges of the Supreme Court and the High Courts.

Therefore we cannot ensure independence of the judiciary without fulfilling its basic components like Independence, integrity, accountability, transparency, capability etc. because these components are the bases of the Independence of judiciary. The final outcome is that the importance of the independence of the judiciary was long ago realized by the framers of the constitution which has been accepted by the courts by marking it as the basic feature of the constitution. It is well known law has to change so as to meet to the needs of the changing society. Similarly judicial independence has to be seen with the changing dimension of the society. Judicial Accountability and Judicial Independence have to work hand in hand to ensure the real purpose of setting up of the institution of Judiciary

REFERENCES

- Agarwala, B R (2014), *Our Judiciary*, New Delhi: National Book Trust.
- Ahmed, Md Nazir (2016), “Independence of Judiciary: Possibilities and Challenges”, *Banglavisian*, 16 (1): 32-47.
- Anand, A. S. (1999), “The Indian judiciary in the 21st Century”, *India International Centre Quarterly*, 26 (3): 61-78.
- Anderson, G. Berry (2009), “Preserving the Independence of Judiciary”, *American Bar Association*, 35 (2): 3-4.
- Chatterje, Arun Prokash (1973), “Independence of the Judiciary”, *Social Scientist*, 2 (4): 65-69.
- Chowdhury, Justice Abdur Rahman (1993), *Democracy Rule of Law and Human Rights*, Dhaka: University of Dhaka.
- Chandrachud, Abhinav (2010), “The Insulation of India’s Constitutional Judiciary”, *Economic and Political Weekly*, 45 (13): 38-42.
- Dam, Sukumar (1964), “Judiciary in India”, *the Indian Journal of Political Science*, 25 (3/4): 276-281.
- Das, Atin Kumar, “Independence of Judiciary in India: a Critical Analysis”, [Online: web] a Accessed 18 March 2017 URL: <http://mulnivasiorganiser.bamcef.org/?p=482>.
- Deshpande, Bhagwanrao (2009), *Accountability of Judiciary under Constitution of India*, New Delhi: Peoples Publishing House Ltd.
- Divan, Anil (2016), “Upholding judicial Independence”, *The Hindu*, New Delhi, 02 June 2016.

- Garg, B. L. (1964), "Problem of the Separation of Judiciary in India", the Indian Journal of Political Science, 25 (3/4): 331-338.
- *Hossain, Sara and Tanjib-ul Alam (2006), "Separation of the Judiciary from the Executive in Bangladesh, UNDP policy Paper, 26 November.
- Jaiswal, Vijay (2013), "Independence of judiciary in Indian Constitution", [Online: web] Accessed 18 March 2017 URL: <http://www.importantindia.com/2146/independence-of-judiciary-in-indian-constitution/>.
- Kumar, Alok Prasanna (2015), "Judicial Independence, Accountability and Transparency", [Online: web] Accessed 18 March 2017 URL: <http://www.livemint.com/Opinion/jUM5IDd7M0qxRGiBeqi0UO/Judicialindependence-accountability-and-transparency.html>.
- Kumar, Prashant (2014), "Independence of Judiciary in India", International Journal of Human Research and Industrial Research, 1 (8): 01-08.
- Malviya, Mr. Mukesh Kumar (2013), "Independent Judiciary: A study in Indian Perspective", Bharti Law Review, July-Sept: 113-140.
- Menon, N.R. Madhava (2016), "A Way to judicial Independence", The Hindu, New Delhi, 25 March 2016.
- Mishra, K.P (1964), "Federal Judiciary in India: A Historical Retrospect", The Indian Journal of Political Science, 25 (3/4): 157-170.
- Mol, Akhil (2013), "Essay on Indian Judicial System", [Online: web] Accessed 18 March 2017 URL: <https://www.scribd.com/document/169610027/Essay-on-Indian-Judiciary-System>.
- Naganand, S S (2007), Independence of the Judiciary, Speech delivered by Hon'ble Justice Arijit Pasayat, Judge, Supreme Court of India on 24 November 2007, Supreme Court Of India: New Delhi.
- Prasad, Vishnu and Vishnu Prasad (1964), "Independence of judiciary in India", Indian Journal of Political Science, 25 (3/4): 307-312.
- Sharma, Preeti, "Judiciary in India, No longer independent: A critical Analysis", International Journal of Law and Legal Jurisprudence studies, 1 (6).
- Singh, Harmandar (1964), "Federal Judiciary in India: A Historical Retrospect", the Indian Journal of Political Science, 25 (3/4): 301-306.
- Singh, M. P (2000), "Securing the Independence of Judiciary: The Indian Experience", Indian International and Company Law Review, 10 (2): 245-292.
- Tirkey, Isha (2011), "Judicial Accountability in India Understating and exploring the failures and solutions to Accountability", CCS Working Paper No 247, [Online: web] Accessed 18 March 2107 URL: https://ccs.in/internship_papers/2011/247_judicial-accountability-in-india_isha-tirkey.pdf.
- Varughese, Shijoy (2015), "Judicial independence in India", [Online: web] Accessed 18 March 2017 URL: <https://intpolicydigest.org/author/shijoy-varughese/>.
- "Independence of Judiciary in India", [Online: web] Accessed 18 March 2017 URL: <http://www.yourarticlelibrary.com/india-2/independence-of-judiciary-in-india/49299/>.

ENDNOTES

- While the doctrine of separation of powers ensures liberty by preventing concentration of powers in one person or body and there by puts a restraint on the executive and legislative, it also ensures the exercise of judicial powers that is unhindered by the other two branches
- It is a system under which appointments and transfers of judges are decided by a forum of the Chief Justice of India and the four senior-most judges of the Supreme Court. It has no place in the Indian Constitution.
- Both the Supreme Court and the High Court have the power to punish any person for their contempt. *Art. 129* provide that the Supreme Court shall have the power to punish for contempt of itself. Likewise, *Art. 215* lays down that every High Court shall have the power to punish for contempt of itself.
- *Art. 50* contains one of the Directive Principles of State Policy and lays down that the state shall take steps to separate the judiciary from the executive in the public services of the state. The object behind the Directive Principle is to secure the independence of the judiciary from the executive. *Art.50* says that there shall be a separate judicial service free from executive control.
- Doctrine of Separation of Powers, first published in Montesquieu, "*The Spirit of laws*," 1748.

International Human Resource Management for Strategic Integration, Challenges and Solutions

Dr. Sweta*

ABSTRACT

In the context of changing global environment there is a need to assess the relevancy of academic output from the higher academic institutions to the industry specially in a country like ours, India. With this realisation that what works effectively in one country may not be as efficient in another has led s to enhance their understanding of international environment and its effects to management of man. This paper focused on the study of the International Human Resources Management (IHRM) for Strategic Integration. Strategic Integration proposes a framework for IHRMSI that helps formulate and implement the integration of strategic IHRM in organizations for enhanced organizational performance. The final part discusses what needed to cope with the multiple challenges they are faced in overseas assignments.

INTRODUCTION

Human Resources Management (HRM) can be described as a series of activities which, firstly enables working people and the organization which uses their skills to agree about the objectives and nature of their working relationship and secondly, ensures that agreement is fulfilled. HR comprises the following core functions: organizing, resourcing, performance, development, employee relations and compensation. As a consequence of the globalization process, the number and size of multinational organizations is increasing and hence, the HR functions have to accommodate this development. Following Dowling, and Schuler (2007) "The complexity of operating in different countries and employing different national categories is a key variable of International Human Resource Management (IHRM), which in broad terms involves the same functions as domestic HRM". International Human resources management is about the world wide management of human resources. The purpose of IHRM is to enable the multinational enterprise, to be successful globally. (Schuler et al, (2002). International HRM defined as, performing HRM and its related activities and arranging for related and necessary cultural and immigration facilities for prospective and current employees by organization operating in domestic and foreign countries. (Subba Rao Pulapa) Morgan (1986) presents a model of international HRM that consists of three dimensions:

1. The three broad human resource activities are procurement, allocation, and utilization.
2. The three national or country categories involved in international HRM activities:
 - (a) the host country where a subsidiary may be located, (b) the home-country where the firm is headquartered, and (c) "other" countries that may be the source of labor or finance.
3. The three types of employees of an international firm:
 - (a) host-country nationals (HCNs), (b) parent-country nationals (PCNs), and (c) third-country nationals (TCNs).³

*Assistant Professor, Department of Management, BIT, Mesra, Patna Campus, Patna. E-mail: sweta.tiwary@bitmesra.ac.in

Thus, for example, IBM employs Australian citizens (HCNs) in its Australian operations, often sends U.S. citizens (PCNs) to Asia-Pacific countries on assignment, and may send some of its Singaporean employees on an assignment to its Japanese operations (as TCNs). Morgan defines international HRM as the interplay among these three dimensions-human resource activities, types of employees, and countries of operation.

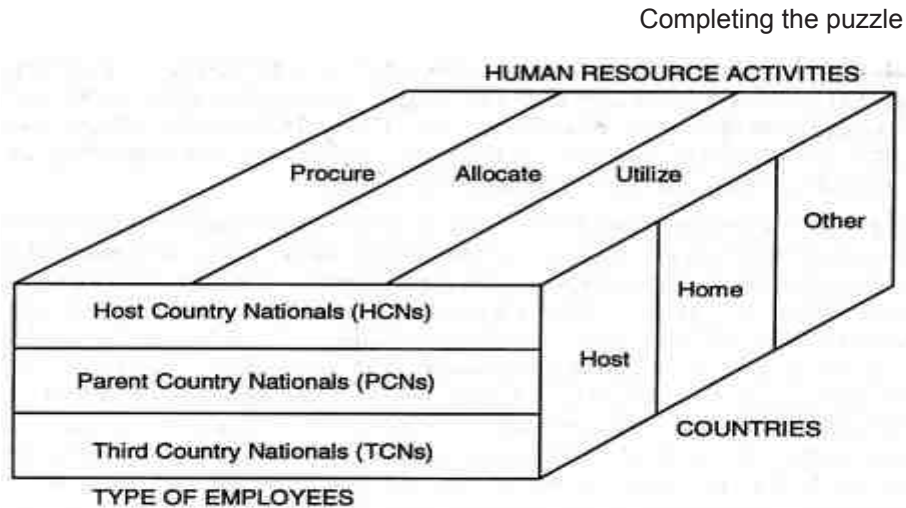


Figure 1: Model of International HRM

Source: Adapted from P. V. Morgan, *International Human Resource Management: Fact of fiction*, Personnel Administrator, 31.9.1986, p. 44

THE NATURE OF IHRM

As IHRM has emerged as an academic discipline, a variety of debates and issues have come to dominate the literature. For practitioners, a long-standing issue has been the delineation of specific practices to be used in the management of people within international organizations. Over time, practices have emerged, and texts today can readily be found (e.g. Briscoe et al., 2009; Dowling et al., 2007) that represent such practices for those working in MNCs as HR managers. While the practical aspects of such texts can be useful, the bigger questions of IHRM are to be found in specialized journal articles. Practices are useful, but there are theoretical underpinnings and debates that must be addressed to inform practice in the field. Debates have arisen as to the role of culture in organizations; will MNCs converge on a single set of practices, or will practices remain diverse, even after increased intercultural contact? What is the role of strategic management when extended to the large MNC (Schuler and Tarique, 2007; Dickmann and Müller-Camen, 2006)? What drives IHRM practices in local and multi-national firms and contexts (Farndale and Paauwe, 2007)? The increased attention to international terrorism cannot be ignored, and emerging economies such as India, China, and Eastern Europe all need to be considered (Scullion et al., 2007). Clearly, the literature on IHRM has the potential for great theoretical depth and richness. HRM, even in a single-country context and from a distinctly Western perspective, can be argued as a practitioner-oriented profession. While a lengthy history of the HRM profession is far beyond our discussion here, it is easily argued that the field emerged approximately 100 years ago as a needed, administrative

function in the emerging modern (i.e. manufacturing) organization. Only in more recent decades has the emergence of organizational behavior as an academic discipline given HRM the needed theoretical underpinnings for understanding our organizational impacts. When applied to IHRM, a number of such concerns have been raised, some of which are addressed by the papers in this issue. Motivation, for example, is a major issue in any work organization. Theories of motivation, derived largely from theories and models of psychology and sociology, have been criticized as having limited applicability in the world forum. Our theories are heavily derived from studies in Western societies, especially the USA, and a common criticism is that these are not universal. Clearly, a major task for academic HRM is to study the applicability of our models in a much broader world context, and this concern can be raised for almost any topic in the HRM literature

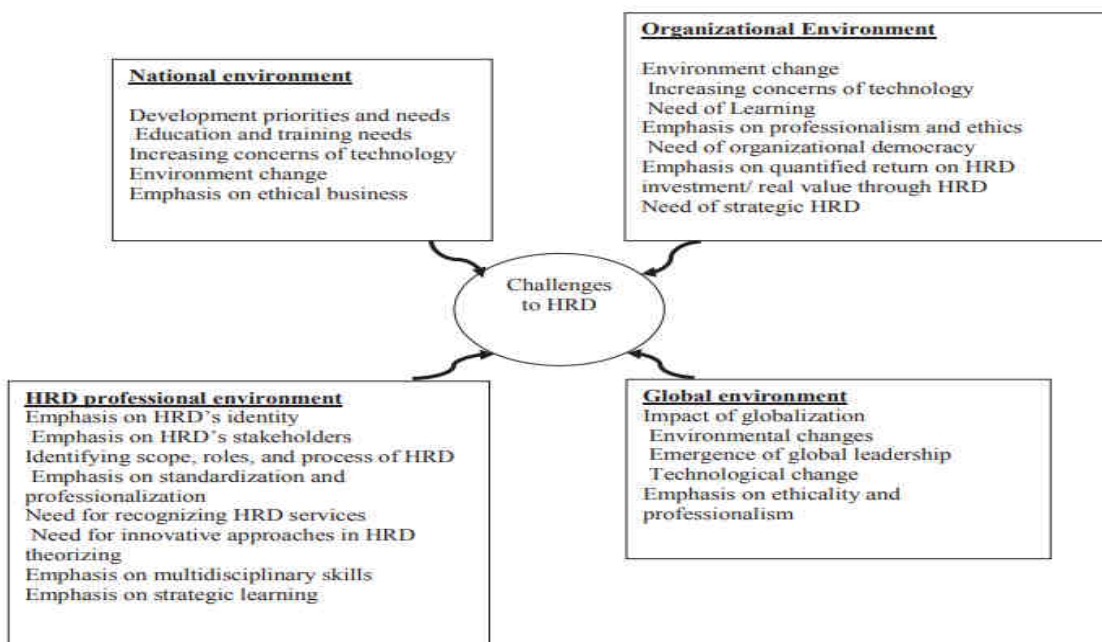


Figure 2: Contemporary HRD Challenges

CRITICAL ISSUES IHRM

IHRM be suitable for - How does the whole expatriation process be managed?

How are performance judged and management when criteria differ from nations to nation? -

Which nationalities ought to be managers in the main subsidiaries, and headquarters? -

How much consistency in IHRM policies ought to be insisted on?

Which policies ought to be international and which local? If global, whose cultural practices and laws should be applied? -

Whether IHRM designed at headquarters can apply at local level by whom and do international teams be apply? -

How does IHRM be suitable for international strategy?

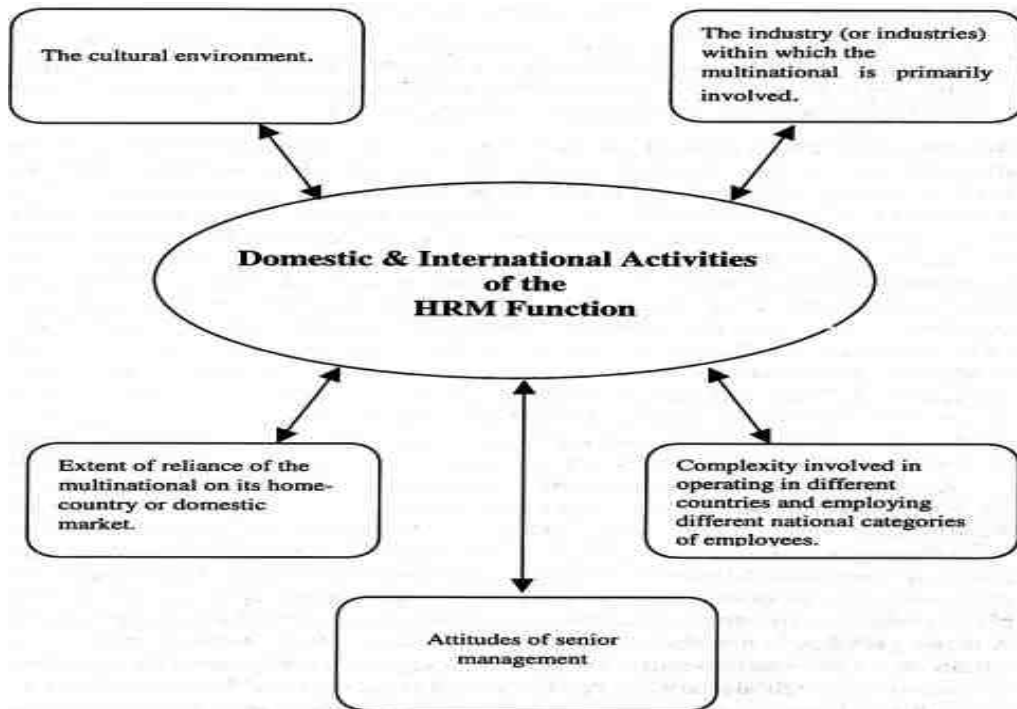
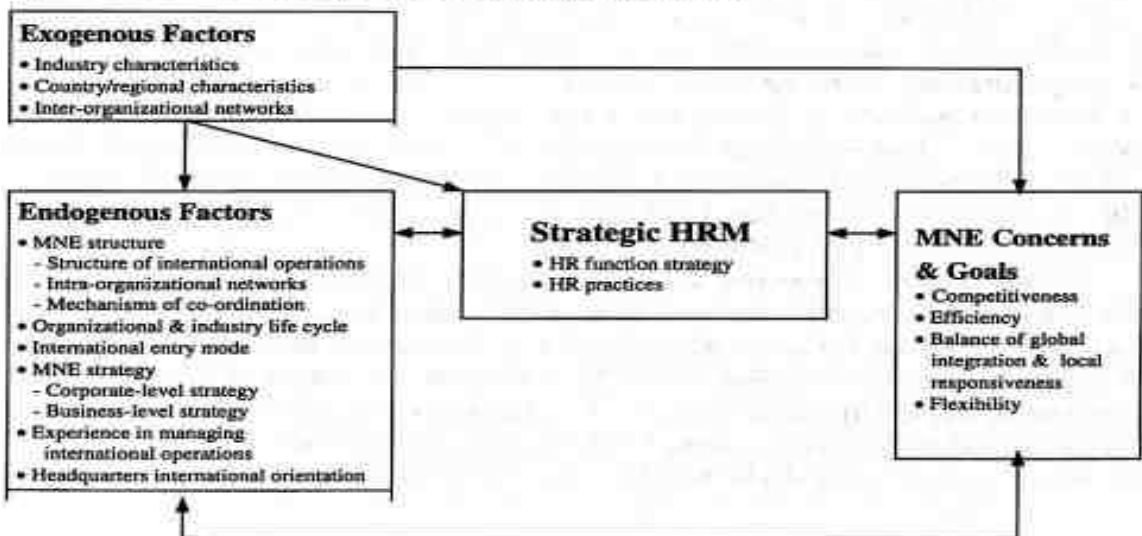


Figure 2. Variables that Moderate Differences Between Domestic and International HRM

Managing Human Resources in International Context



HUMAN RESOURCE PLANNING

Human resource planning from international human resources management point of view is rather difficult and complex compared to that of domestic human resource management. This is due to the fact that international human resource planning should consider a number of additional issues like language, culture, spouse and family adaptability in addition to job skills, talents and knowledge requirement. MNCs have to consider not only the current job and country requirements, but also the future assignments in various other countries where the MNC is currently operating and /or propose to operate in future. In addition, MNCs should also consider the possible alliances like joint ventures, mergers and amalgamations where human element is also a pivotal factor, in their human resource planning. Added to this the international business environment is relatively volatile compared to domestic business environment. Therefore, its influence on MNCs sometimes, is beyond comprehension and predication. Thus, the human resource demands/ requirements of MNCs are complex and consequently the human resource planning process of MNCs is rather critical. In addition, forecasting the supply of human resource of international market is also critical compared to domestic labour market due to the problems in collection of human resource data across the world. Further, international labour market is highly dynamic due to the variations in quantity and quality of human resources available in various countries at different times, levels of human resource participation in employment in different countries, the quality and extent of educational facilities available for different segments of population in various countries and occupational and industrial structure of employment in various countries. For example Indians work in the USA as software professionals and medical doctors while various foreigners including Americans have preferred.

Recruitment and selection: - Recruitment is the process of identifying and attracting potential candidates from within and outside an organization to begin evaluating them for future development. Once candidates are identified, an organization can begin the selection process. This includes collecting, measuring, and evaluating information about the candidates' qualifications for specified positions. Organizations involved in international HRM are basically two types (a) multinational companies and (b) domestic companies. These companies search prospective employees both from within the country operation and outside the country. Recruitment sources at macro level include ethnocentric approach, polycentric approach and geocentric approach.

An Ethnocentric Approach: - In this approach all important positions in MNCs are filled by PCNs in the early stage of internationalizing. Under ethnocentric approach MNCs at their headquarter formulate mission, objectives, strategies and product design etc. and also make important decisions for the subsidiaries and expect the subsidiaries to implement them and report back to all functional/ line managers at headquarters.

A polycentric approach: - A polycentric staffing policy requires host country nationals to be recruited to manage subsidiaries, while parent country national occupy key positions at corporate headquarters.

The Geocentric approach: - In this approach regardless of nationalities, the best talent is recruited by the MNCs for key job throughout the organization. This policy has a number of advantages:-

First it enables the firm to make the best use of its human resources. Second and perhaps more important, a geocentric policy enable the firm to build a cadre of international executives' who feel at home working in a number of cultures. It is helpful in building culture and informal management networks.

Training and Development: - Selection is just first step in matching a personnel with a job. The next step is training the personnel to do with specific job. An intensive training programme might be used to give expatriate personnel the skills required for success in a foreign posting. Management

development is much broader concept. It is intended to develop the manager's skills over his career with the firm. Hence, as part of management development programme a manager might be sent on overall foreign posting over a number of years to build his cross cultural sensitivity and experience. Two most common reasons for expatriate failure were the inability of a manager's spouse to adjust to a foreign environment and the manager's own ability to adjust to a foreign environment. Training can help the managers and spouse to cope up with these problems. Cultural training, language training and practical training all seem to reduce expatriate failure.

Cultural training: - Cultural training seeks to foster an appreciation for host country's culture. The belief is that understanding a host country's culture will help the manager empathize with the culture, which will enhance her effectiveness in dealing with host country nationals. It has been suggested that expatriates should receive training in the host country's culture, history, policies, economy, religion, social and business practices. If possible it is also advisable to arrange for a familiarization trip to the host country before the formal transfer, as this seems to ease culture shock.

Language training: - English is the language of world business. It is possible to conduct business all over the world using only English.

Practical training: - Practical training aimed at helping the expatriate manager and family ease themselves into day to day life in the host country. The sooner a routine is established the better are the prospects that expatriate and her family will adapt themselves successfully. One critical need is for a support network of friends for the expatriate.

Performance Appraisal: -. The multinational require an effective system for managing the performance of its global operations. Monitoring performance and ensuring conformance to agreed standards are important elements of their control system. Performance appraisal systems are used to evaluate the performance of managers against some criteria that the firm judges to be important for the implementation of strategy and the attainment of a competitive advantage. A firm's performance appraisal system is an important element of its control system. Unintentional bias makes difficult to evaluate the performance of expatriate managers objectively. In many cases, two groups evaluate the performance of expatriate managers-host country managers and home- office managers, both are subject to bias. The host nation managers may be biased by their own cultural frame of reference and expectations. For example, Oddou and Mendenhall report the case of U.S. manager who introduced participative decision making while working in an Indian subsidiary. The manager subsequently received a negative evaluation from host - country managers because in India, the strong social stratification means managers are seen as experts who should not have to ask subordinates for help. The local employees apparently viewed the U.S. manager's attempt at participatory management as an indication that he was incompetent and did not know his job.

Several things can reduce bias in the performance appraisal process. First most expatriates appear to believe more weight should be given to an on- site manager's appraisal than to an off- site manager's appraisal. Due to proximity, an on- site manager is more likely to evaluate the soft variables that are important aspects of an expatriate's performance. The evaluation may be especially valid when the on-site manager is of the same nationality as the expatriate, since cultural bias should be alleviated. In practice home - country managers often write performance evaluations after receiving input from on - site managers. When this is the case, most experts recommend that a former expatriate who served in the same location should be involved in the appraisal to help reduce bias.

Compensation:- Compensation may be defined as the financial and non- financial remuneration the employees receive in response to their services rendered. Compensation management deals with wages, salaries, pay increase, and other monetary issues. The compensation system is designed to reward employees in an equitable manner and to serve as an inducement for the attraction and retention of good workforce.

Herrington writes that compensation decisions should achieve five critical objectives:

1. Be legal: compensation decisions should be consistent with federal state and local laws and regulations.
2. Be adequate: Compensation should be sufficient to attract qualified job applications and retain them.
3. Be motivating: compensation should be sufficient to provide the necessary incentives to motivate employees to high performance levels.
4. Be equitable: Employees should be made to feel that the compensation system is equitable
5. Provide Security: Employees should be made to feel that their income is secure and predictable.

When developing international compensation policies, a firm seeks to satisfy several objectives

First, the policy should be consistent with the overall strategy structure and business needs of the multinational.

Second the policy must work to attract and retain staff in the areas where the multinational has the greatest needs and opportunities.

Third, the policy should facilitate the transfer of international employees in the most cost effective manner for the firm.

Fourth, the policy must give due consideration to equity and ease of administration.

CULTURAL ISSUES IN INTERNATIONAL HRM

As organizations becoming global in their operations, which is evident from the above discussion, cross cultural management becomes crucial to their operations. It explains the behaviour of people in the organization around the world and shows people, how to work in organization with employee and client population of many different cultures (Dowling et. Al., 1999, Pucik, 1992).

The aim of cross cultural management is therefore, to describe organizational behaviour within countries and cultures and to compare them and finally to understand and improve the interactions of co- Workers, managers and other stakeholders from around the world. To understand how work behaviour gets affected by cross cultural settings, it is necessary to understand what culture is and how cultures vary which have significant effects on business operations. Anthropological literature produced a great variety of discussions with regard to understanding cultural systems around the worlds which have major implications for managers working outside their native country. In the year 1870, Edward Taylor defined culture as that complex whole which includes knowledge belief art, morals, law, custom, and other capabilities acquired by man as a member of society. Geert Hofstede (1980) an expert on cross cultural differences and management, defined culture as" the collective programming of the mind which distinguishes the members of one human group from another culture", in this sense includes systems of values; and values are among the building blocks of culture. According to him, each orientation leads to a value with behavioural and attitudinal implications. For example, in U.S, cultural orientation, which is highly individualistic, training and development will be more emphasized to facilitate individual learning. In contrasting culture, emphasis will be on selection and best fit approach where employees once employed are not expected to change too much in their behaviour. In U.S, 'doing' or 'achieving' is more important and thus employees work hard to prove themselves. In contrasting cultures, 'being' is more important and therefore employees may not be concerned only about achieving the target but also the relationship with the peers and the boss.

HOFSTEDE'S CULTURAL DIMENSIONS

Hofstede identified four cultural dimensions around which countries have been clustered with people in each group exhibiting identical behaviours. Power distance concerns how a culture deals

with inequality. He suggests that a country can be high on power distance or low on the same. In the former, inequality is accepted and even taken as good. Low power distance cultures are found in societies that seek to play down such inequalities as much as possible.

Uncertainty avoidance: - This relates to norms, values, and beliefs with regards to their tolerance for ambiguity. Again, society may be high or low on this dimension.

Individualism: - The spirit of individualism focuses on the relationship between the individual and the group. Societies may be individualistic or collectivist. Individualistic culture view people as unique. Collectivist societies view people largely in terms of the group which they belong.

Masculinity: - masculinity represents the overall tendency of a culture to support the traditional masculine orientation. Here too societies can be high or low. High masculinity cultures have norms, beliefs and values such as men are assertive and dominant. In low masculinity societies sex roles are less sharply distinguished, and little difference is made between men and women in the same job. How all these do are relevant to IHR professional?

Hofstede's cultural model helps the HIR manager apply culture specific approach to HR practices. For example, in societies with high power distance culture, selection of executives is based on the social class to which the aspirants belong and their elite educational qualifications. In low power distance cultures, educational achievement is the main criterion. Leadership styles in high power distance societies are authoritarian but are participative in low power distance cultures. Executives are hired on the basis of seniority and expected loyalty in high uncertainty avoidance societies but the criteria for such selections in low uncertainty avoidance cultures are education and past job performance. Leadership styles in the Summer Internship Society Volume III Issue-1 April 2012 62 foreign societies are task oriented and relations oriented in the latter category of cultures. Leaders, in general, tend to appeal to subordinates to perform in collectivist societies, but in individualistic cultures, leadership believes in rewarding achievers and punishing non-performers. In collectivist cultures, executive selection is based on group affiliation but it is geocentric in individualistic cultures. Similarly, managerial selection is independent of gender and leadership is participative in feminine cultures. In masculine cultures, men are mainly preferred for jobs and leadership tends to be authoritarian. In addition, staffing policies ethnocentrism, polycentricism or geocentricism depends on whether a host country is known for high power distance, low uncertainty avoidance or feminine orientation. Where power distance is high, staffing is influenced by ethnocentric orientation, so also when a host country believes in high uncertainty avoidance.

CONCLUSION

This study is an attempt towards understanding, how multinational companies manage their human resources. IHRM requires much broader perspective as compared to domestic HRM. Even the most common HR activities have to be handled in different ways in IHRM, because HR managers working in the global environmental face the problem of designing and administrating problems for more than one country. People in different nations have different perceptions about different things. MNCs operating in these countries need to aware of the varied perceptions.

REFERENCES

- Benson, P.G. (Ed.) (2010), *Emerging Themes in International Management of Human Resources*, Information Age Publishing, Charlotte, NC.
- Benson, P.G. and Alas, R. (Eds.) (2008), "Changes in society, changes in organizations, and the changing role of HRM: managing human resources in a complex world", *European Journal of International Management*, Vol. 2 No. 3, pp. 229-375, Special Issue

- Briscoe, D.R., Schuler, R.S. and Claus, L. (2009), *International Human Resource Management: Policies and Practices for Multinational Enterprises*, 3rd ed., Routledge, New York, NY.
- Dickmann, M. and Müller-Camen, M. (2006), "A typology of international human resource management strategies and processes", *International Journal of Human Resource Management*, Vol. 17 No. 4, pp. 580-601.
- Dowling, P.J., Festing, M. and Engle, A.D. (2007), *International Human Resource Management: Managing People in a Multinational Context*, 5th ed., Thomson Learning, London
- Farndale, E. and Paauwe, J. (2007), "Uncovering competitive and institutional drivers of HRM practices in multinational corporations", *Human Resource Management Journal*, Vol. 17 No. 5, pp. 355-75
- Morley, M.J. and Collings, D.G. (2004), "Contemporary debates and new directions in HRM in MNCs: introduction", *International Journal of Manpower*, Vol. 25 No. 6, pp. 487-99.
- Schuler, R.S. and Tarique, I. (2007), "International human resource management: a North American perspective, a thematic update and suggestions for future research", *International Journal of Human Resource Management*, Vol. 18 No. 5, pp. 717-44.
- Scullion, H., Collings, D.G. and Gunnigle, P. (2007), "International human resource management in the 21st century: emerging themes and contemporary debates", *Human Resource Management Journal*, Vol. 17 No. 4, pp. 309-19.

Study the Properties of three Body System in Nuclear and Atomic Physics Using Hyperspherical Harmonics Expansion Method

Kumari Priyanka* and B. B. Prasad**

ABSTRACT

The methods of hyperspherical harmonics are used by many workers to investigate the properties of three-body systems in nuclear and atomic physics. For a three-body system, the angular harmonics are function of five angular variables. The study has been undertaken to calculate the matrix elements of the potential between pairs of such hyperspherical harmonics (K-harmonics). In the present study the method of hyperspherical harmonic expansion has been utilized to study a sigma-minus hypertriton (t_{Σ^-}) and hypernucleus (Σ^0 Be) using one term local two-body potential. The symmetry of the system under study rules out certain harmonics from appearing in the set of coupled differential equations.

Keywords: hyperspherical, harmonics, hypertriton, three particle, system, interaction

INTRODUCTION

The method of hyperspherical harmonics or K-harmonics which was introduced by Delves [1], Smith [2] and Zickendraht [3] was developed in its present forms by Simonov [4], Badalyan [5] and Fabre [6]. This method was used by many workers to investigate the properties of three-body systems in nuclear/7-9/ and atomic/10-11/ physics. It has also been developed to study bound systems for mass number $A > 3/12/$. The basic idea of the method of K-harmonic is to expand the wave function for a system of particles in the center of mass system in terms of a complete set of orthonormal functions of $3A-4$ angular variables. The expansion coefficients are functions of a single variable that represents the length of $3A-3$ dimensional vector. On substituting the expansion in the Schrodinger equation for the system one gets an infinite set of coupled differential equations for the expansion co-efficients. For a three-body system, the angular harmonics are function of five angular variables. We have to calculate the matrix elements of the potential between pairs of such hyperspherical harmonics or K-harmonics. The symmetry of the system under study rules out certain harmonics from appearing in the set of coupled differential equations.

For the three-body systems the detailed studies have been carried out for (i) systems with particles of equal mass [8] and (ii) systems with particles of unequal mass [7]. The study of hypertriton (t_{Σ^-}) [7], ${}^6\text{Li}$ [13] in the $\alpha - n - p$ model, ${}^4\text{He}$ in the $\alpha - \alpha - \alpha$ and ${}^7\text{Li}$ in the $\alpha - \alpha - \alpha$ model falls in the later category. Study of triton and ${}^{12}\text{C}$ ($\alpha - \alpha - \alpha$) [9] falls in the former category. In the present study we use of the method of hyperspherical harmonic expansion to study a sigma-minus hypertriton (t_{Σ^-}) and Σ^0 Be using one term local two-body potential. For the case of t_{Σ^-} hypernucleus we use two-body potentials of square-well and Gaussain form $V = V_0 \exp(-r^2 / \beta^2)$

*Department of Physics, VKSU, Ara (Bihar)

**Department of Physics, VKSU, Ara (Bihar)

We utilize two numerical procedures for solving the coupled Schrodinger wave equation for $K=0$ harmonic. These are (i) Renormalized Numerov Method and (ii) Gauss quadrature method.

HYPERSPHERICAL HARMONIC EXPANSION METHOD

The positions of three-particles are represented by $r_1, r_2,$ and r_3 vectors in the laboratory frame. Use of Jacobi co-ordinates η and ξ is made to remove the motion of center of mass of the three body. These Jacobi co-ordinates are defined by

$$\vec{\eta} = \sqrt{\mu_{12}/\mu} \left(\vec{r}_1 - \vec{r}_2 \right) \quad (1)$$

$$\vec{\xi} = \sqrt{\mu_{12}/\mu} \left(\frac{\vec{r}_1 + \vec{r}_2}{2} - \vec{r}_3 \right) \quad (2)$$

Here η and ξ involve masses of the three particles and

$$\left. \begin{aligned} \mu_{12} &= m_1 m_2 / (m_1 + m_2) \\ \mu_3 &= \frac{(m_1 + m_2) m_3}{m_1 + m_2 + m_3} \end{aligned} \right\} \quad (3)$$

$m_1, m_2, m_3,$ are the masses of the three particles. It is quite clear that η and ξ vectors are independent of the choice of origin. The co-ordinate of the c.m. of the system of three – particles is

$$\vec{R} = \frac{m_1 \vec{r}_1 + m_2 \vec{r}_2 + m_3 \vec{r}_3}{m_1 + m_2 + m_3} \quad (4)$$

Since the structure of $t \Sigma$ is assumed to be $n - n - \Sigma^-$ so, particles 1, 2, 3, refer to n, n and Σ^- . Since the two neutrons are identical so, $m_1 = m_2 = m_3 = m_{\Sigma^-}$. Also a permutation of particles 1 and 2 would leave the system unchanged.

μ is a suitably chosen mass which we have taken as $(m_1 + m_2 + m_3)/3$ i.e. $(2m+m_3)/3$. The inter particle separations can be expressed as

$$r_{12} = \sqrt{\mu/m} \rho [1 + A \cos \lambda]^{1/2} \quad (6)$$

$$r_{13} = \frac{\mu \rho}{\sqrt{2}} [1 + A \cos(\lambda - 2\theta)]^{1/2} \quad (7)$$

$$r_{23} = \frac{\mu \rho}{\sqrt{2}} [1 + A \cos(\lambda - 2\theta)]^{1/2} \quad (8)$$

Where $\rho = \sqrt{(\eta^2 + \xi^2)}$ is the hyperradius in the six-dimensional space, which has one length (ρ) and five angles (Ω_ρ) as the six-coordinates.

Also,

$$A \cos \lambda = \frac{\eta^2 - \xi^2}{\rho^2}; A \sin \lambda = \frac{2(\vec{\eta}, \vec{\xi})}{\rho^2} \quad (9)$$

$$a = \left(\frac{\mu}{\mu_3} + \frac{\mu}{2m} \right)^{\frac{1}{2}} \cdot \tan \theta = \left(\frac{2m}{\mu_2} \right)^{\frac{1}{2}} \quad (10)$$

After separation of the motion of centre of mass of the system of 3-particles the Hamiltonian came out to be

$$\hat{H} = \frac{1}{2\mu} \left(\nabla_{\vec{\xi}}^2 + \nabla_{\vec{\eta}}^2 \right) + \hat{U}_{123} \quad (11)$$

Where U_{123} is the potential energy operator. The Schrodinger wave equation can be written as

$$\left[\frac{1}{2\mu} \left(\nabla_{\vec{\xi}}^2 + \nabla_{\vec{\eta}}^2 \right) + \hat{U}_{123} - E \right] \Psi(\vec{\xi}, \vec{\eta}) = 0 \quad (12)$$

Where E is the energy eigenvalue and $h = c = 1$ system of units have been chosen. The three-particle wave function $\Psi(\xi, \rho)$ is expanded into a complete set of orthonormal angular functions (K-harmonics) $u_{Kv}(\Omega_\rho)$ in the six-dimensional space. Its expansion in $U_{Kv}(\Omega_\rho)$ are two types

The first one is

$$\Psi(\vec{\xi}, \vec{\eta}) = \sum_{Kv} \rho^{-2} \chi_K^v(\rho) u_K^v(\Omega_\rho) \quad (13)$$

K is the global quantum number and takes even positive values 0, 2, 4, and the index v takes the values from -K/2 to K/2 in the steps of two the quantities A and v are connected with ξ and η through the relation.

$$\rho^4 A^2 = \left[\left(\vec{\eta} - \vec{\xi} \right)^2 + 4 \left(\vec{\eta}, \vec{\xi} \right)^2 \right]^{\frac{1}{2}} \quad (14)$$

Substitution of (12) in equation (11) and then multiplication by Ω_ρ and integration over all angular co-ordinates Ω_ρ of the six-dimensional space yields.

$$\frac{d^2 \chi_K}{d\rho^2} + \frac{1}{\rho} \frac{d\chi_K}{d\rho} \left[K^2 + \frac{(K+2)^2}{\rho^2} \right] \chi_K = \frac{2\mu}{\hbar^2} \sum_{Kv} U_{Kv}^{vv}(\rho) \chi_K \quad (15)$$

Here U_{Kv} Ω_ρ 's are harmonic polynomials so that

$$\left(\nabla_{\vec{\xi}}^2 + \nabla_{\vec{\eta}}^2 \right) u_K^v(\Omega_\rho) = -\frac{K(K+4)}{\rho^2} u_K^v(\Omega_\rho) \quad (16)$$

and has the orthogonal properties $-E$ is the binding energy.

$$\int u_k^v u_{k'}^{v'} \delta_{kk'} = K = \sqrt{2\mu | -E |} \tag{17}$$

Since particles 1 and 2 being identical their interchange does not change the sign of vector η . v cannot take negative values.

For $v \geq 0$

$$u_k^v = \frac{\sqrt{K+2}}{\pi^2} \cos(\lambda v) A^v P_{\frac{K+v}{2}}^{(v,0)}(1-2A^2) \times \begin{cases} 1, v \neq 0 \\ \frac{1}{\sqrt{2}}, v = 0 \end{cases} \tag{18}$$

$P_{\frac{K+v}{2}}^{(v,0)}(1-2A^2)$ is Jacobi Polynomial $U_{kk'}^{vv'}(\rho') d\rho'$ is the element of potential.

The integral form of the equation (14) is

$$\chi_k^v(\rho) = \int_0^{\infty} I_{K+2}(k\rho_<) K_{K+2}(k\rho_>) \frac{2\mu}{\hbar^2} \sum_{k'} U_{kk'}^{vv'}(\rho') d\rho' \tag{19}$$

The following notation has been used

$$I_{K+2}(k\rho_<) K_{K+2}(k\rho_>) = \begin{cases} I_{K+2}(k\rho') K_{K+2}(k\rho') & \rho < \rho' \\ I_{K+2}(k\rho') K_{K+2}(k\rho') & \rho > \rho' \end{cases} \tag{20}$$

I_{K+2} and K_{K+2} are the modified Bessel functions of order $K+2$. The explicit form of the matrix element for v and v' not negative is

$$U_{kk'}^{vv'}(\rho) = \frac{\sqrt{(K+2)(K+2)}}{\pi} \int_0^1 A^{v+v'+1} P_{\frac{K+v}{2}}^{(v,0)}(1-2A^2) \times \left[\int_0^{2\pi} U_{\text{int}}(\vec{\xi}, \vec{\eta}) \cos(\lambda v') \cos(\lambda v'') d\lambda \right] dA \tag{21}$$

From which the explicit form of

$$U_{\text{int}}^{vv'}(\rho) = \frac{-2\mu}{\hbar^2} \frac{1}{\pi} \int_0^{2\pi} \Lambda \left[\int_0^{2\pi} U_{\text{int}}(\vec{\xi}, \vec{\eta}) d\lambda \right] dA \tag{22}$$

The potential operator U_{123} in our case is the sum of pair interaction i.e.

$$\hat{U}_{123} = \hat{U}^{12} + \hat{U}^{13} + \hat{U}^{23} \tag{23}$$

For calculation of the potential integrals in the above equation the following expansion was used by Simonov [5].

$$U^{12}(\vec{r}_{12}) = U^{12}(\rho \sqrt{1 + A \cos \lambda}) \tag{24}$$

$$= \sum_{\kappa=0,2}^{\infty} U_{\kappa}^{12}(\rho) C_{\frac{\kappa}{2}}^1(A \cos \lambda) \tag{25}$$

$$U_{\kappa}^{12}(\rho) = 2\pi \int_{-1}^1 \sqrt{1-x^2} C_{\frac{\kappa}{2}}^1(x) U^{12}(\sqrt{1+x}) dx \tag{26}$$

Where x stands for A Cosλ and C¹_{κ/2}(x) is Gegenbauer Polynomial. The explicit form of U⁰⁰₀₀(ρ) is

$$U_{00}^{00}(\rho') = [U_0^{12}(\rho') + U_0^{13}(\rho') + U_0^{21}(\rho')] \tag{27}$$

Equation (19) is numerically solved using Gauss quadrature method. For solving the three particle Schronger equation by Numerov procedure the expansion of the wavefuncton (ξ, η) is done like

$$\Psi(\vec{\xi}, \vec{\eta}) = \sum_{\kappa, \nu} \rho^{-\frac{\nu}{2}} \varphi_{\kappa}^{\nu}(\rho) u_{\kappa}^{\nu}(\Omega_{\rho}) \tag{28}$$

Where U^ν_κ(Ω_ρ) is the same angular harmonics comprising the orthonormal set. Substitution of (25) in the schrodinger wave equation (11) and multiplying then by U^ν_κ(Ω_ρ) and integration over all angles in the six-dimensional space and utilization of the orthonormal properties (16) of U^ν_κ(Ω_ρ) we get the following differential equation

$$\frac{d^2 \varphi_{\kappa}^{\nu}}{d\rho^2} - \left(\kappa^2 + \frac{K(K+4)}{\rho^2} \right) \varphi_{\kappa}^{\nu}(\rho) = \frac{2\mu}{\hbar^2} \sum_{\kappa', \nu'} U_{\kappa \nu}^{\kappa' \nu'}(\rho) \varphi_{\kappa'}^{\nu'}(\rho) \tag{29}$$

$$\kappa = \sqrt{2\mu|E|}$$

Equation (26) is used to numerically obtain the binding energy through renormalized Numerov technique.

TWO-BODY INTERACTIONS

The first study of sigma-minus hypertriton in the three-body bound system based on Faddeev method using square-well two-body interaction has been reported by Kharcheno et al [14]. They used the experimental data [15] on the binding energy of a Σ⁻ hyperdeuteron. The experimental binding energy of this hyperdeuteron is within the limits of 0 to 10 Mev. The system of two neutrons

and a sigma-minus hyperon forms a bound state for the coupling constant $g_{n\Sigma^-} \geq 1.819$. The coupling constant is $g_{n\Sigma^-} = 2\mu_{n\Sigma^-} V_{0n\Sigma^-} R_{n\Sigma^-} / 2h^2$. Here $V_{0n\Sigma^-}$ is the square-well potential depth and $R_{n\Sigma^-}$ is the square-well width of $n\Sigma^-$ interaction and $\mu_{n\Sigma^-}$ is the reduced mass of a neutron and a Σ^- hyperon. Since direct information on $n\Sigma^-$ scattering is not known, they have taken $R_{n\Sigma^-} = R_{nn}$. The range of $g_{n\Sigma^-}$ corresponding to binding energy $0^+ - 10$ MeV of sigma-minus deuteron (d_{Σ^-}) [15] is

$$\frac{\pi^2}{4} \leq g_{n\Sigma^-} \leq 6.45$$

Kharchenko et al. [14] have numerically calculated the whole range of values of the binding energy of the t_{Σ^-} hypernucleus for the above range of $g_{n\Sigma^-}$ in a state of total angular momentum $L=0$.

We have begun our studies on the t_{Σ^-} hypertriton at the two limiting threshold of formation of d_{Σ^-} and at $g_{n\Sigma^-} = 6.45$ which corresponds to the upper experimental limit of the b.e. of d_{Σ^-} . First of all we have considered the $K=0$ state. The way to evaluate the scattering parameters corresponding to the square well potential V_0 and width b is through the use of the relations

$$a = b - \frac{\tan(\kappa_0 b)}{\kappa_0}$$

and

$$r_0 = b - \frac{b^3}{3a^3} - \frac{1}{\kappa_0^2 a}$$

Where $\kappa_0 = \sqrt{2\mu V_0}$ is the reduced mass of the interacting particles i.e. $\mu = \frac{m_1 \times m_2}{m_1 + m_2}$.

These relations were used to find 'a' and 'r₀' for the system. From the values of $V_{0n\Sigma^-}$ and $b = R_{n\Sigma^-} = 2.63$ fm. At the lower limit $a = +\infty$, so, $r_0 = b = 2.63$ fm. These values of scattering parameters were further used to estimate the Gaussian interaction range $\beta_{n\Sigma^-}$. A theory of evaluation of β and V_0 for Gaussian potential is described by Blatt and Jackson [16] $\beta_{n\Sigma^-}$ was found to be 1.834 fm and β_{nn} was found to be 1.81 fm. Corresponding to the theory developed by Blatt and Jackson [16] a suitable algorithm for numerically obtaining scattering length and effective range was developed. Thus numerically the value of Gaussian potential and range for $a = -17$ fm and $r_0 = 2.8$ fm was obtained.

TWO-BODY INTERACTIONS

(a) The n-n interaction corresponding to the low energy single scattering data, scattering length $a = -17$ fm and effective range (r_0) = 2.8 fm has been used to obtain (i) square-well potential V_0 and width b and (ii) Gaussian well depth V_0^{12} and range β_{12} .

Two sets (A) and (B) of n - n - Σ^- interactions for (i) square-well and (ii) Gaussian well have been obtained corresponding to two limiting values of the n - Σ^- coupling constant $g_{n\Sigma^-}$ which are $\pi^2/4$ and 6.45

(i) Form of Square-well potential is

$$V(r) = 0 \text{ for } r < b$$

$$= V_0 \text{ for } r > b$$

(ii) Form of Gaussian potential is

$$V^{(12)}(r) = V_0^{(12)} e^{-r^2 / \beta^2}$$

$V^{(12)}$ is the depth and β is the range

The two-particle interaction is presented in the table below

Particle-pair	Nature of pair interaction				Scattering parameters	
	(i) square – well		(ii) Gaussian-well		Scattering length(a) (fm)	Effective range (r ₀) (fm)
	Depth (V ₀) (MeV)	Range (b) (fm)	Depth (V ₀) (MeV)	Range (β) (fm)		
n-n	-13.106	2.63	-30.32	1.81	-17	2.80
(n – Σ ⁻) (set A)	-13.173	2.63	-29.54	1.834	Large	2.63
(n – Σ ⁻) (set B)	-34.56	2.63	-65.63	1.834	3.43	1.766

RESULTS AND DISCUSSION

The two numerical methods described were used in obtaining the b.e. of t_{Σ⁻} at the threshold of formation of d_{Σ⁻} for K = 0. Also, the solution of the integral equation (19) by Gauss-quadrature method was done for K = 0, 2. Square-well potential was used. Then the b.e. of t_{Σ⁻} corresponding to the upper limit of the coupling constant g_{nΣ⁻} = 6.45 was obtained for K = 0 and 2 utilising the numerical solution of the integral equation. These results are presented as set A and set B below.

Set A: Binding Energy of Σ⁻-triton at the threshold of d_{Σ⁻}-formation

Numerov Method	K = 0	B.E. = 1.65 MeV
Integral equation Method	K = 0	B.E. = 1.65 MeV
Integral equation Method	K = 2	B.E. = 1.65 MeV

Set B: Binding Energy of Σ⁻-triton at the upper limit of g_{Σ⁻}-

Integral Equation Method	K = 0	B.E. 29.94 MeV
Integral Equation Method	K = 2	B.E. 30.36 MeV

A plot of renormalized wavefunction for t_{Σ⁻}- nucleus against the hyperradius ‘ρ’ has drawn. These results and renormalized wave functions were reported [17].

We have further used one term Gaussian potential for n-n low energy scattering data a_{nn} = -17 fm and r₀ = 2.8 fm the Gaussian potential V_{0ⁿⁿ} range β_{nn} were numerically obtained by using an algorithm developed on the basis of theory described by Blatt and Jackson [16].

From the same algorithm the n – Σ⁻ one term Gaussian potential for the two limits of the coupling constant g_{Σ⁻} was numerically obtained. Then Integration method was used to numerically obtain the b.e. of t_{Σ⁻}-hypertriton t_{Σ⁻}. The results are presented with a comparison with the results of binding energy obtained by Kharchnko et al. [14].

Binding Energy (In MeV)

	g_{Σ^-}	Kharchenko et al	Our results
Set A	$\pi^2/4$	1.85	1.72
Set B	6.45	28.20	27.35

The above calculation is for $K=0$ harmonic. $K=2$ does not contribute. The calculation of the binding energy through the hyperspherical harmonic expansion method [18] compares well with the calculations does by Kharchenko et al. using Faddeev method. Further, three particle study on the $n - n - \Sigma^-$ system using the hyperspherical harmonic expansion method has been done with the Gaussian potentials obtained from low-energy $n - \Sigma^-$ singlet 1S_0 scattering parameters given by Nagel et al [19,20,21] and Maessen et al [22].

Low energy data of the hyperon-neutron 1S_0 and 3S_0 , channels have been given by Nagel et al. [19,20,21] and Maessen et al. [22]. Of the these the $\Sigma^- - n$ data for models A,B,C,D built up by Nagel et al and one due to P.M.M. Maessen et al are given below.

	Model	1S_0		3S_1	
		A	r_0	a	r_0
Nagel et al	A	-2.79	3.55	0.63	-0.76
	B	-3.20	3.29	0.41	-2.47
	C	-4.61	3.69	0.32	-6.01
	D	-3.84	4.03	0.62	-1.91
Maessen et al		-4.71	3.36	0.247	26.86

It is clear that for Σ^- system in the 1S_0 channel attractive and for 3S_0 , channel potential is repulsive. Since 3S_0 , channel is repulsive, a bound d_{Σ^-} or t_{Σ^-} can not be expected in 3S_0 , channel of Σ^- interaction.

Under this We have taken 1S_0 channel a, r_0 for $\Sigma^- - n$ interaction from these data and constructed the one term Gaussian potential using the algorithm developed by us and described earlier. For the Gaussian range $\beta_{n\Sigma^-} = 1.834$ fm the potentials for all the five sets of $n - \Sigma^- ^1S_0$ scattering parameters are listed below.

Model	Gaussian Potential (MeV)
A	-16.80
B	-17.99
C	-20.29
D	-19.07
Maessen et al	-20.40

We have numerically computed the binding energy of hypertriton t_{Σ^-} and found small but finite values of the binding energy. The calculations are presented in the table below for different set of 1S_0 interactions in 1S_0 channel.

Nagels et al	A	r ₀	B.E. in MeV
A	-2.79	3.55	0.55
B	-3.20	3.20	0.07
C	-4.61	3.69	0.11
D	-3.84	4.03	0.08
Maessen et al	-4.71	3.36	0.11

However, another Faddeev calculations made by Garcilazo [23] reports non existence of bound Σ^- n-n system. But since our calculations yield finite through small values of the b.e. of t_{Σ^-} hypertriton. So, it is concluded that Σ^- n-n system is barely bound. These calculations and discussion has been reported [24].

CONCLUSION

It has been concluded that the method of hyperspherical harmonics can describe the structure of hypernucleus (Σ^0 Be) properly and yields ground state energies quite close to that obtained by Kharchenko et al using Faddeev method. Lowest K- harmonics plays a dominant role in the study of three particle bound state.

ACKNOWLEDGMENTS

I am very much thankful to Honorable Vice- Chancellor for their consistent support for completing this assignment.

REFERENCES

- 1 L.M. Delves Nucl. Phys. 9, 321 (1959) section 6.5 and L.M. Delves Nucl. Phys. 20, 275 (1960) section 6.5.
- 2 D.R. Smith and D.W. Downs Phys. Rev. **133B** 461 (1964)
- 3 W. Zickendraht, Proc. Natl. Acad. Sc (USA) **52**, 1565 (1964); Ann. Phys. (N.Y.) **35**, 18 (1965).
- 4 Yu. A Simonov Sov. J Nucl. Phys. **3**, 461 (1966)
- 5 Yu. A. Simonov and A.M. Badalyan Sov. J. Nucl. Phys. **3**, 755 (1966)
- 6 J.L. Ballot and M. Fabry de la ripelle Ann. Of Phys. (N.Y.) **127**, 62 (1980)
- 7 S.P. Verma and D.P. Sural Phys. Rev. C **20**, 781 (1979) Phys. Rev. C **22**, 229 (1980)
- 8 M. Fabre de al ripelle, Rev. roum. Phys. **14**, 1215 (1969); Compt. Rend. **269B**, 1070 (1969)
- 9 M. Valliers, H.T. Coelho and T.K. Das Nucl. Phys. **A271** 95 (1976)
- 10 K. Roy Choudhary, D.P. Sural and Tray Phys. Rev **A12** 763 (1975)
- 11 J.L. Ballot and J. Navarro, J. Phys **B8** 172 (1975)
- 12 Yu. A. Simonov, Proc. Of Symp. On Present Status and Nocel developments in Many Body Problem (Rome, Sept, 1972)
- 13 K.K. Fang and e.L. Tomusiak, Phys. Rev. **C16**, 2117 (1977)
- 14 V.F. Kharchenko and V.E. Kuzmichev, Nucl. Phys. **A386**, 493 (1982)
- 15 H. Strobele, H.G. Dosch, O. Braun and Hepp, Heidelberg Univ. Preprint No. H.D.-TH-80-5 (1980).
- 16 J.M. Blatt and J.D. Jackson, Phys. Rev. **76**, 18 (1949)
- 17 S.R. Sharan and S.P. Verma, DAE Symp. Nucl Phys. (BARC), **34B**, 111 (1991), Indian Sc. Cong. (Baroda) (1992)
- 18 S.R. Sharan and S.P. Verma, DAE Symp. Nucl. Phys. (BARC), **35B**, 100 (1992)
- 19 Nagels et al Nucl Phys. **A386** 493 (182)

- 20 Nagels et al Ann. Phys. N.Y. **79** 338 (1973)
- 21 Nagels et al Phys Rev **D15** 2547 (1977) and Phys **D21** 1633 (1979)
- 22 P.M.M. Meassen et al. Phys. Rev **C40** 2226 (1986)
- 23 H. Garcilazo J. Phys. G: Nucl Phys. **13** 163 (1987)
- 24 S.R. Sharan and S.P. Verma DAE Symp. Nucl. Phys. (Cochin), **36B** (1993)
- 25 R.I. Dzhibuti and Sh. M. Tsiklawei, Sov. J. of Nucl. Phys. **40**, 746 (1984)
- 26 B. Buck, H. Friedrich and C.W. Wheatley, Nucl. Phys. **A275**, 246 (1977)
- 27 Bahadur Shah Mayer, Nucl onika **25**, 439 (1980)

History and Politics of Civil Code in India: A Way Out of the Impasse

Sazid Equbal Akhtar*

ABSTRACT

When the state in free India took up the task of Hindu law reforms it projected these efforts as the liberation of women, yet its underlying motive of reform was consolidating the powers of the state and building an integrated nation. There were at least three concerns that govern the reforms. First, the opposition from the conservative forces belonging to both the congress as well as Hindu fundamentalists. Several provisions including the provisions of monogamy, divorce, abolition of coparcenary and inheritance of daughters were opposed. It was felt that the Hindu society will receive moral setback if women were granted the right to inherit property. Second, the homogenising concerns which were instrumental in bringing about reforms in Muslim law, also became the driving force for the Hindu law reform. For the state, the unifying potential of the common code became more important than its potential for ensuring legal equality for women. Third, the fallacy about the claim of liberating women. There is a general presumption that the Hindus are governed by a secular, egalitarian and gender-just code and that this code should now be extended to Muslims to liberate Muslim women. The judiciary has contributed to this myth by reiterating that Hindus have forsaken their personal laws and are governed by a common code.

Keywords: Uniform Civil Code, Partition, Hindu code Bill, Personal laws

In reading the laws and strictures of the 'pristine' Hindu society and its attitude vis-à-vis women, we see two pictures emerging; one the familiar one and another not so familiar but very critical one. The familiar script regarding it is that of strict control over women sexual and economic freedom and a condition of their general servitude sanctioned by scriptures and laws. This was an obvious consequence of the logic of governing social institutions and economic mode of production of the Hindu society¹. The Hindu joint family structure based on male coparcenary, which denied women the right to property, was the institution which perpetuated the condition of general servitude. The strict sexual control was also affected through ordeals. Sita's ordeal by fire is set out as an example.

Another picture of Hindu laws and its take on women's rights which mostly remain the preserve of legal academic and others, is critically at variance with the received knowledge about Hindu women. But this reality of women becomes critically important in the face of the fact that when colonial rule and later when legislatures, civil society and women groups took up the issue of gender justice in independent India the women rights in the context of Hindu laws & customs set the scope and base for much of the reforms. The colonial rule and politics in free India, though resorted to the rhetoric's of ensuring women's rights going back to and in continuance with this Hindu laws and customs, what attended was a radical tinkering with the 'identity' of women's rights in Hindu scriptures as well as customs. The next question that need to be pursued are following: what was the nature of Hindu

*PhD Candidate at Department of Political Science, Jamia Millia Islamia. New Delhi. E-mail - akhtarsazid283@gmail.com

laws? Did it exhibit uniformly governed singular set of laws; whether the diversity within customary practices situated women's rights on varying scale? I will probe the answers to these questions based on Flavia Agnes² exploration of the following areas: The diverse sources of Hindu law; women's rights to property under the orthodox scriptural law; The various regional and local customs which granted women rights; The heterogeneous characteristics of the Indian society governed by the Hindu law.

Plurality of laws and customs and non-state legal structure were the essential characteristics of the ancient Indian communities.³ During the early period, there was no distinction between religion, law and morality. They were cumulatively referring to as 'dharma'. The three sources of dharma are 'shruti', 'smriti' and 'sadachara'⁴. Although the Vedas were treated as the fountainhead of Hindu law by jurists, they do not contain positive law (or lawyer's law). Hence the codified laws governing Hindu marriage and family relationships derive their routes from the Smritis and Nibandhas (commentaries and digests)⁵.

From about eight century BC to fifth century AD elaborate guidelines governing all aspects of social relations were laid down in the smritis—the dharmasutras and dharmashastra. The dharmashastra literature is a complete science and covers all aspect of law, ethics and morality. These were works of encyclopaedic scope and covered a wide range of topics—social obligations and duties of the various castes and of individuals in deferent stages of life; the rules of governance, principles of punishment and warfare for kings and officials etc. These were not written texts under knowledge were passed down by an oral tradition from generation to generation. So, each generation could have re-interpreted the guidelines incorporating their cotemporary contexts. In this tradition, the same smriti could have been evolved by several philosophers and at different historical times. Hence it is not surprising to find contradictory statements regarding a controversial issue attributed to the same smritikar. The same goes with the *nibandhas*. According to A.M. Bhattarcharjee, as quoted by Agnes, despite the claim of divine origin, the smritis were based on local and well-established customs. The smritis regarded marriage as an essential *sanskar*. Marriage was mandatory, to discharge the debt to one's ancestors, the debt of begetting off springs. It was also an essential for performance of religious and spiritual duties. So, a wife was not just a *patni* or *grihapatni* but a *dharmapatni*.

Although marriages were deemed indissoluble, under certain exceptional situations, the wife or the husband were permitted to dissolve the matrimonial union. Narada and Kautilya's arthashastra have stipulated certain situations in which either the husband or the wife could divorce each other. According to scholars, the stipulation in *manusmriti* against remarriage of wives and widows appears to be a later insertion⁶.

The smritis and commentaries, with their roots in a feudal society of agrarian landholdings⁷, prescribed a patriarchal family structure, within which women's right to property was constrained. Under the Mitakshara law, the property of a Hindu male devolved through survivorship jointly upon four generation of male heirs. The ownership was by birth endnote by succession. Upon his birth, the male member acquired the right to property. Although the male members owned property, this ownership cannot be equated with the modern notion of ownership which essentially confers the right of alienation. The basic characteristic of the joint property was its inalienability⁸. Hence the joint ownership of males was more notional than actual. Since women did not form part of the coparcenary, they did not have even the notional right of joint ownership; hence they could not demand partition. The husband was bound to maintain the wife despite all of her faults. He could marry again, but he was under the legal obligation to continue to maintain the first wife. In addition, the wife was entitled to 'supersession fee' an equal share of the property, which the husband gifted to the new wife. Women also had the right to claim marriage expenses from the joint property in their natal house.

In order to partially set off the disability suffered under the notion of joint ownership by male members, the smritikars assigned a special category of property to women they termed as *stridhana*.

The first mention of this term is found in the Gautama dharmasutra who provided not only for the women separate property but also distinct and separate rules for its succession⁹. From this time to the next millennium, the scope of stridhana was gradually expanded to include almost every category of property. Vishnu, a later smritikar and still later sages such as yagnavalkya, katyayana, narda, devla etc expanded the scope of stridhana.

It can conclusively be observed that a system of property ownership by women seems to have been an integral and significant part of the ancient moral ethical, and legal social norms. At each time the smritikars, with great effort, brought the emphasis back to women's ownership of property and in the process also expended scope. There seems to be a constant tussle between the smriti dictates and patriarchal subversion within the family.

Now I will proceed to discuss women's rights under customary law. As custom was an important source of law. Local customs were held in high esteem and were acknowledge as an important source of law under the smritis. The widely used smriti terms, *achara*, *sadachara*, *shishtachara*, *loksangraha* etc. denote custom. Gautama, Manu and Brihaspati granted special recognition to custom. The southern and predominantly Dravidian regions followed various pro-women practices of property inheritance even under smriti law. The Buddhist literature also indicate that women could own and gift property in their own right.

The Brahmanical-Aryan customs followed by the upper castes of north India exercised a strict control over women and their sexuality and the status of among them was low, as compared to women from lower castes and the Dravidian regions¹⁰. The women from the lower castes worked and contributed to the household and hence were not totally dependent upon their men. Among various castes and tribes, along the Malabar coast there were female-headed joint family households and matrilineal inheritance patterns¹¹. From the above discussion it is evident that the customs of the lower castes is marked by absence of a strict sexual code and correspondingly, a wider scope for negotiating women's rights of divorce, remarriage and property ownership among them.

The system of dividing the communities on the basis of their religion and applying to them their own 'divine law' disregarding their caste, tribe and race differences is of recent origin, introduced by the British. The indiansubc-ontinental trend for well over 2000 years, right from Buddha and Mahavir around 500 bc had been to gravitate away from the structure of Brahmanical superiority and Sanskrit orthodoxy. But the new colonial structure reversed the trend and subjected communities to the dominance of the smritis rules¹². It is through the process of litigation over property disputes that the sharply defined community of Hindus governed by the present-day Hindu code was constructed during the colonial regime¹³. So, in conclusion the present day 'Hindu' community governed by the 'Hindu laws' with their Brahminical tilt and Anglo-Saxon base, is more a legal fiction than a religious entity or a social reality¹⁴. In effect, it was an attempt to impose an alien and higher cast system of law upon a pluralistic society¹⁵

ORIGINE AND DEVELOPMENT OF ISLAMIC LAW AND WOMEN'S PLACE WITHIN IT

The Islamic law is of latter origin then the smritis and also lays grater claim to divinity. Despite this claim, its evaluation is not though a process of continuous revelations but through a rational method of interpretations¹⁶. we can trace a similarity between the smriti law and Islamic law regarding the various schools and sects which flow form the original texts which have led to plurality of practises.

The Shariat is the central core of Islam and is an infallible guide to ethics¹⁷. The Islamic jurisprudential law is called *Fiqh*. According to fyzee, Fiqh is the knowledge and obligation derived form the four soucres of Islamic law¹⁸- the Koran, Sunna (tradition), Ijma(an agreement among legal

scholars), Qiyas(reasoning by analogy). The Fatawas(legal opinions of scholars and judges), though not a source of law, have been instrumental in the development and enrichment of legal principles¹⁹

There are two broad sects of Islam, the Sunnis and the Shias. The four recognised schools of Sunni law are Hanafi, Malaki, Shafii and Hanbali. The founder of Shia school is Imam Jafar. The most important among the Shia schools of law are Ithnaashari and Ismaili. The main difference between the Shia and sunni sects is the doctrine of *Imamat*.

Islam came to india through the trade routes of the Arabs via the Arabian sea. Some these traders settled down along the Malabar coast in eight centuries and adopted the local customs and practices (Mopillas of Keral). They did not follow the Shariat law²⁰. In India Shariat was first introduced by muslim Sultanate and later continued by Mughal Emperors. It is through this channel that the Shariat was established in India.²¹

On the eve of colonial establishment, there existed 'amphibious communities' which could not clearly be distinguished as either wholly Hindu or wholly Muslim due to the intermingling of laws, customs and practices.²² This amphibious character of communities presented its own challenges which was settled in by the courts. The courts followed the same colonial construct of reducing this complex nature of communities into Mohammadan and Hindu law binary overriding evidences to the contrary.

Now I will proceed to probe the rights of women under Islam. We must contextualize the principles of Shariat law that developed within tribal Arabia. The Arabs were traders and had mastered the law of contract²³. The basic principle of contract was applied to others social relationship including marriage.

The prophet converted the custom of bride price of tribal Arabia to Mehr which would be a future security to a married woman.²⁴ In an era of unlimited polygamy, the prophet restricted the number of wives to four with an injunction that each wife be treated with equal dignity and affection. Islam was also the first legal system to grant women the right of inheritance (women were entitled to half the share of the male counterpart)²⁵. Some other positive provisions of the Islamic law of marriage and succession are following²⁶ : *marriage is a civil and dissoluble contract; the right to stipulated Mehr; the right to inter into a pre-marriage agreement; the one third rule regarding testamentary succession.*

It is interesting to note that at the time of independence, women's rights under Muslim law were far superior to both the Hindu as well as the Christian laws²⁷. The subversion of women's rights by the constant pleadings of patriarchal interests for the application of Hindu personal laws on the basis of custom, substantiate the same. For instance, *skinner vs skinner* reveals that the succession rights of a Muslim widow were even superior to those granted under the *Indian Succession Act*.

Thus, it is clear that although the Muslim law contains several positive provisions which would safeguard women's rights, these provisions have deteriorated due to socio-cultural reasons and patriarchal subversions of a later period.

COLONIAL RULE AND CURTAILMENT OF WOMEN'S RIGHTS

As discussed in the preceding sections, till the advent of the colonial rule, civil law was enforced primarily by local and non-state legal for a applying the norms of customary law and adaptations of the smriti or qur'anic injunctions to suit local conditions. But the British set in motion the process of Brahmanisation and Islamisation of laws which resulted in clear subversion of women's rights. Simultaneously, through a series of judicial decisions the scope of women's rights was constrained beyond all recognition.²⁸As already discussed, the mitakshara had expanded the scope of stridhana to include property acquired by woman through every source, including inheritance and partition. But the judicial decisions changed this concept and laid down that inherited property is not stridhana.

THE DEBATE WITHIN THE CONSTITUENT ASSEMBLY

The debate in the Constituent Assembly (CA) vis-à-vis women rights was made possible because of womens' leaders' consistent campaign to pass Hindu code bill. Though the CA had recognised the significance of the issue and willing to consider it, "the political developments 'necessitated the shelving of this issue until independence"²⁹. Interestingly thus while laying the foundation of a new nation, the scheme of women's liberation had to be relocated within the master scheme of national integration and became subservient to it in all later developments, both legislative and judicial.³⁰

The issue of personal laws was debated primarily in the CA in the context of rights of minorities within the new nation. The trauma of partition had brought in its wake an insecure and defensive Muslim minority who had to be reassured of their right to religious and cultural freedom within the new democracy, which would be governed by majority concerns and yet the desire and even duty was placed on future Legislature to enact uniform civil code.

HINDU LAW REFORMS AND THE RHETORICS OF GENDER JUSTICE

When the state in free India took up the task of Hindu law reforms it projected these efforts as the liberation of women, yet its underlying motive of reform was consolidating the powers of the state and building an integrated nation. There were at least three concerns that govern the reforms. First, the opposition from the conservative forces belonging to both the congress as well as Hindu fundamentalists. Several provisions including the provisions of monogamy, divorce, abolition of coparcenary and inheritance of daughters were opposed. It was felt that the Hindu society will receive moral setback if women were granted the right to inherit property³¹. Second, the homogenising concerns which were instrumental in bringing about reforms in Muslim law, also became the driving force for the Hindu law reform. For the state, the unifying potential of the common code became more important than its potential for ensuring legal equality for women³². Third, the fallacy about the claim of liberating women. There is a general presumption that the Hindus are governed by a secular, egalitarian and gender-just code and that this code should now be extended to Muslims to liberate Muslim women. The judiciary has contributed to this myth by reiterating that Hindus have forsaken their personal laws and are governed by a common code³³. This misconception forms the basis of the demand for the ucc. The anomalies and anti-women bias within the Hindu code bill were obvious but not discussed widely in public forum. Reflecting on the nature of the hindu code flaviaagnes commented: the acts were neither hindu in character nor based on modern principles of equality but reflected the worst tendencies of both³⁴.

It is pertinent here to establish points discussed above with respect to hindu code by citing just one example that is of 'illusory inheritance rights' of women under the code.

MUSLIM PERSONAL LAW AND UNIFORM CIVIL CODE DEBATE IN FREE INDIA

Since I have already discussed the genesis of Islamic law and its evolution in India, only briefly I will touch on the issue. The Muslim Personal Law (Shariat) Application Act or Act XXVI of 1937 was enacted by the British government in India, as a part of the Government of India Act, 1935. After independence, the Constitution of India has maintained the law as it existed at the time of its introduction. The point to be noted here is that the MPL around which post-independence Muslim identity politics is centred, is actually a creation of colonial British rule. MPL was applied to Muslims in British India as a matter of policy, and not as a matter of religion (Fayzee 1971: 12)³⁵. There are

many elements included in this personal law, which are not based on the shariat, and which are applied as a matter of “justice, equity and good conscience” and yet others were abolished.³⁶

This proves that MPL in this country is not “non-negotiable”, and progressive reforms can be demanded and be made from time to time. Moreover, there have actually been some changes made post-independence. The major change in MPL happened after the infamous Shah Bano case, which led to the enactment of the Muslim Women (Protection of Rights on Divorce) Act, 1986.

This act actually deprived Muslim women of the right of maintenance under Section 125 of the Criminal Procedure Code, and thereafter this created a big upheaval in Indian politics. It created an impression that keeping an eye on the Muslim vote bank, the then Rajiv Gandhi government allowed itself to get influenced and pressurised by the Muslim leadership. Many Muslim women’s organisations, other women’s organisations, and progressive organisations protested, but could not stop it. This has given strength to Hindu fundamentalist propaganda against secular politics in this country, and has also brought MPL back to the centre stage of politics.

Today the discursive plane on which the debate is placed, has widened and become complex. The growth in the civil society since 1980s and the changes in normative discourse of diversity and justice has rendered the character of ucc discussion layered and multifaceted. The complexity is further heightened by the fact that the ‘ucc debate is embedded in not just feminist politics but in party politics’³⁷.

The evolution of the normative grounds for a ucc has broadly gone through three phases: ‘national integration’, ‘equality of laws’, and finally the present stage of ‘gender justice’³⁸. The discussion has moved to exploring the legal and political strategy to be adopted in creating a package of laws, both personal and general, that would advance this goal of gender justice.³⁹ What then emerges is the several issues for our constitutional polity. The first is the movement towards justifying legal pluralism as progressive project. To insist on the uniformity of personal laws is, in fact, in the comparative international law literature, seen as a step backwards for the polity (Sousa Santos 2006; Tamonaha 2008)⁴⁰. But the insistence on plurality of laws must conform to the principles of gender justice. In the case of family laws, therefore, not only must they pass the test of “non-discrimination” and “equal treatment” but they must also satisfy the conditions of “gender justice.”⁴¹

As soon as we sit and work towards this goal we are confronted with inevitable conflicts among principles and priorities such as ‘secular vs religious’ laws; ‘individuals vs group rights. Two strategies are available to ensure that such situations of conflict of rights are minimised⁴². The first is what could be referred to as the “outflanking strategy,” that is, a strategy to outflank the resistances that are encountered by the attempts to evolve a gender-just and minority sensitive UCC. Here as the women’s group on women’s rights have stated a package of laws would have to be enacted covering both the personal law but also laws relating to violence and discrimination in the workplace and in the home, such that the responsibility of promoting gender justice, in the face of an asymmetric system of social power, is not carried by the personal law alone (EPW 1996)⁴³. In addition, as Nivedita Menon has argued, a three-part strategy can be followed: (i) support attempts to bring about reform within personal laws, (ii) bring about legislation in areas not covered by either secular or personal laws, such as domestic violence and right to matrimonial home, thus avoiding direct confrontation with communities and communal politics, and (iii) setting up a comprehensive gender-just framework of rights covering not just areas covered by personal laws but also the “public” domain of work (creches, equal wages, maternity benefits, etc) (Menon 2014: 4)⁴⁴. The second strategy is “reform through juridification.” That is gender justice is being pursued through a number of court cases across the country and as a result the judiciary is creating laws, through interpretation of MWPRDA, which the legislature did not.

Both strategies of “outflanking the resistance” and of “juridification” have advanced the cause of gender justice in India. But ultimately to succeed in the endeavour of lasting gender justice, it is essential that progressive organisations and individuals and most importantly women organisations initiate sustained conversations within the community on a range of gender related issues.

REFERENCES

- Agnes, Flavia (2000).LAW AND GENDER INEQUALITY: The politics of women’s rights in India. OUP. ND.
- Patel, Razia., EPW, OCT.31, VOL XLIV NO44
- Peter Ronald, EPW, NOVEMBER 28, 2015 vol I no 48
- Schacht, J., An introduction to Islamic law. OUP (1964) ND.
- Sharma, R. S., material culture and social formation in ancient India, Madras: Macmillanindia ltd (1983)⁴⁵

ENDNOTES

1. Agnes, Flavia (2000).LAW AND GENDER INEQUALITY: The politics of women’s rights in india. Page11
2. Agnes, Flavia. LAW AND GENDER INEQUALITY: The politics of womens rights in india. Page 12.
3. Desai, S.T.,(ed.), Mulla’s principles of hindu law. As quoted in ibid.
4. Bhattseharjea, A.M.,HINDU LAW AND THE CONSTITUTION, Culcutta: Eastern law house (1994)(2ndedn.) p.17n.4. as quoted in Agnes, Flavia. LAW AND GENDER INEQUALITY: The politics of womens rights in india. P.12.
5. Alladi, k. (ed), Mayne’sTreatise on hindu law & usage , new delhi : bhartlawhouse (1993) (13thedn) p. 146.
6. Shurma, R. S., material culture and social formatin in ancient india, Madras :macmillanindia ltd (1983), pp.89-134.
7. Agnes, Flavia. LAW AND GENDER INEQUALITY: The politics of womens rights in india. Page 14
8. Ibid p.15
9. Ibid.
10. Alladi, k. (ed), Mayne’sTreatise on hindu law & usage , new delhi : bhartlawhouse (1993) (13thedn).
11. Agnes, Flavia. LAW AND GENDER INEQUALITY: The politics of womens rights in india.
12. Ibid.
13. Ibid.
14. ibid
15. Schacht, J., An introduction to Islamic law, ND’oup (1964) p.1. quotd in Ibid
16. Fyzee,A.A.A., outlines of muslim law. Pp.39-40
17. Ibid
18. bid
19. Agnes, Flavia. LAW AND GENDER INEQUALITY: The politics of womens rights in india. P.31
20. Ibid p.32
21. Ibid p33
22. Diwan, p., Muslim law in modern india, Allahabad, Allahabad law agency (1993) 6thedn p.52
23. Ibid p.73
24. Agnes, Flavia. LAW AND GENDER INEQUALITY: The politics of womens rights in india p.35
25. Ibid., p36.
26. Agnes, Flavia. LAW AND GENDER INEQUALITY: The politics of womens rights in india p47.
27. Ibid., p71.
28. Ibid.
29. Ibid., p79.
30. Ibid.,80.
31. Comments made by SC, eg. SarlaMudgal v Union of India&Ors.(1995) 3 ssc 635
32. Agnes, Flavia. LAW AND GENDER INEQUALITY: The politics of womens rights in india

33. Quotd.in Patel, Razia., EPW, OCT.31, VOL XLIV NO44. P45.
34. Patel, Razia., EPW, OCT.31, VOL XLIV NO44. P45
35. Dsouza, Peter Ronald, EPW,NOVEMBER 28, 2015 vol I no 48. P50.
36. Ibid., p54.
37. Ibid., p55.
38. Quotd.inDsouza, Peter Ronald, EPW,NOVEMBER 28, 2015 vol I no 48. P55.
39. Ibid., p56
40. Ibid. p57
41. Ibid.
42. Ibid.

The Historical Role of Syed Ahmad Khan and Evolution of Muslim Women Issues

Sazid Equbal Akhtar*

ABSTRACT

Women issues have assumed significant importance in present day Muslim societies. Muslim women are generally lagging in various fields of life than women in other communities. The origins of this kind of attitude towards Muslim women have been generally traced to a problematic understanding of *Shari'a* laws. These laws have been mostly supposed to be immutable and fixed with no scope of interpretation and change. This paper tries to explore how the early Muslim reformer specifically Syed Ahmad Khan in India engaged with these laws vis-a-vis the new socio-political situation in general and women issues in particular.

Criticizing the degraded position of Muslim Women even though is not a new phenomenon but it received new impetus in the recent decades. To meet this challenge some scholars are making efforts to understand Quran in new perspectives and are brimming up with new interpretations. Among these scholars Amina Wadud, Fatima Mernissi and Laleh Bakhtiar have been at the fore front in the academic circles.

This revisiting and reconstructing the position of women in Islam is not a recent phenomenon. In Colonial India such efforts were made by the Muslim reformers in the second half of the 19th century in order to respond to the colonial discourse which was gendered from the very beginning. Within the colonial parameters, the position of women was believed to indicate the status of a civilization. In South Asia this had been low. Thus women's issues constituted the nucleus of the British colonial critique of Indian society. As the low position of women caused shame to the natives, reforming the condition of women occupied a major place in their intellectual as well as activist engagements.

The Historians of India have examined in elaborate detail Hindu reformers efforts to redefine the role and position of women in their classical scriptures. Though late in the race the Muslim reformers soon followed. This paper is a humble attempt to investigate how the early Muslim intellectuals responded to the colonial gendered critique and their discourses on the reconstruction of Muslim women in Islam. This debate on contesting and claiming the rights in Islam in the Colonial ambience was not a homogenous and uniform endeavor but reveals a plurality of viewpoints.

INTRODUCTION

It was in 19th century when the Indian educated class started to reform their socio-religious set up as an imperative to respond to the challenges put forward by the colonial empire. The colonial discourse on India from the very beginning was gendered, as the colonized society was feminized and its 'effeminate' character, as opposed to 'colonial masculinity', was held to be a justification for its loss of independence. The 'women question' figured prominently in these discourses. The degraded position of Indian women was taken as an indicator of India's inferior status in the hierarchy

*PhD Candidate at Department of Political Science, Jamia Millia Islamia, New Delhi. E-mail - akhtarsazid283@gmail.com

of civilizations. It is no wonder that the status of women became the focus of the reformative agenda of the modernizing Indian intellectuals of the 19th century. As a result of this gendered colonial discourse, native intellectuals started to respond to the challenges put forward by this powerful discourse. First the Hindu middle class voiced their concerns about the status of Hindu women in their society in response to colonial criticism but the Muslims who lost the political power began to respond to this trend a little later after 1857.

The 19th century was also significant as India witnessed a lot of changes in the attitudes and perceptions of both colonial state and its subjects. Colonial state faced the great mutiny of 1857 and it hardly survived to hold on over its colony, thanks to the help of princely states who helped the rule and act as 'breaking waters'.¹ The Muslims who participated largely in 1857 revolt also meted out a large burnt from the colonial state. More than three thousand Muslims were hanged alone in Delhi. The general perception among the colonial officials about the reasons of Muslim participation in revolt was to 'resist civilizing mission' of the colonial state and to reinstate the Muslim rule. Muslims were now victims of suspicion and contempt.

The demise of the Mughal Empire made Muslims to think the possible reason behind the decline. Generally, two explanations hold the debating ground; one that the Mughal empire failed to withstand the onslaught of mighty British because of its traditionalism and obscurantism. Need was felt that Islam must move with new times, new discoveries and experiments must be accommodated.² In some quarters it was also argued that the decline was a result of failure of Muslims to follow the letters and tenets of Islam. Only return to original or pure Islam can save the Muslims from further demise.

Women's body occupied an important debating ground both in the explanation of Mughal demise and in the colonial discourse on Muslim Civilisation. The prevailing illusion that the status of women are in broad lines what are inscribed in Islam make it point for opponents of Muslim culture to criticize the Islam for the degradation of women. On the other hand Muslims middle class intellectuals began to respond this criticism in many ways. Merely responding was not enough but how to respond without losing their Identity of being Muslim. As a result of this necessity to define and redefine the position of women within the circle of their Muslim identity, many Muslim reformers came forward to raise their voices and concerns regarding their Identity issues. Here I am focusing on Sir Syed Ahmad Khan and his take on Muslim women issues.

SIR SYED AHMAD KHAN

Sir Syed Ahmad Khan was a modernist, champion of modern education and rational interpretation of religious faith, practice, experience and the revision of Islamic theology to make it more consonant with the empirical science.³ He was from a late Mughal 'gentry' class who had come to terms with the changing political and economic realities of British ruled India. His response to the challenges put forward by the Colonial state were conditioned by his faith, education and culture.⁴ His grandfather Khawaja Fariduddin Ahmad (1747-1828) had served as a **vazir** to the Mughal empire Akbar Shah (1806-1837). The trait of Mughal gentry class were to devote to both learning and religion and patronage to those who perpetuated scholarship. Thus Sir Syed acquired these 'Mughal gentleman' traits from his family and reshaped and reinterpreted them in the new colonial ambience.⁵

Azizunissa Begum (1780-1857), mother of Sir Syed played a great role in the early education of her son. She had received education according to Upper class norms. She read the Quran, and elementary Persian books. She instructed her son in the moral tales contained in the books of *Gulistan* and *Bostan*. Sir Syed recounted her as a great moral force in his life and believed that there is no doubt that a good mother is better than a thousand teachers.⁶ This simply shows he was echoing a maxim of Victorian pedagogy as argued by G. Minlt.⁷ The Mid-Victorian and later Mughal societies

thus were busy in the process called by Minault as *embourgeoisement*, with increased emphasis on women's values in the house hold.⁸ Sir Syed reminds that he himself received some lessons of *Gulistan* and recited many lessons of Persian to her. She used to keep a scourge, consisting of three throngs of plaited thread and a wooden handle, to chastise me. She got sometimes angry with me but never beaten me with those wooden handle. Her counsel and instruction had a great influence on me.⁹ Minault argued that perhaps because of the influence of his mother on early life, Sir Syed saw no need for women's education other than home learning.¹⁰

The other possible reasons could be that it was the initial time when Muslims started responding to western education. Western educated fellow's need their life partners who could match up psychologically with their new acquired tastes of western culture. Since it was the beginning of western education, no serious need was felt to advocate women's education by Sir Syed and other reforms of his time.

The type of basic and literary education received by Azizunissa was not a general practice among the *Ashraf* class. Knowing how to read was very unusual enough, but knowing how to write was very rare indeed among the *Ashraf* Class women in the 19th century. The mother of *Ashrafunissa Begum* also known as *Bibi Ashraf* (1840-1903), the contemporary of *Azizunissa* was an illiterate.¹¹ Another example was other of *Zakaullah* of Delhi, a younger contemporary of Sir Syed Ahmad Khan. *Zafarullah's* mother married into the family that had served for generations as tutors to the Mughal Princes, yet she was totally illiterate.¹² Sir Syed first thought it better to raise his concern of giving women basic and literary education in homes like his mother rather than for advocating the western education which he thought suitable for his male gentry.

The revolt of 1857 created a wedge between Muslims and British Empire. In order to bridge it, he worked on many fronts. He wrote an analysis of the causes of the revolt, '*Asbab-i-Bagawat-i-Hind*' which later on was translated into English, since it was written for the British audience to minimize the suspicious feelings that Muslims of 'trouble spots' of the Empire. His main emphasis in it was to consult the Indian elite opinion to avoid future misunderstanding. He stressed on the Muslim elite to receive western education and thus started scientific society in 1865 to translate western science books into Urdu.

He wrote other books on the themes of Islam to respond to the criticism of William Muir. In this book Sir Syed touches various themes deals with women's life in Islam which were main grounds of criticism by the opponents of Muslim Civilisation.

Sir Syed Ahmad Khan was pretty much satisfied whatever the space of freedom provided by Islam to the women. While bargaining for that space Sir Syed adopted a mixed approach. He neither rejects the classical exegesis completely nor imitates it totally. The debating issues of colonial gendered discourse like divorce, polygamy, *pardah*, and rights of women were also well responded by him by adopting the mixed approach.

On the question of women, he wrote an article on the rights of women entitled *Auraton Ke Huqooq* (Rights of Women) in his journal *Tahzib al Akhlaq* in 1871 which was later on also published in his book *Maqalat e Sir Syed*. He argued in it that till date no civilized country has bestowed on the women the same rights as did by Islam that too so many centuries ago. To substantiate his argument, he argued that in England no married women can enter into any contract on their own, their property and other possessions came into the control of their husband's possession. They could neither sell it nor buy anything out of it. Contrary to this in Islamic law, Muslim married women is the owner of her property acquired before and after marriage and can sell it, gift it, and endow her property to whatsoever she wishes.¹³ She is entitled to have a share in her husband's property.¹⁴

Sir Syed also highlights the spiritual equality which women are enjoying in Islamic law. To illustrate this point he said that for doing virtues women can get the same reward as by men. She

can get the same punishment by committing sins which is reserved for men. The rights of equality enjoyed by women in Islam are no where available even in the civilized countries like England.

While answering to the question why women of civilised countries enjoying better lives than the Muslim women in India despite enjoying a lot of rights reserved in Islam, he gave two possible reasons of this demise, one men in India are not treating women well both in home and in society, not they were deemed equal by men to share in the time of happiness and sorrows, men are not also showing respect and love which women in civilized countries are enjoying from their men. Second the Muslims in India are not following the Islam in its true spirit which makes them uncivilized.¹⁵ Thus both non religious and religious causes were invoked to give reasons for the miserable position of Muslim women in India.

Sir Syed, though very short but also wrote about Pardah issue which dominated in various newspapers and periodicals of his time. He defended the practice of pardah among Muslims by saying that even though people deem him the modernist still he would like to support this old practice (Parda).¹⁶ He remained silent on the question whether this practice is justified in Islamic law or not but argued that there is need to change the men first then the women. In this way he kept women subservient to the condition of betterment of men.¹⁷

The practice of polygamy and divorce was severely criticized by the European writers especially William Muir.¹⁸ He answered his critiques on polygamy in *Khutabat-al-Ahmadiya (1870)* later translated as *Life of Muhammad*. In the chapter of this book entitled '*whether Islam has been beneficial or injurious to human society in general*', he defended polygamy but on certain conditions. Sir Syed pointed out that women is destined to share with her husband the cares and amenities, the sorrows and pleasures, to increase his happiness and to carry the most important command of giving birth to children, if she fails to perform these natural duties then the ultimate remedy kept by the Creator is polygamy.¹⁹ Without this option man would have been indulged in deepest kinds of vices.²⁰ Sir Syed while justifying polygamy also says that this practice is not reserved for to satisfy one's sexual lust as done by Muslims, to stop the misuse of this practice, Islam put certain restrictions on the unrestrained practice of polygamy. He contended that polygamy must maintain the equality of rights or must maintain justice. Here he differs from the conservative's concept of justice who meant by it was sharing equal time with wives and of equal maintenance.²¹ For Sir Syed equality of rights and privileges is incomplete without the equal treatment of love and pleasure among all wives.²² So to exclude love from the concept of justice is a great mistake.

Sir Syed counted both the advantages and disadvantages of divorce. Divorce can diminish the respect in society due to marriage and destroy man's confidence in women's fidelity.²³ Divorce can either release either the husband or the wife from the bitterness of conjugal life. It is wrong to presume that Sir Syed does not comment both on the triple divorce and women's right of giving divorce.²⁴ He quotes one of the Hadith and showed how the Prophet of Islam got very angry with the person who gave his wife three separate notices of divorce at one and at the same time. By citing this Hadith, Sir Syed argued that one cannot give triple divorce at a single sitting which is not according to the tenants of Islamic law.

About the women's right to ask for divorces, Sir Syed contended that this privilege is only allowed to the wife in the event of husband's incompetency, while as man can have this recourse when he wills, but wife must obtain a legal authorization for the act.²⁵ Hence, he believed that women can ask for divorce but only with strong and unavoidable necessity and with legal authorization.

REFERENCES

- Alam, Asiya, Polygamy, Family and Sharaf: Discourse among North Indian Muslims, Circa 1870-1918, *Journal of Soth Asian Studies*, volume 45, issue 03(May 2011)
- Engineer, Asgar Ali, *Islam, gender Justice-Muslim Gender Discriminationp*,(Delhi:Gyan publishing House,2009)

- Jaffery, Patricia, *Frogs in a Well; Indian women in Pardah*, (New Delhi: Vikas Publishing House, 1979).
- Minault. Gail, *Secluded Scholars, Education and Muslim Social Reform In Colonial India*
- Thanvi, Ashraf Ali, *Behist-e-Zevr*, (Delhi: Fareed Book Depo, 1994).
- Sir Syed Ahmad Khan, *Muqalat-i-Sir Syed*, (Lahore: Majlis-i-Taraqqi Adab, 1963)

ENDNOTES

1. For further details how princely states saved the empire during revolt of 1857, see for instance, Ramasack, N. Barbara, *Indian Princely and their States* (The New Cambridge History of India) Cambridge: Cambridge University Press, 2008.
2. Jaffery, Patricia, *Frogs in a Well; Indian women in Pardah*, (New Delhi: Vikas Publishing House, 1979), p.22.
3. Alam, Asiya, *Polygamy, Family and Sharaf: Discourse among North Indian Muslims, Circa 1870-1918*, *Journal of South Asian Studies*, volume 45, issue 03 (May 2011), pp 631-668
4. Minault. Gail, *Secluded Scholars, Women's Education and Muslim Social Reform In Colonial India*, (Delhi: Oxford University Press, 1998), p.17
5. *Ibid*, p. 18
6. Hali, Altaf Hussain, *Heyat-i-Javeed*, (Delhi: Urdu Academy, 2003), p.44
7. Minault, Gail, *secluded Scholars, Education and Muslim Social Reform In Colonial India*, p.17.
8. *Ibid*
9. Hali, Altaf Hussain, *Heyat-i-Javeed*, p 42
10. Minault, Gail, *Secluded Scholars, Education and Muslim Social Reform In Colonial India*, p.18.
11. C.M.Naim has translated and commented upon Ashrafunissa's story in *How Bibi Ashraf learned to Read AND Write in Urdu Texts and Context*, pp.99-115.
12. Minault. Gail, *Secluded Scholars, Education and Muslim Social Reform In Colonial India*, p.24.
13. Sir Syed Ahmad Khan, *Muqalat-i-Sir Syed*, (Lahore: Majlis-i-Taraqqi Adab, 1963) p.189
14. *Ibid* 189
15. *Ibid* 190
16. *Ibid* 182
17. *Ibid* 172
18. See for instance William Muir, *The life of Mohamet and the History of Islam to the era of the Hegira*, (London: Smith Elder and Co., 1861)
19. Sir Syed Ahmad Khan, 'Whether Islam has been Beneficial', *A series of Essays*, Polygamy is discussed from pages 147-152 in *Al Khutbat*.
20. *Ibid*
21. Thanvi, Ashraf Ali, *Behist-e-Zevr*, (Delhi: Fareed Book Depo, 1994), p.338
22. Sir Syed Ahmad Khan, 'Whether Islam Has been Beneficial or not', p.149
23. Engineer, Asgar Ali, *Islam, gender Justice-Muslim Gender Discrimination*, (Delhi: Gyan publishing House, 2009), p.18
25. Syed Ahmad Khan, 'Whether Islam Has been Beneficial or not', p.151.

Coordination Complex

Ram Prabesh Bharti*

A coordination complex consists of a central atom or ion, which is usually metallic and is called the *coordination centre*, and a surrounding array of bound molecules or ions, that are in turn known as *ligands* or complexing agents. Many metal-containing compounds, especially those of transition metals, are coordination complexes. A coordination complex whose centre is a metal atom is called a metal complex of d block element.

NOMENCLATURE AND TERMINOLOGY

Coordination complexes are so pervasive that their structures and reactions are described in many ways, sometimes confusingly. The atom within a ligand that is bonded to the central metal atom or ion is called the donor atom. In a typical complex, a metal ion is bonded to several donor atoms, which can be the same or different. A polydentate (multiple bonded) ligand is a molecule or ion that bonds to the central atom through several of the ligand's atoms; ligands with 2, 3, 4 or even 6 bonds to the central atom are common. These complexes are called chelate complexes; the formation of such complexes is called chelation, complexation, and coordination.

The central atom or ion, together with all ligands, comprise the coordination sphere. The central atoms or ion and the donor atoms comprise the first coordination sphere.

Coordination refers to the “coordinate covalent bonds” (dipolar bonds) between the ligands and the central atom. Originally, a complex implied a reversible association of molecules, atoms, or ions through such weak chemical bonds. As applied to coordination chemistry, this meaning has evolved. Some metal complexes are formed virtually irreversibly and many are bound together by bonds that are quite strong.

The number of donor atoms attached to the central atom or ion is called the coordination number. The most common coordination numbers are 2, 4, and especially 6. A hydrated ion is one kind of a complex ion (or simply a complex), a species formed between a central metal ion and one or more surrounding ligands, molecules or ions that contain at least one lone pair of electrons.

Any donor atom will give a pair of electrons. There are some donor atoms or groups which can offer more than one pair of electrons. Such are called bidentate (offers two pairs of electrons) or polydentate (offers more than two pairs of electrons). In some cases an atom or a group offers a pair of electrons to two similar or different central metal atoms or acceptors—by division of the electron pair—into a three-center two-electron bond. These are called bridging ligands.

History

Coordination complexes have been known since the beginning of modern chemistry. Early well-known coordination complexes include dyes such as Prussian blue. Their properties were first well understood in the late 1800s, following the 1869 work of Christian Wilhelm Blomstrand. Blomstrand developed what has come to be known as the complex ion chain theory. The theory claimed that the reason coordination complexes form is because in solution, ions would be bound via ammonia chains. He compared this effect to the way that various carbohydrate chains form.

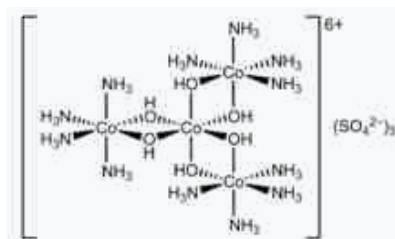
*M.P.T(+2) High School, Jhanjharpur (R.S.), Bihar.

Following this theory, Danish scientist Sophus Mads Jørgensen made improvements to it. In his version of the theory, Jørgensen claimed that when a molecule dissociates in a solution there were two possible outcomes: the ions would bind via the ammonia chains Blomstrand had described or the ions would bind directly to the metal.

It was not until 1893 that the most widely accepted version of the theory today was published by Alfred Werner. Werner's work included two important changes to the Blomstrand theory. The first was that Werner described the two possibilities in terms of location in the coordination sphere. He claimed that if the ions were to form a chain, this would occur outside of the coordination sphere while the ions that bound directly to the metal would do so within the coordination sphere. In one of his most important discoveries however Werner disproved the majority of the chain theory. Werner discovered the spatial arrangements of the ligands that were involved in the formation of the complex hexacoordinate cobalt. His theory allows one to understand the difference between a coordinated ligand and a charge balancing ion in a compound, for example the chloride ion in the cobaltammine chlorides and to explain many of the previously inexplicable isomers.

In 1914, Werner first resolved the coordination complex, called hexol, into optical isomers, overthrowing the theory that only carbon compounds could possess chirality.

Structures



Structure of hexol

The ions or molecules surrounding the central atom are called ligands. Ligands are classified as L or X (or a combination thereof), depending on how many electrons they provide for the bond between ligand and central atom. L ligands provide two electrons from a lone electron pair, resulting in a coordinate covalent bond. X ligands provide one electron, with the central atom providing the other electron, thus forming a regular covalent bond. The ligands are said to be coordinated to the atom. For alkenes, the pi bonds can coordinate to metal atoms. An example is ethylene in the complex $[\text{PtCl}_3(\text{C}_2\text{H}_4)]^-$.

Geometry

In coordination chemistry, a structure is first described by its coordination number, the number of ligands attached to the metal (more specifically, the number of donor atoms). Usually one can count the ligands attached, but sometimes even the counting can become ambiguous. Coordination numbers are normally between two and nine, but large numbers of ligands are not uncommon for the lanthanides and actinides. The number of bonds depends on the size, charge, and electron configuration of the metal ion and the ligands. Metal ions may have more than one coordination number.

Typically the chemistry of transition metal complexes is dominated by interactions between s and p molecular orbitals of the donor-atoms in the ligands and the d orbitals of the metal ions. The s, p, and d orbitals of the metal can accommodate 18 electrons (see 18-Electron rule). The maximum coordination number for a certain metal is thus related to the electronic configuration of the metal ion (to be more specific, the number of empty orbitals) and to the ratio of the size of the ligands and the metal ion. Large metals and small ligands lead to high coordination numbers, e.g. $[\text{Mo}(\text{CN})_8]^{4-}$. Small metals with large ligands lead to low coordination numbers, e.g. $\text{Pt}[\text{P}(\text{CMe}_3)]_2$. Due to their large size, lanthanides, actinides, and early transition metals tend to have high coordination numbers.

Most structures follow the points-on-a-sphere pattern (or, as if the central atom were in the middle of a polyhedron where the corners of that shape are the locations of the ligands), where orbital overlap (between ligand and metal orbitals) and ligand-ligand repulsions tend to lead to certain regular geometries. The most observed geometries are listed below, but there are many cases that deviate from a regular geometry, e.g. due to the use of ligands of diverse types (which results in irregular bond lengths; the coordination atoms do not follow a points-on-a-sphere pattern), due to the size of ligands, or due to electronic effects (see, e.g., Jahn–Teller distortion):

- Linear for two-coordination
- Trigonal planar for three-coordination
- Tetrahedral or square planar for four-coordination
- Trigonal bipyramidal for five-coordination
- Octahedral for six-coordination
- Pentagonal bipyramidal for seven-coordination
- Square antiprismatic for eight-coordination
- Tricapped trigonal prismatic for nine-coordination

The idealized descriptions of 5-, 7-, 8-, and 9- coordination are often indistinct geometrically from alternative structures with slightly differing L-M-L (ligand-metal-ligand) angles, e.g. the difference between square pyramidal and trigonal bipyramidal structures.^[10]

- Square pyramidal for five-coordination^[11]
- Capped octahedral or capped trigonal prismatic for seven-coordination^[12]
- Dodecahedral or bicapped trigonal prismatic for eight-coordination^[13]
- Capped square antiprismatic for nine-coordination

In systems with low d electron count, due to special electronic effects such as (second-order) Jahn–Teller stabilization,^[14] certain geometries (in which the coordination atoms do not follow a points-on-a-sphere pattern) are stabilized relative to the other possibilities, e.g. for some compounds the trigonal prismatic geometry is stabilized relative to octahedral structures for six-coordination.

- Bent for two-coordination
- Trigonal pyramidal for three-coordination
- Trigonal prismatic for six-coordination

Isomerism

The arrangement of the ligands is fixed for a given complex, but in some cases it is mutable by a reaction that forms another stable isomer.

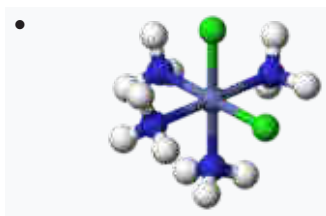
There exist many kinds of isomerism in coordination complexes, just as in many other compounds.

Stereoisomerism

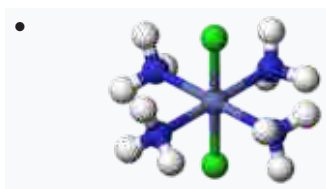
Stereoisomerism occurs with the same bonds in distinct orientations. Stereoisomerism can be further classified into:

Cis–trans isomerism and facial–meridional isomerism

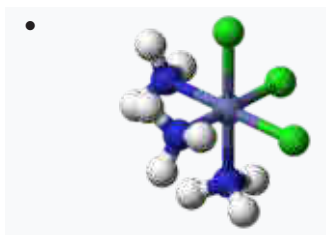
Cis–trans isomerism occurs in octahedral and square planar complexes (but not tetrahedral). When two ligands are adjacent they are said to be *cis*, when opposite each other, *trans*. When three identical ligands occupy one face of an octahedron, the isomer is said to be facial, or *fac*. In a *fac* isomer, any two identical ligands are adjacent or *cis* to each other. If these three ligands and the metal ion are in one plane, the isomer is said to be meridional, or *mer*. A *mer* isomer can be considered as a combination of a *trans* and a *cis*, since it contains both *trans* and *cis* pairs of identical ligands.



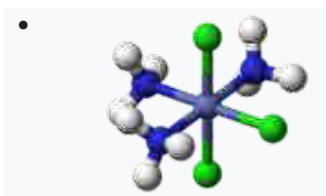
cis-[CoCl₂(NH₃)₄]⁺



trans-[CoCl₂(NH₃)₄]⁺



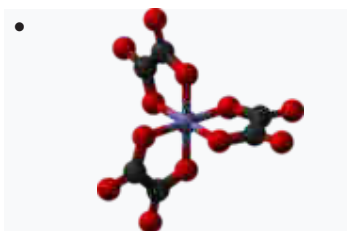
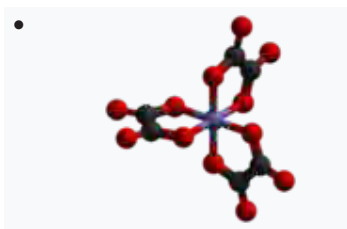
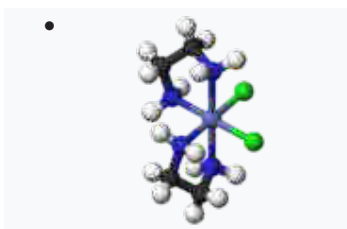
fac-[CoCl₃(NH₃)₃]



mer-[CoCl₃(NH₃)₃]

Optical isomerism

Optical isomerism occurs when a complex is not superimposable with its mirror image. It is so called because the two isomers are each optically active, that is, they rotate the plane of polarized light in opposite directions. In the first molecule shown, the symbol Λ (*lambda*) is used as a prefix to describe the left-handed propeller twist formed by three bidentate ligands. The second molecule is the mirror image of the first, with the symbol Δ (*delta*) as a prefix for the right-handed propeller twist. The third and fourth molecules are a similar pair of Λ and Δ isomers, in this case with two bidentate ligands and two identical monodentate ligands.


 Λ -[Fe(ox)₃]³⁻

 Δ -[Fe(ox)₃]³⁻

 Λ -*cis*-[CoCl₂(en)₂]⁺

Structural isomerism

Structural isomerism occurs when the bonds are themselves different. Four types of structural isomerism are recognized: ionisation isomerism, solvate or hydrate isomerism, linkage isomerism and coordination isomerism.

1. Ionisation isomerism – the isomers give different ions in solution although they have the same composition. This type of isomerism occurs when the counter ion of the complex is also a potential ligand. For example, pentaamminebromocobalt(III) sulphate $[\text{Co}(\text{NH}_3)_5\text{Br}]\text{SO}_4$ is red violet and in solution gives a precipitate with barium chloride, confirming the presence of sulphate ion, while pentaamminesulphatecobalt(III) bromide $[\text{Co}(\text{NH}_3)_5\text{SO}_4]\text{Br}$ is red and tests negative for sulphate ion in solution, but instead gives a precipitate of AgBr with silver nitrate.^[17]
2. Solvate or hydrate isomerism – the isomers have the same composition but differ with respect to the number of molecules of solvent that serve as ligand vs simply occupying sites in the crystal. Examples: $[\text{Cr}(\text{H}_2\text{O})_6]\text{Cl}_3$ is violet colored, $[\text{CrCl}(\text{H}_2\text{O})_5]\text{Cl}_2 \cdot \text{H}_2\text{O}$ is blue-green, and $[\text{CrCl}_2(\text{H}_2\text{O})_4]\text{Cl} \cdot 2\text{H}_2\text{O}$ is dark green. See water of crystallization.
3. Linkage isomerism occurs with ambidentate ligands that can bind in more than one place. For example, NO_2 is an ambidentate ligand: It can bind to a metal at either the N atom or an O atom.
4. Coordination isomerism – this occurs when both positive and negative ions of a salt are complex ions and the two isomers differ in the distribution of ligands between the cation and the anion. For example, $[\text{Co}(\text{NH}_3)_6][\text{Cr}(\text{CN})_6]$ and $[\text{Cr}(\text{NH}_3)_6][\text{Co}(\text{CN})_6]$.

Electronic properties

Many of the properties of transition metal complexes are dictated by their electronic structures. The electronic structure can be described by a relatively ionic model that ascribes formal charges to the metals and ligands. This approach is the essence of crystal field theory (CFT). Crystal field theory, introduced by Hans Bethe in 1929, gives a quantum mechanically based attempt at understanding complexes. But crystal field theory treats all interactions in a complex as ionic and assumes that the ligands can be approximated by negative point charges.

More sophisticated models embrace covalency, and this approach is described by ligand field theory (LFT) and Molecular orbital theory (MO). Ligand field theory, introduced in 1935 and built from molecular orbital theory, can handle a broader range of complexes and can explain complexes in which the interactions are covalent. The chemical applications of group theory can aid in the understanding of crystal or ligand field theory, by allowing simple, symmetry based solutions to the formal equations.

Chemists tend to employ the simplest model required to predict the properties of interest; for this reason, CFT has been a favorite for the discussions when possible. MO and LF theories are more complicated, but provide a more realistic perspective.

Colors of lanthanide complexes

Superficially lanthanide complexes are similar to those of the transition metals in that some are colored. However, for the common Ln^{3+} ions (Ln = lanthanide) the colors are all pale, and hardly influenced by the nature of the ligand. The colors are due to 4f electron transitions. As the 4f orbitals in lanthanides are “buried” in the xenon core and shielded from the ligand by the 5s and 5p orbitals they are therefore not influenced by the ligands to any great extent leading to a much smaller crystal field splitting than in the transition metals. The absorption spectra of an Ln^{3+} ion approximates to that of the free ion where the electronic states are described by spin-orbit coupling. This contrasts to the transition metals where the ground state is split by the crystal field. Absorptions for Ln^{3+} are weak as electric dipole transitions are parity forbidden (Laporte forbidden) but can gain intensity due to the effect of a low-symmetry ligand field or mixing with higher electronic states (e.g. d orbitals).

f-f absorption bands are extremely sharp which contrasts with those observed for transition metals which generally have broad bands. This can lead to extremely unusual effects, such as significant color changes under different forms of lighting.

Magnetism

Metal complexes that have unpaired electrons are magnetic. Considering only monometallic complexes, unpaired electrons arise because the complex has an odd number of electrons or because electron pairing is destabilized. Thus, monomeric Ti(III) species have one “d-electron” and must be (para)magnetic, regardless of the geometry or the nature of the ligands. Ti(II), with two d-electrons, forms some complexes that have two unpaired electrons and others with none. This effect is illustrated by the compounds $\text{TiX}_2[(\text{CH}_3)_2\text{PCH}_2\text{CH}_2\text{P}(\text{CH}_3)_2]_2$: when $\text{X} = \text{Cl}$, the complex is paramagnetic (high-spin configuration), whereas when $\text{X} = \text{CH}_3$, it is diamagnetic (low-spin configuration). It is important to realize that ligands provide an important means of adjusting the ground state properties.

In bi- and polymetallic complexes, in which the individual centres have an odd number of electrons or that are high-spin, the situation is more complicated. If there is interaction (either direct or through ligand) between the two (or more) metal centres, the electrons may couple (antiferromagnetic coupling, resulting in a diamagnetic compound), or they may enhance each other (ferromagnetic coupling). When there is no interaction, the two (or more) individual metal centers behave as if in two separate molecules.

Reactivity

Complexes show a variety of possible reactivities:

- Electron transfers
Electron transfer (ET) between metal ions can occur via two distinct mechanisms, inner and outer sphere electron transfers. In an inner sphere reaction, a bridging ligand serves as a conduit for ET.
- (Degenerate) ligand exchange
One important indicator of reactivity is the rate of degenerate exchange of ligands. For example, the rate of interchange of coordinate water in $[\text{M}(\text{H}_2\text{O})_6]^{n+}$ complexes varies over 20 orders of magnitude. Complexes where the ligands are released and rebound rapidly are classified as labile. Such labile complexes can be quite stable thermodynamically. Typical labile metal complexes either have low-charge (Na^+), electrons in d-orbitals that are antibonding with respect to the ligands (Zn^{2+}), or lack covalency (Ln^{3+} , where Ln is any lanthanide). The lability of a metal complex also depends on the high-spin vs. low-spin configurations when such is possible. Thus, high-spin Fe(II) and Co(III) form labile complexes, whereas low-spin analogues are inert. Cr(III) can exist only in the low-spin state (quartet), which is inert because of its high formal oxidation state, absence of electrons in orbitals that are M–L antibonding, plus some “ligand field stabilization” associated with the d^3 configuration.
- Associative processes
Complexes that have unfilled or half-filled orbitals often show the capability to react with substrates. Most substrates have a singlet ground-state; that is, they have lone electron pairs (e.g., water, amines, ethers), so these substrates need an empty orbital to be able to react with a metal centre. Some substrates (e.g., molecular oxygen) have a triplet ground state, which results that metals with half-filled orbitals have a tendency to react with such substrates (it must be said that the dioxygen molecule also has lone pairs, so it is also capable to react as a ‘normal’ Lewis base).

CLASSIFICATION

Metal complexes, also known as coordination compounds, include virtually all metal compounds. The study of “coordination chemistry” is the study of “inorganic chemistry” of all alkali and alkaline earth metals, transition metals, lanthanides, actinides, and metalloids. Thus, coordination chemistry is the chemistry of the majority of the periodic table. Metals and metal ions exist, in the condensed phases at least, only surrounded by ligands.

The areas of coordination chemistry can be classified according to the nature of the ligands, in broad terms:

- **Classical (or “Werner Complexes”):** Ligands in classical coordination chemistry bind to metals, almost exclusively, via their lone pairs of electrons residing on the main-group atoms of the ligand. Typical ligands are H_2O , NH_3 , Cl^- , CN^- , en. Some of the simplest members of such complexes are described in metal aquo complexes, metal ammine complexes, Examples: $[\text{Co}(\text{EDTA})]^-$, $[\text{Co}(\text{NH}_3)_6]^{3+}$, $[\text{Fe}(\text{C}_2\text{O}_4)_3]$
- **Organometallic Chemistry:** Ligands are organic (alkenes, alkynes, alkyls) as well as “organic-like” ligands such as phosphines, hydride, and CO.
Example: $(\text{C}_5\text{H}_5)\text{Fe}(\text{CO})_2\text{CH}_3$
- **Bioinorganic Chemistry:** Ligands are those provided by nature, especially including the side chains of amino acids, and many cofactors such as porphyrins.
Example: hemoglobin contains heme, a porphyrin complex of iron
Example: chlorophyll contains a porphyrin complex of magnesium
Many natural ligands are “classical” especially including water.
- **Cluster Chemistry:** Ligands include all of the above as well as other metal ions or atoms as well.

Example $\text{Ru}_3(\text{CO})_{12}$

- In some cases there are combinations of different fields:
Example: $[\text{Fe}_4\text{S}_4(\text{Scysteiny})_4]^{2-}$, in which a cluster is embedded in a biologically active species.
Mineralogy, materials science, and solid state chemistry – as they apply to metal ions – are subsets of coordination chemistry in the sense that the metals are surrounded by ligands. In many cases these ligands are oxides or sulfides, but the metals are coordinated nonetheless, and the principles and guidelines discussed below apply. In hydrates, at least some of the ligands are water molecules. It is true that the focus of mineralogy, materials science, and solid state chemistry differs from the usual focus of coordination or inorganic chemistry. The former are concerned primarily with polymeric structures, properties arising from a collective effects of many highly interconnected metals. In contrast, coordination chemistry focuses on reactivity and properties of complexes containing individual metal atoms or small ensembles of metal atoms.

Nomenclature of coordination complexes

The basic procedure for naming a complex is:

1. When naming a complex ion, the ligands are named before the metal ion.
2. The ligands’ names are given in alphabetical order. Numerical prefixes do not affect the order.
 - Multiple occurring monodentate ligands receive a prefix according to the number of occurrences: *di-*, *tri-*, *tetra-*, *penta-*, or *hexa-*.
 - Multiple occurring polydentate ligands (e.g., ethylenediamine, oxalate) receive *bis-*, *tris-*, *tetrakis-*, etc.

- Anions end in *o*. This replaces the final 'e' when the anion ends with '-ide', '-ate' or '-ite', e.g. *chloride* becomes *chlorido* and *sulfate* becomes *sulfato*. Formerly, '-ide' was changed to '-o' (e.g. *chloro* and *cyano*), but this rule has been modified in the 2005 IUPAC recommendations and the correct forms for these ligands are now *chlorido* and *cyanido*.^[24]
 - Neutral ligands are given their usual name, with some exceptions: NH_3 becomes *ammine*; H_2O becomes *aqua* or *aquo*; CO becomes *carbonyl*; NO becomes *nitrosyl*.
3. Write the name of the central atom/ion. If the complex is an anion, the central atom's name will end in *-ate*, and its Latin name will be used if available (except for mercury).
 4. The oxidation state of the central atom is to be specified (when it is one of several possible, or zero), and should be written as a Roman numeral (or 0) enclosed in parentheses.
 5. Name of the cation should be preceded by the name of anion. (if applicable, as in last example)

Examples:

metal	changed to
cobalt	cobaltate
aluminium	aluminate
chromium	chromate
vanadium	vanadate
copper	cuprate
iron	ferrate

$[\text{Cd}(\text{CN})_2(\text{en})_2] \rightarrow$ dicyanidobis(ethylenediamine)cadmium(II)

$[\text{CoCl}(\text{NH}_3)_5]\text{SO}_4 \rightarrow$ pentaamminechloridocobalt(III) sulfate

$[\text{Cu}(\text{H}_2\text{O})_6]^{2+} \rightarrow$ hexaaquacopper(II) ion

$[\text{CuCl}_5\text{NH}_3]^{3-} \rightarrow$ amminepentachloridocuprate(II) ion

$\text{K}_4[\text{Fe}(\text{CN})_6] \rightarrow$ potassium hexacyanidoferrate(II)

$[\text{NiCl}_4]^{2-} \rightarrow$ tetrachloridonickelate(II) ion (The use of chloro- was removed from IUPAC naming convention)

The coordination number of ligands attached to more than one metal (bridging ligands) is indicated by a subscript to the Greek symbol μ placed before the ligand name. Thus the dimer of aluminium trichloride is described by $\text{Al}_2\text{Cl}_4(\mu_2\text{-Cl})_2$.

Any anionic group can be electronically stabilized by any cation. An anionic complex can be stabilised by a hydrogen cation, becoming an acidic complex which can dissociate to release the cationic hydrogen. This kind of complex compound has a name with "ic" added after the central metal. For example, $\text{H}_2[\text{Pt}(\text{CN})_4]$ has the name tetracyanoplatinic (II) acid.

Stability constant

The affinity of metal ions for ligands is described by a stability constant, also called the formation constant, and is represented by the symbol K_f . It is the equilibrium constant for its assembly from the constituent metal and ligands, and can be calculated accordingly, as in the following example for a simple case:



where X, Y, and Z are the stoichiometric coefficients of each species. Formation constants vary widely. Large values indicate that the metal has high affinity for the ligand, provided the system is at equilibrium.^[26]

Sometimes the stability constant will be in a different form known as the constant of destability. This constant is expressed as the inverse of the constant of formation and is denoted as $K_d = 1/K_f$.^[27] This constant represents the reverse reaction for the decomposition of a complex ion into its individual metal and ligand components. When comparing the values for K_d , the larger the value, the more unstable the complex ion is.

As a result of these complex ions forming in solutions they also can play a key role in solubility of other compounds. When a complex ion is formed it can alter the concentrations of its components in the solution.

APPLICATION OF COORDINATION COMPOUNDS

Metals only exist in solution as coordination complexes, it follows then that this class of compounds is useful in a wide variety of ways.

Bioinorganic chemistry

In bioinorganic chemistry and bioorganometallic chemistry, coordination complexes serve either structural or catalytic functions. An estimated 30% of proteins contain metal ions. Examples include the intensely colored vitamin B₁₂, the heme group in hemoglobin, the cytochromes, the chlorin group in chlorophyll, and carboxypeptidase, a hydrolytic enzyme important in digestion. Another complex ion enzyme is catalase, which decomposes the cell's waste hydrogen peroxide.

Industry

Homogeneous catalysis is a major application of coordination compounds for the production of organic substances. Processes include hydrogenation, hydroformylation, oxidation. In one example, a combination of titanium trichloride and triethylaluminium gives rise to Ziegler–Natta catalysts, used for the polymerization of ethylene and propylene to give polymers of great commercial importance as fibers, films, and plastics.

Nickel, cobalt, and copper can be extracted using hydrometallurgical processes involving complex ions. They are extracted from their ores as ammine complexes. Metals can also be separated using the selective precipitation and solubility of complex ions. Cyanide is used chiefly for extraction of gold and silver from their ores.

Phthalocyanine complexes are an important class of pigments.

Analysis

At one time, coordination compounds were used to identify the presence of metals in a sample. Qualitative inorganic analysis has largely been superseded by instrumental methods of analysis such as atomic absorption spectroscopy (AAS), inductively coupled plasma atomic emission spectroscopy (ICP-AES) and inductively coupled plasma mass spectrometry (ICP-MS).

REFERENCES

1. Lawrance, Geoffrey A. (2010). Introduction to Coordination Chemistry. Wiley. doi:10.1002/9780470687123. ISBN 9780470687123.

- IUPAC, Compendium of Chemical Terminology, 2nd ed. (the "Gold Book") (1997). Online corrected version: (2006–) "complex". doi:10.1351/goldbook.C01203
- IUPAC, Compendium of Chemical Terminology, 2nd ed. (the "Gold Book") (1997). Online corrected version: (2006–) "coordination entity". doi:10.1351/goldbook.C01330
- Greenwood, Norman N.; Earnshaw, Alan (1997). *Chemistry of the Elements* (2nd ed.). Butterworth-Heinemann. ISBN 978-0-08-037941-8.
- "Definition of coordination sphere". chemistry-dictionary.com.
- "What Is A Coordination Compound?". Purdue University Department of Chemistry.
- Cotton, Frank Albert; Geoffrey Wilkinson; Carlos A. Murillo (1999). *Advanced Inorganic Chemistry*. p. 1355. ISBN 978-0-471-19957-1.
- Miessler, Gary L.; Donald Arthur Tarr (1999). *Inorganic Chemistry*. p. 642. ISBN 978-0-13-841891-5.
- "Coordination Compound".
- Wells A.F. (1984) *Structural Inorganic Chemistry* 5th edition Oxford Science Publications ISBN 0-19-855370-6
- Angelo R. Rossi; Roald Hoffmann (1975). "Transition metal pentacoordination". *Inorganic Chemistry*. 14 (2): 365–374. doi:10.1021/ic50144a032.
- Roald Hoffmann; Barbara F. Beier; Earl L. Muetterties; Angelo R. Rossi (1977). "Seven-coordination. A molecular orbital exploration of structure, stereochemistry, and reaction dynamics". *Inorganic Chemistry*. 16 (3): 511–522. doi:10.1021/ic50169a002.
- Jeremy K. Burdett; Roald Hoffmann; Robert C. Fay (1978). "Eight-Coordination". *Inorganic Chemistry*. 17 (9): 2553–2568. doi:10.1021/ic50187a041.

Periodic Table (Block)

Ram Prabesh Bharti*

A **block** of the periodic table is a set of elements unified by the orbitals their valence electrons or vacancies lie in. The term appears to have been first used by Charles Janet. Each block is named after its characteristic orbital: s-block, p-block, d-block, and f-block.

The block names (s, p, d, and f) are derived from the spectroscopic notation for the value of an electron's azimuthal quantum number: shape (0), principal (1), diffuse (2), or fundamental (3). Succeeding notations proceed in alphabetical order, as g, h, etc.

CHARACTERISTICS

There is an *approximate* correspondence between this nomenclature of blocks, based on electronic configuration, and sets of elements based on chemical properties. The s-block and p-block together are usually considered main-group elements, the d-block corresponds to the transition metals, and the f-block encompasses nearly all of the lanthanides (like lanthanum) and the actinides (like actinium). Not everyone agrees on the exact membership of each set of elements. For example, the group 12 elements zinc, cadmium, and mercury are often regarded as main group, rather than transition group, because they are chemically and physically more similar to the p-block elements than the other d-block elements. The group 3 elements are sometimes considered main group elements due to their similarities to the s-block elements. Groups (columns) in the f-block (between groups 3 and 4) are not numbered.

Helium is from the s-block, with its outer (and only) electrons in the 1s atomic orbital, although its chemical properties are more similar to the p-block noble gases in group 18 due to its full shell.

Sometimes the f-block is considered to be between groups 2 and 3 instead of 3 and 4, which means that lanthanum and actinium are f-block elements, and lutetium and lawrencium are d-block elements instead located under yttrium.

S-BLOCK

The s-block is on the left side of the conventional periodic table and is composed of elements from the first two columns, the nonmetals hydrogen and helium and the alkali metals (in group 1) and alkaline earth metals (group 2). Their general valence configuration is ns^{1-2} . Helium is an s-element, but nearly always finds its place to the far right in group 18, above the p-element neon. Each row of the table has two s-elements.

The metals of the s-block (from the second period onwards) are mostly soft and have generally low melting and boiling points. Most impart colour to a flame.

Chemically, all s-elements except helium are highly reactive. Metals of the s-block are highly electropositive and often form essentially ionic compounds with nonmetals, especially with the highly electronegative halogen nonmetals.

P-BLOCK

The p-block is on the right side of the standard periodic table and encompasses elements in groups 13 to 18. Their general electronic configuration is $ns^2 np^{1-6}$. Helium, though being the

*M.P.T (+2) High School, Jhanjharpur (R.S.), Bihar.

first element in group 18, is not included in the p-block. Each row of the table has a place for six p-elements except for the first row (which has none).

This block is the only one having all three types of elements: metals, nonmetals, and metalloids. The p-block elements can be described on a group-by-group basis as: group 13, the *icosagens*; 14, the *crystallogens*; 15, the *pnictogens*; 16, the *chalcogens*; 17, the *halogens*; and 18, the *helium group*, composed of the *noble gases* (excluding helium) and oganesson. Alternatively, the p-block can be described as containing *post-transition metals*; *metalloids*; *reactive nonmetals* including the *halogens*; and *noble gases* (excluding helium).

The p-block elements are unified by the fact that their valence (outermost) electrons are in the p orbital. The p orbital consists of six lobed shapes coming from a central point at evenly spaced angles. The p orbital can hold a maximum of six electrons, hence there are six columns in the p-block. Elements in column 13, the first column of the p-block, have one p-orbital electron. Elements in column 14, the second column of the p-block, have two p-orbital electrons. The trend continues this way until column 18, which has six p-orbital electrons.

The block is a stronghold of the octet rule in its first row, but elements in subsequent rows often display hypervalence. The p-block elements show variable oxidation states usually differing by multiples of two. The reactivity of elements in a group generally decreases downwards. This is not case in group 18, where reactivity increases in the following sequence: Ne < He < Ar < Kr < Xe < Rn < Og (although helium, which breaks the trend, is not a part of the p-block; therefore the p-block portion of group 18 conforms to the trend).

Oxygen and the halogens tend to form more ionic compounds with metals; the remaining reactive nonmetals tend to form more covalent compounds, although ionicity is possible when the electronegativity difference is high enough (e.g. Li_3N). The metalloids tend to form either covalent compounds or alloys with metals.

D-BLOCK

The d-block is in the middle of the periodic table and encompasses elements from groups 3 to 12; it starts in the 4th period. Most or all of these elements are also known as transition metals because they occupy a transitional zone in properties, between the strongly electropositive metals of groups 1 and 2, and the weakly electropositive metals of groups 13 to 16. Group 3 or group 12, while still counted as d-block metals, are sometimes not counted as transition metals because they do not show the chemical properties characteristic of transition metals, for example, multiple oxidation states and coloured compounds.

The d-block elements are all metals and most have one or more chemically active d-orbital electrons. Because there is a relatively small difference in the energy of the different d-orbital electrons, the number of electrons participating in chemical bonding can vary. The d-block elements have a tendency to exhibit two or more oxidation states, differing by multiples of one. The most common oxidation states are +2 and +3. Chromium, iron, molybdenum, ruthenium, tungsten, and osmium can have oxidation numbers as low as -4; iridium holds the singular distinction of being capable of achieving an oxidation state of +9.

The d-orbitals (four shaped as four-leaf clovers, and the fifth as a dumbbell with a ring around it) can contain up to five pairs of electrons.

F-BLOCK

The f-block appears as a footnote in a standard 18-column table but is located at the center-left of a 32-column full width table. While these elements are generally not considered part of

any group some authors consider them to be part of group 3. They are sometimes called inner transition metals because they provide a transition between the s-block and d-block in the 6th and 7th row (period), in the same way that the d-block transition metals provide a transitional bridge between the s-block and p-block in the 4th and 5th rows.

The f-block elements come in two series, in periods 6 and 7. All are metals. The f-orbital electrons are less active in the chemistry of the period 6 f-block elements, although they do make some contribution:^[4] these are rather similar to each other. They are more active in the early period 7 f-block elements, where the energies of the 5f, 7s and 6d shells are quite similar; consequently these elements tend to show as much chemical variability as their transition metals analogues. The later f-block elements behave more like their period 6 counterparts.

The f-block elements are unified by mostly having one or more electrons in an inner f-orbital. Of the f-orbitals, six have six lobes each, and the seventh looks like a dumbbell with a donut with two rings. They can contain up to seven pairs of electrons hence the block occupies fourteen columns in the periodic table. They are not assigned group numbers, since vertical periodic trends cannot be discerned in a “group” of two elements.

The two 14-member rows of the f-block elements are sometimes confused with the *lanthanides* and the *actinides*, which are names for sets of elements based on chemical properties more so than electron configurations. The lanthanides are the 15 elements running from lanthanum (La) to lutetium (Lu); the actinides are the 15 elements running from actinium (Ac) to lawrencium (Lr).

G-BLOCK

A g-block is predicted to begin in the vicinity of element 121. Though g-orbitals are not expected to start filling in the ground state until around element 125 (see extended periodic table), they may be low enough in energy to participate in chemistry earlier, similar to the situation of the 4f and 5f orbitals.

REFERENCES

1. Jump up to:^{a b} Jensen, William B. (21 March 2015). “The positions of lanthanum (actinium) and lutetium (lawrencium) in the periodic table: an update”. *Foundations of Chemistry*. **17**: 23–31. doi:10.1007/s10698-015-9216-1.
2. Charles Janet, *La classification hélicoïdale des éléments chimiques*, Beauvais, 1928
3. Stewart, P. J. (7 November 2017). “Tetrahedral and spherical representations of the periodic system”. *Foundations of Chemistry*. **20** (2): 111–120. doi:10.1007/s10698-017-9299-y.
4. Gschneidner Jr., Karl A. (2016). “282. Systematics”. In Jean-Claude G. Bünzli; Vitalij K. Pecharsky (eds.). *Handbook on the Physics and Chemistry of Rare Earths*. **50**. p. 12–16. ISBN 978-0-444-63851-9.
5. Stewart, P. (2018). “Amateurs and professionals in chemistry: The case of the periodic table”. In Scerri, E.; Restrepo, G. (eds.). *From Mendeleev to Oganesson: A Multidisciplinary Perspective on the Periodic Table*. New York: Oxford University Press. pp. 66–79 (76–77). ISBN 978-0-190-66853-2.

Bioinorganic Chemistry

Ram Prabesh Bharti*

Bioinorganic chemistry is a field that examines the role of metals in biology. Bioinorganic chemistry includes the study of both natural phenomena such as the behavior of metalloproteins as well as artificially introduced metals, including those that are non-essential, in medicine and toxicology. Many biological processes such as respiration depend upon molecules that fall within the realm of inorganic chemistry. The discipline also includes the study of inorganic models or mimics that imitate the behaviour of metalloproteins.

As a mix of biochemistry and inorganic chemistry, bioinorganic chemistry is important in elucidating the implications of electron-transfer proteins, substrate bindings and activation, atom and group transfer chemistry as well as metal properties in biological chemistry.

COMPOSITION OF LIVING ORGANISMS

About 99% of mammals' mass are the elements carbon, nitrogen, calcium, sodium, chlorine, potassium, hydrogen, phosphorus, oxygen and sulfur. The organic compounds (proteins, lipids and carbohydrates) contain the majority of the carbon and nitrogen and most of the oxygen and hydrogen is present as water. The entire collection of metal-containing biomolecules in a cell is called the metallome.

History

Paul Ehrlich used organoarsenic ("arsenicals") for the treatment of syphilis, demonstrating the relevance of metals, or at least metalloids, to medicine, that blossomed with Rosenberg's discovery of the anti-cancer activity of cisplatin ($\text{cis-PtCl}_2(\text{NH}_3)_2$). The first protein ever crystallized (see James B. Sumner) was urease, later shown to contain nickel at its active site. Vitamin B₁₂, the cure for pernicious anemia was shown crystallographically by Dorothy Crowfoot Hodgkin to consist of a cobalt in a corrin macrocycle. The Watson-Crick structure for DNA demonstrated the key structural role played by phosphate-containing polymers.

Themes in bioinorganic chemistry

Several distinct systems are of identifiable in bioinorganic chemistry. Major areas include:

Metal ion transport and storage

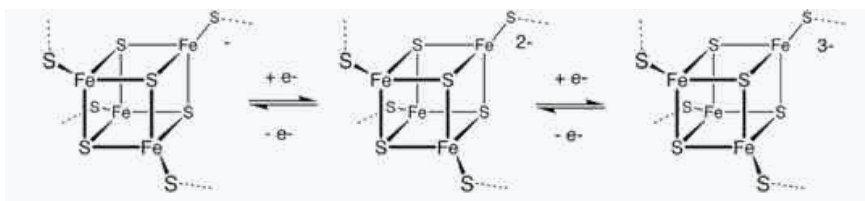
A diverse collection of transporters (e.g. the ion pump NaKATPase), vacuoles, storage proteins (e.g. ferritin), and small molecules (e.g. siderophores) are employed to control metal ions concentration and bio-availability in living organisms. Crucially, many essential metals are not readily accessible to downstream proteins owing to low solubility in aqueous solutions or scarcity in the cellular environment. Organisms have developed a number of strategies for collecting and transporting such elements while limiting their cytotoxicity.

*M.P.T (+2) High School, Jhanjharpur (R.S.), Bihar.

ENZYMOLGY

Many reactions in life sciences involve water and metal ions are often at the catalytic centers (active sites) for these enzymes, i.e. these are metalloproteins. Often the reacting water is a ligand (see metal aquo complex). Examples of hydrolase enzymes are carbonic anhydrase, metallophosphatases, and metalloproteinases. Bioinorganic chemists seek to understand and replicate the function of these metalloproteins.

Metal-containing electron transfer proteins are also common. They can be organized into three major classes: iron-sulfur proteins (such as rubredoxins, ferredoxins, and Rieske proteins), blue copper proteins, and cytochromes. These electron transport proteins are complementary to the non-metal electron transporters nicotinamide adenine dinucleotide (NAD) and flavin adenine dinucleotide (FAD). The nitrogen cycle make extensive use of metals for the redox interconversions.



4Fe-4S clusters serve as electron-relays in proteins.

Toxicity

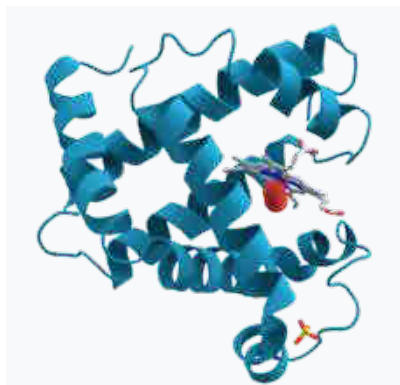
Several metal ions are toxic to humans and other animals. The bioinorganic chemistry of lead in the context of its toxicity has been reviewed.

Oxygen transport and activation proteins

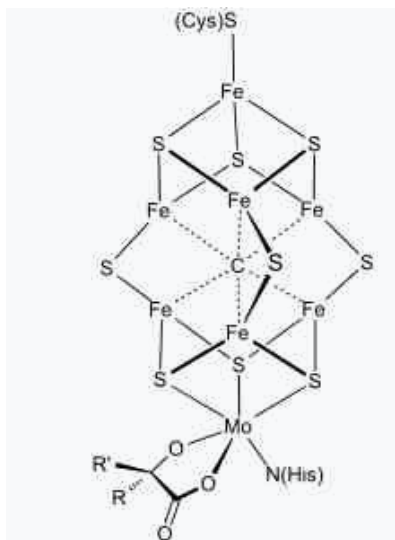
Aerobic life make extensive use of metals such as iron, copper, and manganese. Heme is utilized by red blood cells in the form of hemoglobin for oxygen transport and is perhaps the most recognized metal system in biology. Other oxygen transport systems include myoglobin, hemocyanin, and hemerythrin. Oxidases and oxygenases are metal systems found throughout nature that take advantage of oxygen to carry out important reactions such as energy generation in cytochrome c oxidase or small molecule oxidation in cytochrome P450 oxidases or methane monooxygenase. Some metalloproteins are designed to protect a biological system from the potentially harmful effects of oxygen and other reactive oxygen-containing molecules such as hydrogen peroxide. These systems include peroxidases, catalases, and superoxide dismutases. A complementary metalloprotein to those that react with oxygen is the oxygen evolving complex present in plants. This system is part of the complex protein machinery that produces oxygen as plants perform photosynthesis.

Bioorganometallic chemistry

Bioorganometallic systems feature metal-carbon bonds as structural elements or as intermediates. Bioorganometallic enzymes and proteins include the hydrogenases, FeMoco in nitrogenase, and methylcobalamin. These naturally occurring organometallic compounds. This area is more focused on the utilization of metals by unicellular organisms. Bioorganometallic compounds are significant in environmental chemistry.^[4]



Myoglobin is a prominent subject in bioinorganic chemistry, with particular attention to the iron-heme complex that is anchored to the protein.



Structure of FeMoco, the catalytic center of nitrogenase.

METALS IN MEDICINE

A number of drugs contain metals. This theme relies on the study of the design and mechanism of action of metal-containing pharmaceuticals, and compounds that interact with endogenous metal ions in enzyme active sites. The most widely used anti-cancer drug is cisplatin. MRI contrast agent commonly contain gadolinium. Lithium carbonate has been used to treat the manic phase of bipolar disorder. Gold antiarthritic drugs, e.g. auranofin have been commercialized. Carbon monoxide-releasing molecules are metal complexes have been developed to suppress inflammation by releasing small amounts of carbon monoxide. The cardiovascular and neuronal importance of nitric oxide has been examined, including the enzyme nitric oxide synthase. (See also: nitrogen assimilation.) Besides, metallic transition complexes based on triazolopyrimidines have been tested against several parasite strains.

Environmental chemistry

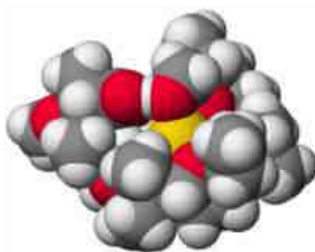
Environmental chemistry traditionally emphasizes the interaction of heavy metals with organisms. Methylmercury has caused major disaster called Minamata disease. Arsenic poisoning is a widespread problem owing largely to arsenic contamination of groundwater, which affects many millions of people in developing countries. The metabolism of mercury- and arsenic-containing compounds involves cobalamin-based enzymes.

Biom mineralization

Biom mineralization is the process by which living organisms produce minerals, often to harden or stiffen existing tissues. Such tissues are called mineralized tissues. Examples include silicates in algae and diatoms, carbonates in invertebrates, and calcium phosphates and carbonates in vertebrates. Other examples include copper, iron and gold deposits involving bacteria. Biologically-formed minerals often have special uses such as magnetic sensors in magnetotactic bacteria (Fe_3O_4), gravity sensing devices (CaCO_3 , CaSO_4 , BaSO_4) and iron storage and mobilization ($\text{Fe}_2\text{O}_3 \cdot \text{H}_2\text{O}$ in the protein ferritin). Because extracellular^[9] iron is strongly involved in inducing calcification, its control is essential in developing shells; the protein ferritin plays an important role in controlling the distribution of iron.

TYPES OF INORGANIC SUBSTANCES IN BIOLOG

Alkali and alkaline earth metals



Like many antibiotics, monensin-A is an ionophore that tightly bind Na^+ (shown in yellow).

The abundant inorganic elements act as ionic electrolytes. The most important ions are sodium, potassium, calcium, magnesium, chloride, phosphate, and bicarbonate. The maintenance of precise gradients across cell membranes maintains osmotic pressure and pH. Ions are also critical for nerves and muscles, as action potentials in these tissues are produced by the exchange of electrolytes between the extracellular fluid and the cytosol. Electrolytes enter and leave cells through proteins in the cell membrane called ion channels. For example, muscle contraction depends upon the movement of calcium, sodium and potassium through ion channels in the cell membrane and T-tubules.

TRANSITION METALS

The transition metals are usually present as trace elements in organisms, with zinc and iron being most abundant. These metals are used as protein cofactors and signalling molecules. Many are essential for the activity of enzymes such as catalase and oxygen-carrier proteins such as hemoglobin. These cofactors are tightly to a specific protein; although enzyme cofactors can be modified during catalysis, cofactors always return to their original state after catalysis has taken place. The metal

micronutrients are taken up into organisms by specific transporters and bound to storage proteins such as ferritin or metallothionein when not being used. Cobalt is essential for the functioning of vitamin B12.

Main group compounds

Many other elements aside from metals are bio-active. Sulfur and phosphorus are required for all life. Phosphorus almost exclusively exists as phosphate and its various esters. Sulfur exists in a variety of oxidation states, ranging from sulfate (SO_4^{2-}) down to sulfide (S^{2-}). Selenium is a trace element involved in proteins that are antioxidants. Cadmium is important because of its toxicity.

REFERENCES

- Maret, Wolfgang (2017). "Chapter 1. The Bioinorganic Chemistry of Lead in the Context of its Toxicity". In Astrid, S.; Helmut, S.; Sigel, R. K. O. (eds.). *Lead: Its Effects on Environment and Health. Metal Ions in Life Sciences*. 17. de Gruyter. pp. 1–20. doi:10.1515/9783110434330-001. ISBN 9783110434330. PMID 28731294.
- Sigel, A.; Sigel, H.; Sigel, R.K.O., eds. (2010). *Organometallics in Environment and Toxicology. Metal Ions in Life Sciences*. 7. Cambridge: RSC publishing. ISBN 978-1-84755-177-1.
- Méndez-Arriaga JM, Oyarzabal I, et al. (March 2018). "In vitro leishmanicidal and trypanocidal evaluation and magnetic properties of 7-amino-1,2,4-triazolo[1,5-a]pyrimidine Cu(II) complexes". *Journal of Inorganic Biochemistry*. 180: 26–32. doi:10.1016/j.jinorgbio.2017.11.027. PMID 29227923.
- Astrid Sigel, Helmut Sigel and Roland K.O. Sigel, ed. (2008). *Biom mineralization: From Nature to Application. Metal Ions in Life Sciences*. 4. Wiley. ISBN 978-0-470-03525-2.
- Weiner, Stephen; Lowenstam, Heinz A. (1989). *On biomineralization*. Oxford [Oxfordshire]: Oxford University Press. ISBN 978-0-19-504977-0.
- Jean-Pierre Cuif; Yannicke Dauphin; James E. Sorauf (2011). *Biom minerals and fossils through time*. Cambridge. ISBN 978-0-521-87473-1.
- Gabbiani G, Tuchweber B (1963). "The role of iron in the mechanism of experimental calcification". *J Histochem Cytochem*. 11 (6): 799–803. doi:10.1177/11.6.799. Archived from the original on 2012-08-02.
- Schulz, K.; Zondervan, I.; Gerringa, L.; Timmermans, K.; Veldhuis, M.; Riebesell, U. (2004). "Effect of trace metal availability on coccolithophorid calcification" (PDF). *Nature*. 430 (7000): 673–676. Bibcode:2004Natur.430..673S. doi:10.1038/nature02631. PMID 15295599.
- Anghileri, L. J.; Maincent, P.; Cordova-Martinez, A. (1993). "On the mechanism of soft tissue calcification induced by complexed iron". *Experimental and Toxicologic Pathology*. 45(5–6): 365–368. doi:10.1016/S0940-2993(11)80429-X. PMID 8312724.
- Jackson, D. J.; Wörheide, G.; Degnan, B. M. (2007). "Dynamic expression of ancient and novel molluscan shell genes during ecological transitions". *BMC Evolutionary Biology*. 7: 160. doi:10.1186/1471-2148-7-160. PMC 2034539. PMID 17845714.
- Greenwood, Norman N.; Earnshaw, Alan (1997). *Chemistry of the Elements* (2nd ed.). Butterworth-Heinemann. ISBN 978-0-08-037941-8.
- Sychrová H (2004). "Yeast as a model organism to study transport and homeostasis of alkali metal cations" (PDF). *Physiol Res*. 53 Suppl 1: S91–8. PMID 15119939.
- Levitan I (1988). "Modulation of ion channels in neurons and other cells". *Annu Rev Neurosci*. 11: 119–36. doi:10.1146/annurev.ne.11.030188.001003. PMID 2452594.
- Dulhunty A (2006). "Excitation-contraction coupling from the 1950s into the new millennium". *Clin Exp Pharmacol Physiol*. 33 (9): 763–72. doi:10.1111/j.1440-1681.2006.04441.x. PMID 16922804.
- Dlouhy, Adrienne C.; Outten, Caryn E. (2013). "Chapter 8 The Iron Metallome in Eukaryotic Organisms". In Banci, Lucia (ed.). *Metallomics and the Cell. Metal Ions in Life Sciences*. 12. Springer. pp. 241–78. doi:10.1007/978-94-007-5561-1_8. ISBN 978-94-007-5560-4. PMC 3924584. PMID 23595675. electronic-book ISBN 978-94-007-5561-1ISSN 1559-0836 electronic-ISSN 1868-0402

Inorganic Chemistry

Ram Prabesh Bharti*

Inorganic chemistry deals with synthesis and behavior of inorganic and organometallic compounds. This field covers all chemical compounds except the myriad of organic compounds (carbon-based compounds, usually containing C-H bonds), which are the subjects of organic chemistry. The distinction between the two disciplines is far from absolute, as there is much overlap in the subdiscipline of organometallic chemistry. It has applications in every aspect of the chemical industry, including catalysis, materials science, pigments, surfactants, coatings, medications, fuels, and agriculture

KEY CONCEPTS

Many inorganic compounds are ionic compounds, consisting of cations and anions joined by ionic bonding. Examples of salts (which are ionic compounds) are magnesium chloride MgCl_2 , which consists of magnesium cations Mg^{2+} and chloride anions Cl^- ; or sodium oxide Na_2O , which consists of sodium cations Na^+ and oxide anions O^{2-} . In any salt, the proportions of the ions are such that the electric charges cancel out, so that the bulk compound is electrically neutral. The ions are described by their oxidation state and their ease of formation can be inferred from the ionization potential (for cations) or from the electron affinity (anions) of the parent elements.

Important classes of inorganic compounds are the oxides, the carbonates, the sulfates, and the halides. Many inorganic compounds are characterized by high melting points. Inorganic salts typically are poor conductors in the solid state. Other important features include their high melting point and ease of crystallization. Where some salts (e.g., NaCl) are very soluble in water, others (e.g., FeS) are not.

The simplest inorganic reaction is double displacement when in mixing of two salts the ions are swapped without a change in oxidation state. In redox reactions one reactant, the *oxidant*, lowers its oxidation state and another reactant, the *reductant*, has its oxidation state increased. The net result is an exchange of electrons. Electron exchange can occur indirectly as well, e.g., in batteries, a key concept in electrochemistry.

When one reactant contains hydrogen atoms, a reaction can take place by exchanging protons in acid-base chemistry. In a more general definition, any chemical species capable of binding to electron pairs is called a Lewis acid; conversely any molecule that tends to donate an electron pair is referred to as a Lewis base. As a refinement of acid-base interactions, the HSAB theory takes into account polarizability and size of ions.

Inorganic compounds are found in nature as minerals. Soil may contain iron sulfide as pyrite or calcium sulfate as gypsum. Inorganic compounds are also found multitasking as biomolecules: as electrolytes (sodium chloride), in energy storage (ATP) or in construction (the polyphosphate backbone in DNA).

The first important man-made inorganic compound was ammonium nitrate for soil fertilization through the Haber process. Inorganic compounds are synthesized for use as catalysts such as vanadium(V) oxide and titanium(III) chloride, or as reagents in organic chemistry such as lithium aluminium hydride.

*M.P.T (+2) High School, Jhanjharpur (R.S.), Bihar.

Subdivisions of inorganic chemistry are organometallic chemistry, cluster chemistry and bioinorganic chemistry. These fields are active areas of research in inorganic chemistry, aimed toward new catalysts, superconductors, and therapies.

Industrial inorganic chemistry

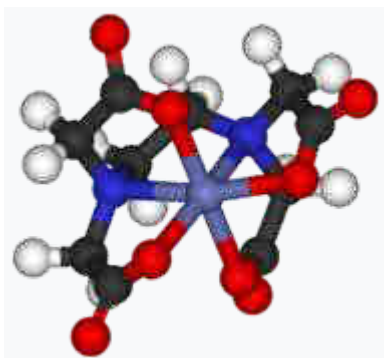
Inorganic chemistry is a highly practical area of science. Traditionally, the scale of a nation's economy could be evaluated by their productivity of sulfuric acid. The top 20 inorganic chemicals manufactured in Canada, China, Europe, India, Japan, and the US (2005 data):^[2] Aluminium sulfate, Ammonia, Ammonium nitrate, Ammonium sulfate, Carbon black, Chlorine, hydrochloric acid, hydrogen, hydrogen peroxide, nitric acid, nitrogen, oxygen, phosphoric acid, sodium carbonate, sodium chlorate, sodium hydroxide, sodium silicate, sodium sulfate, sulfuric acid, and titanium dioxide.

DESCRIPTIVE INORGANIC CHEMISTRY

Descriptive inorganic chemistry focuses on the classification of compounds based on their properties. Partly the classification focuses on the position in the periodic table of the heaviest element (the element with the highest atomic weight) in the compound, partly by grouping compounds by their structural similarities.

CLASSIFICATIONS OF INORGANIC CHEMISTRY

Coordination compounds



EDTA chelates an octahedrally coordinated Co^{3+} ion in $[\text{Co}(\text{EDTA})]^-$

Classical coordination compounds feature metals bound to “lone pairs” of electrons residing on the main group atoms of ligands such as H_2O , NH_3 , Cl^- , and CN^- . In modern coordination compounds almost all organic and inorganic compounds can be used as ligands. The “metal” usually is a metal from the groups 3-13, as well as the *trans*-lanthanides and *trans*-actinides, but from a certain perspective, all chemical compounds can be described as coordination complexes.

The stereochemistry of coordination complexes can be quite rich, as hinted at by Werner's separation of two enantiomers of $[\text{Co}((\text{OH})_2\text{Co}(\text{NH}_3)_4)_3]^{6+}$, an early demonstration that chirality is not inherent to organic compounds. A topical theme within this specialization is supramolecular coordination chemistry. Examples: $[\text{Co}(\text{EDTA})]^-$, $[\text{Co}(\text{NH}_3)_6]^{3+}$, $\text{TiCl}_4(\text{THF})_2$.

Main group compounds

These species feature elements from groups I, II, III, IV, V, VI, VII, 0 (excluding hydrogen) of the periodic table. Due to their often similar reactivity, the elements in group 3 (Sc, Y, and La) and group 12 (Zn, Cd, and Hg) are also generally included, and the lanthanides and actinides are sometimes included as well. Main group compounds have been known since the beginnings of chemistry, e.g., elemental sulfur and the distillable white phosphorus. Experiments on oxygen, O₂, by Lavoisier and Priestley not only identified an important diatomic gas, but opened the way for describing compounds and reactions according to stoichiometric ratios. The discovery of a practical synthesis of ammonia using iron catalysts by Carl Bosch and Fritz Haber in the early 1900s deeply impacted mankind, demonstrating the significance of inorganic chemical synthesis. Typical main group compounds are SiO₂, SnCl₄, and N₂O. Many main group compounds can also be classed as “organometallic”, as they contain organic groups, e.g., B(CH₃)₃. Main group compounds also occur in nature, e.g., phosphate in DNA, and therefore may be classed as bioinorganic. Conversely, organic compounds lacking (many) hydrogen ligands can be classed as “inorganic”, such as the fullerenes, buckytubes and binary carbon oxides.

Transition metal compounds

Compounds containing metals from group 4 to 11 are considered transition metal compounds. Compounds with a metal from group 3 or 12 are sometimes also incorporated into this group, but also often classified as main group compounds.

Transition metal compounds show a rich coordination chemistry, varying from tetrahedral for titanium (e.g., TiCl₄) to square planar for some nickel complexes to octahedral for coordination complexes of cobalt. A range of transition metals can be found in biologically important compounds, such as iron in hemoglobin.

ORGANOMETALLIC COMPOUNDS

Usually, organometallic compounds are considered to contain the M-C-H group. The metal (M) in these species can either be a main group element or a transition metal. Operationally, the definition of an organometallic compound is more relaxed to include also highly lipophilic complexes such as metal carbonyls and even metal alkoxides.

Organometallic compounds are mainly considered a special category because organic ligands are often sensitive to hydrolysis or oxidation, necessitating that organometallic chemistry employs more specialized preparative methods than was traditional in Werner-type complexes. Synthetic methodology, especially the ability to manipulate complexes in solvents of low coordinating power, enabled the exploration of very weakly coordinating ligands such as hydrocarbons, H₂, and N₂. Because the ligands are petrochemicals in some sense, the area of organometallic chemistry has greatly benefited from its relevance to industry.

- Examples: Cyclopentadienyliron dicarbonyl dimer (C₅H₅)Fe(CO)₂CH₃, Ferrocene Fe(C₅H₅)₂, Molybdenum hexacarbonyl Mo(CO)₆, Diborane B₂H₆, etrakis(triphenylphosphine)palladium(0) Pd[P(C₆H₅)₃]₄

Cluster compounds

Clusters can be found in all classes of chemical compounds. According to the commonly accepted definition, a cluster consists minimally of a triangular set of atoms that are directly bonded to each other. But metal-metal bonded dimetallic complexes are highly relevant to the area. Clusters occur in “pure” inorganic systems, organometallic chemistry, main group chemistry, and bioinorganic chemistry. The distinction between very large clusters and bulk solids is increasingly blurred. This

interface is the chemical basis of nanoscience or nanotechnology and specifically arise from the study of quantum size effects in cadmium selenide clusters. Thus, large clusters can be described as an array of bound atoms intermediate in character between a molecule and a solid.

- Examples: $\text{Fe}_3(\text{CO})_{12}$, $\text{B}_{10}\text{H}_{14}$, $[\text{Mo}_6\text{Cl}_{14}]^{2-}$, 4Fe-4S

Bioinorganic compounds

By definition, these compounds occur in nature, but the subfield includes anthropogenic species, such as pollutants (e.g., methylmercury) and drugs (e.g., Cisplatin). The field, which incorporates many aspects of biochemistry, includes many kinds of compounds, e.g., the phosphates in DNA, and also metal complexes containing ligands that range from biological macromolecules, commonly peptides, to ill-defined species such as humic acid, and to water (e.g., coordinated to gadolinium complexes employed for MRI). Traditionally bioinorganic chemistry focuses on electron- and energy-transfer in proteins relevant to respiration. Medicinal inorganic chemistry includes the study of both non-essential and essential elements with applications to diagnosis and therapies.

- Examples: hemoglobin, methylmercury, carboxypeptidase

Solid state compounds

This important area focuses on structure bonding, and the physical properties of materials. In practice, solid state inorganic chemistry uses techniques such as crystallography to gain an understanding of the properties that result from collective interactions between the subunits of the solid. Included in solid state chemistry are metals and their alloys or intermetallic derivatives. Related fields are condensed matter physics, mineralogy, and materials science.

- Examples: silicon chips, zeolites, $\text{YBa}_2\text{Cu}_3\text{O}_7$

THEORETICAL INORGANIC CHEMISTRY

An alternative perspective on the area of inorganic chemistry begins with the Bohr model of the atom and, using the tools and models of theoretical chemistry and computational chemistry, expands into bonding in simple and then more complicated molecules. Precise quantum mechanical descriptions for multielectron species, the province of inorganic chemistry, is difficult. This challenge has spawned many semi-quantitative or semi-empirical approaches including molecular orbital theory and ligand field theory. In parallel with these theoretical descriptions, approximate methodologies are employed, including density functional theory.

Exceptions to theories, qualitative and quantitative, are extremely important in the development of the field. For example, $\text{Cu}^{\text{II}}_2(\text{OAc})_4(\text{H}_2\text{O})_2$ is almost diamagnetic below room temperature whereas Crystal Field Theory predicts that the molecule would have two unpaired electrons. The disagreement between qualitative theory (paramagnetic) and observation (diamagnetic) led to the development of models for “magnetic coupling.” These improved models led to the development of new magnetic materials and new technologies.

Qualitative theories

Inorganic chemistry has greatly benefited from qualitative theories. Such theories are easier to learn as they require little background in quantum theory. Within main group compounds, VSEPR theory powerfully predicts, or at least rationalizes, the structures of main group compounds, such as an explanation for why NH_3 is pyramidal whereas ClF_3 is T-shaped. For the transition metals, crystal field theory allows one to understand the magnetism of many simple complexes, such as why $[\text{Fe}^{\text{III}}(\text{CN})_6]^{3-}$ has

only one unpaired electron, whereas $[\text{Fe}^{\text{III}}(\text{H}_2\text{O})_6]^{3+}$ has five. A particularly powerful qualitative approach to assessing the structure and reactivity begins with classifying molecules according to electron counting, focusing on the numbers of valence electrons, usually at the central atom in a molecule.

Molecular symmetry group theory

A central construct in inorganic chemistry is the theory of molecular symmetry. Mathematical group theory provides the language to describe the shapes of molecules according to their point group symmetry. Group theory also enables factoring and simplification of theoretical calculations.

Spectroscopic features are analyzed and described with respect to the symmetry properties of the, *inter alia*, vibrational or electronic states. Knowledge of the symmetry properties of the ground and excited states allows one to predict the numbers and intensities of absorptions in vibrational and electronic spectra. A classic application of group theory is the prediction of the number of C-O vibrations in substituted metal carbonyl complexes. The most common applications of symmetry to spectroscopy involve vibrational and electronic spectra.

Group Theory highlights commonalities and differences in the bonding of otherwise disparate species. For example, the metal-based orbitals transform identically for WF_6 and $\text{W}(\text{CO})_6$, but the energies and populations of these orbitals differ significantly. A similar relationship exists CO_2 and molecular beryllium difluoride.

THERMODYNAMICS AND INORGANIC CHEMISTRY

An alternative quantitative approach to inorganic chemistry focuses on energies of reactions. This approach is highly traditional and empirical, but it is also useful. Broad concepts that are couched in thermodynamic terms include redox potential, acidity, phase changes. A classic concept in inorganic thermodynamics is the Born-Haber cycle, which is used for assessing the energies of elementary processes such as electron affinity, some of which cannot be observed directly.

MECHANISTIC INORGANIC CHEMISTRY

An important aspect of inorganic chemistry focuses on reaction pathways, i.e. reaction mechanisms.

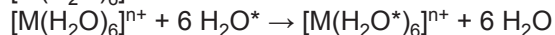
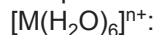
Main group elements and lanthanides

The mechanisms of main group compounds of groups 13-18 are usually discussed in the context of organic chemistry (organic compounds are main group compounds, after all). Elements heavier than C, N, O, and F often form compounds with more electrons than predicted by the octet rule, as explained in the article on hypervalent molecules. The mechanisms of their reactions differ from organic compounds for this reason. Elements lighter than carbon (B, Be, Li) as well as Al and Mg often form electron-deficient structures that are electronically akin to carbocations. Such electron-deficient species tend to react via associative pathways. The chemistry of the lanthanides mirrors many aspects of chemistry seen for aluminium.

Transition metal complexes

Transition metal and main group compounds often react differently. The important role of d-orbitals in bonding strongly influences the pathways and rates of ligand substitution and dissociation. These themes are covered in articles on coordination chemistry and ligand. Both associative and dissociative pathways are observed.

An overarching aspect of mechanistic transition metal chemistry is the kinetic lability of the complex illustrated by the exchange of free and bound water in the prototypical complexes

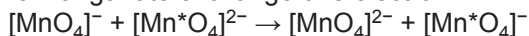


where H_2O^* denotes isotopically enriched water, e.g., $H_2^{17}O$

The rates of water exchange varies by 20 orders of magnitude across the periodic table, with lanthanide complexes at one extreme and Ir(III) species being the slowest.

Redox reactions

Redox reactions are prevalent for the transition elements. Two classes of redox reaction are considered: atom-transfer reactions, such as oxidative addition/reductive elimination, and electron-transfer. A fundamental redox reaction is “self-exchange”, which involves the degenerate reaction between an oxidant and a reductant. For example, permanganate and its one-electron reduced relative manganese exchange one electron:



Reactions at ligands

Coordinated ligands display reactivity distinct from the free ligands. For example, the acidity of the ammonia ligands in $[Co(NH_3)_6]^{3+}$ is elevated relative to NH_3 itself. Alkenes bound to metal cations are reactive toward nucleophiles whereas alkenes normally are not. The large and industrially important area of catalysis hinges on the ability of metals to modify the reactivity of organic ligands. Homogeneous catalysis occurs in solution and heterogeneous catalysis occurs when gaseous or dissolved substrates interact with surfaces of solids. Traditionally homogeneous catalysis is considered part of organometallic chemistry and heterogeneous catalysis is discussed in the context of surface science, a subfield of solid state chemistry. But the basic inorganic chemical principles are the same. Transition metals, almost uniquely, react with small molecules such as CO , H_2 , O_2 , and C_2H_4 . The industrial significance of these feedstocks drives the active area of catalysis. Ligands can also undergo ligand transfer reactions such as transmetalation.

CHARACTERIZATION OF INORGANIC COMPOUNDS

Because of the diverse range of elements and the correspondingly diverse properties of the resulting derivatives, inorganic chemistry is closely associated with many methods of analysis. Older methods tended to examine bulk properties such as the electrical conductivity of solutions, melting points, solubility, and acidity. With the advent of quantum theory and the corresponding expansion of electronic apparatus, new tools have been introduced to probe the electronic properties of inorganic molecules and solids. Often these measurements provide insights relevant to theoretical models. For example, measurements on the photoelectron spectrum of methane demonstrated that describing the bonding by the two-center, two-electron bonds predicted between the carbon and hydrogen using Valence Bond Theory is not appropriate for describing ionisation processes in a simple way. Such insights led to the popularization of molecular orbital theory as fully delocalised orbitals are a more appropriate simple description of electron removal and electron excitation.

Commonly encountered techniques are

- X-ray crystallography: This technique allows for the 3D determination of molecular structures.

- Dual polarisation interferometer: This technique measures the conformation and conformational change of molecules.
- Various forms of spectroscopy
- Ultraviolet-visible spectroscopy: Historically, this has been an important tool, since many inorganic compounds are strongly colored
- NMR spectroscopy: Besides ^1H and ^{13}C many other “good” NMR nuclei (e.g., ^{11}B , ^{19}F , ^{31}P , and ^{195}Pt) give important information on compound properties and structure. Also the NMR of paramagnetic species can result in important structural information. Proton NMR is also important because the light hydrogen nucleus is not easily detected by X-ray crystallography.
- Infrared spectroscopy: Mostly for absorptions from carbonyl ligands
- Electron nuclear double resonance (ENDOR) spectroscopy
- Mössbauer spectroscopy
- Electron-spin resonance: ESR (or EPR) allows for the measurement of the environment of paramagnetic metal centres.
- Electrochemistry: Cyclic voltammetry and related techniques probe the redox characteristics of compounds.

SYNTHETIC INORGANIC CHEMISTRY

Although some inorganic species can be obtained in pure form from nature, most are synthesized in chemical plants and in the laboratory.

Inorganic synthetic methods can be classified roughly according to the volatility or solubility of the component reactants.^[10] Soluble inorganic compounds are prepared using methods of organic synthesis. For metal-containing compounds that are reactive toward air, Schlenk line and glove box techniques are followed. Volatile compounds and gases are manipulated in “vacuum manifolds” consisting of glass piping interconnected through valves, the entirety of which can be evacuated to 0.001 mm Hg or less. Compounds are condensed using liquid nitrogen (b.p. 78K) or other cryogenes. Solids are typically prepared using tube furnaces, the reactants and products being sealed in containers, often made of fused silica (amorphous SiO_2) but sometimes more specialized materials such as welded Ta tubes or Pt “boats”. Products and reactants are transported between temperature zones to drive reactions.

REFERENCES

1. Lehn, J.M. (1995). *Supramolecular Chemistry: Concepts and Perspectives*. Weinheim: VCH. ISBN 978-3-527-29311-7.
2. Greenwood, Norman N.; Earnshaw, Alan (1997). *Chemistry of the Elements* (2nd ed.). Butterworth-Heinemann. ISBN 978-0-08-037941-8.
3. Elschenbroich, C.; Salzer, A. (1992). *Organometallics: A Concise Introduction* (2nd ed.). Weinheim: Wiley-VCH. ISBN 978-3-527-28164-0.
4. S.J. Lippard; J.M. Berg (1994). *Principles of Bioinorganic Chemistry*. Mill Valley, CA: University Science Books. ISBN 978-0-935702-73-6.
5. Wells, A.F. (1984). *Structural Inorganic Chemistry*. Oxford: Clarendon Press.
6. Cotton, F.A. (1990). *Chemical Applications of Group Theory* (3rd ed.). New York: John Wiley & Sons. ISBN 978-0-471-51094-9.
7. R.G. Wilkins (1991). *Kinetics and Mechanism of Reactions of Transition Metal Complexes* (2nd ed.). Wiley-VCH. ISBN 978-3-527-28389-7.
8. Girolami, G.S.; Rauchfuss, T.B.; Angelici, R.J. (1999). *Synthesis and Technique in Inorganic Chemistry* (3rd ed.). Mill Valley, CA: University Science Books. ISBN 978-0-935702-48-4.

Study of Ultrasonic Interaction Between Thiophenol and Aliphatic and Aromatic Ketones

Dr. Anirudh Kumar*

ABSTRACT

The ultrasonic studies provide a comprehensive investigation of molecular association between aniline with Dimethylketone, Ethyl methyl ketones, Iso-butyl methyl ketones in cyclohexane arising from the dipole-dipole and H-bonding between the solute and solvent molecules and the order of interaction is found to be Dimethylketone > Ethyl methyl ketones > Iso-butyl methyl ketones. This studies provide a comprehensive investigation of molecular association between aniline with Dimethylketone, Ethyl methyl ketones, Iso-butyl methyl ketones in cyclohexane arising from the dipole-dipole and H-bonding between the solute and solvent molecules and the order of interaction is found to be Dimethylketone > Ethyl methyl ketones > Iso-butyl methyl ketones. The experimental data have been used to calculate the acoustical parameters such as adiabatic compressibility (β), free length (Lf), free volume (Vf), internal pressure (π), viscous relaxation time (τ) and Gibb's free energy (ΔG) were evaluated.

Keywords: Ultrasonic Velocity, Thiophenol & Aromatic Ketones.

INTRODUCTION

The study of molecular interaction plays a vital role in the development of molecular science. Molecular interactions and structural behavior of molecular and their mixtures can be identified using ultrasonic studies. Ultrasonic waves have been used by many scientists to investigate the nature of molecular interactions and physico-chemical behaviors of pure, binary and ternary liquid mixtures. The values of density, viscosity and ultrasonic velocity of intermolecular H-bonded complexes of aniline with aliphatic ketones with different mole fractions in cyclohexane at 303K, 313K and 323K are presented. The acoustical parameter viz., Adiabatic compressibility (β), Free Length (Lf), Free Volume (Vf), thermo dynamical parameters viz., Internal pressure(π), Gibb's Free Energy (ΔG) and kinetic acoustical parameter like Viscous relaxation time (τ) are presented. It is found that Ultrasonic Velocity (U), Density (ρ), Viscosity (η) are increasing with increase in mole fraction of aniline. The increase in velocity, perhaps, is due to the structural changes occurring in the mixture, resulting in weakening of intermolecular forces. In addition, ultrasonic Velocity (U) decreases with increase in temperature at all noted concentration. This is because, the increase in spacing between the molecules and the increase in entropy of its structural arrangement. The decrease in density and viscosity with temperature indicates the decrease in intermolecular forces due to increase in thermal vibrations of the system, which causes an increase in volume expansion and hence increase in free path length. In all the cases values of the aliphatic ketones without aniline is much lower than that of the aniline without ketones. Which means, when mole fraction of aniline increases the increasing trend is observed in density, viscosity and velocity, it reveals that the addition of aniline increases the effective molecular space. The increased space is due to the substitution of a cyclic molecule

*M.Sc. Chemistry At- Bairia, Post-Ratouli Via-Tharbitta, P.S.-Pipra Dist-Supaul Bihar.

(aniline) by replacing another cyclic molecule (cyclohexane). The observed trend may be due to the polar nature of the added components. In the first concentration, a weak dipolar interaction is observed between ketones and cyclohexane as shown in fig a, from the second concentration onwards, aniline is purposefully introduced, because aniline is having a relatively higher dielectric constant and basically electron donor nature, when it mixes with aliphatic ketones exhibits significant interactions like a dipole-dipole interaction and hydrogen bonding between participating molecules.

MATERIALS AND METHODS

In the liquid state of matter, molecules are loosely packed, leaving free space among them. The free length is the distance between the surfaces of the neighbouring molecules. Determination of intermolecular free length in liquids and in liquid mixtures has been a subject to a semi-empirical relation to achieve the concept of intermolecular free length in order to explain the ultrasonic velocity in liquids. High purity Analytic reagent (AR) grades chemicals used in the present work were purchased from E-Merck (Germany) with of minimum assay of 99.9%. In all the systems, the ternary liquid mixtures were prepared in terms of mole fraction, out of which the mole fraction of the second compound, cyclohexane ($X_2 = 0.3$) was kept fixed while the mole fraction of the remaining two (X_1 and X_3) were varied from 0.0 to 0.7. The ultrasonic velocity in the liquid mixtures has been measured using a single crystal ultrasonic interferometer with an operating frequency of 2MHz. The density of all compounds was measured by a 10 ml specific gravity bottle calibrated with double distilled water and acetone. An Ostwald's viscometer with 10ml capacity was used for the viscosity measurements of all the compounds. The flow time of water (t_w) and the flow time of solution (t_s) were measured by a digital stop clock with an accuracy of 0.01s. Theory and calculation Using the measured data of density (ρ), velocity (U) and viscosity (η), the acoustical parameters such as adiabatic compressibility (β), free length (L_f), free volume (V_f), internal pressure (π_i), viscous relaxation time (τ) and Gibb's free energy (ΔG) have been calculated using the following standard expressions. Adiabatic compressibility (β) When acoustical wave passes through a medium, adiabatic compression and rarefaction takes place. This results in a change in pressure and a corresponding change in volume. Hence, the adiabatic compressibility is the fractional decrease of volume per unit increase of pressure, when no heat flows in or out. It can be calculated from the speed of sound (U) and the density of the medium (ρ).

RESULT AND DISCUSSION

It is found that the adiabatic compressibility (β) and Free Length (L_f) decrease with increasing concentration of aniline. There is a decreasing trend observed for adiabatic compressibility (β) which is just the inverse to ultrasonic velocity (U). The decrease in adiabatic compressibility (β) shows the decrease in interaction between solute and solvent molecules with the decrease concentration of ketones, which shows a possible formation of complex between these two entities. This clustering between aniline and ketones molecule is broken up by the interacting molecule, cyclohexane. This lessened force of interaction between solute & solvent will consequently decrease free length in the mixture. It implies that, there is a significant interaction between solute and solvent molecule, which is found, decreased when the concentration of solute is lessened. On the other hand, if there is a decrease in free length (L_f) with increase in ultrasonic velocity (U), which is also in accordance with the expected decrease in compressibility following an increase in ultrasonic velocity (U). is also found that there is a decrease in free volume, with decrease in concentration of ketones. The values of free volume also reported to be a temperature dependent. Carbonyl group in ketones, being polar, results in intermolecular Hbonding between H of the aniline and O of carbonyl ketones. Because of

the H-bonding, the molecules must be arranged such that the void spaces may be available, due to which the solute is more compressible. On the other hand cyclohexane is non-polar, having no possibility of forming H-bond.

CONCLUSION

The ultrasonic velocity (U), Density (ρ) and Viscosity (η) have been measured for three ternary liquid mixtures of Aniline + Cyclohexane + Ethyl methyl Ketone, Aniline + Cyclohexane + Dimethyl Ketone and Aniline + Cyclohexane + Iso-butyl methyl Ketone at 303K, 313K and 323K. The experimental data have been used to calculate the acoustical parameters such as adiabatic compressibility (β), free length (Lf), free volume (Vf), internal pressure (π), viscous relaxation time (τ) and Gibb's free energy (ΔG) were evaluated. The obtained results support the occurrence of molecular association through intermolecular hydrogen bonding in these ternary liquid mixtures.

REFERENCES

1. Rajendranaidu G and Ramachandranaidu, Ind.J.pure & Appl.phys, 1984, 22, 207-209.
2. Ali A, Tiwari K, Nain A K and V. Charkravarthy, Ind.J.phy., 2000, 74B (5), 351-355.
3. Devadoss D, Thairiyaraja M and Palaniappan L, Ind.J.phys, 2003, 77B (6), 669-672.
4. Miecznik P, Golebiewski Z and Mielcarek S, Fluid phase Equilibria, 2004, 41, 221.
5. Vasantharani P, Balu L, Ezhilpavai R and Shailajha, Glob.J.Mole Sci, 2009, 4(1), 42-48.
6. Prabakar S, Rajagopal K, J.pure & Appl ultrasonic, 2005, 27, 41-48.
7. Edward I peters; Introduction to chemical principles (ch/4), 3rd Edu CCBS college publishing (Philadelphia), 1982, PP 324.
8. Tiwari V and Pandey J D, Ind J pure appl physics, 1980, 18, 51.
9. Surayanarayana C V and Kuppasamy T, J.Acou.soc.Ind, 1976, 4, 75.
10. Surayanarayana C V J.Acou.soc.Ind, 1979, 7, 131.
11. Eyring H and Kincaid J F, J.Chem. Phy, 1938, 6, 220 -229.
12. Thiyagragan R, Jaafar M S and Palaniappan L, J Phy Sci, 2007, 18(2), 81-88.
13. Palaniappan L, Ind.J.pure & Appl.phys, 2002, 40, 828.

Study of Non-Exponentiality in Electron Transfer Kinetics

Dr. Bhupendra Prasad Yadav*

ABSTRACT

Our work is expected to have a few significant impacts on electrochemical measurements and their interpretation in that the transient currents are fully taken advantage of for extraction of useful information. The earlier transients have usually been discarded thus far in traditional electrochemical experiments. The technique should also offer high-throughput recordings of impedance signals for studying interactions and analysis of biologically important compounds. Finally, the technique should allow the time-resolved electrochemistry to be conducted when the technology advances enough to analyze the transient at very high frequencies.

Keywords: Non-exponentiality, Electron Transfer & Kinetics.

INTRODUCTION

Non-exponential electron transfer kinetics in complex systems are often analyzed in terms of a quenched, static disorder model. In this work we present an alternative analysis in terms of a simple dynamic disorder model where the solvent is characterized by highly non-exponential dynamics. We consider both low and high barrier reactions. For the former, the main result is a simple analytical expression for the survival probability of the reactant. In this case, electron transfer, in the long time, is controlled by the solvent polarization relaxation in agreement with the analyses of Rips and Jortner and of Nadler and Marcus. The short time dynamics is also non-exponential, but for different reasons. The high barrier reactions, on the other hand, show an interesting dynamic dependence on the electronic coupling element, V_{el} . Electron transfer reactions often show non-exponential kinetics. The probable cause for this non-exponentiality has been a subject of considerable discussion in the literature in the recent past.

MATERIALS AND METHODS

For biological electron transfer reactions, this non-exponentiality is usually attributed to the existence of multiple configurations often observed in the biosystems, each with different activation energy and solvent environment. Understanding of this non-exponentiality, therefore, is highly non-trivial and requires the elucidation of reaction parameters for the different configurations. We shall not discuss this any further. Electron transfer reaction can be strongly non-exponential even in homogeneous phase, such as in liquids and glasses. Actually, the Sumi-Marcus theory was first formulated to explain such non-exponentiality observed in low or zero barrier photo-electron transfer reactions. Now, the non-exponentiality in Sumi-Marcus theory comes from the widening of the reaction zone due to the participation of a low frequency intra-molecular vibration in the electron transfer. The extent of this intrinsic non-exponentiality depends on the width of the reaction window determined

*M.Sc., Ph.D.Chemistry At + Post- Jankinagar, Via-Banmankhi Dist-Purnea Bihar.

by the ratio of the re-organization energies of the solvent and the vibrational modes and the degree of non-exponentiality if rather limited. There can, however, be another source of non-exponentiality in homogeneous systems. This is the non-Debye dielectric relaxation of the medium.

RESULT

Traditionally, voltammograms, in which currents are plotted as a function of applied potential, have been used to describe an electrode reaction at the electrode/electrolyte interface, because the currents are a measure of the electrode reaction kinetics for its activation parameter, overpotential. The current has two components, Faradaic and non-Faradaic, of which the non-Faradaic component is not related to the electrode reaction and is often regarded as noise. Investigators have been trying to minimize the non-Faradaic component as much as possible; the normal-pulse and differential-pulse modes of voltammetric or polarographic experiments have evolved from dc polarography and linear sweep voltammetry. Recently, almost complete removal of capacitive contributions has been achieved using programmed potential voltammetry, which enhances the sensitivity by orders of magnitude. While the minimization of noise would certainly bypass the problem to a certain extent, a better approach would be to measure both components concurrently and have a full description of the system using the information thus obtained.

CONCLUSION

The antifungal activity of the test compounds were evaluated against *A. niger* and *A. flavus* by the cup plate method cultured on seberose dextrose agar (SDA) medium adapting the procedures as described above. The plates were incubated at 37°C for 48 h. The diameter of the zone of inhibition for all the test compounds were compared with standard drug Fluconazole of the same concentration as that of the test compounds under identical conditions. Since all the test compounds and standard drugs were prepared in freshly distilled DMF, its zone of inhibition was found to be negligible and taken as 0 mm.

REFERENCES

1. H. Sumi & R. A. Marcus, *J. Chem. Phys.* 84, 42372, 1986.
2. W. Nardler & R. A. Marcus, *Chem. Phys. Lett.* 144, 24, 1988.
3. R. Zwanzig, *Acct. Chem. Res.* 23, 148, 1990.
4. J. T. Hynes, *J. Phys. Chem.* 90, 370, 1986.
5. R. Biswas, & B. Bagchi, *J. Phys. Chem.* 100, 4278, 1996.
6. A. Mele, A. G. Guidoni, C. Flamini, A. Latini, S. Orlando and R. Teghil, *Proc. Indian Acad. Sci. (Chem. Sci.)*, Vol. 110, pp. 163-180, 2001.
7. Shim, Y.-B.; Park, S.-M. *J. Electroanal. Chem.* **1997**, 425, 201. (c)
8. Urquidi-Macdonald, M.; Real, S.; Macdonald, D. D. *Electrochim. Acta* **1990**, 35, 1559.
9. Lee, J.-Y.; Park, S.-M. *J. Phys. Chem. B* **1998**, 102, 9940. (b) Choi, S.-J.; Park, S.-M. *Bull. Korean Chem. Soc.* **2002**, 23, 699. (c) Amatore, C.; Savenat, J. M.; Tessier, D. *J. Electroanal. Chem.* **1983**, 149, 39.
10. Pyun, C.-H.; Park, S.-M. *J. Electrochem. Soc.* **1985**, 132, 2426.

Study of Transition Metal Chelates with A 2-Thiophenecarboxaldehyde-Derived Schiff Base

Dr. Devendra Kumar Rai*

ABSTRACT

In this work synthesize and characterize the above named Schiff base and its metal (II) complexes in order to investigate their magnetic, thermal and antibacterial properties for possible magnetic behaviors such as anti- and ferro-magnetisms, probable use as metal precursor in material science and broad-spectrum activities against pathogenic bacteria. Consequently, this research work is a continuation of our studies on the synthesis, characterization and bioactivities of some metal (II) complexes of various Schiff bases. Preparation, isolation, and characterization of a new bidentate Schiff base derived from 2-thiophenecarboxaldehyde, and its complexes with Fe(II), Co(II), Ni(II), Cu(II), Zn(II), and Cd(II). It is tentatively proposed that the Schiff base ligand coordinates through the nitrogen of the azomethine group and the sulfur of the thiophene ring, forming a stable chelate ring structure. In discussion, distorted octahedral structures for Fe(II), Co(II), Ni(II), and Cu(II) complexes, and tetrahedral structures for Zn(II) and Cd(II) compounds are proposed.

Keywords: Transition Metal, Chelates & Schiff Base.

INTRODUCTION

It is well known that divalent metal ions are critical to the proper functioning of various biomolecules, such as replication processes and protein biosynthesis. These ions are essential in the stabilization of noncanonical forms of nucleic acids. Therefore, the interaction between divalent metal ions (such as Ca^{2+} and Mg^{2+}) and nucleic acids have got a number of investigations. Effect of Mg^{2+} on solubility, viscosity, and melting temperature of DNA molecule are attributed to the existence of a strong binding between Mg^{2+} and DNA phosphates. At the same time, Schiff basemetal complexes are an area of increasing interest and have numerous applications. They are considered to new kinds of potential anticancer reagent, anti-bactericide reagent and antivirus reagent. The metal ions may enhance the activities of Schiff base ligands. Generally, the complexes are known to bind to DNA by a series of noncovalent interactions such as intercalation, electrostatic interaction and groove binding. In this study, a Schiff base derived from vanillin and L-tryptophan and its Mg (II) complex have been synthesized. The interaction of this complex with DNA has been investigated systematically by spectroscopy, cyclic voltammetry and viscosity methods.

MATERIALS AND METHODS

Herring sperm DNA was purchased from Sigma Biological Co. (USA) and used as received. Purity of DNA was checked by monitoring the ratio of absorbance at 260 to that at 280 nm. The ratio

*M.Sc. Ph.D. Chemistry Vidya Aashram, Red Cross Road Opposite of Co-operative Bank Adampur, Bhagalpur Bihar -812001

of A260/A280 was 1.89, indicating that DNA was free from protein. The DNA was dissolved in doubly distilled deionized water with 50 mM NaCl and dialyzed for 48 hours against a buffer solution at 4°C. The concentration of DNA stock solution was determined by UV absorbance at 260 nm using a molar absorption coefficient $\epsilon = 6600 \text{ L} \cdot \text{mol}^{-1} \cdot \text{cm}^{-1}$. A tris-HCl buffer (Its concentration is $0.05 \text{ mol} \cdot \text{L}^{-1}$ and pH is 7.40, examined by acidometer.) was used to control the pH of the reaction system. All of the samples were dissolved in the Tris-HCl buffer. $\text{MgSO}_4 \cdot 7\text{H}_2\text{O}$ was purchased from Chongqing Beibei Chemical Plant, China. L-Tryptophan was purchased from Chengdu-China Kelong Chemical Plant (A.R., China). Vanillin was purchased from Xian-China Chemical Plant (A.R., China) Acridine orange (AO) was purchased from Shanghai- China Medicine Chemical Plant (A.R., China). Other reagents were at least analytical grade and were used without further purification.

RESULT

Schiff bases and their first row transition metal complexes such as Co (II), Ni (II), Cu (II), etc., were reported to exhibit fungicidal, bactericidal, antiviral and 114 antitubercular activity. In specially, Cu (II) complexes with diverse drugs have been the subject of a large number of research studies, presumably due to the biological role of Cu (II) and its synergetic activity with the drug. The antifungal and antibacterial properties of a range of Cu (II) complexes have been evaluated against several pathogenic fungi and bacteria. For many years it has been believed a trace of Cu (II) destroys the microbe, however, recent mechanisms becomes activated oxygen in the surface of metal Cu kills the microbe because Cu (II) activity is weak.

CONCLUSION

These studies pertaining to interaction of transition metal complexes with nucleic acid. These studies are relevant for the development of new reagents for biotechnology and medicine. Researchers have shown substantial interest in the rational design of novel transition metal complexes, which bind and cleave duplex DNA with high sequence and structure selectivity. Thus, our study to synthesize and characterize the above named Schiff base and its metal (II) complexes in order to investigate their magnetic, thermal and antibacterial properties for possible magnetic behaviors such as anti- and ferro-magnetisms, probable use as metal precursor in material science and broad-spectrum activities against pathogenic bacteria. Consequently, this research work is a continuation of our studies on the synthesis, characterization and bioactivities of some metal (II) complexes of various Schiff bases.

REFERENCES

- Serganov, A.; Polonskaia, A.; Phan, A.T.; Breaker, R.R.; Patel, D.J. Structural basis for gene regulation by a thiamine pyrophosphate-sensing riboswitch. *Nature* **2006**, 441, 1167–1171.
- Choi, C.J.; Kanthasamy, A.; Anantharam, V.; Kanthasamy, A.G. Interaction of metals with prion protein: possible role of divalent cations in the pathogenesis of prion diseases. *Neurotoxicology* **2006**, 27, 777–787.
- Clement, R.M.; Sturm, J.; Daune, M.P. Interaction of metallic cations with DNA VI. Specific binding of Mg^{2+} and Mn^{2+} . *Biopolymers* **1973**, 12, 405–421.
- Wang, M.; Wang, L.F.; Li, Y.Z.; Li, Q.X.; Xu, Z.D.; Qu, D.Q. Antitumour activity of transition metal complexes with the thiosemicarbazone derived from 3-acetylbulliferone. *Trans. Met. Chem.* **2001**, 26, 307–310.
- Tarasconi, P.; Capacchi, S.; Pelosi, G.; Corina, M.; Albertini, R.; Bonati, A.; Dall'Aglio, P.P.; Lunghi, P.; Pinelli, S. Synthesis, spectroscopic characterization and biological properties of new natural aldehydes thiosemicarbazones. *Bioorg. Med. Chem.* **2000**, 8, 157–162.

Study of Physico-Chemical and Bacteriological Characteristics of Ground Water Assessment

Dr. Jyoti Sharan*

ABSTRACT

In this study the Groundwater is one of the major sources of potable water. Over abstraction of this limited resource, in addition to erratic waste disposal in surface waters, enhances the contamination of groundwater. It thus becomes obligatory to identify suitable management strategies to balance development without compromising on environment or public health. Groundwater pollution will increase regional water scarcity; leading to a humanitarian crisis. The successful implementation of projects requires an intensive, daily investment in coordination between the parties. The responsibility for this coordination lies with all parties.

Keywords: Ground Water Assessment, Physico-Chemical & Bacteriological Characteristics.

INTRODUCTION

Ground water is an essential and important resource which is utilized for drinking, irrigation and industrial purposes in many parts of the world. Usually ground water is less susceptible to pollution compared to surface water. However, the past few decades ground water quality has been under threat for a number of reasons, such as extensive abstraction, increased population, changing land uses and above all, improper disposal of municipal and industrial waters. Natural facts like weathering of rocks, rock-water interactions and occurrence of ore deposits also contribute to ground water pollution. Ground water accounts for more than 80% of the urban and rural water needs in development countries like India. Due to lack of adequate facilities and piped drinking water supply systems in these countries. Ground water is directly pumped and used for all domestic needs by the majority of the population. However, the recent researches on ground water reveals that the consumption of direct ground water is no longer safe because 40% or more of the diseases are attributed to its consumption and at the same time the over exploitation of ground water in non-sustainable way is also fatal and it must be punctuated.

SAMPLE COLLECTION AND ANALYSIS

The samples were collected during winter. Water samples from bore well were collected in glass containers. Before collecting samples, water from bore well was pumped out for about 5-10 minutes or until water temperature is stabilized. Samples were collected in different containers at each point to add necessary preservatives as per standard procedure. The samples were preserved in icebox and transported to laboratory within 3 hours from the time of collection and analyses. The samples were analysed as per Standard methods for the examination of water and waste water. The results obtained were compared with the drinking water standards as specified by World Health Organisation (WHO) and Bureau of Indian Standards(BIS).

*M.Sc., Ph.D.Chemistry Raja Bazar, Patna Dist-Patna Bihar.

MICROBIOLOGICAL ANALYSES

For microbiological analyses, 100 ml water samples were collected from sixteen study sites of the river stations. The samples were subjected to serial dilution in nutrient water containing potassium dihydrogen phosphate and magnesium chloride and inoculated in multiple tubes as per the maximum probable number method. The tubes contained 10 ml of lauryl tryptose broth for the detection of total coliform and faecal coliform were incubated at $35 \pm 0.5^\circ\text{C}$ for three hour in A1 broth. For faecal coliform, the tubes were inoculated serially and were incubated for three hour at $35 \pm 0.5^\circ\text{C}$ for three hours and transferred to a water bath at $44.5 \pm 0.2^\circ\text{C}$ and incubated for an additional 21 ± 2 hour. Production of an acidic reaction or gas production in any A-1 broth culture within 24 hours or less is a positive reaction indicating the presence of faecal coliform. pH of the water ranged from 6.59 to 7.69 and TDS 174 mg/l to 1283.6mg/l. The conductivity of the samples were found between 229 $\mu\text{S}/\text{cm}$ to 2010 $\mu\text{S}/\text{cm}$. Alkalinity ranged between 140 mg/l to 572 mg/l. Chloride ranged from 2.0 mg/l to 247.9 mg/l. Total dissolved solids in samples ranged from 174 mg/l to 1284 mg/l. Total hardness of the samples have a wide range in the samples (156 mg/l to 760mg/l) Calcium 44.2 mg/l to 212.6 mg/l. Magnesium from 10.2 mg/l to 68.8 mg/l. Nitrate ranged from 0.06 mg/l to 13.71 mg/l. Sulphate from 2.27 to 78.4 mg/l. Fluoride from 0.24 to 0.76 mg/l. Total and faecal coliform ranged from 1.1 MPN/100ml to 8 MPN/100ml.

DISCUSSION

pH usually has direct effects on biotic environment. For satisfactory water disinfection and clarification at all stages the control of pH is very necessary. Effective disinfection with chlorine, the pH should preferably be less than 8. pH of all the stations in Bihar were found within the range of Indian standards (6.5-8.5). The Total dissolved solids (TDS) of five stations were higher than the standard. Craun et al. reported that increase TDS concentrations in drinking water cause of cancer, coronary heart disease, arteriosclerotic heart disease and cardiovascular disease. The concentration and relationship Alkalinity and TDS.

CONCLUSION

Preventive management is the preferred approach to drinking-water safety and should take account of the characteristics of the drinking-water supply from catchment and source to its use by consumers. As many aspects of drinking-water quality management are often outside the direct responsibility of the water supplier, it is essential that a collaborative multiagency approach be adopted to ensure that agencies with responsibility for specific areas within the water cycle are involved in the management of water quality.

REFERENCES

1. Baghvand, A., Nasrabadi, T., Nabibidhendi, G., Vosoogh, A., Karbassi, A. and Mehradadi, N., 2010. "Groundwater quality degradation of an aquifer in Iran central desert". *Desalination* 260(3), 264-275.
2. Attoui, B., Kherci, N. and Bousnoubra, H., 2012. "State of vulnerability to pollution of the big reservoirs of groundwater in the region of Annaba-Bouteldja (NE Algeria)". *Geographia Technica*. 2:1-13
3. Schijven, J.F., Hassnizadeh S.M. and Husman, A.M., 2010. "Vulnerability of unconfined aquifers to virus contamination". *Water Res.*, 44(4):1170-1181.
4. Suvarna T., Mohammad J. S. and Rushikesh S., 2012. "Spatial Distribution of Ground Water Quality In Some Selected Parts of Pune City, Maharashtra, India Using GIS". *Current World Environment*, 7(2), 281-286.
5. Shivasharanappa, Padaki S. and Mallikarjun S. H., 2011. "Assessment of ground water quality characteristics and Water Quality Index (WQI) of Bidar city and its industrial area, Karnataka State, India". *International Journal of Environmental Sciences*, 2(2), 965-976.
6. Huang, T., Pang, Z. and Edmunds, W.M., 2012. "Soil profile evolution following land-use change: Implications for groundwater quantity and quality". *Hydrol. Process* 27(8), 1238-1252.

Study of Solution of Neutral Functional Integrodifferential Equation in Banach Spaces

Dr. Niranjan Kumar Nirala*

ABSTRACT

We study the existence of mild and strong solutions for nonlinear neutral functional integrodifferential evolution equations with nonlocal conditions in Banach spaces. The results are obtained by using the fractional powers of operators and Sadovskii's fixed point theorem. Sufficient conditions for controllability of semilinear second order ordinary differential systems in Banach spaces are established using the theory of strongly continuous cosine families. The results obtained are based on the Schaefer theorem.

Keywords: Neutral function, Integrodifferential Equation & Branch Spaces.

INTRODUCTION

Neutral differential equations arise in many areas of applied mathematics and for this reason these equations have received much attention in the last few decades. The literature related to ordinary neutral functional differential equations is very extensive. The work in partial neutral functional differential equations with infinite delay was initiated by Hernandez and Henriquez. Firstorder partial neutral functional differential equations have been studied by different authors. Controllability of linear and nonlinear systems represented by ordinary differential equations in finite dimensional spaces has been extensively studied. Several authors extended the concept to infinite dimensional systems in Banach spaces with bounded operators. Chukwu and Lenhart studied controllability of nonlinear systems in abstract spaces. Naito studied controllability of semilinear systems and nonlinear Volterra integrodifferential systems. Quinn and Carmichael showed that a controllability problem in Banach spaces can be converted into a fixed-point problem for a single-valued mapping. Balachandran et al. established sufficient conditions for controllability of nonlinear integrodifferential systems in Banach spaces. In many cases it is advantageous to treat second order abstract differential equations directly rather than convert them to first order systems. For example, Fitzgibbon used the second order abstract differential equations for establishing the boundedness of solutions of an equation governing the transverse motion of an extensible beam. A useful tool for the study of abstract second order equations is the theory of strongly continuous cosine families. We will make use of some of the basic ideas from cosine family theory. A motivation for second order systems can be found. Recently, Park et al. discussed controllability of second order nonlinear systems in Banach spaces with the help of the Schauder fixed point theorem. The purpose of this paper is to study controllability of semilinear second order differential systems in Banach spaces by using the Schaefer theorem.

PRELIMINARIES

We consider the semilinear second order control system

$$X''(t) = Ax(t) + f(t, x(t), x'(t)) + Bu(t),$$

*M.Sc. Mathematics At + Post-Bhawanipur Via + P.S.-Singheshwar Dist-Madhepura Bihar.

$$t \in J = [0, T],$$

$$x(0) = x_0,$$

$$x'(0) = y_0$$

where the state $x(\cdot)$ takes values in a Banach space X , $x_0, y_0 \in X$, A is the infinitesimal generator of the strongly continuous cosine family $C(t)$ ($t \in \mathbb{R}$), of bounded linear operators in X , f is a nonlinear mapping from $J \times X \times X$ to X , B is a bounded linear operator from U to X and the control function $u(\cdot)$ is given in $L^2(J, U)$, a Banach space of admissible control functions, with U also being a Banach space.

Definition 1. A one parameter family $C(t)$ $t \in \mathbb{R}$, of bounded linear operators in the Banach space X is called a strongly continuous cosine family iff

$$(i) \quad C(s+t) + C(s-t) = 2C(s)C(t) \text{ for all } s, t \in \mathbb{R}.$$

$$(ii) \quad C(0) = I;$$

$$(iii) \quad C(t)x \text{ is continuous in } t \text{ on } \mathbb{R} \text{ for each fixed } x \in X.$$

Define the associated sine family $S(t)$, $t \in \mathbb{R}$, by

$$S(t)x = \int_0^t C(s) x ds, \quad x \in X, t \in \mathbb{R}$$

Assume the following conditions on A .

(H_1) A is the infinitesimal generator of a strongly continuous cosine family $C(t)$, $t \in \mathbb{R}$, of bounded linear operators from X into itself and the adjoint operator A^* is densely defined.

CONCLUSIONS

With this choice of A , f and B , I , is an abstract formulation of this. Furthermore, all the conditions stated in the above theorem are satisfied. Hence, system is controllable on J .

REFERENCES

1. Adimy M, Ezzinbi K. A class of linear partial neutral functional-differential equations with nondense domain. *J. Differential Equations*. 1998; 147:285–332.
2. Bahuguna D, Agarwal S. Approximations of solutions to neutral functional differential equations with nonlocal history conditions. *J Math Anal Appl*. 2006; 317:583–602.
3. Balachandran, K., Dauer, J.P. and Balasubramaniam, P., Controllability of nonlinear integrodifferential systems in Banach spaces, *J. of Optim. Theory and Appl.* 84 (1995), 83-91.
3. Bochenek, J., An abstract nonlinear second order differential equation, *A nnales Polonici Math. Lv.* 54 (1991), 155-166.
4. Chukwu, E.N. and Lenhart, S.M., Controllability questions for nonlinear systems in abstract spaces, *J. of Optim. Theory and Appl.* 68 (1991), 437-462.
5. Fitzgibbon, W.E., Global existence and boundedness of solutions to the extensible beam equation, *SIAM J. of Math. Anal.* 13 (1982), 739-745.
6. MacCamy, R.C., A model for one-dimensional nonlinear viscoelasticity, *Quart. of Appl. Math* 35 (1977), 21-33.
7. MacCamy, R.C., An integrodifferential equation with application in heat flow, *Quart. of Appl. Math* 35 (1977), 1-19.
8. Naito, K., Controllability of semilinear control systems dominated by the linear part, *SIAM J. on Contr. and Optim.* 25 (1987), 715-722.
9. Naito, K., On controllability for a nonlinear Volterra equation, *Nonl. Anal.: Theory, Methods and Appl.* 18 (1992), 99-108.

Studies on Thermodynamic Properties of Some Binary Liquid Mixtures of Some Aromatic Compounds

Dr. Rinki Kumari*

ABSTRACT

As an extension of our previous work, thermodynamic and acoustic properties of binary mixtures of benzyl alcohol with propyl amine, di-propyl amine, diiso-propyl amine and tri-propyl amine have been investigated by measuring density and speed of sound data at four temperatures ($T = 303.15, 308.15, 313.15$ and 318.15 K) and pressure ($P = 0.1$ MPa) over the entire composition range. These data have been utilized to calculate excess parameters like excess molar volume (V_m^E), excess isentropic compression (K_s^E), and excess speed of sound (u^E) for all the systems. All the excess parameters have been correlated by Redlich-Kister equation. Further, to analyse the experimental results theoretical treatment of the data has also been done by using Prigogine-Flory-Patterson (PFP) theory, intermolecular free length theory and collision frequency theory. Results were also supported by FTIR studies of equimolar binary liquid mixtures.

Keywords: Thermodynamic Properties, Binary Liquid Mixture & Aromatic Compound.

INTRODUCTION

Thermodynamic properties of binary or ternary mixtures of liquids are of key importance from theoretical and technological view point. Their immense importance lies in various industrial applications like heat transfer, fluid flow, mass transfer, equipment designing, chemical separation. Generally, the mixing of two or more compounds results in deviations from the ideal behaviour. The degree of these deviations can be studied in terms of various calculated excess thermodynamics functions. The calculated excess thermodynamic functions reflect a qualitative way to extract the information regarding molecular structure and intermolecular interactions present in different solvents and solute. The measurements of such properties of binary mixtures containing self-associated and polar compounds like benzyl alcohol and aliphatic amines exhibit remarkable deviation from ideality. The reason for significant deviations may be difference in sizes or presence of inter-molecular hydrogen bonding among the different components of binary mixture. The choice of solvents used in the present study has been done on the basis of their vast industrial applications. Benzyl alcohol is an aromatic alcohol of low toxicity, high polarity and low vapour pressure. As a solvent, it is a main component of inks, liquor, shellac, paints and epoxy resin coatings. In health care practices, benzyl alcohol also acts as bacteriostatic preservative at low concentrations used to treat intravenous medications. It shows its potential in cosmetic industry, photography as well as in food industry also. Several studies have been reported on their thermodynamic data due to its distinctive physiochemical properties. Amines (the organic derivatives of ammonia) are in abundance in nature. Amines are also released by

*M.Sc., Ph.D.Chemistry Village-Bathnaha, Post-Golma Dist-Saharsa Bihar.

certain amino acid and protein which also constitute the basis of life DNA. Primary and secondary amines are regarded as weak self-associated class of compounds possessing low dipole moment and low vapour pressure. Amines are very interesting and important industrial chemicals used as an additive in the manufacturing of petrochemicals, initiator for manufacturing of azo dyes etc. Primary, secondary and tertiary amine differs strongly by their static environment of their nucleophilic centre.

MATERIALS AND METHODS

Materials and methods The specification of chemicals used in the present study has been summarized. These liquids are dried over a molecular sieves 4 Å. The purities of the experimental liquids declared by the manufacturer were ascertained by comparing with the densities and speeds of sound with those reported in the literature and are listed. There is a good consistency in measured and literature data. The preparations of the mixtures has been without further purification of chemicals by using airtight stoppered bottles to avoid evaporation of the liquids. Apparatus and procedures Density and speed of sound of pure liquids and the binary mixtures have been measured using a calibrated single stem capillary pycnometer (capacity ≈14 ml) and an ultrasonic interferometer (Mittal Enterprises, New Delhi, Model: M-82) operating at 2 MHz respectively. During the experiment, all the measurements and temperatures were controlled by circulating the water through an ultra-thermostat JULABO F-25 (made in Germany) keeping temperature accuracy within ±0.02 K. The details of the experimental set up, calibration and measuring procedure have been described elsewhere. All the mass measurements were performed on an electronic balance (Mettler-AE 240, Switzerland) with precision up to ±0.05 mg. Freshly prepared samples have been analysed. The uncertainty in densities and speeds of sound measurements was within ±0.1 kg·m⁻³ and ±1 m·s⁻¹. For better interpretation of result the I.R. spectra of the pure components and their equimolar mixtures were also recorded by using a Fourier Transform Infrared Spectrometer based on double beam performance having a resolution of 2 cm⁻¹ provided with a sample space 150 mm². The spectrum was recorded at a temperature of 303.15 K using quartz crystal in the region 4000 cm⁻¹ to 400 cm⁻¹.

RESULT & DISCUSSION

The measured values of density (ρ) and speed of sound (u) for the binary mixtures of benzyl alcohol with propyl amine, di-propyl amine, diiso-propyl amine and tri-propyl amine at different compositions and temperatures has been tabulated and graphically represented. S1 and S2 respectively. Both density values and speed of sound values decrease with an increase of temperature and increase with increasing concentration of benzyl alcohol for all the studied systems. The measured values of densities, ρ and ultrasonic velocity, u were fitted to a polynomial expression given by equation

$$F(x) = \sum_{i=1}^k A_i X^{i-1}$$

The values of coefficients A_i and standard deviations σ for both ρ and u are summarized.

CONCLUSION

The binary mixtures containing benzyl alcohol and aliphatic amines have been studied to measure densities and speed of sound at different temperatures and compositions. This raw data of measured data on density and speed of sound has been utilized to execute excess molar volume and excess molar isentropic compression. These calculated properties have also been fitted to Redlich-Kister type polynomial equation and well demonstrated in the text. The FTIR studies have also performed to establish a liaison between the thermodynamic properties and structure elucidation. From the interpretation of excess molar volume data and excess molar isentropic compression, the

existence of specific interactions and the interactions due to formation of hydrogen bonding between the unlike molecules has been revealed. Further, theoretical studies have been done for results obtained for excess molar volume and speed of sound. Excess molar volume was correlated by applying Prigogine – Flory – Patterson theory, which unveils the suppression of P \square contribution by dominance of interaction and free volume contribution. Intermolecular free length theory and collision frequency theory were used on speed of sound results. For equimolar compositions, FTIR studies have also been performed, which confirmed the interactional forces present between the studied systems.

REFERENCES

1. F. Kermanpour, H. Jahani, H. Iloukhani, *J. Mol. Liq.* 146 (2009) 29–34.
2. H.A. Zarei, *J. Chem. Eng. Data* 51 (2006) 1597–1601.
3. B. Nair, *Int. J. Toxicol.* 20 (2001) 23–50.
4. F. Brühne, E. Wright, Benzyl Alcohol, *Ullmann's Encyclopedia of Industrial Chemistry*, 7th ed. Wiley, 2007.
5. A. Ali, A.K. Nain, D. Chand, R. Ahmad, *Phys. Chem. Liq.* 43 (2005) 205–224.
6. P.S. Nikam, S.J. Kharat, *J. Chem. Eng. Data* 48 (2003) 1291–1295.
7. D. Ambrose, N.B. Ghiassee, *J. Chem. Thermodyn.* 22 (1990) 307–311.
8. F. Comelli, S. Ottani, S., *Thermochim. Acta* 430 (2005) 123–128.
9. X. Zhao, Z.-W. Yu, R. Zhou, Y. Liu, *J. Chem. Eng. Data* 46 (2001) 1258–1260.
10. H.N. Solimo, M.N.B.G.D. Doz, *J. Chem. Eng. Data* 40 (1995) 563–566.
11. C. Castellari, *C.J. Chem, Eng. Data* 51 (2006) 599–603.
12. A. Ali, H.S. Abida, A.K. Nain, *Czech. Chem. Commun.* 67 (2002) 1125–1140.

Studies on the Effect of Air Resistance, Solar Pressure and Magnetic Force of the Earth on the Motion and Stability of two Artificial Satellites Connected By Light Flexible and Inextensible String

Dr. Sunil Kumar*

ABSTRACT

The present work deals with the study of equilibrium positions of the motion of a system of two artificial satellites connected by a light, flexible, inextensible and non-conducting cable under the influence of solar radiation pressure, earth's oblateness, shadow of the earth and air resistance. Here, we study the case of circular orbit of the centre of mass of the system. We derive differential equations of motion of the system. General solutions of the differential equations are beyond the reach. On the other hand, the general solutions do not serve our purpose. Jacobian integral of the system has also been obtained. Thereafter equilibrium positions of the motion of the system have been obtained.

Keywords: Equilibrium Positions, Two Cable Connected Satellites & Circular Orbit.

INTRODUCTION

We study the equilibrium positions of the motion of a system of two cable-connected artificial satellites under the influence of solar radiation pressure, earth's oblateness, shadow of the earth and air resistance. The influence of the above mentioned perturbations on the system has been studied singly and by a combination of any two or three of them by various workers, but never conjointly all at a time. Therefore, these could not give a real picture of motion of the system. This fact has initiated the present research work. The case of circular orbit of the centre of mass of the system is discussed. Shadow of the earth is taken to be cylindrical and the system is allowed to pass through the shadow beam. The satellites are connected by a light, flexible, inextensible and non-conducting cable. The satellites are taken as material particles. Since masses of the satellites are small and distances between the satellites and other celestial bodies are very large, the gravitational forces of attraction between the satellites and other celestial bodies including the sun have been neglected. The present work is an attempt towards the generalization of work done by Beletsky and Novikova and Beletsky and Novoorebelskii. They studied the motion of a system of two satellites connected by a light, flexible and inextensible string in the central gravitational field of force relative to its centre of mass. This study assumed that the two satellites are moving in the plane of the centre of mass. Das et al. studied the effect of magnetic force on the motion of a system of two cable-connected satellites in orbit. Kumar and Bhattacharya studied the stability of equilibrium positions of two cable-connected satellites under the influence of solar radiation pressure, earth's oblateness and earth's magnetic field. Kumar et al. obtained the equations of

*M.Sc., Ph.D. Mathematics Maharshi Mehi Nagar, Ward No.-05, P.S+Dist-Madhepura Bihar -852113.

motion of a system of two cable-connected artificial satellites under the influence of solar radiation pressure, earth's oblateness and shadow of the earth. Singh and Demin and Singh investigated the problem in two and three dimensional cases.

EQUATIONS OF MOTION AND JACOBIAN INTEGRAL OF THE SYSTEM

We write the equations of motion of one of the satellites when the centre of mass moves along Keplerian elliptical orbit in Nechvile's co-ordinate system as Prasad and Kumar

$$X'' - 2Y' - 3Xp = \lambda aX - g(B_1/m_1 - B_2/m_2).$$

$$\cos \epsilon \cos(v-a) + 12\mu K^2/R^5. pX - fpp'$$

And

$$Y'' + 2X' = \lambda aY + g(B_1/m_1 - B_2/m_2).$$

$$\cos \epsilon \cos(v-a) - 3\mu K^2/R^5. pY - fp2$$

m_1 and m_2 are masses of the two satellites. B_1 and B_2 are the absolute values of the forces due to the direct solar pressure on m_1 and m_2 respectively and are small. p is the focal parameter. m is the product of mass of the earth and gravitational constant. l is undermined Lagrange's multiplier. R_e is equatorial radius of the earth. g_e is the force of gravity. W is angular velocity of the earth's rotation. a_R is the earth's oblateness. e is eccentricity of the orbit of the centre of mass. v is the true anomaly of the centre of mass of the system. ϵ is inclination of the oscillatory plane of the masses m_1 and m_2 with the orbital plane of the centre of mass of the system. a is the inclination of the ray. γ is a shadow function which depends on the illumination of the system of satellites by the sun rays. If γ is equal to zero, then the system is affected by the shadow of the earth. If γ is equal to one, then the system is not within the said shadow. R is the first order time derivative of R . R is the modulus of position vector of the centre of mass of the system. c_1 and c_2 are the Ballistic coefficients. ρ_a is the average density of the atmosphere. Prime denotes differentiation with respect to v . If motion of one of the satellites m_1 be determined with the help of equations, motion of the other satellite of mass m_2 can be determined by Prasad and Kumar.

RESULT

We have obtained a set of equations for motion of the system in the rotating frame of reference. It is assumed that the system is moving with the effective constraint and the connecting cable of the two satellites always remains tight. The equilibrium positions of motion of the system are given by the constant values of the co-ordinates in the rotating frame of reference. Let us take. Actually it is very difficult to obtain the solution. Hence, we are compelled to make our approaches with certain limitations. In addition to this, we are interested only in the case of the maximum effect of the earth's shadow on motion of the system.

CONCLUSION

The equilibrium position has wide applications in solving problems of stability of a cable-connected satellites system in orbit. It will also state whether the motion of the system is continuous or not. We also write Jacobian integral of motion of the system. The work may be further modified, if wobbling and nutation of the orbit of the system are taken into account.

REFERENCES

1. Beletsky, V.V. and Novikova, E.T. (1969) About the Relative Motion of Two Connected Bodies in Orbit. Kosmicheskie Issledovania, 7, 377-384.

2. Beletsky, V.V. and Novoorebelskii, A.B. (1969) Existence of Stable Relative Equilibria for an Artificial Satellite in a Model Magnetic Field. Institute of Applied Mathematics, Academy of Sciences of the U. S. S. R., Soviet Astronomy, Vol. 17, 213-220.
3. Das, S.K., Bhattacharya, P.K. and Singh, R.B. (1976) Effect of Magnetic Force on the Motion of a System of Two Cable-Connected Satellites in Orbit. Proceedings National Academy of Science, India, 46, 287-299.
4. Kumar, S. and Bhattacharya, P.K. (1995) Stability of Equilibrium Position of Two Cable-Connected Satellites. In: Bhatnagar, K.B. and Ishwar, B., Eds., Proceedings Workshop on Space Dynamics and Celestial Mechanics, Muzaffarpur, India, 71-74.
5. Kumar, S., Srivastava, U.K. and Bhattacharya, P.K. (2005) Equations of Motion of a System of Two Cable-Connected Artificial Satellites under the Influence of Solar Radiation Pressure, Earth's Oblateness and Shadow of the Earth. Proceedings Mathematical Society, Banaras Hindu University, Varanasi, 21, 51-61.
6. Singh, R.B. and Demin, V.G. (1972) About the Motion of a Heavy Flexible String Attached to the Satellites in the Central Field of Attraction. Celestial Mechanics, 6, 268-277.
7. Singh, R.B. (1973) Three Dimensional Motion of a System of Two Cable-Connected Satellites in Orbit. Astronautica Acta, 18, 301-308.
8. Nechvile, V. (1926) Sur une Nouvelle Forme Des Equations Differentielles Du Problem Restriint Elliptique. Academy Paris Compte Rendus, 182, 310-322.
9. Prasad, J.D. and Kumar, S. (2011) Equations of Motion of a System of Two Cable-Connected Artificial Satellites Under the Influence of Earth's Magnetic Field, Earth's Shadow, Solar Radiation Pressure and Earth's Oblateness. Journal Purvanchal Academy of Sciences, Jaunpur, India, 17 (Physical Science), 27-34.

Study of Antimicrobial Activity and Characterization of Some Schiff Base Metal Chelates

Dr. Sumant Kumar*

ABSTRACT

In this study the antifungal activity of the test compounds were evaluated against *A. niger* and *A. flavus* by the cup plate method cultured on seberose dextrose agar (SDA) medium adapting the procedures as described above. The plates were incubated at 37°C for 48 h. The diameter of the zone of inhibition for all the test compounds were compared with standard drug Fluconazole of the same concentration as that of the test compounds under identical conditions. Since all the test compounds and standard drugs were prepared in freshly distilled DMF, its zone of inhibition was found to be negligible and taken as 0 mm. A new ligand 5-chloro-3-phenyl-*N*1-((2-thioxo-1,2-dihydroquinoline-3-yl) methylene)-1*H*indole- 2-carbohydrazide and its complexes have been synthesized and characterized by IR, ¹HNMR, mass, TGA, ESR and Powder-XRD data which concludes that all the complexes are of the type ML₂ stoichiometry and these complexes exhibited octahedral geometry. Some of these complexes have exhibited good antimicrobial, antioxidant and DNA cleavage activities.

Keywords: Antimicrobial, Metal Chelates & Schiff Base Complex.

INTRODUCTION

The chemistry of coordination compounds with heterocyclic ligands containing oxygen and nitrogen as donor atoms has attracted the attention of chemists in recent years. It is well known that such ligands coordinate to metal atom in different ways in different media. Transition metal ions are essential in many biological systems in nature. These metal complexes with bidentate and tetra dentate ligands containing both hard and soft donor groups have been used extensively in coordination and organometallic chemistry. The chelating properties of Schiff base display manifold applications in medicine, industry and agriculture. The indole moiety represents an important structural component associated with a variety of alkaloids and molecules having wide ranging biological activities, such as antiviral, antitumor, antimicrobial activities, antituberculosis and antifungal activities. Many quinoline derivatives have been reported to possess antimicrobial¹ and anti-inflammatory activities.

MATERIALS AND METHODS

IR, 1H NMR and mass spectra of ligand HL: The IR spectrum of ligand showed peaks at 1655 cm⁻¹ due to carbonyl group and the three absorption band at 3288, 3129 and 3088 cm⁻¹ due to indole NH, amide NH and NH of quinolone moiety respectively. The bands observed at 1579 and 1181 cm⁻¹ are due to azomethine C=N group and C=S function at 2-position of quinoline moiety respectively.

*M.Sc., Ph.D. Chemistry Ward No.-03, Madhepura Dist-Madhepura Bihar -852113

The ^1H NMR spectra of the Schiff base HL in d_6 -DMSO at room temperature, showed signal at δ 13.9 (s, 1H, quinoline NH), δ 12.1 (s, 1H, CONH), δ 11.8 (s, 1H, indole NH), δ 8.94 (s, 1H, N=CH) and δ 7.30-8.47 (m, 13H, ArH) due to protons of quinolone NH, amide NH, azomethine NH and aromatic protons respectively.

The mass spectrum of ligand HL showed the molecular ion peak at $M+1=457, 459$ (12%, 3%). This on loss of hydrogen radical gave a fragment ion recorded at m/z 456, 458 (12%, 4%). This on loss of $\text{C}_9\text{H}_5\text{NS}$ species gave a fragment ion recorded at m/z 297, 299 (5%, 2%) which on simultaneous expulsion of methyl, chloride, hydrogen, hydrogen and hydrogen radicals gave a fragment ion recorded at m/z 244 (100%) which is also a base peak. This on simultaneous loss of nitrogen and carbon monoxide molecules gave another fragment ion record at m/z 188 (30%). The molecular ion in another route has also lost $\text{C}_{10}\text{H}_8\text{N}_2\text{S}$ species and gave a fragment ion recorded at m/z 268, 270 (33%, 12%) The fragmentation pattern is depicted in Scheme 3. The above fragmentation pattern is in consistency with its structure. The IR, ^1H NMR and mass spectral data of ligand HL confirms its formation by the reaction between 5-substituted-3-phenyl-1*H*-indole-2-carboxyhydrazide and 2-thioxo-1,2-dihydroquinoline-3-carbaldehyde.

RESULT

In view of these findings, we have synthesized some metal complexes with a new Schiff base 5-chloro-3-phenyl-*N*1-((2-thioxo-1,2-dihydroquinoline-3-yl)methylene)-1*H*-indole-2-carbohydrazide which was prepared by the reaction between 5-chloro-3-phenyl-1*H*-indole-2-carboxyhydrazide and 2-thioxo-1,2-dihydroquinoline-3-carbaldehyde.

All solvents and reagents were used as obtained from commercial sources with further purification according to standard procedures. Melting points were determined in open glass capillary tubes. Purity of the compounds was checked on TLC. The IR spectra of compounds were recorded on Perkin-Elmer spectrum one spectrophotometer using KBr disc technique. ^1H NMR spectra were recorded on Bruker Avance 400 MHz instrument in d_6 -DMSO using TMS as an internal standard and mass spectra on a JEOL GC mate and Agilent 6330 ion trap mass spectrophotometer. Satisfactory C, H, N analysis was recorded for all the compounds. Compounds 2-chloro-3-formylquinolines, 2-thioxo-1, 2-dihydroquinoline-3-carbaldehyde and 5-chloro-3-phenyl-1*H*-indole-2-carboxyhydrazides were prepared according to reported methods..

CONCLUSION

The antifungal activity of the test compounds were evaluated against *A. niger* and *A. flavus* by the cup plate method cultured on seberose dextrose agar (SDA) medium adapting the procedures as described above. The plates were incubated at 37°C for 48 h. The diameter of the zone of inhibition for all the test compounds were compared with standard drug Fluconazole of the same concentration as that of the test compounds under identical conditions. Since all the test compounds and standard drugs were prepared in freshly distilled DMF, its zone of inhibition was found to be negligible and taken as 0 mm.

REFERENCES

1. S. N. Pandeya, P. Yogecewari, D. Sriram, et al., Chemotherapy, **1999**, 45, 192.
2. S. K. Sridhar, S. N. Pandeya, J. P. Stables, A. Ramesh, Eur. J. Pharm. Sci., **2002**, 16, 129.
3. N. Sari, P. Gürkan, Trans. Met. Chem., **2003**, 28, 687.
4. E. Sezer, B. Ustamehmetoğlu and A.S. Saraç, Int. J. Polym. Anal. Charact, **1999**, 1-13.
5. Dhar D N & Taploo C. L, Shiff bases and their application, J. Science.Ind (Res) 41 **1982**, 501-506.
6. P. Souza, J.A. Garcia-Vazquez and J. R. Masaguer, Transition Met. Chem. 10 **1985**, 410.
7. H. Naeimi, J. Safari and A. Heidarneshad, Dyes Pigments 73 **2007**, 251.

Impact of Photodissociation and Geminate Mechanism of I₂ in Solution

Alok*

ABSTRACT

In this study we present the calculation of all polyatomic electronic states participating in the dynamics of relaxation and the couplings among the different surfaces that determine the rate of nonradiative electronic transitions. We implement the DIIS method where the polyatomic Hamiltonian is written as a sum of a DIM Hamiltonian and a perturbation term that introduces the induction energy which accounts for the self-consistent many-body nature of the electric field responsible for polarization. This method has been successfully investigated in studies of halogen atoms embedded in rare gas clusters and in our recent calculations of ion-pair states of I₂ in rare gas matrices. The ability of nonadiabatic MD methods coupled with semiempirical excited state electronic structure techniques to semiquantatively reproduce experimental trends in ultrafast photoexcited dynamics as demonstrated in this paper indicates the enormous potential of this computational methodology for exploring excited state chemistry in solution.

Keywords: Photodissociation, Geminate Mechanism and I₂

INTRODUCTION

In recent years, several groups have applied ultrafast spectroscopic techniques to investigate cluster fragmentation, the competition between fragmentation and ionization, and photoinitiated chemical reactions in clusters. The more recent experiments involve the use of both photofragmentation and ultrafast pump-probe techniques and have been applied to investigate the X₂⁻ (X=I,Br) photodissociation and cage recombination dynamics in size selected X₂⁻ S_n (S=Ar,CO₂) ionic molecular clusters. I₂⁻ exhibits a strong absorption spectrum corresponding to an electronic excitation from the bound X, ²Σ_u⁺_{1/2} ground state to the repulsive A', 2P_g, 1/2 excited state (see Fig. 3). In the gas phase, photoexcitation of this transition at 720–790 nm produces recoiling I and I₂ photofragments with a kinetic energy release of ~0.5 eV. Due to this large amount of excess energy and the repulsive nature of the excited state potential one might think that a single, partially complete solvation shell expected with small molecular clusters of 10–20 atoms would be ineffective at caging the photofragments and inducing recombination. However, photoexcitation experiments on I₂⁻ in clusters of even fairly weakly interacting CO₂ molecules have detected coherent relaxation of I₂⁻ to the ground electronic state within a few picoseconds. This relaxation time scale is strongly cluster size dependent and quite different from the vibrational relaxation timescales of the corresponding neutral species in liquids that are usually about two orders of magnitude longer. we focus on the first two picoseconds of dynamics after photoexcitation. Thus, we explore the earliest time processes involved in the interconversion from bound excited state motion over the B state onto some dissociative surface leading to the separation of atomic fragments. Within 2 ps in a dense liquid environment, these hot atoms can collide with neighboring solvent molecules, give up some of their energy and perhaps reform an excited iodine molecule in some bound state.

*M.Sc. Chemistry At- Murlı, Post-Rasalpur Dist-Saharsa Bihar.

MATERIALS AND METHODS

The diatomics-in-molecules method (DIM) is a semiempirical approach developed by Ellison for computing potential energy surfaces (PES) of the ground and excited states of polyatomic systems from diatomic potentials. It is closely related to the semiempirical extended valence bond (EVB) methods and is ideally suitable for studies of the dynamics of a variety of chemical reactions. In our implementation of the method, the Schrödinger equation is formulated in terms of potentials of the constituent atomic and diatomic fragments for the system of an iodine molecule embedded in liquid xenon, which is represented here as $\text{Xe}^{(1)}\text{Xe}^{(n)}\dots\text{X}^{(1)}\text{I}^{(1)}\text{I}^{(2)}$. Spin-orbit coupling, electron correlation and hyperfine interactions in the iodine molecule are incorporated by using proper potentials for the corresponding electronic states of the molecule. This method neglects three and four center terms in the Hamiltonian matrix as well as the nonorthogonality of the basis set and the overlap between atomic orbitals belonging to different rare gas atoms or solvent-iodine molecule overlap. These approximations are very common in semiempirical methods, in particular in the DIM method.

RESULT AND DISCUSSION

We present our results survey the early time dynamics during which the I_2 bond extends on the excited B state surface and the thermal ensemble passes through various regions of interaction with other states. Our ensemble members sample a variety of different environments in which the electronic states are affected in different ways. Thus, the velocities with which different ensemble members encounter the various interaction regions, and the strengths of the couplings between the states for the ensemble members will all be different due to the effects of the unique solvation environment sampled by each ensemble member. Thus some trajectories may leave the initially prepared excited state very rapidly by coupling to other states, while other trajectories may remain in the B state for some time.

CONCLUSION

The work to provide a survey of the different types of early time nonadiabatic relaxation dynamics that are available in solution after Frank–Condon photoexcitation of I_2 to its B state. Our aim at this point is not to reproduce the results of specific experiments but rather to provide a general overview of the effects of solvent on the nonadiabatic couplings between electronic states and to find out what types of relaxation pathways the calculations described here predict will be important in solution. The more ambitious task of computing specific experimental spectra will be the subject of a future publication.

REFERENCES

1. J. C. Tully, *J. Chem. Phys.* **93**, 1061 (1990).
2. S. Hammes-Schiffer and J. C. Tully, *J. Chem. Phys.* **101**, 4657 (1994).
3. D. F. Coker, in *Computer Simulation in Chemical Physics*, edited by M. P. Allen and D. J. Tildesley (Kluwer, Dordrecht, 1993), pp. 315–377.
4. H. S. Mei and D. F. Coker, *J. Chem. Phys.* **104**, 4755 (1996).
5. D. F. Coker and L. Xiao, *J. Chem. Phys.* **102**, 496 (1995).
6. V. S. Batista and D. F. Coker, *J. Chem. Phys.* **105**, 4033 (1996).
7. Kunz, H.; McCaffrey, J. G.; Schrieffer, R.; Schwentner, N. *J. Chem. Phys.* **1991**, *94*, 1039.
8. Xu, J.; Schwentner, N.; Chergui, M. *J. Chem. Phys.* **1994**, *101*, 7381.
9. Godderz, K. H.; Schwentner, N.; Chergui, M. *J. Chem. Phys.* **1996**, *105*, 451.
10. Dardi, P. S.; Dahler, J. S. *J. Chem. Phys.* **1990**, *93*, 242.

विद्यालय जाने वाले बच्चों के शारीरिक एवं मानसिक विकास में पोषण की भूमिका : एक अध्ययन

डॉ. रैना कुमारी*

पोषण का अर्थ है ऐसा आहार जिसे शरीर की भोजन संबंधी आवश्यकताओं के संदर्भ में उपयुक्त समझा जाता है। बेहतर पोषण तथा सन्तुलित आहार तथा साथ ही नियमित शारीरिक क्रियाकलाप बच्चे के स्वास्थ्य में विकास के प्रति योगदान करते हैं। खराब पोषण बच्चों में बीमारियों और उनकी मृत्यु होने की बढ़ती घटनाओं का एक प्रमुख कारण है। बच्चों की पोषण संबंधी आवश्यकताओं को पूरा करने के लिए पर्याप्त मात्रा में प्रोटीन और कैलोरी आवश्यक है। प्रोटीन भोजन में विद्यमान और शरीर निर्माण के अवयव हैं। जो विभिन्न अहारों में पाये जाते हैं, जैसे दालें, दूध अंडा, मछली और मांस। हमारे शरीर की मांस पेशियाँ और अंग तथा हमारी प्रतिरक्षण प्रणाली अधिकांशतः प्रोटीन के द्वारा ही बनती है। कैलोरी हमारे शरीर को ऊर्जा प्रदान करती है तथा यह अनाज, चीनी, वसा और तैलीय आहारों में उपलब्ध होती है। एक 18 किलोग्राम भार वाले 4 से 6 वर्ष के बच्चे को प्रतिदिन अपने भोजन में 1350 ग्राम कैलोरी, 20 ग्राम प्रोटीन और 25 ग्राम वसा की आवश्यकता होती है। बढ़ती उम्र के साथ बच्चों के पोषण की आवश्यकताएं भी बढ़ती हैं। प्रत्येक बच्चे के पास उत्प्रेरणा, शिक्षा, खेल कूद मनोरंजन और संस्कृतिक क्रियाकलापों के माध्यम से शारीरिक, मानसिक और संवेदनात्मक विकास का अधिकार है ताकि वह अपने व्यक्तित्व का विकास अपनी सर्वोत्तम क्षमता के अनुरूप कर सके। जैसे-जैसे बच्चों की आयु महीनों और वर्षों में बढ़ती जाती है, उनका विकास शारीरिक, मानसिक, सामाजिक और भावनात्मक रूप से होता है, उनमें समझने और सीखने की क्षमता (संज्ञात्मक कौशल) का विकास होने लगता है। हमारे बच्चों के विकास और उनकी संवृद्धि में विशेष रूप से विद्यालय पूरे की आयु से उपलब्ध कराए गए संपोषणीय परिवेश, बेहतर पोषण और उनके ज्ञान की पर्याप्त उत्प्रेरणा के माध्यम से और भी सुधारा किया जा सकता है। इस बात के वैज्ञानिक प्रमाण विद्यमान हैं कि विद्यालय में प्राप्त की गई अधिकांश प्रगति तीन वर्ष की आयु तक के बच्चों के संज्ञानात्मक और सामाजिक-भावनात्मक विकास पर निर्भर करती है। हम बच्चों के पोषण स्वास्थ्य और शिक्षा पर जितना अधिक ध्यान देंगे उनका उतना ही अच्छा शारीरिक और मानसिक विकास होगा। आइए, बच्चों के विकास के प्रमुख पहलुओं और उनमें ग्राम पंचायत की भूमिका के बारे में जानें। बाल्यावस्था के प्रारंभिक वर्षों में अल्प पोषण के फलस्वरूप बच्चों के विकास में गंभीर बाधाएँ आती हैं तथा यह प्रक्रिया जीवन की आगामी अवस्था में भी जारी रहती है। उदहारण के लिए समय से पूरे जन्मी और जन्म के समय कम वजन की बालिका का विकास निरंतर धीमी गति से होता है तथा वह एक कुपोषित बालिका हो जाती है, जिसका किशोरावस्था में वजन अत्यंत कम होता है। फिर 18 वर्ष से पूर्व की आयु में उसका विवाह होने पर वह कम आयु की कमजोर कद-काठी वाली गर्भवती स्त्री बन जाती है।

*ग्राम पोस्ट-नवटोलिया जिला-मधेपुरा (बिहार)-852113।

इसके उपरांत, कुपोषण और खराब शारीरिक विकास का एक अगला चक्र उसके द्वारा जन्म दिए जाने वाले बच्चे, चाहे वह लड़का हो या लड़की के साथ पुनः आरंभ हो जाता है। निर्धनता, निम्न आयु बाद और अकाल, नवजात शिशुओं तथा छोटे बच्चों को माता द्वारा अपना दूध न पिलाना अथवा कम दूध पिलाना और कभी-कभी संस्कृतिक प्रथाएँ जैसे कुछ अवसरों पर शिशुओं को आहार न देना, उन्हें केवल सीमित आहार ही देना, आदि।

अल्प पोषण का निवारण करने के लिए प्रमुख योजनाएँ : इसके लिए कुछ मुख्य कार्यक्रम हैं—समेकित बाल विकास कार्यक्रम, सर्व शिक्षा अभियान के तहत मध्याह्न भोजन कार्यक्रम और राष्ट्रीय ग्रामीण स्वास्थ्य कार्यक्रम के तहत विभिन्न योजनाएँ। कुछ मुख्य कार्यक्रमों और योजनाओं से उपलब्ध करवाए जाने वाले लाभ नीची तालिका में दिए गए हैं ताकि बच्चों में पोषण को बेहतर बनाया जा सके। बच्चे के विद्यालय जाने से पूर्व ही उनकी शिक्षा आरंभ हो जाती है। व्यापक प्रारंभिक बाल्यावस्था देखभाल और शिक्षा का उद्देश्य जन्म से छह वर्ष की आयु तक के बच्चों की समग्र रूप से वृद्धि, विकास और उनके शिक्षण को प्रोत्साहित करना है। "देखभाल" का अर्थ है बच्चों के लिए एक देखरेख पूर्ण और सुरक्षित परिवेश उपलब्ध कराते हुए उसके स्वास्थ्य, साफ-सफाई और पोषण पर ध्यान देना। प्रारंभिक बाल्यावस्था के वर्षों में 'शिक्षा' के अर्थ ने केवल विद्यालय-पूर्व शिक्षा है बल्कि इसमें नाटक, कथा कहानियों और संगीत आदि के माध्यम से बच्चों को सिखाना भी शामिल हैं। 3-6 वर्ष की आयु में बच्चे सबसे अच्छी तरह से खिलौनों, कहानियों, गीतों, नृत्यों आदि से ही सीखते हैं। अच्छी प्रारंभिक बाल्यावस्था देखभाल और शिक्षा बच्चों को विद्यालय के परिवेश में स्वयं को ढालने में सहायता करती हैं व उनके द्वारा विद्यालय में बेहतर शिक्षा अर्जित करना सुनिश्चित करती हैं।

भारत सरकार की प्रारंभिक बाल्यावस्था देखभाल और शिक्षा नीति के अनुसार आंगनबाड़ी को एक 'सक्रिय बाल-हितैषी प्रारंभिक बाल्यावस्था विकास केंद्र' की भूमिका निभानी चाहिए। अध्याय 3 में हमने आंगनबाड़ी की इस भूमिका के बारे में जाना है। इसे विशेष रूप से गरीब व साधनहीन परिवारों के बच्चों और लड़कियों के नामांकन पर बल देना चाहिए। साथ ही सुनिश्चित करना चाहिए कि वे अपनी शिक्षा पूरी करें। आंगनबाड़ी को प्रत्येक माह एक नियत दिन पर प्रारंभिक बाल्यावस्था और देखभाल दिवस मनाना चाहिए जिसमें समुदाय के सदस्यों और अभिभावकों को भी शामिल किया जाना चाहिए। प्रारंभिक बाल्यावस्था देखभाल और शिक्षा उपलब्ध करवाने वाले कुछ अन्य कार्यक्रम हैं - प्रारंभिक बाल्यावस्था देखभाल और शिक्षा उपलब्ध करवाने वाली स्वयंसेवी संस्थाओं को सहायता, सरकारी अनुदान से स्वयंसेवी संस्थाओं द्वारा चलाए जा रहे बालवाड़ी, डे-केयर सेंटर, सरकारी व गैर सरकारी संस्थाओं द्वारा चलाए जा रहे प्राथमिक विद्यालय। बच्चों को फुलवारियों में देखभाल और बाल्यावस्था देख - रेख प्राप्त होती हैं। निर्धन परिवारों की माताएं अपने परिवार की अल्प आयु में योगदान देने में समर्थ नहीं हो पाती क्योंकि उनमें से उनके को अपने छोटे बच्चों की घर पर रहकर देखभाल करनी होती है। यदि माता काम पर चली जाती है, तो छोटे बच्चों को संभालने की जिम्मेदारी उनके बड़े भाई-बहनों पर आ जाती है जिसके कारण वे विद्यालय को छोड़ने पर विवश हो जाते हैं। इस मुद्दे का समाधान करने की लिए जन स्वास्थ्य सहयोग नामक गैर - सरकारी संस्था ने छत्तीसगढ़ और झारखण्ड राज्यों में शिशु सदन (फुलवारी) की सुविधाएँ आरंभ की। इन शिशु सदनों में, 6 माह से लेकर 3 वर्ष तक की आयु वाले शिशुओं और बच्चों के लिए सुरक्षित परिवेश उपलब्ध कराया गया है। ये बच्चों को पोषणयुक्त खाद्य-पदार्थ उपलब्ध कराने के माध्यम से उन्हें स्वस्थ और चुस्त-दुरुस्त बने रहने में मदद करते हैं। ये शिशु सदन एक दिन में

6-8 घंटे तक चलते हैं जिससे बच्चों की माताएं काम पर तथा उनके बड़े भाई-बहन विद्यालय जा पाते हैं। इन सभी शिशु सदनों का संचालन स्थानीय समुदाय की महिला कार्यकर्ताओं द्वारा किया जाता है। बच्चों को प्रतिदिन नाश्ता और दो बार पोषक भोजन कराया जाता है। शिशु सदन में बच्चों को खिलौने भी दिए जाते हैं तथा बच्चों के लिए शिक्षा के क्रियाकलाप संचालित करने के लिए कार्यकर्ताओं को प्रशिक्षण प्रदान किया जाता है। इससे बच्चे प्रसन्नचित रहते हैं तथा फूलवारी जाने वाले बच्चों में बीमारियाँ भी कम हुई हैं। प्रारंभिक शिक्षा का अर्थ है विद्यालय में कक्षा 1 से 8 तक दी जाने वाली शिक्षा। किसी भी बच्चे का विकास उसके द्वारा प्राप्त की गई प्रारंभिक शिक्षा से काफी हद तक जुड़ा रहता है। शिक्षा का अधिकार अधिनियम 6-14 वर्ष के सभी बच्चों के लिए निःशुल्क और अनिवार्य शिक्षा का प्रावधान करता है अर्थात् समस्त बालक और बालिकाओं का नामांकन विद्यालय में किया जाना चाहिए तथा उन्हें नियमित रूप से विद्यालय जाना चाहिए। विद्यालय को यह सुनिश्चित करना चाहिए कि शिक्षा पाने योग्य सभी बच्चे उनकी आयु के अनुरूप कक्षा में बिठाना चाहिए और अध्यापकों यह ध्यान देना चाहिए कि बच्चे को इससे पहले की शिक्षा भी दी जाए। प्रायः लड़कियाँ अथवा निर्धन और पिछड़े परिवारों के बच्चे या तो विद्यालय में भर्ती ही नहीं कराए जाते हैं अथवा वे शिक्षा बीच में ही छोड़ देते हैं। बालिकाओं को विद्यालय भेजने के लिए उनके अभिभावकों को प्रोत्साहित किए जाने तथा साथ ही उन्हें आवश्यक सहायता भी प्रदान किए जाने की आवश्यकता है, ताकि वे विद्यालय कि शिक्षा पूरी कर लें। कुछ शारीरिक अथवा मानसिक असामान्यता रखने वाले अथवा शिक्षण संबंधी असमर्थता वाले बच्चों की अपने विकास के लिए विशेष आवश्यकताएँ होती हैं। ऐसे बच्चों में वे आते हैं जो दृष्टिहीन हैं, बाधिर हैं, शारीरिक रूप से, मानसिक रूप से विकलांग हैं अथवा जिनकी शिक्षा संबंधी असमर्थतायें हैं। प्रायः ऐसे बच्चों को परिवार द्वारा छोड़ दिया जाता है। प्रायः विशेष आवश्यकताओं वाले बच्चों को परिवार और समाज के उपयोगी या मूल्यवान सदस्य नहीं माना जाता। अन्य बच्चे उनके साथ खेलना पसंद नहीं करते। यहाँ तक कि वे इन बच्चों का मजाक उड़ाते हैं और प्रायः विशेष आवश्यकता वाले बच्चों को उनके परिवारों द्वारा परित्यक्त किए जाते हैं। विशेष आवश्यकता वाले बच्चों के प्रति संवेदनशीलता रखने तथा एक बेहतर जीवन जीने में उनकी सहायता करने की आवश्यकता है।

यह अति महत्वपूर्ण है विशेष आवश्यकता वाले बच्चों को उनकी शिक्षा संबंधी आवश्यकताओं वाले बच्चों को उनकी शिक्षा संबंधी आवश्यकताओं और उनकी स्थिति के अनुरूप शिक्षा मिले। यह शिक्षा उन्हें नियमित या विशेष विद्यालयों में, या फिर घर पर भी दी जा सकती है। किशोरावस्था बाल्यावस्था के बाद तथा वयस्कता से पहले की अवधि है तथा सामान्यतः यह 10 से 18-19 वर्ष तक आयु की होती है। किशोरावस्था के दौरान, शरीर का तेजी से विकास होता है तथा बच्चों में अनेक समाजिक और मनोवैज्ञानिक परिवर्तन आते हैं जिनमें यौन परिपक्वता और चिंतन योग्यता भी शामिल होती है। किशोर को न तो बच्चा समझा जाता है और न ही वयस्क। प्रायः उनमें अपने शारीरिक विकास तथा आयु से जुड़ी आवश्यकताओं से संबंधित महत्वपूर्ण पहलुओं, विशेष रूप से यौन और प्रजनन संबंधी पहलुओं के बारे में जानकारी नहीं मिल पाती। किशोरों के सामने पेश आने जाने वाले चुनौतियों में शामिल हैं—विद्यालय छोड़ देना, बाल विवाह, आवंछित गर्भधारण, कुपोषण, निधनता, परिवार का दबाव, नशे की लत, किशोरों के प्रति अपराध जैसे उनका अवैध व्यापार, नशीले पदार्थों की लत, असुरक्षित यौन-संबंध आदि। भारत में लड़कों की तुलना में लड़कियों की शिक्षा पर कम ध्यान दिया

जाता है। शीघ्र विवाह तथा बच्चे हो जाने से उनकी भूमिकाओं में परिवर्तन आ जाता है तथा उनके घरेलू हिंसा का शिकार बनने की संभावनाएँ अधिक होती हैं। किशोरियों की महत्वपूर्ण आवश्यकताओं के बारे में चर्चा न करने संबंधी सामाजिक कुरीतियाँ उन्हें सही जानकारी और उचित मार्गदर्शन प्राप्त करने से वंचित करती हैं। उदहारण के लिए, मासिक-धर्म संबंधी साफ – सफाई की जानकारी के अभाव में किशोर युवतियों के लिए अनेक स्वास्थ्य संबंधी परेशानियाँ उत्पन्न हो जाती हैं।

संदर्भ ग्रन्थ सूची

1. आशारानी व्होरा, लडी हेल्थ गाईड, प्रकाशन विभाग, भारत सरकार, सूचना प्रसारण मंत्रालय, नई दिल्ली।
2. विश्व स्वास्थ्य संगठन का प्रतिवेदन।
3. डा0 ग्रांटली डिकरेट, भयमुक्त प्रसव।
4. सुभाष शर्मा—भारतीय महिलाएं : दशा और दिशा
5. सुशील अग्रवाल – स्टेटस ऑफ वूमैन
6. भारत—2011—सूचना और प्रसारण मंत्रालय, भारत सरकार।
7. आर्थिक सर्वेक्षण—बिहार सरकार वित्त विभाग, पटना।

मिथिला मैदान के कृषि विकास की समस्याएँ एवं संभावनाएँ

डॉ. राकेश कुमार*

सम्पूर्ण देश के भौतिक सांस्कृतिक तत्वों की क्षेत्रीय समानताओं और विषमताओं को आधार मानकर—वृहद् क्षेत्र, उप-क्षेत्र और लघु क्षेत्र में विभक्त किया है। बहुत से आधारी तत्व समान्यीकरण पर आधारित होने के कारण क्षेत्रीय विशिष्टताओं—भौतिक, सांस्कृतिक, ऐतिहासिक को उभारने के साथ उन परिस्थितियों को भी दर्शाते हैं, जिनके कारण क्षेत्रीय असंतुलन समस्याजन्य हो गया है। ऐसे क्षेत्र नियोजित विकास में मदद करते हैं क्योंकि पिछड़े और साधनहीन क्षेत्र पिछड़ते चले जाते हैं। फलतः ऐसे क्षेत्रों के लिए विशेष ध्यान देने की आवश्यकता होती है। इन्हीं तथ्यों के आलोक में उत्तरी गंगा मैदान के एक ऐसे भौगोलिक क्षेत्र मिथिला मैदान प्रदेश का अध्ययन हेतु चयन किया गया है जो संसाधन सम्पन्न होते हुए भी समस्याग्रस्त है। खासकर बिहार के विभाजन के पश्चात् मिथिला क्षेत्र के विकास के लिए कृषि को विकसित किया जाना आवश्यक माना जाता है।

इस हेतु मिथिला मैदान की संरचना और कृषि विकास की समस्याओं और संभावनाओं का विश्लेषण किया गया है तथा उनके प्रबंधन की नवीन तकनीकों का सुझाव उपस्थापित किया गया है। पश्चिम में गंडक नदी से लेकर पूरब में कोशी नदी तक और उत्तर में नेपाल तराई से लेकर दक्षिण में गंगा नदी तक 83° 19' 45" पूर्वी देशान्तर से 86° 42' 15" पूर्वी देशान्तर तथा 25° 13' 45" से 27° 31' 15" उत्तरी अक्षांश के मध्य 26.761 वर्ग किलोमीटर क्षेत्र पर विस्तृत मिथिला मैदान मध्य गंगा मैदान का एक महत्वपूर्ण उप-क्षेत्र है। आर० एल० सिंह (1991) के विभाजन के आधार पर मिथिला मैदान अर्थात् अध्ययन क्षेत्र में तिरहुत प्रमण्डल के ५० चम्पारण (3,922,780, 2011 की जनगणना के अनुसार) पूर्वी चम्पारण (5,082,868) सीतामढ़ी (3,419,622), शिवहर (656,916), मुजफ्फरपुर (4,476,610) एवं वैशाली (3,495,249) जिले दरभंगा प्रमण्डल के मधुबनी (4,476,044), दरभंगा (3,954,367) तथा खगड़िया (1,280,354) जिले तथा भागलपुर प्रमण्डल का नवगछिया सब डिवीजन सम्मिलित किये जाते हैं। प्राचीन काल से ही मिथिला भारतवर्ष का उच्च सांस्कृतिक केन्द्र रहा है, जिसने प्राचीन काल में समन्वित भारतीय संस्कृति के विकास में एक महत्वपूर्ण भूमिका निभाया है। प्राचीन काल में मिथिला के सांस्कृतिक महत्व और श्रेष्ठ सभ्यता का वर्णन विभिन्न धार्मिक, ऐतिहासिक तथा साहित्यिक ग्रंथों में उपलब्ध है। भारत के शिक्षा, दर्शन, कला, साहित्य संस्कृति आदि के विकास में मिथिला ने महत्वपूर्ण योगदान दिया है और अपना एक विशिष्ट पहचान बनाया है। निश्चित रूप से मिथिला भारत के एक अभिन्न एवं विशिष्ट सांस्कृतिक क्षेत्र रहा है। मिथिला का नाम और क्षेत्र विस्तार विभिन्न कालों में बदलता रहा है। मिथिला को विदेह, विमुक्ति, तिरहुत, तपोभूमि, वेणुपति, स्वर्णकाल, सांभवि आदि नामों से भी जाना जाता है, विभिन्न श्रोतों में इसके नाम और सीमा का भिन्न-भिन्न उल्लेख मिलता है। वैदिक साहित्य में मिथिला का प्राचीनतम नाम है विदेह। मिथिला नाम का उल्लेख विष्णु पुराण में भी आया है। जिसके अनुसार महाराजा इक्ष्वाकु के कनिष्ठ पुत्र निमि के नाम पर मिथिला नाम पड़ा। ज्ञातव्य है कि मिथिला मैदान के क्षेत्रीय सीमांकन

*एम. ए., पी.एच.डी. (भूगोल) छत्रधारी बाजार, छपरा (बिहार)।

के सम्बन्ध में विद्वानों में मतभिन्नता पाई जाती है। कुछ विद्वानों ने उपर्युक्त क्षेत्र के अतिरिक्त इसमें कोशी प्रमण्डल के सुपौल, सहरसा, मधेपुरा जिले तथा पूर्णिया प्रमण्डल के पूर्णिया, अररिया तथा कटिहार जिले को भी सम्मिलित किया है।

मिथिला मैदान एक कृषि प्रधान क्षेत्र है तथा 2001 की जनगणना के अनुसार यहाँ की 90 प्रतिशत से अधिक आबादी ग्रामीण है। इस क्षेत्र की भौतिक, आर्थिक एवं सामाजिक परिस्थितियाँ कृषि उत्पाद पर आधारित है। वर्तमान समय में मिथिला क्षेत्र के विकास के लिए कृषि उत्पादन पर आधारित बंद पड़े उद्योगों तथा चालू उद्योगों की क्षमता बढ़ाने की ओर सरकार ने भी योजनायें बनाई हैं तथा उसके क्रियान्वयन पर कार्य आरंभ हो चुका है। कृषि पर आधारित इन उद्योगों में चीनी उद्योग, कागज, उद्योग, जूट उद्योग, चावल आटा तथा तेल मिल आदि विशेष महत्वपूर्ण है। इनके अतिरिक्त विभिन्न फलों यथा, आम, लीची, केला, अनानास, अमरूद, नींबू नारियल आदि तथा जलज फलों यथा मखाना, सिंघाड़ा आदि पर आधारित उद्योगों के विकास की संभावनाओं की तलाश प्रारंभ हो चुकी है। मिथिला क्षेत्र में खासकर दरभंगा समस्तीपुर मधुबनी का आम, मुजफ्फरपुर की लीची, वैशाली का केला, दरभंगा—मधुबनी का मखाना भारत भर में प्रसिद्ध है। परन्तु इन फलों पर आधारित उद्योगों का मिथिला क्षेत्र में विकास नगण्य है। फलतः मौसमी फसल खास समय में अत्यधिक सस्ते दर पर बिक जाते हैं और कृषकों को उचित मूल्य से वंचित रह जाना पड़ता है फलों पर आधारित कुछ उद्योग हैं भी तो वे विभिन्न समस्याओं से ग्रस्त हैं। अतः फलों का उचित संरक्षण भी नहीं हो पाता है तथा अन्य क्षेत्रों की ओर सुरक्षित स्थानान्तरण एवं विपणन भी नहीं हो पाता है। फलतः मिथिला मैदान में फलों पर आधारित डिब्बाबंद उद्योग की समस्याओं के संदर्भ में उनके विकास की संभावनाओं तथा प्रबंधन की रणनीति पर ध्यान केन्द्रित किया गया है।

प्रस्तुत शोध का प्रमुख उद्देश्य संसाधन सम्पन्न मिथिला मैदान में कृषि विकास की समस्याओं तथा उनके विकास की संभावनाओं तथा प्रबंधन की रणनीति तैयार करना है ताकि आर्थिक दृष्टि से पिछड़े मिथिला मैदान में प्रति व्यक्ति आय में वृद्धि की जा सके तथा बेरोजगार युवकों के पलायन पर प्रभावी ढंग से नियंत्रण पाया जा सके और समन्वित क्षेत्रीय विकास की आयोजना की संभावनाओं पर विचार किया जा सके। मिथिला के मैदानी भाग में खासकर ग्रामीण अर्थव्यवस्था वाले मिथिला क्षेत्र में भूमि उपयोग प्रतिरूप एवं विभिन्न फसलों, उत्पादकता को प्रभावित करनेवाले कारकों एवं विभिन्न आंतरिक विशेषताओं के विशिष्ट प्रतिरूपों का विश्लेषण करते हुए कृषि विकास के स्तर का निर्धारण किया गया है। कृषि प्रदेशों का निर्धारण तथा निम्न, मध्यम और उच्च उत्पादकता के क्षेत्र की पहचान करना किया गया है। कृषि भूमि उपयोग की बदलती प्रवृत्ति का उत्पादकता पर पड़ने वाले प्रभाव का अध्ययन करके संभावित परिवर्तनों का संकेत किया गया है। नवीन वैज्ञानिक विधियों का संकेत कर कृषि की उत्पादकता में सामान्य वृद्धि के साथ-साथ विशेषकर खाद्यान्न और व्यापारिक फसलों फलों के उत्पादन में वृद्धि की सम्भाव्यता का विश्लेषण करके प्रादेशिक असंतुलन कम करने तथा क्षेत्र के ग्रामीण एवं समन्वित विकास हेतु व्यवहारिक सुझाव प्रस्तुत किया गया है। कम्प्यूटर तथा अन्य नवीन सूचना तकनीकों का प्रयोग कर मानव संसाधन के विकास के उपाय उपस्थापित किया गया है एवं कृषि पर आधारित उद्योगों की रणनीति तैयार कर ग्रामीण विकास एवं संभावित विकास की योजना प्रस्तुत कर प्रादेशिक असंतुलन कम करने हेतु व्यवहारिक सुझाव प्रस्तुत किया गया है।

इस प्रकार कृषि भूगोल के क्षेत्र में शोध की नवीन प्रवृत्ति में यह देखी जा रही है कि कुछ निर्धारित मानकों के आधार पर कृषि विकास के स्तर का मूल्यांकन किया जा रहा है। लेकिन अभी तक उत्तरी बिहार के मिथिला मैदान के कृषि के क्षेत्र में कोई खास परिवर्तन नहीं आयी हैं, जबकि मिथिला मैदान में फलोत्पादन एवं फल आधारित उद्योग की संभावनायें में विस्तार से मिथिला मैदान में विभिन्न प्रमुख फलों के उत्पादन, वितरण पर प्रकाश डालते हुए फल-आधारित उद्योगों की संभावनाओं पर ध्यान दिया गया है।

संदर्भ ग्रंथ सूची

1. प्राचीन भारत की संस्कृति और सभ्यता, कौसाम्बी, पृ0 86
2. हिन्दू सभ्यता, राधाकुमुद मुकर्जी, पृ0 76
3. रामायण कालीन समाज, डॉ. व्यास, पृ0 223
4. गौतम धर्मसूत्र, 10-5-6^प 11/21
5. शर्मा, पूर्वोक्त ग्रंथ, पृ0 61
6. जातक, 2-357
7. पाणिनी, 15-2-107, 5-2-2
8. प्रा0 भा0 सा0 एवं आर्थिक, जैन, पृ0 117
9. हिन्दी सभ्यता, मुकर्जी पृ0 287
10. प्राचीन भारत का इतिहास, भगवतशरण उपाध्याय, पृ0 94
11. प्राचीन भारत का राजनीतिक तथा सांस्कृतिक इतिहास, डॉ. पाण्डेय, पृ0 587

नागार्जुन का वर्गीय दृष्टिकोण

डॉ. सुमन सिंह*

भारत एक ऐसा देश है जहां समाज असंगठित और वर्गीकृत है, यहां का सामाजिक, आर्थिक स्वरूप निराला है। भारतीय स्थिति की जटिलताएं और अनोखापन वर्ग संघर्ष के अलावा जाति और साम्प्रदायिक संघर्ष में भी प्रतिबिम्बित होता है। 'नागार्जुन' एक ऐसे कथाकार है जो श्रम की महान परंपरा से जुड़े हैं। लेखक किसी भी वर्ग के जीवन की संघर्षशीलता को सिर्फ कह ही देना बड़ी बात नहीं समझता बल्कि स्वयं उस वर्ग में रहकर उनके जीवन के सभी पड़ाव को समझने के बाद ही उसे वाणी देता है। श्रम संघर्ष की भूमि ही नागार्जुन की भूमि रही है।

भारतीय जनता के पोषक नागार्जुन वैचरिक दृष्टि से मार्क्सवादी होते हुए भी वामपंथी दलों की, नीतियों से असहमत है और उनका भी प्रतिवाद करते हैं इन्होंने साम्यवादी जीवन दर्शन को स्वीकार कर समाज की विसंगतियों पर प्रहार किया।

"साहित्यिक स्तर पर नागार्जुन प्रगतिशील आन्दोलन में एक निश्चित विचारधारा से जुड़े लोगों के बीच प्रमुख रूप में अधिक सक्रिय रहे हैं। मार्क्सवादी सिद्धान्तों में इनकी दृढ़ आस्था है। मार्क्सवाद के अनुसार विचारधारा वर्गीय आधार होता है और प्रत्येक लेखक और कथाकार अपने सृजनात्मक कार्यों में जाने-अनजाने में किसी एक सामाजिक वर्ग के ही हितों की रक्षा और अभिव्यक्ति करता है, क्योंकि प्रत्येक वर्ग वास्तविकता को अपने वर्गीय दृष्टिकोण से देखता है उसका यह वर्गीय दृष्टिकोण समाज में उस वर्ग की स्थिति से निश्चित होता है। जो उनकी आकांक्षाओं और भावनाओं और समष्टि को प्रभावित करते हैं।

जीवनानुभव किसी भी कथाकार को कितना ऊर्जावान बना देता है, यह 'नागार्जुन' को पढ़कर समझा जा सकता है। 'नागार्जुन' पीड़ित वर्ग विशेष की पीड़ा को मां की तरह गोद में लेकर ममता के आंचल की छाया देते हैं।

'नागार्जुन' की मान्यता है कि— "सामाजिक दायित्व तो साधना का पथ है। संघर्ष का रास्ता है। जो चलेगा उसे कबीर की तरह कहना पड़ेगा, जो घर फूँके आपनो—चले हमारे साथ। जीवन में क्रान्ति और सामाजिक सेवा की ऊँचे-ऊँचे आदर्शों की बात करने वाले को उसके अनुरूप आचरण भी करना चाहिए। सर्वहारा पर बात करने तथा मजदूर और किसान पर लिखने की होड़ दिखती है, यह अच्छी बात है इसमें कहीं न कहीं दायित्व बोध है। इसके साथ ही जो इन पर लिखते हैं उन्हें मालूम होना चाहिए कि झुग्गी झोपड़ी में रहने वाले मजदूरों की जिन्दगी कैसी है ? ठंड, बरसात और लू के थपेड़ों के बीच काम करने वाले किसानों का संघर्ष कितना कठिन है। जब तक पेट भूखा नहीं हो वह हड़ताल और संघर्ष का अर्थ नहीं समझ सकता। जनता को अपना स्रोत बनाना जरूरी है। सामाजिक दायित्व तो लेखन में लेखक की समझदारी और साहस के साथ धीरे-धीरे उत्पन्न होता है। आत्ममुग्ध कवि शब्दों की वाजीगरी करेगा तो उसमें सामाजिक दायित्व ढूँढना कठिन होगा।

*असिस्टेंट प्रोफेसर (हिन्दी विभाग) जनहित पी0जी0 कॉलेज, जलालपुर, जौनपुर।

नागार्जुन का वर्गीय दृष्टिकोण जमींदारों और सत्ताधारी वर्ग की आलोचना करते हुए दिखायी देता है। मूल रूप से नागार्जुन की सहानुभूति जिस विशेष वर्ग के प्रति है वह है गरीब किसान शोषित मजदूर। जाति बिरादरी के आधार पर वे किसानों का मूल्यांकन नहीं करते। गरीबी ने किसी भी जाति वर्ग का नक्शा नहीं है, चाहे वह ब्राह्मण हो या शूद्र। इस दृष्टि से नागार्जुन ने कोई अलग साहित्य तो नहीं रचा है परन्तु उनकी प्रत्येक मार्मिक पीड़ा की सहज अनुभूति उनकी कथा का मुख्य आधार रहा है। इनके द्वारा लिखित उपन्यासों को पढ़कर भारत की संस्कृति, परम्परा उसके वर्तमान संघर्ष उनकी पीड़ाओं और उससे उबरने के प्रयासों को समझा जा सकता है। नागार्जुन के साहित्य में आज का मानव उस रूप में नहीं दिखाई देता जो आधुनिकतावादी साहित्य में है आधुनिकता समाज को धार्मिक असहिष्णुता और कट्टरता की ओर ले के जाने का प्रयास करता है। नागार्जुन के साहित्य में आधुनिक मनुष्य का रूप यह है कि उसे खाने-पीने की कमी न हो उसे स्वतन्त्र जीवन जीना चाहिए। किसी भी व्यक्ति को जड़ रुढ़ियों में जकड़कर अपना विकास अवरूद्ध नहीं करना चाहिए। वर्तमान समय मानव धर्म के बारे में न तो मध्यकालीन मनुष्य की तरह सम्पूर्ण समर्पण मात्र रखता है और न ही वह समाज में धर्म के व्यापक प्रभाव को देखते हुए उसे पूरी तरह अस्वीकार ही कर सकता है।

नागार्जुन के किसान भाव ने कर्म की सामूहिकता को अन्य कई प्रकार से प्रतिपादित किया। नागार्जुन के सम्बन्ध कमला प्रसाद का मत है कि – 'नागार्जुन' ने मार्क्सवाद की पंडिताई, उसका कर्मकाण्ड नहीं किया। उन्होंने अपनी तरह से अपने अनुभव मार्क्सवाद को 'रिसीव' किया। वे संस्कृत का पंडित बुद्ध के मार्ग पर भी चले, सन्यासी भी हुए और फिर लौटकर आए। संस्कृत का पंडित बुद्ध के मार्ग पर गया हुआ फिर लौट के मार्क्सवादी होता है तो इसकी जो माया है वह बहुत ही टेढ़े-मेढ़े रास्ते से होकर आयी है। वे सीधे-सीधे वर्गों में बटे समाज को देखते हैं, और सीधे वर्गों की जो गतिविधियां हैं चाक्षुष सत्य है वर्गों के परस्पर व्यवहार का शोषण का, वह नागार्जुन से छिपा नहीं है। कबीर का मार्ग यही है जिससे आंखों का सच अनुभव किया हुआ सच प्रधान हो। नागार्जुन की जो काव्य माया है उसमें मार्क्सवाद का क्लैसिक है, जो मुक्तिबोध के यहां आपको दिखायी देता है, वह नागार्जुन के यहां नहीं है। दैनिक जीवन के क्षेत्र में जो अंतर्विरोधी है उनमें अपनी पक्षधरता वे प्रगट करते हैं।

नागार्जुन के वर्ग संघर्ष में नारी जीवन की पीड़ा, व्यथा की मार्मिक अभिव्यंजना हुयी है, इनका दृष्टिकोण सदैव से उस वर्ग के प्रति सजग रहा है, जो समाज में शोषित, पीड़ित और उपेक्षित है। इसी श्रेणी में समाज का नारी वर्ग भी आता है जो पुरुष समाज द्वारा शोषित, पीड़ित और उपेक्षित रहा है, ऐसे नारी वर्ग के उद्धार के लिए नागार्जुन ने विद्रोह का विस्फोटक प्रहार कर इन्हें अपने अधिकार के लिए लड़ने की सीख दी। नागार्जुन के उपन्यासों में नारी अपने हक के लिए लड़ती हुयी दिखायी पड़ती है। वह विद्रोह करती हुयी, अदम्य साहस एवं स्वाभिमानपूर्ण जीवन जीने की भावना लेकर नए अवतार में प्रगट हुयी है। वरुण के बेटे, उपन्यास में नायिका मधुरी कहती है— "जिन्दगी और जहान औरतों के लिए नहीं है क्या?" मधुरी द्वारा कहा गया यह वाक्य उसकी स्वतंत्रता तथा आत्मविश्वास का ज्वलन्त उदाहरण है। ऐसे परिवर्तनशील व्यक्तित्व वाली स्त्रियों के प्रति नागार्जुन की असीम करुणा स्पष्ट होती है। बहुधा नारी चरित्र के दो वर्ग सामने आते हैं, एक ओर आदिम युग से शोषण की चक्की में पिसती हुयी नारी का रूप दिखायी देता है तो दूसरी तरफ इस परिवेश का खुलकरविरोध करने वाली नारी जीवन का वर्णन है। क्रान्तिकारी भूमिका निभाने वाली स्त्रियों

में 'नयी पौध' उपन्यास की नायिका विसेसरी का चरित्र उभरकर सामने आता है, जो बाल वैधव्य से बोझिल अपनी बेटी की जिन्दगी दाव पर नहीं लगाती बल्कि सामाजिक, धार्मिक विरोध का सामना करती हुयी पुनर्विवाह का निर्णय लेती है।

नागार्जुन का 'बलचनमा' उपन्यास निम्न वर्गीय एक कृषक के पुत्र की यातनापूर्ण तिरस्कृत अभावग्रस्त जीवन की गाथा है। वचपन से ही जमींदारों के अमानवीय अत्याचार का शिकार 'बलचनमा' जीवन में कठिन अभाव और व्यथाएँ झेलते हुए जीवन जीने को बेबश रहा, उसका वचपन असहनीय कष्टों से भरा हुआ था। 'बलचनमा' की व्यथा और आक्रोश इस कथन से स्पष्ट होता है—

'थकावट के मारे चूर—चूर रहता मैं, मलिकाइन के नइहर की खवासिन जब कोढ़िया कहकर मुझे पुकारती तो मन करता की झपटकर उसका थुथुन नोच लू, क्षण भर भी मेरा बैठना उसे बरदाश्त नहीं था'। निश्चित रूप से बलचनमा के इस कथन से उसकी अन्तर्वेदना प्रकट होती है।

पंकज चतुर्वेदी और केदारनाथ सिंह से हुयी बातचीत के दरम्यान नागार्जुन के कथन— "पतित बुद्धि जीवी समाज में आग लगा दो" के बारे में केदार नाथ सिंह का यह वक्तव्य— "नागार्जुन का यह आक्रोश बहुत सात्विक हैं खास तौर से मैं भी मानता रहा हूँ कि सबसे ज्यादा दुलमुलपन का शिकार जो वर्ग है वह बुद्धि जीवी वर्ग है, इसमें दो मत नहीं है। इसमें कवि साहित्यकार भी एक हद तक शामिल हो सकते हैं, लेकिन आसानी से बुद्धिजीवी वर्ग को एक पक्ष से दूसरे पक्ष में किया जा सकता है, करने की कोशिश होती रही है, और जो लोग ऐसा करना चाहते हैं, इसमें सफल भी होते रहे हैं, पर यह भी ध्यान देने की बात है कि इसके विरुद्ध आवाज बुद्धिजीवी वर्ग के व्यक्ति की है, और जब कहते हैं तो यह आक्रोश एक बड़े प्रखर बुद्धिजीवी का आक्रोश है, इसलिए बुद्धिजीवी वर्ग के भीरत का पक्ष प्रतिपक्ष होता है। "

जनवादी रचनाकार वैज्ञानिक दृष्टिकोण से लैस है, वह जानता है कि वर्ग विभाजित समाज में हर चीज की भाँति ही साहित्य का भी वर्गीय स्वरूप होता है और शोषक तथा शोषित वर्गों में से किसी एक के प्रति सबको अपनी पक्षधरता और प्रतिबद्धता प्रस्तुत करनी पड़ती है। दरअसल प्रतिबद्धता का सिद्धान्त एक वैज्ञानिक संवर्ग है। यह संकीर्ण वस्तुनिष्ठता और अहंवादी आत्मनिष्ठता की प्रवृत्तियों का विरोध वैचारिक स्तर पर करता है। इन दोनों स्थितियों से साहित्य को बचाने का वैज्ञानिक उपक्रम एकमात्र प्रतिबद्धता करती है। प्रतिबद्धता ही कृतिकार को सही समझ देती है, जिसे प्राप्त करती हुयी वह ऐतिहासिक युगबोध से बन रहे मानवीय सम्बन्धों की पक्षधरता समृद्धि में सभी रह सकें। होता यह है कि, प्रतिबद्धता की वजह से कृतिकार गलत रुझान वालों को अपनी सहानुभूति और सहृदयता नहीं देता बल्कि उल्टे उनके क्रिया—कलाप और उनकी विस्तृत भौतिक मायाजाल की विसंगतियों को निर्ममता के साथ ध्वस्त करता है और प्रगतिशील शक्तियों का पथ प्रशस्त करता है। अपने आपको तटस्थ बताने वाले लोग कही न कही से शोषकों के साथ होते हैं और उनकी मनसा यथास्थिति को बनाये रखने की होती है।

जनवादी साहित्यकार वर्गीय चेतना के कारण अपनी स्पष्ट पक्षधरता घोषित करता है और करोड़ों मेहनतकश जनता के संघर्ष में सहभागी होता है। जनवादी कथाकार अपनी प्रतिबद्धता में बेहद स्पष्ट दिखयी देता है उसके लिए नीति से अलग रहना एक प्रकार का अवसरवाद होगा। वे भलीभाँति जानते हैं कि हाथ फैलाने से अधिकार नहीं मिलता बल्कि उसे छीनना पड़ता है। इसलिए वे क्रांति का उद्घोष करते हैं और

शोषित पीड़ित मेहनतकश सर्वहारा वर्ग के साथ खड़े रहने के लिए प्रतिबद्ध है, उनकी इस मानसिकता के पीछे सुचिन्तित ओर सुविचारित वैज्ञानिक दृष्टिकोण है तथा दृष्टिकोण की अभिव्यक्ति के लिए उनके पास समर्थ और सर्जनात्मक विवेक भी है।

जन मन की भावनाओं के पोषक बाबा नागार्जुन का निजी अनुभव ही उन्हें आम आदमी के जीवन से जोड़ने की मजबूत कड़ी बना। सच्चे साहित्य का सृजन तभी सम्भव है जब साहित्यकार उस धरातल का हो, नागार्जुन एक ऐसे कथाकार है जिन्होंने सामान्य जीवन जिया ही नहीं बल्कि आभाव ग्रस्त जीवन जीने वालों के प्रत्येक पल के सहभागी रहे। ये जनवादी कवि, एवं कथाकार है अतएव जन जीवन के दुख दर्द एवं मनःस्थिति को भलिभांति पहचान कर यथार्थ तथा स्वाभाविकता के साथ चित्रित करते है। नागार्जुन आम जनता का जीवन जीने वाले ऐसे साहित्यकार है जो जनता के हर पल के सघर्षों के साक्षी रहे है। यही कारण है कि अन्याय पूर्ण जमींदारों का व्यवहार और किसान का शोषण करने के विभिन्न हथकंडे, और अन्यायी व्यवस्था के शासक स्वरूप और उससे तप्त करुण जीवन गाथा को नागार्जुन ने सजीव जीवन प्रदान किया है। इन्होंने जन जीवन के असंगति बोध को बड़े कलात्मक ढंग से उभारा है। नव्यता किसी बाध्यता या पूर्वाग्रह का परिणाम नहीं है। यह आत्मा भारतीय किसान की है जो ज्ञान विज्ञान से अपनी क्षमता तथा सहज बोध के बल पर जीवन जगत की समीक्षा करती है। नागार्जुन ने जीजिविषा को कही भी मलिन नहीं होने दिया है। ये शोषक वर्ग का वास्तविक चेहरा पहचानते है इसलिए भारतीय समाज की क्रूर विसंगति को उजागर करते है।

सन्दर्भ ग्रन्थ

1. हिन्दी की जनवादी कविता – डॉ. वशिष्ठ अनूप राधा प्रकाशन नई दिल्ली।
2. नागार्जुन के उपन्यासों में सामाजिक चेतना – डॉ. शिवप्रसाद मिश्र, श्यामा प्रकाशन बम्बई।
3. हिन्दी उपन्यास की प्रवृत्तियाँ – शशिभूषण
4. हिन्दी उपन्यास : उपलब्धियाँ, लक्ष्मीसागर वाष्णीय
5. नागार्जुन का सम्पूर्ण कथा साहित्य – डॉ. सुरेन्द्र यादव
6. नागार्जुन : विचार सेतु – महावीर अग्रवाल, श्री प्रकाशन कसारीडीह दर्ग (म0प्र0)

Effect of Familial Relationships on Emotional Development in Adolescence-A Psycho-Social Approach

Md. Ehtashamul Hassan*

ABSTRACT

The present study the relationship between familial relationships on emotional development among adolescents. This cross-sectional study included 100 adolescents studying in 11th and 12th standard selected by purposive sampling. All subjects gave informed consent. Socio-demographic characteristics were recorded on a specially designed proforma. "Family functioning questionnaire" and "Mangal Emotional Intelligence Inventory" were used to assess family functioning and emotional intelligence respectively. The data was analyzed using parametric and nonparametric statistics. There was a significant positive correlation between family functioning and emotional intelligence. Healthy family functioning plays a vital role in developing better emotional intelligence.

Keywords: Familial relationships, Emotional Development & Adolescenc.

INTRODUCTION

Emotions have a profound effect on different aspects of our life including our decisions and behaviour. The concept of emotional intelligence (EI) was developed to explain the importance of emotions. EI is defined as "perceiving emotions, using emotions in order to support ideas, understanding emotions and emotional information, adjusting emotions for emotional and mental development". The development of EI begins from birth, initially with the mother who provides for the child's needs. Thereafter the type of interaction that the growing child has with people in his environment, viz. parents, siblings, friends and teachers may develop or weaken his EI. The effective use of emotions by children enable them to control their instinctive reactions in stressful situations. It also helps them to learn to communicate their emotional state properly, to develop healthy relationships with family members and friends, and to become successful in school, work and life. Family functioning plays an important role in the child's development. Family is the first social institution which shapes and moulds the child. Family socialization impact directly the child's social and emotional competency. In addition family socialization has an indirect effect on socio-emotional competence through the child's understanding of emotions and acquisition of social knowledge. In the familial context, from their parents, children learn their emotional knowledge base, as well as competence in emotion identification and regulation. Parental socialization of emotional competencies is carried out by parents acting directly on the child, mainly through the way parents regulate the children's emotions (e.g. through explicit lessons or informal conversations about emotion regulation). Parental influences may also act indirectly on the child e.g. through the observation and modelling of other's emotional responses and competencies.

*Assistant Professor, Department of Psychology People's College, Araria [Bihar]-854311

MATERIAL AND METHODS

This cross-sectional study was carried out on students of Sarvodaya School, Kanke, Ranchi. Ethical clearance for the study was obtained from the institutional ethical committee.

SAMPLE

The study sample consisted of adolescents in the age range of 16-18 years, studying in 11 th and 12th standards in Araria district, Bihar. A total of 100 adolescents of both sex participated in the study. Selection of the sample was based on purposive sampling technique. Inclusion criteria Age between 16 years to 18 years.

TOOLS

Socio-Demographic Data Sheet: Socio- demographic data sheet was used to collect details such as sex, age, education, religion, domicile and occupation. **Family Functioning Questionnaire (FFQ):** The FFQ consists of 60 items related to six dimensions. Each dimension has its distinctive family functioning characteristics. One item has been taken from all the related characteristics respectively (a) Structure (b) Affect (c) Communication (d) Behavior control (e) Value transmission (f) External systems. The reliability of FFQ was determined through odd-even and test- retest methods which were 0.71 and 0.81 respectively. The content validity of the scale was 0.78. The sample standardizing the FFQ consisted of 910 school going children.

Mangal Emotional Intelligence Inventory (MEII): The MEII was used to measures the EI of the students. It contains 100 items, 25 each from the four areas or aspects of emotional intelligence namely, intrapersonal awareness (knowing about one's own emotion), interpersonal awareness (knowing about other's emotion), intrapersonal management (managing one's own emotion), and inter-personal management (managing others emotion). The subject has to respond either 'yes' or 'no' in each item. While constructing items for each of these areas due care was taken to make use of simple language and provide well-defined purposeful statements to the respondents for the assessment of their emotional intelligence. Reliability of the inventory is 0.92 (Test Re-test method), 0.89 (split half method) and 0.90 (K-R formula). Validity of this test is 0.71 from intervalidity formula.

PROCEDURE

The researcher explained the study to all the students and written informed consent was obtained. To ensure full cooperation it was emphasized that anonymity would be ensured. Thereafter, by purposive sampling, students were included in the study considering the inclusion and exclusion criteria. The students were initially interviewed to collect the socio-demographic data. Thereafter the FFQ and MEI were administered individually to the participants. The questionnaires were scored as per the test manual and the data was tabulated and analyzed.

RESULTS

Socio demographic characteristics of the sample calculated. Mean (\pm SD) age of the study sample was 17.31 (\pm 0.64) years. Majority of the participants were in the age group of 17-18 years, female, muslim, with rural background. Mean (\pm SD) of score on Mangal Emotional Inventory is 3.5 (\pm 0.61). The EI scores were analysed to see differences with regard to age, sex, religion and domicile. However, it was found that there was no significant difference with regard to age (Mann – Whitney U test = 313; $p=0.79$; not significant), sex (Mann – Whitney U test = 312.5; $p=0.71$; not significant),

religion (Mann – Whitney U test = 185; $p=0.16$; not significant), and domicile (Mann – Whitney U test = 250; $p=0.52$; not significant).

DISCUSSION

The present study was aimed to elicit the possible relationship, if any, between family functioning and EI among adolescents by means of information gathered from family functioning questionnaire and emotional intelligence inventory. The results show significant positive correlation between family functioning and emotional intelligence. The finding that adolescents who have average range of family functioning were found to have average level of EI is in agreement with some earlier studies. The interaction of adolescents within family or family members and others may help in development of EI of adolescents. The finding that adolescents who have poor range of family functioning also had low EI score is also in agreement with earlier studies. This indicates that the poor quality of interaction of the adolescents with their intimate environment, such as parents, siblings and friends weaken their EI. Further, these results clearly imply that EI is an important factor in regulating the family environment. The possibility of improving the family environment increases when family members understand themselves, the emotions of the others and guide their emotions.

CONCLUSION

We may conclude from the present study that family functioning is an important factor for the development of EI. If family functioning is poor then the EI is likely to be adversely affected leading to maladaptive behavioural and emotional problems in adolescence and may also affect his academic achievement. Average and good family functioning leads to healthy development of adolescents and emotional and social maturity. Therefore in school based intervention there is need to focus on family functioning.

REFERENCES

1. Mayer JD, Salovey P. What is emotional Intelligence? In: Salovey, P., Sternberg, R.J., Editors, *Emotional development and emotional intelligence: implications for educators*, New York: Basic Books. 1997. pp 3-31.
2. Houtmeyers KA. Attachment relationship and emotional intelligence in preschoolers. Unpublished doctoral dissertation, Department of Psychology, University of Windsor, Ontario, Canada. 2000. Retrieved April 8, 2015, from Umi Proquest database
3. Shapiro L E. How to raise a child with a high E.Q. Istanbul: Varlyk Publications. 2000.
4. Sullivan A K. The Emotional Intelligence Scale for Children. Unpublished doctoral dissertation, University of Virginia, VA.1999. Retrieved April 8, 2015, from Umi Proquest database.
5. Elias MJ, Weissberg RP. Primary prevention: Educational approaches to enhance social and emotional learning. *Journal of School Health* 2000; 70(5): 186-190.
6. Payton J W, Wardlaw D M, Graczyk PA, Bloody M R, Trompsett C J, Weissberg R P. Social and emotional learning: A framework for promoting mental health and reducing risk behavior in children and youth. *Journal of School Health* 2000; 70 (5): 179-184.
7. Ulutas I, Ömeroglu E. The effects of an emotional intelligence education program on the emotional intelligence of children. *Social Behavior and Personality* 2007;35 (10): 1365-1372
8. Garner PW, Jones DC, Miner JL. Social competence among low-income preschoolers: Emotion socialization practices and social cognitive correlates. *Child development* 1994; 65: 622-637.
9. Lewis M, Saarni C. *The Socialization of emotions* New York, Plenum Press. 1985.
10. Manuel, M.P. Parental Inducement of Emotional Intelligence. *Imagination, Cognition, Personality*. 2002; 18 (1), 3-23.

रामचरितमानस में पर्यावरण के विविध रूप

रानी सिंह*

सार

तुलसी के मानस में पर्यावरण के विविध रूपों का सजीव चित्रण हुआ है। मानस का प्रकृति वर्णन जीवन्त एवं प्रेरणा स्रोत है।

प्रस्तुत शोध में मानस में वर्णित पर्यावरण के विविध रूपों का विवरण प्रस्तुत किया गया है। इसमें विमर्श के उपरांत निकले निष्कर्ष समय और परिस्थिति के अनुरूप तुलसीदास ने जो मानस में प्रकृति रस विनियोग सरस एवं सुंदर ढंग से किया है, यही उनकी मौलिकता है, और इसके निरूपण में उन्हें पर्याप्त सफलता मिली है। मानस को पर्यावरण के संदर्भ में जोड़कर किए गए अध्ययन से हमें अपने भविष्य को पर्यावरण प्रदूषण के दुष्परिणाम से बचाव हेतु सरल एवं सहज मार्ग दर्शन भी प्राप्त हुआ है।

शब्द कुंजी Keywords— पर्यावरण, पुरातन, प्राकृतिक दृश्य, प्रकृतिप्रेम, पशु-पक्षी, पेड़-पौधे, जीव-जंतु

प्रस्तावना

आदिकाल से ही प्रकृति और मानव का संबंध बहुत गहरा रहा है। मनुष्य ने अपनी आंखें प्रकृति की गोद में ही खोली हैं। मनुष्य निरंतर प्रकृति के संपदाओं से लाभान्वित होता रहा है और भविष्य में भी प्रकृति के विभिन्न उपादानों से वह उपकृत रहेगा। प्रकृति के बिना तो मनुष्य का जीवन संभव ही नहीं है। प्रकृति के बिना मनुष्य का संपूर्ण जीवन आधार एवं अधूरा है। यही कारण है कि मनुष्य ने अपनी रचनाओं में भी पर्यावरण के बहुविध उपयोग कर अपनी रचनाओं को सार्थकता प्रदान की है। मनुष्य ने जहां एक ओर प्रकृति के विभिन्न रूप विधान तथा उसके विशाल दृश्यों में अपने राग और भाववृत्तियों के लिए अनुकूल उपादानों का संचयन किया तो दूसरी ओर वैज्ञानिक उपकरणों के माध्यम से उसके लिए गहरे से गहरे रहस्यों का उद्घाटन करने और अपने जीवन की अद्भुत वृत्तियों को संश्लिष्ट करने का उपक्रम भी निरंतर करता रहा।

रामचरितमानस में पर्यावरण के विविध रूप

बालकांड से लेकर उत्तरकांड तक तुलसी द्वारा रचित रामचरितमानस पर्यावरण के विविध रूपों से परिपूर्ण है। मानस में पर्वतों, नदियों, तालाबों, वाटिकाओं, ऋतुओं सहित प्रकृति के पंचमहाभूतों जिसे तुलसीदास ने क्षिति, जल, पावक, गगन, समीरा कहकर अद्भुत छंदों में अलंकृत किया है, उसका विस्तृत वर्णन देखने को मिलता है।

*शोधार्थी (हिंदी विभाग), तिलकामांझी भागलपुर विश्वविद्यालय, भागलपुर (बिहार)

रामचरितमानस का बालकांड पुष्प वाटिका प्रसंग से प्रारंभ ही होता है, जिसमें श्रीराम गुरु की आज्ञा पाकर फूल लेने के लिए अपने भाई लक्ष्मण के साथ जनक की वाटिका में जाते हैं, जहां वसंत ऋतु अपनी सुषमा से सबको आकर्षित कर रही थी, पत्ते, फूल, और फल से युक्त सुंदर वृक्ष अपनी संपत्ति से कल्पवृक्ष को भी ले जा रहे थे। पपीहा, कोयल, तोते, चकोर आदि पक्षी मीठी बोली बोल रहे थे और मोर नाच रहा था। बाग के बीचों-बीच सुहावना सरोवर सुशोभित था, जिसमें मणियों की सीढ़ियां विचित्र ढंग से बनी थी। सरोवर का जल स्वच्छ और निर्मल था, जिसमें अनेक रंगों के कमल खिले हुए थे। तालाब में पक्षी कलरव कर रहे थे और भवरे गुलजार कर रही थी प्रकृति का यह विविध रूप कितना रमणीय है जहां, तुलसी के इस प्रसंग के माध्यम से पर्यावरण के विविध रूपों का विवरण मिलता है। महाकवि तुलसी के शब्दों में—

भूप भागू भर देगी जाई। जह बसंत रितु रही दो-ढाई। ।
 लागे बिटर्प मनोहर नाना। बरन बरन बर बेलि बिताना। ।
 नव पल्लव फल सुमन सुहाए। निजी संपत्ति सुर रुख लगाए। ।
 चातक कोकिल कीर चकोरा। कूजत बिहग नटत कल मोरा। ।
 मध्य बाग सरू सोह सुहावा। मनि सोपान विचित्र बनावा। ।
 बिमल सलिलु सरसिज बहुरंगा। जलजग कूजत गुंजन भृंगा। ।
 बागू तड़ागू बिलोकि प्रभु हरसे बंधु समेत।
 परम रम्य रामु रहुं जो रामहि सुध लेते। ।

इसी प्रकार पर्वतराज हिमालय का प्राकृतिक सौंदर्य का वर्णन करते हुए तुलसीदास कहते हैं की पर्वतराज हिमालय हमेशा भक्तों को आकर्षित करता रहा है। देव ऋषि नारद ने अपनी समाधि हिमालय की एक पवित्र गुफा में ही लगाई। उसके समीप ही पतित पावनी गंगा कलकल स्वर में बहती रहती थी। यही कारण था कि महाराज जी को यह स्थान समाधि के लिए सबसे उपयुक्त लगाओ। मानस में तुलसीदास ने हिमालय के इस अद्भुत प्राकृतिक सौंदर्य का वर्णन बड़े ही सरस रूप में किया है—

हिमगिरि गुहा एक अति पावनि। बस समीप सुरसुरी सुहावनी। ।
 आश्रम परम पुनीत सुहावना। देखी देवरिषि रमापति पद अनुरागा। ।
 सुमित हरिहि श्राप गति बाधित। सहज बिमल मन लागि समाधि। ।

तुलसीदास ने अरण्यकांड में प्रकृति के मनोहर रूप का वर्णन करते हुए कहते हैं कि विशालवृक्षों में लताएं उलझी हुई मालूम होती हैं, मानों नाना प्रकार के तंबू तान दिए गए हैं। केला और तार सुंदर ध्वजा पताका के समान हैं, इन्हें देखकर वही मोहित नहीं होता जिसका मन धीरा नहीं है। अनेक वृक्ष नाना प्रकार से फूलें हुए मानों अलग-अलग वर्दी धारण किए हुए बहुत से तीरंदाज हों। कहीं-कहीं सुंदर वृक्ष शोभा दे रहे हैं, मानो योद्धा लोग अलग-अलग होकर छावनी डाले हों। कोयल कूक रही है, वहीं मतवाले हाथी हैं। टूक और मोहक पक्षी मानों ऊँट और खच्चर के समान दिखाई दे रहे हैं। मोर, चकोर, तोते, कबूतर और हंस सब सुंदर ताजी घोड़े हैं। तीतर और बटेर पैदल सिपाहियों के झुंड हैं। कामदेव की सेना का वर्णन तो ही नहीं सकता। पर्वतों की शिलायें रथ और जल के झरने नगाड़े हैं। पपिहे भांट हैं जो गुण समूह का वर्णन करते हैं। भवरो का गुंजार भेड़ी और शहनाई है। शीतल मंद और सुगंधित हवा मानों दूत का काम लेकर

आई है। इस प्रकार चतुरंगी सेना साथ लिए कामदेव मानों सब को चुनौती देता हुआ फिर रहा है। अभिनव बाल्मीकि तुलसी के शब्दों में—

बिटप बिसाल लता अरुझानी। बिबिध बितान दिए जनुतानी। ।

अंजलि ताल भर धुजा पताका। देखि न मोह धीर मन जाका। ।

किष्किंधा कांड में राम की सुग्रीव से मित्रता हुई। सुग्रीव एक वानर थे, फिर भी श्री राम ने सुग्रीव के लिए बाली का वध किया और उन्हें किष्किंधा का राजा बनाया। इस प्रसंग में मानव और पशु के बीच मित्रता का भाव स्पष्ट दिखाई देता है। रामचरितमानस में प्रकृति का अद्भुत रूप देखने को मिलता है। तुलसीदास द्वारा रचित रामचरितमानस की कथा वर्णन में मूल रूप से उष्णकटिबंधीय प्रदेश के पतझड़ी पेड़ों के जंगलों में चित्रकूट, दंडकारण्य का मुख्य रूप से वर्णन किया गया है। इन जंगलों के दृश्य और प्राकृतिक छँटा में पानी के तत्व, नदी, झील, धारा, तालाबों, जलीय पौधों का वर्णन किया गया है। मानस में वर्षा ऋतु, शरद ऋतु, ग्रीष्म ऋतु, वसंत ऋतु आदि का भी वर्णन किया गया है, जिसमें ऋतुओं द्वारा प्राकृतिक जीव-जंतुओं पर होने वाले प्रभावों को विभिन्न जगहों पर दर्शाया गया है। जैसे— वर्षा ऋतु में मोरों के झुंड बादलों को देखकर नाचते हैं। आकाश में बादल घुमड़-घुमड़ कर और गर्जना करते हैं। बिजली की चमक बादलों में उहरती नहीं। बादल पृथ्वी के समीप आकर नीचे उतरकर बरस रहे हैं। छोटी नदियां भरकर किनारों को तोड़ती हुई चली हैं। पृथ्वी घास से परिपूर्ण होकर खड़ी हो गई है, जिससे रास्ते समझ नहीं पड़ते। चारों दिशाओं में मेढ़कों की ध्वनि सुहावनी लगती है। अनेकों वृक्षों में नए पत्ते आ गए हैं, जिससे वे बड़े-बड़े एवं सुशोभित हो गए हैं। मदार और जवासा बिना पत्ते के हो गए हैं। अन्न से युक्त लहराती हुई खेती से हरी-भरी पृथ्वी सुशोभित है। भारी वर्षा से खेतों की क्यारियां फूट चली हैं। चतुर किसान खेतों को निराते हैं। वर्षा ऋतु में चक्रवाक पक्षी दिखाई नहीं देते। पृथ्वी अनेक तरह के जीवों से भरी हुई, उसी तरह शोभायमान है, जैसे—सुराज्य पाकर प्रजा की वृद्धि होती है। कभी-कभी वायु बड़े जोर से चलने लगती है, जिससे बादल जहां-तहां गायब हो जाते हैं। कभी दिन में घोर अंधकार छा जाता है और कभी सूर्य प्रकट हो जाते हैं। इस प्रकार मानस में वर्षा ऋतु में होने वाले प्रभावों को बड़े ही अनुपम ढंग से प्रस्तुत किया गया है।

चित्रकूट के जंगल एवं पहाड़ प्रकृति और ईश्वर की अनुपम देन है। चारों ओर से विंध्य पर्वत श्रृंखलाओं और वनों से गिरे चित्रकूट को अनेक आश्चर्य की पहाड़ी कहा जाता है। मानस में चित्रकूट के जंगल एवं पहाड़ कई कारणों से महत्वपूर्ण हैं। चित्रकूट के कामदगिरि पर्वत पर श्रीराम ने अपना महत्वपूर्ण समय व्यतीत किया। हालांकि मानसकार ने पर्यावरण के विविध रूपों एवं पारिस्थितिकी के दो सहयोगी जंगल एवं पहाड़ के प्राकृतिक परिवेश के चित्रण को छंद एवं दोनों के माध्यम से जगह-जगह स्पष्ट किया है। तुलसी के शब्दों में—

चित्रकूट महिमा अमित कही महामुनि गाइ।

आए नहाए सरित बर सिय समेत दोउ भाइ। ।

मानस कथा में भरद्वाज मुनि श्री राम को अपने जीवन के पहले चरण में चित्रकूट के जंगल में ही बसने की सलाह देते हैं, क्योंकि चित्रकूट के जंगल को महावन या महान जंगल के रूप में भी जाना जाता है। इस जंगल में पाई जाने वाली लकड़ियां एवं धाराएं काफी सुखद हैं और यह जंगल सुंदर और फूलों के पेड़ों से हमेशा आच्छादित रहता है। मानस में वर्णित जंगल की विशेषताओं का वर्णन करते हुए तुलसीदास कहते हैं

कि जंगल से उस समय वायुमंडल शुद्ध रहता था। जंगल के पेड़ हवा के साथ-साथ वातावरण की सफाई में मदद करते थे। वृक्ष और मिट्टी वायुमंडलीय तापमान को वाष्पीकरण की प्रक्रिया के माध्यम से भी विनियमित करती थी। जंगल जलवायु को स्थिर रखने में सहायक होते थे। जंगल से तापमान ठंडा रहता था। जंगल के पास स्वयं के माइक्रोकलीन मेंट्स बनाने की क्षमता थी, जिससे आसपास के क्षेत्रों में नियमित रूप से वर्षा को बढ़ावा मिलता था। जंगल जंगली जानवरों और पक्षियों की कई प्रजातियों के लिए घर के रूप में सेवा करते थे। चित्रकूट के पहाड़ विविध जैव परिघटनाओं, समृद्ध जल संसाधनों जलप्रपात, नाले और फव्वारे विशाल खनिज संपदा वन में रहने वाले स्थानीय लोगों और विशेषता से पूर्ण जंगलों एवं आध्यात्मिक वातावरण को बढ़ावा देने वाली प्रकृति एवं पौष्टिक तत्वों से परिपूर्ण है। मानस में जीव जंतुओं के समूह का भी वर्णन देखने को मिलता है जिसमें जंगली और गैर जंगली दोनों रूपों में जीव-जंतु वर्णित हैं। इनमें कई प्रकार के हाथी, हिरण जो वर्तमान में भारतीय वन के खास जानवरों में से एक हैं, का वर्णन मिलता है। बंदर की अनेक किस्म, भालू बाघ और चीता आदि का विशेष उल्लेख मानस में मिलता है। मानस में मोर, कोयल और छोटे जंगली पक्षियों के अलावा सारस के कई प्रकार वन, उपवन, नदियों की शोभा बढ़ाने के लिए देखे जा सकते हैं ऐसा वर्णन तुलसी ने कई स्थानों पर किया है। मानस में पात्रों द्वारा मंदाकिनी नदी की पूजा अर्चना करने का भी वर्णन है। मानसकार गंगा नदी अर्थात् मंदाकिनी नदी का वर्णन करते हुए कहते हैं कि इस नदी में असंख्य कमल और विभिन्न प्रकार के पक्षियों का निवास स्थान था। इसका पवित्र जल मनुष्य पशु-पक्षी एवं समस्त जीव-जंतुओं के लिए अमृत के समान है। इस नदी का पानी पारदर्शी है और इसके जल का प्रवाह तेज है। मंदाकिनी नदी के किनारे लगे पेड़ पौधों में सालों भर फूल खिले रहते हैं, जो नदी की सुंदरता में चार चांद लगाते हैं। इस प्रकार नदी के साथ नदी का परिदृश्य इसकी पवित्रता और किनारे के वातावरण पर्यावरण के विविध रूप के विस्तार का प्रतीक है। इस प्रकार महान आदि कवि तुलसी की ऐतिहासिक कृति मानस भले ही आम आदमी के लिए रामचंद्र की एक कथा भर हो जो हमें समाज की बेहतरी का संदेश देती है परंतु मानस के माध्यम से तुलसी ने पर्यावरण के विविध रूपों का विस्तृत विवेचन किया है। इस संदर्भ में आज तुलसी की मानस अधिक प्रसांगिक हो गई है। संपूर्ण मानस में जंगलों के अभाव में कोई घटना नजर ही नहीं आती मानस में वर्णित प्रसंगानुसार भरत जब भारद्वाज मुनि के आश्रम में पहुंचते हैं, तो बताते हैं कि उनके साथ विशाल सेना है, फिर भी इस आशंका से हाथियों, घोड़ों और सैनिकों से आश्रम के वृक्ष जल भूमि और वन सालों को कोई नुकसान ना हो इसलिए कहते हैं कि वह अकेले ही वन में जाएंगे। मानस में वृक्ष और जंगल भी पारिवारिक सदस्यों के समान समझे जाते थे। पारिवारिक सदस्यों की भांति ही उनकी कुशल मंगल पूछी जाती थी। वशिष्ठ और भरत जब महर्षि भारद्वाज से मिलने पहुंचे तो उन्होंने पेड़-पौधों और पशु-पक्षियों के कुशल समाचार भी पूछा। लंका विजय के उपरांत अयोध्या लौटते हुए राम जब महर्षि अगस्त्य के आश्रम में उनसे मिलते हैं, तो ऋषि से याचना करते हुए कहते हैं कि अयोध्या जाते हुए मार्ग के सभी वृक्ष मौसम ना होने के बाद भी फल-फूलों से लदे हों एवं अमृत के समान उनकी सुगंध हो। रामचरितमानस में जहां भी आश्रमों का वर्णन मिलता है, वह सघन जंगलों से घिरे दिखाई देते हैं। उनके आसपास सरोवर होते हैं, जिसमें सदैव जंतु भी उपस्थित हैं। क्योंकि तुलसी ने मानस में जितने विशाल वृक्षों का वर्णन किया है, वह सघन जंगलों की कल्पना के लिए पर्याप्त है। देखा जाए तो वर्णन के क्रम में यह स्पष्ट होता है कि लंका के वनों की सघनता

के कारण हमेशा अंधकार छाया रहता था। राम और रावण तुलसीदास जी के दो ऐसे पात्र हैं, जो विपरीत ध्रुव वाले कहे जा सकते हैं, परंतु दोनों के बीच एक समानता यह थी कि दोनों ही सघन जंगल के स्वामी थे।

निष्कर्ष

रामचरितमानस में पर्यावरण के विविध रूपों के वर्णन के साथ ही धर्म के नैतिक आवरण में प्रदूषण रहित पर्यावरण के लिए मंत्रों का सृजन किया गया है। जिसमें सदियों पुरानी परंपराओं के आधार पर प्रदूषण रहित विशुद्ध और स्वस्थ जीवनयापन की विभिन्न विधाएं मौजूद हैं। मानव और पर्यावरण को एक दूसरे से अलग नहीं किया जा सकता है। रामचरितमानस लगभग हर घर में पढ़ा जाता है। आज इसके संदेश को घर-घर तक पहुंचाने की आवश्यकता है। रामचरितमानस में वर्णित प्रकृति प्रेम का यह संदेश समय, धर्म एवं देश की सीमा से परे सर्वकालिक एवं सर्वजन हिताय हेतु प्रस्तुत करने की एक अनोखी पहल है।

संदर्भ ग्रंथ सूची

1. श्रीमद्गोस्वामी तुलसीदास, रामचरितमानस, गोरखपुर, गीताप्रेस, गोरखपुर, आई.एस.बी.एन- 293-0017-6
2. महर्षि वाल्मीकिय - श्रीमद् वाल्मीकीय रामायण, गीता प्रेस, गोरखपुर, Volume-1,2 तृतीय संस्करण संवत्-2033
3. आर.सी.चांदना, पर्यावरण भूगोल, लुधियाना कल्याणी पब्लिशर्स, प्रथम संस्करण-2006, नई दिल्ली
4. डॉ. उदयभानू सिंह, तुलसी चिंतन अनुचिंतन, राधाकृष्ण प्रकाशन, नईदिल्ली, प्रथम संस्करण- 1966
5. विश्वनाथ त्रिपाठी, लोकवादी तुलसीदास, राधाकृष्ण प्रकाशन, नई दिल्ली, प्रथम संस्करण- 1974

अरुण कमल के काव्य का सर्वेक्षण

डॉ. बबीता त्यागी*

समकालीन हिन्दी कविता वास्तव में एक जनचेतना है जो समकालीन कवि को मुल्यान्वेषी बनाती है। कहा जा सकता है समकालीन कवियों में सिर्फ वर्तमान में जीने की इच्छा है वर्तमान विभीषिका है और वर्तमान जिजीविषा है कभी—कभी ऐसा प्रतीत होता है कि वर्तमान से आगे या पीछे इनकी दृष्टि ही नहीं जाती। आज की जैसी परिस्थितियाँ हैं उसमें मानव की पहचान गायब होती जा रही है। एक ओर आम आदमी का जीवन बद से बदतर होता जा रहा है। दूसरी ओर खास आदमी भौतिक समृद्धि की पराकाष्ठा पर है। मेहनत करने के उपरान्त भी दो जून की रोटी न जुटा पाने का आक्रोश व्यक्ति को तिलमिला देता है। इसी प्रकार आज का कवि अपनी पूर्व मान्यताओं, आस्थाओं और रूढ़ परम्पराओं से भी उलझता है। समकालीन कवि समाज में फैली विडम्बनाओं एवं विसंगतियों से जूझने के लिए अपने विवेक के आधार पर परम्परा, इतिहास, राजनीति तथा समाज का पुनर्मुल्यांकन करता है, फिर उन्हें अपने अनुभव की कसौटी पर कसकर कविता में अभिव्यक्त करता है।

समकालीन कवि अपनी बात कहने के लिए शारीरिक नग्नता एवं अश्लीलता का भी सहारा लेता है। वह काव्य के लिए किसी भी प्रसंग या घटना को त्याज्य नहीं समझता। वास्तव में वर्तमान सत्य से कटकर कोई भी रचनाकार स्थायी पहचान नहीं बना सकता। कवि आम आदमी के अधिकाधिक निकट जाता है। आज की परिस्थितियों में अरुण कमल जैसे कवि लक्षित करते हैं कि समकालीन परिवेश में सामाजिक भ्रष्टाचार दिन—प्रतिदिन बढ़ता जा रहा है। वह भ्रष्टाचार, रिश्वतखोरी, मुनाफाखोरी, कालाबाजारी, लालफीताशाही, गुण्डागर्दी, चोरी, डकैती, राहजनी दहेज की दानवी लीला एवं बलात्कार के रूप में अपने पंजे समाज में फैला रहा है। पैसा कमाने की ललक ने स्त्रियों के नैतिक चरित्र का पतन कर दिया है। वह देह के बल पर जीवन की समस्त सुख—सुविधाओं को प्राप्त करने में भी नहीं हिचकती हैं। अर्जन्त विज्ञापनों, ब्युटी कांटेस्टों के माध्यम से पैसा कमाने में उन्हें कोई शर्म महसूस नहीं होती। कार्यालयों में कार्यरत महिलाएँ अपने जिस्म के बल पर लगातार तरक्की की सीढियाँ चढ़ती जाती हैं। वहीं शिक्षित युवा बेरोजगार अपनी—अपनी डिग्रियाँ सीने पर लादे दर—दर भटकने, आत्महत्या, चोर बाजारी, सामप्रदायिक दंगे करने में ही अपना जीवन होम कर देते हैं। सरकारी महकमे भ्रष्टाचार के अड्डे बन गए हैं, और रिश्वत को आज दूसरे वेतन के रूप में देखा जा रहा है। आज के कवि के अनुसार, राजनैतिक भ्रष्टाचार एवं लोकतन्त्र समाकालीन परिवेश मानवीय यातना शिविर बन चुका है। कहीं अभाव, कहीं आतंक, कहीं उत्पीड़न का दौर जैसे समकालीन जीवन का अंग हो। ऐसे में लोकतन्त्र बहाना मात्र लगता है। जो इन सभी कविताओं के कथ्य का समाहार है—

*प्रधानाध्यापिका किसान पूर्व माध्यमिक विद्यालय जरौठी, हापुड़।

**‘अपना क्या है इस जीवन में
सब तो लिया उधार
सारा लोहा उन लोगों का
अपनी केवल धार।’ (7)**

अरुण कमल ने अपनी कविताओं में स्पष्ट किया है कि राजनीतिक भ्रष्टाचार और समाज में व्याप्त आर्थिक विषमता के कारण जनसंघर्ष ही प्रतिरोध का एकमात्र रास्ता है।

अरुण कमल ने समकालीन जीवन की असंगत स्थितियों के बीच सच्चाई पर से पर्दा उठाने का भरपूर यत्न किया है। जीवन की पीड़ाओं, विसंगतियों, कष्टों, दुखों आदि का यथार्थवादी अंकन करने के बाद भी आज का कवि हताश, निराश नहीं हुआ है। वह जीवन को सार्थक बनाने में अब भी मानवीयता एवं नैतिकता में आस्था रखता है। वह मानता है कि नैतिकता अभी समाज में कहीं जिन्दा है। आस्थावान व्यक्तियों के आधार पर ही यह विश्व गतिमान है। मानवीयता बिल्कुल निःशेष नहीं हो गई है, उस पर अन्धकार के बादल मँडरा रहे हैं। इतनी पीड़ाओं में जीने के बाद भी समकालीन कवि विषम परिस्थितियों के बाद भी जीवन के प्रति आस्थावान है। अरुण कमल की कविता में जनवादी संघर्ष चेतना पूरे शबाब के साथ उपस्थित है। कितनी ही त्रासद स्थितियाँ उनकी काव्यपंक्तियों में बैठी नजर आती हैं। स्वभावतः उनकी कविताएँ जिन्दगी से सीधे साक्षात्कार करती हैं। कवि ने पूरी शक्ति के साथ सूचित किया है कि यह वही धरती है जहाँ विसंगति, बिडम्बना और आक्रोश जन्म लेते हैं और यही वह भूमि है जहाँ अनगिनत त्रासदियों के बीच आदमी जीने को विवश है। इन्हीं सब स्थितियों से हमारे वर्तमान परिवेश की जमीन पटी पड़ी है और इसी पर साँस लेने वाला संवेदनशील कलाकार अपनी कविता का पट इन्हीं स्थितियों के धागों से बुन रहा है। ये सभी स्थितियाँ अनिवार्यताएँ बनकर कवि के गले में फंसी हुई हैं। आज के आदमी को उसके समस्त अन्तर्विरोधों के साथ संकल्प विकल्पों और निश्चय अनिश्चयों के साथ कवि ने पहचान लिया है। यह पहचान काफी साफ, तेज और तल्लु है तभी तो कविता में एक जोरदार कशिश एक छटपटाहट, असफलता, नैराश्य, स्वप्न भंग और आक्रोश मुद्रा उभरी है। कवि ने आदमी के सामने एक ऐसा दर्पण रख दिया जिसमें वह अपना असली चेहरा तो देख ही सका, अन्दरूनी तस्वीर की हल्की गहरी सभी रेखाएँ भी पूरे रोएँ-रेशों के साथ देख सका। तलघर में छिपे कितने ही बिम्ब ऊपर तैर गये। विज्ञान तो मन की ‘एक्सरे मशीन’ ईजाद न कर सका, किन्तु कविता ने वह काम कर दिखाया। स्पष्ट है कि अरुण कमल की कविताई समकालीन जीवन के सम्पूर्ण इतिहास और भूगोल को प्रस्तुत करने वाली है। उसमें समकालीन भारत का मानचित्र सही रेखाओं द्वारा उजागर किया गया है। हमारे आसपास के परिवेश का सच्चा, निर्मम यथार्थ और साक्षात्कृत जीवन किसी दूसरी कविता में कहाँ हैं? वस्तुतः आज के कवि आज के परिवेश और प्रशासन में व्याप्त झूठी भाषा को सही शब्द दे रहे हैं। इन्होंने चौराहे पर खड़े होकर झूठी शकलें देखी हैं। नकली नकाब देखे हैं, बदलते दृश्य देखे हैं। दुनिया के नक्शे में अपनी, अपने देश की और अपने नक्शे में दुनिया की बदलती स्थितियों को पढ़ा है, गरीबों की आह देखी और धनवानों के ठहाकें देखे हैं, शासकों का दंभ देखा है, शासितों की विवशता पहचानी है, आदमी को कागज, चीज और मुहर बनते देखा और जाना है साथ ही वह सब कि कैसे एक आदमी दूसरे आदमियों की गर्दनों पर पैर रखते हुए ऊँची कुर्सी पर जाता है ? कैसे एक ईमानदार रात भर में बेईमान ‘निकम्मा और अपराधी’

हो जाता है और कैसे पल भर में छप्री ईमानदारी का प्रमाण पा जाता है। धूल, गर्द, गुबार और कीचड़ों को फाँकते नापते आदमी की जिन्दगी की समूची दैनन्दिनी साठोत्तर कविता के पृष्ठों पर अंकित हुई है। इस कविता में आदमी का पूरा चेहरा है, पूरी जिन्दगी है और वह सब है जो उसे यह शकल दे रहा है। कुल मिलाकर, आज की कविता मोहभंग, आक्रोश, अस्वीकार, तनाव और विद्रोह की कविता है। उसका मुहावरा नया है, शैली बेपर्दा है, और इसके साथ ही उसमें जिजीविषा का रंग गहरा है। अरुण कमल की कविताएँ इसी नए मुहावरे की जीवंत कविता हैं क्योंकि उनमें हमारे समय की विसंगतियाँ और संघर्ष मुद्राएँ एकसाथ सुरक्षित हैं। अरुण कमल बेलाडिला एवं पन्त नगर ढूँढ़ते हैं, और हाथ लगती है—

‘वाह! जनरल डायर के जूते ऐसे
कि हर शहंशाह के पांवों में फीट
और बन्दूक की नली हर शहंशाह की
प्यारी इकलौती दूरबीन।’

अपनी केवल धार से ‘पुतली में संसार’ तक अरुण कमल की काव्य विकास का एक सम्पूर्ण कवि की विकास यात्रा रहा है। अपने पहले काव्य संकलन में कवि ने अपनी आधारभूमि की तलाश की है, जिसके सबूत में आगे की कविताएँ पेश की जा सकती हैं। ‘अपनी केवल धार’ की जमीन से ही ‘नये इलाके’ की खोज होती है। यह सही है कि अरुण कमल लगातार अपने शिल्प को सघन और भाषा को परिष्कृत करते चले हैं, लेकिन वह भाषा के कई स्तरों को सृजित नहीं कर सके हैं। जिस तरह निराला और नागार्जुन में भाषा के अनेक स्तर हैं, उसी तरह अरुण कमल में भाषा के अनेक स्तर और शिल्प की विविधता कहीं नहीं है। फिर भी ‘सबूत’ और ‘नये इलाके में’ की कविताएँ मानवस्थिति को संपूर्णता में पकड़ने और व्यापक फलक पर मनुष्य की नियति और उसकी नयी अर्थ छवियों को ढुंढ़ने का गहरा प्रयास है। किंचित् आशंका और हिचक के साथ दिशा की तलाश में ये कविताएँ अब स्मृतियों पर विश्वास नहीं करती। एक सुरक्षित घर के बजाय नये इलाके की तलाश में अरुण कमल के चढ़ते कदम हमें आश्चर्य नहीं, प्रश्नबि(करते हैं और बदली-बदली दुनिया की सैर कराते हैं तथा एक वृहत्तर आयाम से जोड़ते हैं। यह नहीं कि ‘अपनी केवल धार’ की कविताओं में व्यापक परिवेश और विश्वबोध नहीं है, वे हैं और गहरे रूप में हैं, लेकिन समय के साथ ये रूप भी बदल गये होते हैं और नये रूपों की तलाश में बढ़ता कवि इर्द-गिर्द की चीजों को अपनी तीक्ष्ण दृष्टि से देखता चलता है और फिर सम्बन्धों की नई व्याख्या करते हुए ‘पुतली में संसार’ बसाता है। इसी जमीन पर अरुण कमल राजनीतिक प्रश्नों को कायदे से उठाते हैं और विश्वास पूर्वक अपने पुष्ट विवरण प्रस्तुत करते हैं।

अरुण कमल के कविता संग्रहों की कविताएँ अपनी पूरी धात्विक खनन के साथ हमारी स्मृतियों में बजती हैं और हमारी संवेदना के तारों को झंकृत करती हैं। उनमें संपूण मानवीय स्थिति को गहराई में उकेरने का प्रयास किया गया है और अमहत्वपूर्ण समझी जाने वाली चीजों से एक बड़े सत्य का उद्घाटन किया गया है। हर एक छोटी कोशिका में जीवन के बाह्य तरंगों आंतरिक रागों और अर्थ-लयों को सुना जा सकता है। ‘अपनी केवल धार’ की कविताएँ जहाँ अपने आवेग और लावण्य से मोहती हैं और अपनी तरलता एवं ताजगी से जीवन के प्रति लालसा पैदा करती हैं, वहाँ ‘पुतली में संसार’ की कविताएँ वर्तमान व्यवस्था के प्रति जहोजहद करते आदमी की आंतरिक ताकत और उसकी संगठित शक्ति के पुंजीभूत स्वरूप को सामने रखती हैं।

कवि प्रकृति परिवेश की प्रकृति से विलग नहीं, प्रकृति कवि के परिवेश से विलग होती जा रही है। कवि के संसार की प्रकृति ही कुछ ऐसी है। प्रकृति के बदलते परिवेश से कवि ने जन जीवन को जोड़ा है। एक संतुलन बनाये रखने की कोशिश की है। यही कोशिश विविधता भरी है। यही वजह है कि प्रकृति के चित्रांकन में सजीवता क्षीण हुई है। जहाँ वैज्ञानिक प्रविधि से मूल्यांकित भाव ज्ञान तक विस्तारत परिलक्षित है—

‘पर आज पहली बार जब देखा है

डाल पर पकते इस फल को

तभी जाना है असली रंग स्वाद गंधा

इस छोटे से फल के

धरती- आकाश तक फैले संबंध। । ’

इसका कारण यही है कि अरुण कमल ने समकालीन कविता में संघर्ष की चेतना, अंधेरे से लड़ने की रोशनी का आवाहन करते हुए अलग पहचान बनाई है। आज का परिवेश, आज के व्यक्ति की आवश्यकताएँ सभी में परिवर्तन आया है। यह परिवर्तन समाज में मूल्यों के बदलाव की सूचना देता है। निश्चय ही समकालीन कवि यथार्थ के अधिक निकट है। वे कविता को केवल आनन्द और मनोरंजन की वस्तु नहीं मानते, वरन् कविता उनके लिए ‘कमिटमेंट’ का आधार है। वास्तव में यह ‘इन्वाल्मैण्ट’ और ‘कमिटमेंट’ की कविता है जो राजनीति से किसी प्रकार से दुराव की पक्षधर नहीं है। कविता अनेक पड़ावों से होती हुई आज जिस स्तर को प्राप्त कर चुकी है उससे स्पष्ट है कि कविता को पहचान आज पुराने मानदण्डों के आधार पर नहीं की जा सकती। आज के परिवेश में बदलाव आया है और यह बदलाव मूल्यों के बदलाव की सूचना देता है। इसलिए समकालीन कविता निषेध, मोहभंग, संत्रास, लघुता, पीड़ा बोध की कविता नहीं है वह तो कवि के समाज के साथ गहरे जुड़ाव की कविता है, जो राजनीति से किसी प्रकार के अंतराल का अभ्यासी नहीं है। इसी जमीन पर लिखी गई अरुण कमल की कविताएँ गहरी सामाजिक चेतना और सुदृढ़ संघर्ष भावना का परिचय देती हैं। जनयथार्थ के तमाम पहलुओं को अपनी कविता की अंतर्वस्तु में अंतर्निहित करते हुए कवि ने अपने धारदार कवि कर्म का परिचय दिया है। उनकी कविता स्थानीयता और वैश्विकता, सहजता और मानवीय संदर्भों की जटिलता, संगठन और संघर्ष को एक दूसरे से मिलाती हुई एक दुर्लभ प्रक्रिया पूरी करती है।

अरुण कमल समकालीन बोध के प्रतिष्ठित जनवादी कवि हैं। आज की हिन्दी कविता पर विचार करने के पूर्व उन मुद्दों और प्रवृत्तियों को रेखांकित करना आवश्यक है जो 1990 के करीब से लेकर अब तक राष्ट्रीय अंतरराष्ट्रीय स्तर पर विद्यमान है और जिनसे हिन्दी कविता रू-ब-रू होती जा रही है। सोवियत रूस का विघटन, भूमण्डलीकरण, आर्थिक उदारीकरण, विश्व आतंकवाद, साम्प्रदायिकता, राजनीति और धर्म का गठबंधन, राजनीति और माफिया की युगलबंदी, दलित विमर्श, स्त्री विमर्श— ये ऐसे मुद्दे हैं जो विश्व स्तर पर दिखायी देते हैं और विवेच्य युग की कविता में ये प्रवृत्तियाँ बड़ी प्रबलता के साथ उभरी हैं। इनमें बहुत कुछ साकारात्मक, बहुत कुछ नाकारात्मक, बहुत कुछ विस्फोटक, बहुत कुछ नवीनता के द्योतक और बहुत कुछ आम जीवन को निगलनेवाली है। चूँकि इस काल में एक नया जीवन आया है, पूरे विश्व में नयी विशिष्टताएँ आयी हैं, इसलिए कविता में भी एक नया भाव-बोध उभरा है। उपभोक्ता-संस्कृति के विश्व-प्रपंच, बाजारवाद के लुभावने दृश्य, सत्ता-संघर्ष सदृश आंदोलन का अभाव और उसकी जड़ता, धर्म का राजनीतिकरण— जो

हमारे समक्ष एक समस्या के रूप में है, उनसे हिन्दी कविता आँख मिलाती है। अतः यह कविता कहीं युग से अपना संवेदनात्मक और कहीं प्रतिक्रियात्मक सरोकार स्थापित करती है और उसमें सारे भूमंडल की तस्वीरें देखी जा सकती हैं। इसमें पुरानी और नयी दोनों पीढ़ी के रचनाकार शामिल हैं। यह पूरे आत्मविश्वास और पुष्ट प्रमाणों के साथ कहा जा सकता है कि हिन्दी कविता में जहाँ शाश्वत सवाल उठाए गए हैं, वहीं वह समकालीन दबावों और समस्याओं से भी निरपेक्ष नहीं है। इस काल की कविता की संवेदना और उसमें उठाए गए सवाल अपने युग की उर्वर भूमि से उपजी संवेदना और सवाल हैं जिनसे कविता जूझती है और हमें उन सवालों पर सोचने को बाध्य करती है।

यह सच है कि पूँजीवादी और साम्राज्यवादी शक्तियाँ समाजवादी व्यवस्था को पीछे धकेलने में सफल हो गयी है जिसकी प्रत्यक्ष मिसाल रूस के समाजवादी दुर्ग का ढहना है। रूस के समाजवादी ढाँचे के विद्यमान होने तक लोग समाजवाद के स्वप्न देखते थे, किन्तु उनके ध्वस्त होने के बाद, साम्राज्यवाद की प्रबल शक्तियों के समक्ष समाजवाद की निरीहता लोगों के मन में निराशा और उदासीनता का भाव पैदा करती है क्योंकि उनके मन में जिस प्रगतिशील व्यवस्था का एक खाका था और जो देश उसका आदर्श था, वहीं ध्वस्त हो गया। सोवियत संघ के विघटन की पीड़ा को लेकर शायद ही कोई कविता आयी हो, शायद इसका कारण यह हो कि संगठनों और आंदोलनों के प्रति लोग उदासीन हुए हैं और कहीं न कहीं वे पूँजीवादी मानसिकता से ग्रस्त हैं। इसके बावजूद कविता अपने सामाजिक दायित्वों और प्रगतिशील विचारों से कटी हुई नहीं है। नब्बे के बाद की अनेक कविताओं में इसका यथार्थ चित्रण मिलता है।

अस्तित्व रक्षा और स्वाधीनता मनुष्य के बुनियादी सवाल हैं। अरुण कमल स्वतंत्रता और समानता के आदर्श तथा आवाम की शक्ति और संभावना के प्रति बेहद संवेदनशील कवियों में से एक हैं। उनकी सभी कविताएँ लोकजीवन के रस से सराबोर हैं और चिंतन की तीक्ष्णता से अनुप्राणित हैं। 'अपनी केवल धार (1980)', 'सबूत (1989)' 'नए इलाके में' (1996) और 'पुतली में संसार (2004) में एकत्र उनकी सभी कविताओं में समकालीन काव्यलोक का प्रतिनिधित्व करती है।

सहायक ग्रंथ सूची

1. अरुण कमल: अपनी केवल धार, वाणी प्रकाशन, दिल्ली, संस्करण - 4, 2006
2. अरुण कमल: सबूत, वाणी प्रकाशन, दिल्ली, संस्करण - 3, 2004
3. अरुण कमल: नए इलाके में, वाणी प्रकाशन, दिल्ली, संस्करण - 3, 2006
4. अरुण कमल: पुतली में संसार वाणी प्रकाशन, दिल्ली संस्करण - 2, 2006
5. अरुण कमल: कविता और समय वाणी प्रकाशन, दिल्ली संस्करण - 2, 2002
6. अशोक वाजपेयी : कवि कह गया है आधार प्रकाशन, पंचकूला 1999
7. डॉ. कैलाश चन्द्र भाटिया : हिन्दी भाषा में अक्षर तथा शब्द की सीमा लिपि प्रकाशन, दिल्ली 1985
9. डॉ. गोविन्द चातक : प्रसाद के नाटक-सर्जनात्मक धरातल एवं भाषिक चेतना, तक्षशिला प्रकाशन, दिल्ली 1981
10. गोस्वामी तुलसीदास : विनय पत्रिका , सं० - योगेन्द्र प्रताप सिंह, लोकभारती प्रकाशन, इलाहाबाद 1998
10. जगदीश चतुर्वेदी : इतिहासहन्ता, सन्मार्ग प्रकाशन, दिल्ली 1976
11. डॉ. त्रिभुवन सिंह (सं०), अत्याधुनिक साहित्यिक निबंध, रत्ना पब्लिकेशंस, दिल्ली 1998
12. डॉ. धीरेन्द्र वर्मा (सं०) हिन्दी साहित्य कोश, भाग-1, ज्ञान मण्डल, वाराणसी, संस्करण - 2, 1996

हिन्दी की प्रगतिशील आलोचना

डॉ. बबलू सिंह*

सामान्यतः व्याख्या या मूल्यांकन को आज हम आलोचना कहते हैं। जिस प्रकार रचनाकार अपने आस-पास के वातावरण से प्रभावित एवं प्रेरित होकर सृजन करता है, उसी प्रकार आलोचक रचना से प्रेरित एवं प्रभावित होकर आलोचना की सर्जना करता है। किसी युग की आलोचना का स्तर उसके साहित्य के स्तर को प्रतिबिम्बित करता है।

आलोचना ज्ञान की एक विशिष्ट शाखा के रूप में स्वयं में तो उपयोगी है ही साथ ही वह रचना, रचनाकार एवं पाठक तीनों में एक ज्ञानात्मक समन्वय उपस्थित करने का भी कार्य करती है। आलोचक का काम मात्र कोरे फतवे जारी करना न होकर साहित्य की सर्जनात्मक एवं सामाजिक उपादयता को विश्लेषित करना है। रचना सदैव आलोचना के आगे-आगे चलती है। जितनी चुनौतीपूर्ण एवं व्यापक तथा गहन संवेदनायुक्त रचना होगी आलोचना को उतनी ही सूक्ष्म दृष्टि एवं महत् विश्लेषणात्मक शक्ति की आवश्यकता होगी। मनुष्य की अनुभूति एवं संवेदना की व्यवस्थित अभिव्यक्ति के साथ ही उसकी व्याख्या एवं मूल्यांकन का क्रम भी जुड़ता है। प्रगतिशील आलोचना की शुरुआत 1936 में स्थापित 'प्रगतिशील लेखक संघ' की स्थापना से होती है। अपने वक्तव्य के माध्यम से प्रेमचन्द जी ने प्रगतिशील साहित्य का मार्गदर्शन किया जिससे जनसामान्य की पक्षधरता इसका प्रमुख संकल्प हुआ। उन्होंने अपने अध्यक्षीय उद्बोधन में साहित्यकार को स्वभावतः प्रगतिशील बताते हुए प्रगतिशीलता का लक्षण यों बताया कि 'वह अप्रिय अवस्थाओं का अन्त कर देना चाहता है।

भारत में एक ओर जहाँ प्रेमचन्द जी के नेतृत्व में लेखकों को संगठित करने तथा भारतीय भाषाओं के एकीकरण एवं अन्तः संबंधों की दिशा में बढ़ने का प्रयत्न हो रहा था, वहीं दूसरी ओर सोवियत संघ में मैक्सिम गोर्की के नेतृत्व में 1934 में 'सोवियत लेखक संघ' का गठन हुआ। लेखकों को संगठित करने का एक ऐसा ही व्यापक प्रयत्न जुलाई 1935 में हेनरी बारबूज के नेतृत्व में पेरिस में हुआ। संस्कृति की रक्षा के लिए विश्व लेखक अधिवेशन जुलाई के महीने में पेरिस में बुलाया गया। इसके संयोजकों में मैक्सिम गोर्की, रोम्यारोलाँ, आंद्रेमालरो, टॉमस मान, वाल्डे फ्रैंक, जैसे विश्वविख्यात साहित्यकार थे। 'सज्जाद जहीर के वाले से यह बात ज्ञात होता है कि इस अधिवेशन ने फासिज्म के विरोध में उत्पीड़ित राष्ट्र के शोषित जनगण के समर्थन में एवं विचार स्वातंत्र्य की रक्षा के लिए लेखकों की आवाज बुलंद की।' इसी अधिवेशन में सारी दुनिया में प्रगतिशील लेखकों की एक स्थायी समिति चुन ली गई, जिसके अध्यक्ष अंग्रेजी के सुप्रसिद्ध कथाकार ई0 एम0 फास्टर बनाए गए तथा उसका केन्द्रीय कार्यालय पेरिस में खोला गया। इसी समय 1935 में ही लंदन के प्रवासी भारतीयों में से कुछ समाजवादी विचारधारा के बुद्धिजीवियों ने 'भारतीय प्रगतिशील लेखक संघ' की स्थापना की, जिसमें मुल्कराज आनंद को अध्यक्ष तथा सज्जाद जहीर को सचिव चुना गया। प्रगतिशील समीक्षा और साहित्य को प्रगतिशील लेखक संघ से एक देशव्यापी विस्तृति प्राप्त हुई। प्रगतिशील लेखक संघ भारत

*सहायक प्रोफेसर हिन्दी विभाग जे. एस. हिन्दू (पी.जी.) कॉलेज, अमरोहा।

में एक लंबी अवधि से मात्र संघ के रूप में ही नहीं बल्कि एक सशक्त आंदोलन के रूप में हिन्दी साहित्य का नेतृत्व संभाले हुए चल रहा है।

भारतीय साहित्य में प्रगतिशील आंदोलन का प्रादुर्भाव जनता के साम्राज्यवाद—सामंतवाद विरोधी मुक्तिसंघर्ष के स्वाभाविक विकास के रूप में हुआ। देश में स्वतंत्रता के आंदोलन और अन्तर्राष्ट्रीय स्तर पर सोवियत क्रान्ति ने प्रगतिशील साहित्य लेखन को व्यापक फलक प्रदान किया। उस समय के रचनाकारों, आलोचकों ने इस सामाजिक बदलाव की प्रक्रिया को आत्मसात् कर अपनी रचना के माध्यम से उसकी सार्थक अभिव्यक्ति की है। यह प्रगतिशील साहित्य कोई स्थिर मतवाद नहीं है, बल्कि यह एक निरन्तर विकासशील साहित्यधारा है, जिसके लेखकों का विश्वास है कि प्रगतिशील साहित्य लेखक की स्वयंभू अंतःप्रेरणा से उद्भूत नहीं होता, बल्कि सामाजिक और सांस्कृतिक विकास के क्रम से वह भी परिवर्तित और विकसित होता रहता है और उसके सिद्धांत उत्तरोत्तर स्पष्ट तथा अधिक पूर्ण होते चलते हैं।¹ चूँकि समाज के सम्बन्धों और मनोवृत्तियों के बदलने के साथ-साथ साहित्य का स्वरूप भी बदला करता है। फलस्वरूप रचना के स्वरूप और आलोचना के मानदण्ड दोनों में परिवर्तन उपस्थित हुआ करते हैं। प्रगतिशीलता का भेदक लक्षण कोई विशेष कालखण्ड नहीं होता, बल्कि अपने युग की अभिव्यक्ति है। साहित्यकार अपने युग की सीमाओं से सीमित अवश्य रहे हैं, किन्तु उन्होंने अपने साहित्य में अन्याय पर न्याय की विजय का वर्णन किया है। प्रेमचंद के शब्दों में कहें तो 'अप्रिय अवस्थाओं का अंत कर देना चाहा है।'

मार्क्सवादी दृष्टि मूल रूप में ऐतिहासिक और सामाजिक दृष्टि है जो किसी वस्तु का अध्ययन देशकाल के परिप्रेक्ष्य में करती है तथा अपने विवेचन के केन्द्र में विवेच्य के अन्तर्विरोधों का विश्लेषण करके वैज्ञानिक ढंग से प्रतिक्रिया और प्रगति के तत्वों को अलग-अलग करती है। यह आलोचना दृष्टि ऐतिहासिक संदर्भ में रचना का अध्ययन तथा मूल्यांकन करती है। चूँकि इसकी दृष्टि इतिहास सापेक्ष होती है, इस कारण से उसका कार्यक्षेत्र व्यापक होता है। प्रगतिवादी आलोचना को ठीक ढंग से समझने के लिए केवल तत्कालीन सामाजिक स्थिति तथा आंदोलनों का विवेचन ही पर्याप्त न होगा अपितु विज्ञान एवं यंत्र के बढ़ते प्रभाव तथा तज्जन्य सामाजिक स्थिति के कारण साहित्य चिंतन में सामाजिक जीवन के महत्व को भी रेखांकित करना होगा। प्रगतिशील आलोचना ने इसी बल पर विकासमान सामाजिक दृष्टि को एक व्यवस्थित सैद्धान्तिक आधार प्रदान किया तथा सामाजिक जीवन की स्वीकृति के आधार पर ही साहित्य और आलोचना सम्बन्धी विचारों को प्रस्तुत किया।

इस प्रकार इस आलोचना शैली की प्रमुख विशेषता यह सिद्ध होती है कि साहित्य का निर्माण सोद्देश्य है और यह उद्देश्य है सामाजिक यथार्थ का सही और मार्मिक उद्घाटन। परम्परा और रूढ़ संस्कारों और यथार्थ के बीच संबंध संतुलन का नहीं बल्कि निरंतर द्वन्द्व का संबंध होता है। पुराने और नये के बीच यही अनिवार्य द्वन्द्व यथार्थ के विकास का नियम है। 'यथार्थ का ज्ञान तथाकथित वर्ग-निरपेक्ष शिक्षा और संस्कार पर निर्भर न होकर इस बात पर निर्भर होता है कि कोई व्यक्ति जनसमुदाय के जीवन से कितना निकट है, उसके संघर्षों में कितनी रूचि या भाग लेता है। ऐसा व्यक्ति अपने यथार्थ-बोध के लिए अपनी आत्मिक सच्चाइयों से साक्षात्कार का हवाला नहीं देता। वह हवाला देता है अपने युग की आत्मा का, उसमें अंकुरित नये तत्वों का, उसकी विकासशील प्रवृत्तियों का और उन प्रवृत्तियों की उन्नायक शक्तियों का।'²

प्रायः ऐसा सोच लिया जाता है कि वस्तु-स्थिति से कोई संबंध रखे बिना कल्पनालोक में विचरण करने वाला साहित्यकार 'कल्पनावादी तथा किसी प्रकार की कल्पना का आश्रय लिए बिना वस्तुस्थिति का वर्णन करने वाला साहित्यकार यथार्थवादी कहा जाना चाहिए और इसी कसौटी पर परखकर प्रगतिशील साहित्यकार को साहित्य के अधिकृत क्षेत्र की परिधि से बहिष्कृत करने की चेष्टा की जाती है, क्योंकि कहा जाता है कि आमूल-चूल वास्तविक जगत की समस्याओं से उलझने वाला मार्क्सवादी कल्पनावादी तो हो ही नहीं सकता लेकिन अपने सिद्धान्तीय पूर्वाग्रहों का वशवर्ती होकर वास्तविक जगत के अपने चित्रण को विकृत कर डालने के कारण वह यथार्थवादी कहलाने का भी अधिकारी नहीं। मार्क्सवादी साहित्यकार के विरुद्ध लगाए गए इस आक्षेप पर यथातथ्यवादी तथा विज्ञानवादी दार्शनिकों के मतिश्रम की छाया है। वस्तुतः साहित्य समीक्षा की पारिभाषिक शब्दावली में वस्तु पक्ष तथा कलापक्ष का अनुपात के अनुरूप स्फुटन ही सत्साहित्य का लक्षण है।³ अतीत में जिस पुस्तक ने जीवन की सतह के नीचे काम करने वाली शक्तियों को प्रतिबिम्बित किया है वह बहुत संभव है हमारे आज के बुनियादी यथार्थ के विषय में भी महत्वपूर्ण बातें बता सकें। सतह के ऊपर गति नीचे से अधिक छिप्र होती है और जितनी ही गहराई से किसी लेखक की अन्तर्दृष्टि सतह भेदकर नीचे पहुंचेगी उतने ही दीर्घकाल तक उसकी कृति परिवर्तनशील यथार्थ जगत के प्रति बासी पुरानी नहीं पड़ेगी।⁴ इस प्रकार प्रगतिशील आलोचना का प्रमुख मानदण्ड यह हुआ कि रचना में सामाजिक यथार्थ की अभिव्यक्ति हो। लेकिन आज यह पर्याप्त नहीं है। आज के प्रगतिशील साहित्य की केंद्रीय भूमिका समाजवादी चेतना का विकास ही नहीं बल्कि जनवादी चेतना का विकास है।⁵

प्रगतिशील आलोचना ने एक नई समीक्षा पद्धति का भी विकास किया है, वह पद्धति है परम्परा के मूल्यांकन की। यह कार्य इतना जटिल है कि किसी भी अन्य समीक्षा प्रणाली ने आज तक यह दुष्कर कार्य अपने हाथों में नहीं लिया था। नामवर सिंह ने तो यहाँ तक कहा है कि परम्परा का मूल्यांकन इतना कठिन कार्य है कि एक व्यक्ति अथवा युग या विचारधारा द्वारा उसका अन्तिम निर्णय हो सकना असंभव है।⁶ परम्परा के मूल्यांकन के प्रश्न को लेकर स्वयं आचार्य शुक्ल में भी अपने अन्तर्विरोध रहे हैं। कुछ हद तक आचार्य हजारी प्रसाद द्विवेदी ने इस कार्य को सार्थक ढंग से अवश्य किया है। लेकिन प्रगतिशील आलोचना का तो यह प्रमुख उपजीव्य ही हो गया। "प्रगतिवादी समीक्षा प्रणाली ने जो सबसे महत्वपूर्ण कार्य किया है वह यह है कि परम्परा के प्रतिगामी तत्वों को अलगाकर उनमें अविच्छिन्न रूप से प्रवाहित और विकसित होने वाले प्रगतिशील तथा जीवन्त तत्वों को उभारकर सामने रखा। उन्होंने यह प्रमाणित किया कि साहित्य की प्रगतिशील परम्परा जनवाद की परम्परा है— इसकी मुख्य प्रेरक शक्ति जनता है— जो पुरोहितों, महन्तों, राजाओं, नवाबों, बदमाशों, सेठों और साहूकारों के अत्याचार झेलती हुई भी जातीय प्राणशक्ति को निरन्तर जीवनदान देती हुई आगे बढ़ी चली आ रही है।"⁷ इस प्रकार एक ओर जहाँ परम्परा के मूल्यांकन पर प्रगतिशील आलोचना में इतना जोर दिया जा रहा है, वहीं उसके विवेकपूर्ण इस्तेमाल तथा निषेधात्मक तत्वों से भी टकराने की बात कही जा रही है। इस प्रक्रिया में कुछ लोग परम्परा को तोड़ना भी चाहते हैं लेकिन 'परंपरा भंजन की प्रवृत्ति निश्चय ही त्याज्य है, साथ ही परम्परा का ऐसा पूजन भी त्याज्य ही है जो उसके निषेधात्मक तत्वों से टकराने के बजाय उन्हें गोल कर जाना अधिक उचित मानता हो।'⁸ इस प्रकार परम्परा

का मूल्यांकन केवल बौद्धिक विलास की चीज नहीं है बल्कि उसके माध्यम से हम अपने वर्तमान को अड़िाक उत्कृष्ट बना सकेंगे तथा अतीत के रूढ़िगत तत्त्वों को त्यागकर प्रगतिशील तत्त्वों को समाज के सम्मुख रख सकेंगे। परम्परा के प्रति पूजा भाव और उसकी अवहेलना दोनों ही मार्क्सवादी चिन्तन की प्रक्रिया तथा विकास के लिए घातक हैं।

आलोचना के क्षेत्र में प्रतिमानों के बदलने के साथ ही सौन्दर्य के प्रतिमान भी बदले। इस प्रक्रिया में सौन्दर्य कोई विशेष चीज न रह गई या यों कहें कि जोर इस बात पर अधिक नहीं रह गया कि रचना में किस प्रकार का सौन्दर्य है, बल्कि उस सौन्दर्य का कारण क्या है या उस सौन्दर्य की परिणति रचना में किस प्रकार हुई? नामवर जी के शब्दों में कहें तो— “प्रगतिवादी समीक्षा की मौलिक समस्या यह नहीं है कि कौन रचना कितनी सुन्दर है; मौलिक समस्या यह है कि रचना में वह सौन्दर्य शक्ति आती कहाँ से है?”⁹ इस प्रश्न का उत्तर स्वयं देते हुए वे कहते हैं कि— “लेखक में शक्ति जनता से आती है, जनता के साथ उसका सम्बन्ध जितना ही घनिष्ठ होता है, उसमें उतनी ही अधिक रचनाशक्ति आती है और उसकी रचना में उतना ही अधिक सौन्दर्य बढ़ता है। इसके विपरीत ज्यों ही लेखक अपने उस अक्षयस्रोत से हट जाता है, उसकी सारी शक्ति जवाब दे जाती है। हिरण्यकश्यप की तरह उसकी मृत्यु तभी होती है जब उसका पांव धरती से उठ जाता है। इस सिद्धान्त की व्याख्या करते हुए प्रगतिशील आलोचना यह भी निष्कर्ष निकालती है कि श्रेष्ठ रचना करने के लिए साहित्यकार को अनिवार्य रूप से जनता का पक्षधर होना ही पड़ेगा।”¹⁰ इस प्रकार जमीन से कटकर या अपने परिवेश और सामान्य जन से पृथक होकर कोई भी रचनाकार कालजयी रचना नहीं कर सकता। इसी कारण जो तथाकथित महान लेखक होते हैं, वे अपनी रचना में जनता की कभी उपेक्षा नहीं करते। वास्तव में जनसामान्य से पृथक रहकर कोई महान कृति आज तक सम्भव ही नहीं हुई।

प्रगतिवाद ने आलोचना के शुद्ध मानदण्ड का निर्माण “सामाजिकता की प्रतिष्ठा” द्वारा किया है। जहाँ पहले श्रेष्ठता तथा निकृष्टता का निर्धारण व्यक्तिगत अभिरूचियों पर केन्द्रित था वहाँ प्रगतिशील आलोचना ने सबसे पहले किसी रचना के ऐतिहासिक महत्व को जांचने का सुझाव दिया। “प्रगतिवाद के अनुसार व्यक्तिनिष्ठा ‘सब्जेक्टिव’ ढंग से किसी रचना का मूल्यांकन कठिन ही नहीं भ्रामक भी है। रचना को उसकी ठोस सामाजिक पीठिका में रखकर देखना चाहिए कि वह समाज के विकास में कितना योग देती है।”¹¹ इसी ऐतिहासिक मूल्य से विकसित होकर आलोचना के क्षेत्र में एक परम्परा का निर्माण होता है जिसके आधार पर प्राचीन से लेकर वर्तमान तक के साहित्य का समुचित मूल्यांकन संभव होता है। “प्रगतिवाद ने स्थापित किया कि किसी रचना का शाश्वत मूल्य उसके ऐतिहासिक मूल्य में ही निहित है और ऐसे ही ऐतिहासिक मूल्यों से समीक्षा के क्षेत्र में एक परम्परा बनती है जिसके आधार पर प्राचीन से लेकर आधुनिक साहित्य का तुलनात्मक मूल्यांकन किया जा सकता है। इस तरह प्रगतिवाद ने समीक्षा को व्यक्तिनिष्ठा, भाववादी पूर्वाग्रह तथा जड़ता से मुक्त करके उसके स्थान पर स्वस्थ, वैज्ञानिक, बोधगम्य, वस्तुनिष्ठ और जनकल्याणकारी ऐतिहासिक समीक्षा पद्धति की प्रतिष्ठा की।”¹² इसी प्रसंग में किसी कृति विशेष का मूल्य या संदेश अधिक प्रश्नगर्भित हो जाता है। मैं समझता हूँ कि किसी रचना या सृजन का फलक जिस अनुपात में उदात्त एवं वृहत् सामाजिक सरोकारों से संपृक्त होगा उसी अनुपात में उसको जनमानस में लोकप्रियता एवं स्वीकृति प्राप्त होगी।

प्रगतिशील आलोचना की समस्याएँ एवं उपलब्धियाँ

प्रगतिशील सौन्दर्यशास्त्र में विश्वास रखने के कारण सभी प्रगतिशील मार्क्सवादी साहित्य दृष्टि के अनुयायी हैं। सभी रूढ़ मान्यताओं के विरोधी तथा प्रगतिशील परम्पराओं के पक्षधर हैं। सभी साहित्य का हेतु समाज को तथा प्रयोजन समाज के निम्नवर्ग को स्वीकारते हैं। साहित्य और परम्परा का विश्लेषण ऐतिहासिक क्रमबद्धता तथा तत्कालीन वातावरण के आलोक में करते हैं। परन्तु उनकी प्रारंभिक मान्यताओं में एकता होने पर भी व्याख्यानों में पर्याप्त अंतर है। वह चाहे इतिहास और परम्परा के प्रश्न को लेकर हो चाहे प्रगतिशील कविता के कवियों की आलोचना हो या कविता के प्रतिमानों की। उनमें बराबर वैचारिक भिन्नता बनी रही।

प्रगतिवाद शोषण के अन्त को अपना मुख्य उद्देश्य मानकर चलता है, लेकिन इसके लिए उसे समाज की मुख्य शोषक और शोषित शक्तियों की पहचान आवश्यक है, जिसका मतलब है, किसी समाज के वर्गीय स्वरूप और उसके मुख्य अन्तर्विरोध की पहचान। अतः उन साहित्य समीक्षकों को जो सौन्दर्यशास्त्रीय प्रश्नों पर मार्क्सवादी ढंग से विचार करने के लिए कृतसंकल्प हैं, लेखक ने रचना-कौशल के पीछे छिपे हुए वर्ग संघर्ष के यथार्थ का उद्घाटन करने की चेष्टा करनी चाहिए। दूसरे शब्दों में कहें तो मार्क्सवादी समीक्षक को प्रत्येक साहित्यिक कृति की परीक्षा उसकी सौन्दर्यात्मक खूबियों और खामियों की दृष्टि से करने के साथ-साथ उसकी वर्गीय विचारधारात्मक अंतर्वस्तु की दृष्टि से भी करनी चाहिए।¹³ प्रगतिशील लेखक संघ की स्थापना के बाद भारतीय मार्क्सवादी साहित्य-समीक्षा की सामान्य कमजोरियों में से एक कमजोरी यह रही कि उसमें प्रायः सृजनशील लेखकों के इस द्वैत पर ध्यान नहीं दिया गया कि उनमें एक ओर अपने आत्मपरक दृष्टिकोण की सीमाएं होती हैं, तो दूसरी ओर यह क्षमता भी होती है कि वे इन सीमाओं का अतिक्रमण करके यथार्थ का सच्चाई के साथ प्रतिबिंब कर सकें।

प्रगतिवादी आलोचकों द्वारा विचारधारा पर सही जोर देने के साथ ही प्रगतिवादी आंदोलन में काफी बड़े पैमाने पर साहित्य के रूपगत पक्ष की उपेक्षा की प्रवृत्ति रही है। यह प्रवृत्ति यथार्थ के चित्रण में विविधता, व्यक्तिगत रुचियों के आधार पर नये-नये रूपों की रचना के रास्ते में अवरोध का काम करती रही है। वर्तमान सामाजिक दौर तीव्र वर्ग-संघर्ष का दौर है। हमारे अधिकांश लेखक मध्यवर्ग से आते हैं, जो स्वयं शोषित वर्ग है और जो आज की सामाजिक परिस्थितियों से घोर असंतुष्ट है। यदि उसके एक हिस्से का असंतोष और विद्रोह अराजकतावादी दिशा की ओर जाता है तो उससे भी बड़े हिस्से का असंतोष और विद्रोह मुक्तिकामी है। उसके असंतोष और विद्रोह को समझना, चित्रित करना और सही दिशा देना आज के प्रगतिवादी आंदोलन का एक महत्वपूर्ण कार्य है।¹⁴

किसी भी प्रतिबद्ध साहित्य को प्रचारात्मक और आंदोलनात्मक होते हुए भी संवेदनात्मक स्तर पर प्रभावशाली होना चाहिए। परन्तु साहित्य के प्रभावशाली होने का यह अर्थ कभी नहीं होता कि पाठक उसे पढ़ते ही लेखक की वांछित दिशा में प्रेरित होकर रचना द्वारा बताये या सुझाये गये कार्य को करने चल पड़ेंगे। साहित्य से न तो ऐसा होता है, न इसकी अपेक्षा की जानी चाहिए।

प्रगतिशील आलोचना : उपलब्धियाँ

प्रगतिशील आलोचना ने लेखकों को कल्पना से उतारकर यथार्थ की ठोस धरती पर ला खड़ा किया और जीवन की असंगतियों तथा समस्याओं को कार्य-कारण रूप में परखने का प्रयत्न किया। प्रगतिवादी आलोचना

के प्रभाव से साहित्य में एक ओर जहां जनसाधारण की आशा-आकांक्षाओं को अभिव्यक्ति मिलने लगी, वहां दूसरी ओर युगीन राष्ट्रीयता के साथ-साथ उसमें अन्तर्राष्ट्रीयता और मानवतावाद का भी समावेश हुआ।

प्रगतिवादी साहित्य में इस व्यापक दृष्टि और महान् विचारणा को सर्वत्र स्वीकृति मिली है। इस प्रकार प्रगतिवादी साहित्य ने मनुष्य को उसके धर्म, संस्कार, जाति, रंग तथा भाषागत सीमाओं से मुक्त कर उसे केवल मनुष्य के रूप में देखने का प्रयत्न किया। प्रगतिशील आलोचना ने देववशोद्भव अथवा धीरोदात्त पात्रों के स्थान पर जन-सामान्य को नायकत्व प्रदान किया। मजदूर, किसान तथा चोर, डाकू आदि भी नायक के रूप में स्वीकार किये जाने लगे। इन पात्रों में अतिवादिता का विरोध होने लगा। “कथाकारों को प्रगतिवादी दृष्टिकोण ने सामाजिक यथार्थवाद के दो खतरों से बचाने का प्रयत्न किया है। एक खतरा तो मनोविश्लेषणवाद की ओर से है जिसमें या तो शेखर और भुवन जैसे सर्वथा अहंवादी और असाधारण पात्रों की सृष्टि की जाती है अथवा इलाचन्द्र जोशी के सेक्सग्रस्त अद्भुत नायकों का निर्माण होता है। इन दोनों की असाधारणताओं से उबारकर प्रगतिवाद ने साधारण पात्रों के निर्माण का गुर बताया। “ लोक-निर्माण और लोक-संस्कृति का पुनरुद्धार प्रगतिशील आलोचना की एक महत्वपूर्ण उपलब्धि है। इस आन्दोलन ने लोक-संस्कृति के विभिन्न पक्षों को स्पर्श करने का जो प्रयत्न किया, उसके फलस्वरूप देश के विभिन्न अंचलों में वहां की बोलियों में साहित्य की सर्जना करने वाले अनेक साहित्यकारों का प्रादुर्भाव हुआ।

हिन्दी का आंचलिक उपन्यास इसी का परिणाम है, जिसमें अंचल विशेष के जन-जीवन और उनकी संस्कृति का वर्णन होता है। इस प्रकार इस आलोचना ने एक नवीन सांस्कृतिक अभियान के द्वारा देश में नव-जागरण का संदेश दिया, जो परिणाम की दृष्टि से अत्यन्त प्रभावशाली है। इस आलोचना के प्रभाव से देश में अनेक प्रगतिशील पत्र भी निकलने लगे। बंगला में ‘परिचय’, हिन्दी में ‘नया साहित्य’, उर्दू में ‘नया अदब’, गुजराती में ‘संस्कार’ और तेलगू में ‘अभ्युदय’ आदि इसके प्रमुख उदाहरण हैं। यह निःसंकोच स्वीकार किया जा सकता है कि प्रगतिवादी आलोचना ने साहित्य और जनजीवन की चेतना में एक नया मोड़ दिया। यही कारण है कि छोटे-छोटे साहित्यिकों से लेकर कवीन्द्र रवीन्द्र और प्रेमचन्द जैसे उच्च कोटि के साहित्यकारों ने इस आन्दोलन का खुलकर समर्थन किया।

यह आलोचना जनता को साथ लेकर चलने में ही अपनी सार्थकता मानता है। स्वाभाविक रूप से जिन देशों में शोषणमूलक पद्धतियों का अभी अन्त नहीं हुआ है, वहाँ प्रगतिवादी साहित्य शोषण के विरुद्ध संग्राम के लिए उकसायेगा, पर जहां सच्चे अर्थों में जनवादी शासन स्थापित हो चुका है, वहां वह निर्माण के हाथों को मजबूत करेगा, अवश्य वह हर हालत में शोषकों के षड्यन्त्रों के विरुद्ध जनता को जागरूक रखेगा। यद्यपि यह आलोचना एक महान् साहित्यिक और सांस्कृतिक लक्ष्य को लेकर चला था, किन्तु अनेक कारणों से वह यदा-कदा लड़खड़ाता रहा है। फिर भी इन सीमाओं और अवरोधों के बावजूद यह जनसाधारण की सेवा के महत्तर लक्ष्य से कभी विचलित नहीं हुआ है।

संदर्भ ग्रन्थ

1	अन्तिम दो दशकों का हिन्दी साहित्य	—	प्रधान सम्पादक— मीरा गौतम, वाणी प्रकाशन, प्रथम संस्करण—2002
2	अधूरे साक्षात्कार	—	नेमिचंद्र जैन, वाणी प्रकाशन, नई दिल्ली, तृतीय संस्करण—2002

3	आलोचना के मान	—	शिवदान सिंह चौहान, संपा0—विष्णुचन्द्र शर्मा, स्वराज प्रकाशन, दिल्ली, प्रथम संस्करण—1958
4	आलोचना के सौ बरस—1	—	संपा0 डॉ. श्रीप्रकाश शुक्ल
5	आलोचक रामविलास शर्मा	—	संपा0 नत्थन सिंह, विभूति प्रकाशन के 014, नवीन शाहदरा, दिल्ली, संस्करण—1984
6	आलोचना के हाशिये पर	—	डॉ. विश्वनाथ प्रसाद तिवारी, नेशनल पब्लिशिंग हाउस, नई दिल्ली, प्रथम संस्करण—2008
7	आलोचना के नए मान	—	कर्णसिंह चौहान, प्रथम संस्करण—2001, स्वराज प्रकाशन, दिल्ली
8	आलोचना—समय और साहित्य	—	रमेश दवे, प्रथम संस्करण—2005, प्रकाशक—भारतीय ज्ञानपीठ, नई दिल्ली
9	आधुनिक कविता यात्रा	—	रामस्वरूप चतुर्वेदी, लोकभारती प्रकाशन, इलाहाबाद, प्रथम संस्करण—1998
10	आलोचक के मुख से— नामवर सिंह	—	संपा0 खगेन्द्र ठाकुर, राजकमल प्रकाशन, प्रथम संस्करण—2005
11	आधुनिकता और उपनिवेश	—	कृष्णमोहन, वाणी प्रकाशन, नई दिल्ली, प्रथम संस्करण—2006
12	आलोचना और आलोचना	—	देवीशंकर अवरथी, वाणी प्रकाशन, नई दिल्ली, प्रथम संस्करण—1995

Endnotes

- 1 आधुनिक साहित्य की प्रवृत्तियाँ— नामवर सिंह, पृष्ठ—64
- 2 आलोचना का जनपक्ष— चंद्रबली सिंह, पृष्ठ 9
- 3 समालोचक खंड 3 से, पृष्ठ 14, मार्क्सवादी दर्शन और साहित्यिक यथार्थवाद (श्री कृष्णकुमार दीक्षित का लेख)
- 4 प्रगतिशील आलोचना— रामदरश मिश्र, पृष्ठ 323—324
- 5 आलोचना का जनपक्ष, प्रगतिवाद पुनर्मूल्यांकन और नई दिशा— पृष्ठ 227
- 6 आधुनिक साहित्य की प्रवृत्तियाँ— पृष्ठ 87
- 7 वही, पृष्ठ 87—88
- 8 तीसरा रूख, पृष्ठ 112
- 9 आधुनिक साहित्य की प्रवृत्तियाँ— पृष्ठ 88
- 10 वही, पृष्ठ 88—89
- 11 आधुनिक साहित्य की प्रवृत्तियाँ— पृष्ठ 90
- 12 आधुनिक साहित्य की प्रवृत्तियाँ— पृष्ठ 91
- 13 आलोचना का जनपक्ष — चन्द्रबली सिंह, पृ0 228
- 14 वही, पृ0 230

States of Matter -Gases and Liquids

Krishan Kumar*

THREE STATES OF MATTER

Physical science, which includes chemistry and physics, is usually thought of as the study of the nature and properties of matter and energy in non-living systems. Matter is the “stuff” of the universe — the atoms, molecules and ions that make up all physical substances. Matter is anything that has mass and takes up space.

Energy is the capacity to cause change. Energy cannot be created or destroyed; it can only be conserved and converted from one form to another. “Potential energy” is the energy stored in an object due to its position — for example, a bucket of water balanced over a doorway has the potential to fall. “Kinetic energy” is energy that is in motion and causing changes. Any object or particle that is in motion has kinetic energy based on its mass and speed. Kinetic energy can be converted into other forms of energy, such as electrical energy and thermal energy.

FIVE PHASES

There are five known phases, or states, of matter: solids, liquids, gases, plasma and Bose-Einstein condensates. The main difference in the structures of each state is in the densities of the particles.

SOLIDS

In a solid, particles are packed tightly together so they are unable to move about very much. Particles of a solid have very low kinetic energy. The electrons of each atom are in motion, so the atoms have a small vibration, but they are fixed in their position. Solids have a definite shape. They do not conform to the shape of the container in which they are placed. They also have a definite volume. The particles of a solid are already so tightly packed together that increasing pressure will not compress the solid to a smaller volume

LIQUIDS

In the liquid phase, the particles of a substance have more kinetic energy than those in a solid. The liquid particles are not held in a regular arrangement, but are still very close to each other so liquids have a definite volume. Liquids, like solids, cannot be compressed. Particles of a liquid have just enough room to flow around each other, so liquids have an indefinite shape. A liquid will change shape to conform to its container. Force is spread evenly throughout the liquid, so when an object is placed in a liquid, the liquid particles are displaced by the object. The magnitude of the upward buoyant force is equal to the weight of the fluid displaced by the object. When the buoyant force is equal to the force of gravity pulling down on the object's mass, the object will float. This principle of buoyancy was discovered by the Greek mathematician Archimedes who, according to legend, sprang from his bath and ran naked through the streets shouting “Eureka!” Particles of a liquid tend

*T.G.T (Science) Janta Inter College, Chhajjupur Dahana-Hapur.

to be held by weak intermolecular attraction rather than moving freely as the particles of a gas will. This cohesive force pulls the particles together to form drops or streams.

Scientists reported in April 2016 they had created a bizarre state of matter, one that had been predicted to exist but never seen in real life. Though this type of matter could be held in one's hand as if it were a solid, a zoom-in on the material would reveal the disorderly interactions of its electrons, more characteristic of a liquid. In the new matter, called a Kitaev quantum spin liquid, the electrons enter into a sort of quantum dance in which they interact or "talk" to one another. Usually when matter cools down the spin of its electrons tends to line up. But in this quantum spin liquid, the electrons interact so that they affect how the others are spinning and never align no matter how cool the material gets. The material would behave as if its electrons, considered indivisible, had broken apart, the researchers reported April 4, 2016, in the journal *Nature Materials*.

GASES

Gas particles have a great deal of space between them and have high kinetic energy. If unconfined, the particles of a gas will spread out indefinitely; if confined, the gas will expand to fill its container. When a gas is put under pressure by reducing the volume of the container, the space between particles is reduced, and the pressure exerted by their collisions increases. If the volume of the container is held constant, but the temperature of the gas increases, then the pressure will also increase. Gas particles have enough kinetic energy to overcome intermolecular forces that hold solids and liquids together, thus a gas has no definite volume and no definite shape

INTERMOLECULAR INTERACTIONS

Intermolecular forces (IMFs) are the forces which mediate interaction between molecules, including forces of attraction or repulsion which act between molecules and other types of neighboring particles, e.g., atoms or ions. Inter-molecular forces are weak relative to intramolecular forces – the forces which hold a molecule together. For example, the covalent bond, involving sharing electron pairs between atoms, is much stronger than the forces present between neighboring molecules. Both sets of forces are essential parts of force fields frequently used in molecular mechanics.

The investigation of inter-molecular forces starts from macroscopic observations which indicate the existence and action of forces at a molecular level. These observations include non-ideal-gas thermodynamic behavior reflected by virial coefficients, vapor pressure, viscosity, superficial tension, and absorption data.

The first reference to the nature of microscopic forces is found in Alexis Clairaut's work *Theorie de la Figure DE la Terre*. Other scientists who have contributed to the investigation of microscopic forces include: Laplace, Gauss, Maxwell and Boltzmann.,

Attractive intermolecular forces are considered by the following types:

- Ion-induced dipole forces
- Ion-dipole forces
- Hydrogen bonding
- van der Waals forces – Keesom force, Debye force, and London dispersion force

Information on intermolecular force is obtained by macroscopic measurements of properties like viscosity, PVT data. The link to microscopic aspects is given by virial coefficients and Lennard-Jones potentials.

ELECTROSTATIC INTERACTIONS

Electrostatic attraction between electrically-charged particles is the strongest of all the intermolecular forces. As you learned in school, these coulombic forces (as they are often called) cause opposite charges to attract and like charges to repel.

Coulombic forces are involved in all forms of chemical bonding; when they act between separate charged particles (ion-ion interactions) they are especially strong. Thus the energy required to pull a mole of Na and Cl ions apart in the sodium chloride crystal is greater than that needed to break the covalent bond in H₂.

The effects of ion-ion attraction are seen most directly in solids such as NaCl which consist of oppositely-charged ions arranged in two inter-penetrating crystal lattices.

According to Coulomb's Law, the force between two charged particles directly proportional to the product of the electrostatic charges of the particles, and inversely proportional to the square of the distance between them:

Instead of using SI units, chemists often prefer to express atomic-scale distances in picometers and charges as electron charge (± 1 , ± 2 , etc.) Using these units, the proportionality constant k works out to 2.31×10^4 J pm.

The sign of F determines whether the force will be attractive (–) or repulsive (+); notice that the latter is the case whenever the two Q 's have the same sign.

The stronger the attractive force acting between two particles, the greater the amount of work required to separate them. Work represents a flow of energy, so the foregoing statement is another way of saying that when two particles move in response to a force, their potential energy is lowered. This work, as you may recall if you have studied elementary mechanics, is found by integrating the force with respect to distance over the distance moved. Thus the energy that must be supplied in order to completely separate two oppositely-charged particles initially at a distance r_0 is given by ... hence the value of $m = -1$ in the Mie equation.

NON-BONDING ELECTROSTATIC INTERACTIONS

Dipoles and dipole moments

According to Coulomb's law, the electrostatic force between an ion and an uncharged particle having $Q = 0$ should be zero. Bear in mind, however, that this formula assumes that the two particles are point charges having zero radii. A real particle such as an atom or a molecule occupies a certain volume of space. Even if the electric charges of the protons and electrons cancel out (as they will in any neutral atom or molecule), it is possible that the spatial distribution of the electron cloud representing the most loosely-bound [valence] electrons might be asymmetrical, giving rise to an electric dipole moment. There are two kinds of dipole moments:

- Permanent electric dipole moments can arise when bonding occurs between elements of differing electronegativities.
- Induced (temporary) dipole moments are created when an external electric field distorts the electron cloud of a neutral molecule.

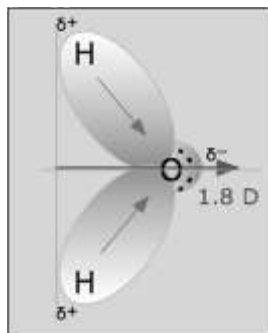
In physics, an electric dipole refers to a separation of electric charge. An idealized electric dipole consists of two point charges of magnitude $+q$ and $-q$ separated by a distance r . Even though the overall system is electrically neutral, the charge separation gives rise to an electrostatic effect whose strength is expressed by the electric dipole moment given by $\vec{\mu} = r q$

Dipole moments possess both magnitude and direction, and are thus vectorial quantities; they are conventionally represented by arrows whose heads are at the negative end.

PERMANENT DIPOLE MOMENTS

In many molecules that are otherwise electrically neutral, the differing electronegativities of the various atoms give rise to an uneven distribution of negative charge. Such molecules are said to be polar, and to possess a permanent dipole moment (the word “permanent” is commonly dropped in ordinary discourse.)

The most well-known molecule having a dipole moment is ordinary water. The charge imbalance arises because oxygen, with its nuclear charge of 8, pulls the electron cloud that comprises each O–H bond toward itself. These two “bond moments” add vectorially to produce the permanent dipole moment denoted by the red arrow. Note the use of the δ (Greek delta) symbol to denote the positive and negative ends of the dipoles.



When an electric dipole is subjected to an external electric field, it will tend to orient itself so as to minimize the potential energy; that is, its negative end will tend to point toward the higher (more positive) electric potential. In liquids, thermal motions will act to disrupt this ordering, so the overall effect depends on the temperature. In condensed phases the local fields due to nearby ions or dipoles in a substance play an important role in determining the physical properties of the substance, and it is in this context that dipolar interactions are of interest to us here. We will discuss each kind of interaction in order of decreasing strength.

INDUCED DIPOLES

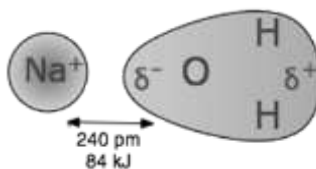
Even if a molecule is electrically neutral and possesses no permanent dipole moment, it can still be affected by an external electric field. Because all atoms and molecules are composed of charged particles (nuclei and electrons), the electric field of a nearby ion will cause the centers of positive and negative charges to shift in opposite directions. This effect, which is called polarization, results in the creation of a temporary, or induced dipole moment. The induced dipole then interacts with the species that produced it, resulting in a net attraction between the two particles.

The larger an atom or ion, the more loosely held are its outer electrons, and the more readily will the electron cloud be distorted by an external field. A quantity known as the polarisability expresses the magnitude of the temporary dipole that can be induced in it by a nearby charge.

ION-DIPOLE INTERACTIONS

A dipole that is close to a positive or negative ion will orient itself so that the end whose partial charge is opposite to the ion charge will point toward the ion. This kind of interaction is very important in aqueous solutions of ionic substances; H₂O is a highly polar molecule, so that in a solution of

sodium chloride, for example, the Na ions will be enveloped by a shell of water molecules with their oxygen-ends pointing toward these ions, while H₂O molecules surrounding the Cl ions will have their hydrogen ends directed inward. As a consequence of ion-dipole interactions, all ionic species in aqueous solution are hydrated; this is what is denoted by the suffix in formulas such as K(aq), etc.



The strength of ion-dipole attraction depends on the magnitude of the dipole moment and on the charge density of the ion. This latter quantity is just the charge of the ion divided by its volume. Owing to their smaller sizes, positive ions tend to have larger charge densities than negative ions, and they should be more strongly hydrated in aqueous solution. The hydrogen ion, being nothing more than a bare proton of extremely small volume, has the highest charge density of any ion; it is for this reason that it exists entirely in its hydrated form H₃O in water.

DIPOLE-DIPOLE INTERACTIONS

As two dipoles approach each other, they will tend to orient themselves so that their oppositely-charged ends are adjacent. Two such arrangements are possible: the dipoles can be side by side but pointing in opposite directions, or they can be end to end. It can be shown that the end-to-end arrangement gives a lower potential energy.

Dipole-dipole attraction is weaker than ion-dipole attraction, but it can still have significant effects if the dipole moments are large. The most important example of dipole-dipole attraction is hydrogen bonding which is discussed on page 15.

ION-INDUCED DIPOLE INTERACTIONS

The most significant induced dipole effects result from nearby ions, particularly cations (positive ions). Nearby ions can distort the electron clouds even in polar molecules, thus temporarily changing their dipole moments. The larger ions (especially negative ones such as SO₂ and ClO₄) are highly polarizable, and the dipole moments induced in them by a cation can play a dominant role in compound formation.

DIPOLE-INDUCED DIPOLE INTERACTIONS

A permanent dipole can induce a temporary one in a species that is normally nonpolar, and thus produce a net attractive force between the two particles. This attraction is usually rather weak, but in a few cases it can lead to the formation of loosely-bound compounds. This effect explains the otherwise surprising observation that a wide variety of neutral molecules such as hydrocarbons, and even some of the noble gas elements, form stable hydrate compounds with water.

DISPERSION OR LONDON FORCES

The fact that noble gas elements and completely non-polar molecules such as H₂ and N₂ can be condensed to liquids or solids tells us that there must be yet another source of attraction

between particles that does not depend on the existence of permanent dipole moments in either particle. To understand the origin of this effect, it is necessary to realize that when we say a molecule is “nonpolar”, we really mean that the time-averaged dipole moment is zero. This is the same kind of averaging we do when we draw a picture of an orbital, which represents all the locations in space in which an electron can be found with a certain minimum probability. On a very short time scale, however, the electron must be increasingly localized; not even quantum mechanics allows it to be in more than one place at any given instant. As a consequence, there is no guarantee that the distribution of negative charge around the center of an atom will be perfectly symmetrical at every instant; every atom therefore has a weak, fluctuating dipole moment that is continually disappearing and reappearing in another direction.

Dispersion or London forces can be considered to be “induced dipole - induced dipole” interactions.

Although these extremely short-lived fluctuations quickly average out to zero, they can still induce new dipoles in a neighboring atom or molecule, which helps sustain the original dipole and gives rise to a weak attractive force known as the dispersion or London force (after F. London, who explained this effect in 1930).

Although dispersion forces are the weakest of all the intermolecular attractions, they are universally present. Their strength depends to a large measure on the number of electrons in a molecule. This can clearly be seen by looking at the noble gas elements, whose ability to condense to liquids and freeze to solids is entirely dependent on dispersion forces.

Element	He	Ne	Ar	Kr	Xe
Atomic Number	2	10	18	36	54
Bolling Point, K	27	87	120	165	210
Critical Temperature, K	5	44	151	510	290
Heat Of Vaporization, KJ Mol	.08	1.76	6.51	59	12.6

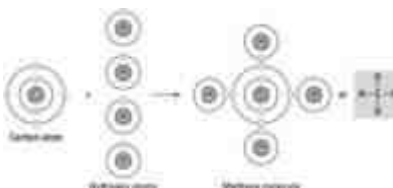
It is important to note that dispersion forces are additive; if two elongated molecules find themselves side by side, dispersion force attractions will exist all along the regions where the two molecules are close. This can produce quite strong attractions between large polymeric molecules even in the absence of any stronger attractive forces.

TYPES OF BONDING

Atoms tend to arrange themselves in the most stable patterns possible, which means that they have a tendency to complete or fill their outermost electron orbits. They join with other atoms to do just that. The force that holds atoms together in collections known as molecules is referred to as a chemical bond. There are two main types and some secondary types of chemical bonds:

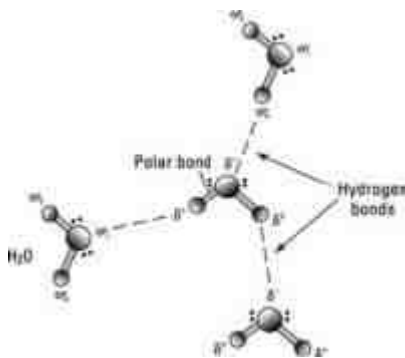
IONIC BOND

Ionic bonding involves a transfer of an electron, so one atom gains an electron while one atom loses an electron. One of the resulting ions carries a negative charge (anion), and the other ion carries a positive charge (cation). Because opposite charges attract, the atoms bond together to form a molecule.



COVALENT BOND

The most common bond in organic molecules, a covalent bond involves the sharing of electrons between two atoms. The pair of shared electrons forms a new orbit that extends around the nuclei of both atoms, producing a molecule. There are two secondary types of covalent bonds that are relevant to biology — polar bonds and hydrogen bonds.



Polar bond

Two atoms connected by a covalent bond may exert different attractions for the electrons in the bond, producing an unevenly distributed charge. The result is known as a polar bond, an intermediate case between ionic and covalent bonding, with one end of the molecule slightly negatively charged and the other end slightly positively charged.

These slight imbalances in charge distribution are indicated in the figure by lowercase delta symbols with a charge superscript (+ or -). Although the resulting molecule is neutral, at close distances the uneven charge distribution can be important. Water is an example of a polar molecule; the oxygen end has a slight positive charge whereas the hydrogen ends are slightly negative. Polarity explains why some substances dissolve readily in water and others do not.

Hydrogen bond

Because they're polarized, two adjacent H₂O (water) molecules can form a linkage known as a hydrogen bond, where the (electronegative) hydrogen atom of one H₂O molecule is electrostatically attracted to the (electropositive) oxygen atom of an adjacent water molecule.

Consequently, molecules of water join together transiently in a hydrogen-bonded lattice. Hydrogen bonds have only about 1/20 the strength of a covalent bond, yet even this force is sufficient to affect

the structure of water, producing many of its unique properties, such as high surface tension, specific heat, and heat of vaporization. Hydrogen bonds are important in many life processes, such as in replication and defining the shape of DNA molecules.

MELTING AND BOILING POINTS

What is Boiling Point?

The boiling point is the temperature at which the vapour pressure of the liquid is equal to the atmospheric pressure of the liquid and the liquid is converted to vapour. The boiling point of the liquid depends upon the pressure of the surrounding. When the liquid is at high pressure, it has higher boiling point than the boiling point at normal atmospheric pressure. The boiling point of different liquids is different for a given pressure. In 1982 IUPAC, defined standard boiling point which is the temperature at which liquid boils under the pressure of 1 bar. The boiling point changes with altitude and that's why when we go to mountain areas i.e. at higher altitudes cooking food takes more time because the pressure decreases and therefore because of this it takes more time in cooking food at hilly areas.

What is Melting Point?

The temperature at which solid changes its state to liquid at an atmospheric pressure is called the melting point of that liquid. This is the point at which both liquid and solid phase exists at equilibrium. The melting point of the substance also varies with pressure and is specified at standard pressure.

Another term is freezing point which is just reverse of melting point which is the temperature at which liquid is converted to solid. Technically, you can say that melting point and freezing point are not same because a substance can be supercooled below its freezing point without forming solid.

REFERENCES

- Bhanumati, S Managing Curriculum induced hazards in chemistry laboratories, Kayakalp, No.4, Jan-Dec,1997,15.
- Chemlab, Dartmouth College,© 1997-2004
- Fadnis,A.G. Independent and responsible self learning, University News, 36(13),March, 1969.
- Mani,R.S. Objectives of teaching chemistry in schools,New Frontiers in Education, XXX(2),April-June 2000,189-198.
- Mani,R.S. Safety in laboratory, School Science,XXXII(2),June 1995,33-37, New Delhi: NCERT
- Mani,R.S. Capacity building in Science and integrating technology into education, Educational Herald,35(3), July-Sept 2006,15-27
- Mani,R.S. Mobile science in perspective-development of skills in science and technology, Education and Society, I(1),Jan-Dec 2012,296-302,ISSN No. 2319-9687
- Mani,R.S. Recycling Chemical Waste, Excellence in Education,III(1), Jan-Dec 2014 86-93, ISSN No. 2320-7019
- Mani,R.S. Essential elements as bioinorganic ions, Journal of Education in the Twentyfirst century,I(1), Jan-Dec 2014,304-310, ISSN No. 2394-7845
- National Curriculum Framework 2005,New Delhi: NCERT
- <http://schmidel.com>
- <http://tifr.hbcse.res.ac.in>.
- UNESCO resource book for teaching science, New Delhi: 1968

महिलाओं के सुरक्षा हेतु निर्मित प्रमुख कानूनी प्रावधान

डॉ. अनुराधा कुमारी*

नारी समाज की एक अभिन्न अंग है। भारतीय संस्कृति में महिला के विषय में कहा गया है कि " यत्र नार्यस्त पूज्यते रमन्ते तत्र देवता " अर्थात् जहां नारी की पूजा होती है, वहां देवता बसते हैं। दुसरे शब्दों में हम कह सकते हैं कि जहाँ महिला का सम्मान होता है वहाँ सुख एवं समृद्धि का वास होता है जिन्हें हम माँ, बहन, पत्नी, बेटी के रूप में देखते हैं और जिनसे हमारा परिवार, और स्वस्थ देश का निर्माण होता है।

अतीत से ही नारी का सम्मान में सर्वोपरि स्थान रहा है। महिलाएँ माता, पत्नी एवं बहन के रूप में सृष्टी की रचना करती है, उन्हें सुख और समृद्धि का प्रतिक माना जाता है। भारतीय संस्कृति में महिलाओं का विशिष्ट स्थान रहा है।

भारतीय संविधान ने महिला व पुरुष दोनों को समकक्ष रखकर उनके विकास के लिए सामान अवसर एवं सुरक्षा की गारंटी दीस अनेक प्रावधानों द्वारा महिला को सुरक्षा एवं संरक्षण प्रदान करने की व्यवस्था की गईस पर इन सबके बावजूद महिला की स्थिति में गुणात्मक परिवर्तन नहीं आया। इसके पीछे एक मात्र कारण है पुरुषों का स्वामित्व नारी को नारायणी बनाने के लिए उनके आँचल में दूध और आँखों में है पानी वाले हालत बदलने होंगे।

हमारे समाज में महिलाएँ शिक्षित होने के बावजूद अपने कानूनी अधिकारों से अनभिज्ञ है, सभी शिक्षित या अशिक्षित महिलाएँ नहीं पर हाँ भारतीय समाज का एक बड़ा वर्ग आज भी कानूनी अधिकारों के प्रति जागरूक नहीं हैं।

महिलाएँ आज हर क्षेत्र में पुरुषों के बराबर अवश्य है, परन्तु वास्तविकता यह भी है कि हमारे इस पुरुष प्रधान समाज में घरेलु हिंसा होती है; जहाँ महिलाओं पर अत्याचार और शोषण किया जाता है। यह शोषण केवल निम्न या मध्यम वर्गीय महिलाओं के साथ ही नहीं होता है, बल्कि इस शोषण का शिकार उच्चवर्ग की महिलायें भी है। वे भी घरेलु हिंसा की शिकार बनती हैं; यह शोषण कई रूपों में किया जाता है – शारीरिक, मानसिक, आर्थिक और दहेज इत्यादि। घरेलु हिंसा के अंतर्गत सबसे ज्यादा महिलाओं को दहेज के लिए प्रताड़ित किया जाता है। महिलाओं के साथ छोटी छोटी बातों पर मारपीट की जाती है। कभी उन्हें घरों से निकाल दिया जाता है और कभी उन्हें जला दिया जाता है। महिलायें ऐसे घरेलु हिंसा के खिलाफ बुलंद आवाज नहीं उठाती, जिससे पुरुषों का साहस बढ़ जाता है।

महिलाओं को बिना किसी रोक-टोक के अपने फैसले स्वयं लेने के लिए सशक्त बनाना और उन्हें पुरुषों के बराबर मानना राष्ट्र की सर्वांगीण प्रगति के लिए अनिवार्य है। हमारा संविधान समानता के अधिकार की तथा लैंगिक समानता का बोध कराता है। लेकिन भारतीय समाज में लैंगिक अर्थात् स्त्री – पुरुष भेदभाव प्राचीनकाल से ही चला आ रहा है।

*सहायक प्राध्यापक, इतिहास विभाग, ए0 बी0 एम0 कॉलेज, जमशेदपुर, कोलहान विश्वविद्यालय।

घरेलू हिंसा के खिलाफ संविधान में कानून बनाये गये है जिसके अंतर्गत -

- कानून पीड़िता को घर में रहने का अधिकार चाहे संपत्ति उसके नाम हो या न हो, देता है।
- हिंसात्मक व्यक्ति को पीड़िता के कार्य स्थान पर उस जगह पर जहाँ पीड़ित जाती रहती है। पर प्रवेश को पीड़िता के साथ बात करने को या हिंसात्मक व्यक्ति के रिश्तेदार जिन्होंने हिंसात्मक कार्य में सहयोग किया हो, को बचाव आदेश जारी करके रोक सकती है।
- हिंसात्मक व्यक्ति द्वारा बचाव आदेश का उल्लंघन एक non – bailable व दंडनीय अपराध है, इसके अंतर्गत एक साल की जेल या 20,000/रु जुर्माना या दोनों हो सकते हैं।

महिलाओं को अपने अधिकारों के प्रति जागरूक होकर घरेलू हिंसा के खिलाफ कदम उठाने चाहिए और अपने सम्मान की रक्षा करनी चाहिए। समाज में घरेलू हिंसा को रोका जा सके इसके लिए समाज के प्रत्येक वर्ग के स्त्री और पुरुष दोनों का शिक्षित होना आवश्यक है साथ ही महिलाओं को अपने अधिकारों के प्रति जानकारी होना आवश्यक है।

धारा 497 के तहत ऐसे किसी भी पुरुष को दण्डित किया जाता है, को किसी अन्य पुरुष की सहमति के बगैर उसकी पत्नी के साथ अवैध संबंध रखता है। यह स्त्रियों के साथ बहुत पक्षपात करने वाला प्रावधान है और संविधान के अनुच्छेद 14 तथा 15 का उल्लंघन भी करता है।

यौन प्रताड़ना से मुक्ति

यौन प्रताड़ना, छेड़छाड़ या फिर बलात्कार जैसे वारदातों के लिए सख्त कानून बनाए गये हैं। महिलाओं के खिलाफ इस तरह के घिनौने अपराध करने वालों को सख्त सजा दिए जाने का प्रावधान किया गया है।

I-P-C 354 – B के तहत अगर कोई शख्स महिला की इज्जत के साथ खेलने के लिए जबरदस्ती करता है या फिर उसके कपड़े उतारता है या इसके लिए मजबूर करता है तो तीन साल से लेकर सात साल तक कैद की सजा का प्रावधान है।

I-P-C 354 – C के तहत प्रावधान है की अगर कोई शख्स किसी महिला के प्राइवेट पार्ट की तस्वीर लेता है और उसे लोगों में फैलाता है तो ऐसे मामले में 1 साल से 3 साल की सजा का प्रावधान है।

मातृत्व अवकाश का अधिकार

संविधान के अनुच्छेद – 42 के तहत कामकाजी महिलाओं को तमाम अधिकार दिए गये हैं। संसद ने 1961 में यह कानून बनाया था, इसके तहत कोई भी महिला अगर सरकारी नौकरी में है या फिर किसी फ़ैक्ट्री में या किसी अन्य प्राइवेट संस्था में, जिसकी स्थापना employees state insurance act 1948 के तहत हुई हो, काम करती है तो उसे maternity लाभ मिलेगा स इसके तहत महिला को बारह हफ्ते का मातृत्व अवकाश है जिसे वह अपनी जरूरत के हिसाब से ले सकती है। इस दौरान महिला को वही वेतन और भत्ता दिया जायेगा जो उसे आखिरी बार दिया गया था स अगर महिला का गर्भपात हो तो भी उसे एक्ट का लाभ मिलेगा।

तीन तलाक मुद्दा :- मुस्लिम पुरुष एक ही बार में तीन बार तलाक शब्द बोलकर अपनी पत्नी को एकतरफा तलाक दे सकता था, परन्तु वर्तमान समय में इसे खारिज करते हुए अवैध घोषित कर दिया गया है। जो

महिला सुरक्षा कानून बन गया है भारत में 2017 में एक साथ तीन तलाक की संवैधानिक वैधता शायरा बानो बनाम भारत सरकार एवं अन्य मामले में उच्चतम न्यायालय के सामने आया स इसे 3:2 के बहुमत से असंवैधानिक, पक्षपाती, और अनुच्छेद 14 के विरुद्ध ठहराया गया, लेकिन यह प्रश्न अब भी बाकि है कि क्या एक साथ तीन तलाक को असंवैधानिक ठहराने जाने से भारत में स्त्री-पुरुष समानता की तस्वीर बदल गयी है। महिला को सुरक्षित करते हुए मुस्लिम पुरुष पर मुकदमा चलाया जा सकता है चाहे उसकी पत्नी उस पर मुकदमा नहीं करना चाहती है। मुस्लिम महिलाओं के अधिकारों को बढ़ावा देने के प्रयाश में यह विधेयक अनजाने में मुस्लिम पुरुषों के अधिकारों को ठेस पहुंचा सकता है और उनके साथ भेदभाव कर सकता है।

संपत्ति का अधिकार

संपत्ति का अधिकार और महिला का संपत्ति रखने का अधिकार भी अदालतों, न्यायिक फैसलों, संशोधनों तथा कानूनों की व्याख्या का विषय रहा है। हिन्दू उत्तराधिकार अधिनियम, 1956 में हुए संशोधन में महिलाओं को माता-पिता और ससुराल दोनों की ही संयुक्त परिवार की सम्पत्तियों में हिस्सेदारी का अधिकार दिया।

स्त्रीधन पर महिला का अधिकार

स्त्रीधन वह धन है जो महिला को शादी के वक्त उपहार के तौर पर मिलते हैं। इसके अलावा, वरद्वधु को सामान्य उपयोग की तमाम चीजे दी जाती हैं, ये भी स्त्रीधन के दायरे में आती हैं। स्त्रीधन पर लड़की का पूरा अधिकार होता है। अगर ससुराल ने महिला को स्त्रीधन अपने पास रख लिया है तो महिला इसके खिलाफ IPC – की धारा 406 की भी शिकायत कर सकती है। इसके तहत बचतबंदी के आदेश से महिला की अपना स्त्रीधन वापस मिल सकता है।

जमीन जायदाद से जुड़े अधिकार

विवाहित या अविवाहित महिलाओं को अपने पिता की संपत्ति में बराबर का हिस्सा पाने का हक है। इसके अलावा विधवा बहु अपने ससुर से गुजाराभत्ता व संपत्ति में हिस्सा पाने की भी हकदार है। Hindu marriage act 1955 के section 27 के तहत पति और पत्नी दोनों की जितनी भी सम्पत्ति है। इसके बटवारे की भी मांग पत्नी कर सकती है।

भारत सरकार द्वारा महिलाओं के लिए कई विकास कार्यक्रम एवं कल्याणकारी योजनाओं का संचालन कर रहा है, ताकि उनके जीवन स्तर में सुधार किया जा सके और विकास कार्यक्रमों में उनकी आर्थिक से अधिक भागीदारी सुनिश्चित हो सके सरकार द्वारा महिलाओं से सम्बंधित चलाई जा रही प्रमुख योजनाये इस प्रकार हैं :-

नोराड प्रशिक्षण योजना 1989 महिलाओं को लघु वयवशय से सम्बंधित प्रशिक्षण दिया जाता है। महिला समृद्धि योजना, 1993 यह ग्रामीण महिलाओं को सशक्त बनाता है। राष्ट्रीय महिला कोष में महिलाये छोटे – छोटे ग्रुप बनाकर इस कोष से आर्थिक सहायता लेकर अपना काम शुरू कर सकती हैं और ली गई राशी को किस्तों में लौटा सकती हैं

राजीव गाँधी national crèche scheme for the children of worship mother 12100/रु. से कम मासिक आय वाली महिलाओं को कार्य स्थल पर बतध्वीम की सुविधा उपलब्ध कराता है।

Worship womens hostel के तहत एकल कामकाजी महिलाओं को शहरों में होटल की सुविधा प्रदान करता है जो सुरक्षित एवं किफायती होते हैं

central social welfare board में हादसों की शिकार बेसहारा महिलाओं की counselling के साथ रोजगार के लिए प्रशिक्षण और व्यावसायिक शिक्षण दी जाती है।

निष्कर्ष

यह कहा जा सकता है की महिलाओं को सुरक्षा और अनुकूल वातावरण प्रदान करने की व्यवस्था कर उन्हें शक्ति बनाने का प्रयास अद्वितीय है। इसके साथ सरकार की सकारात्मक नीतियों को आगे बढ़ाने की जरूरत है जिससे महिलाओं के बाकियों के साथ एक समान स्तर पर लाया जा सके। भारतीय स्त्रियों के सुअवसर प्रदान किया जाये तो उनमें असीम संभावना है। पर इसके लिए यह जरूरी है कि कानून /महिलाओं को मिले संवैधानिक अधिकार सिर्फ पन्नों, नेताओं एवं राष्ट्रीय महिला आयोग के भाषणों तक सीमित न रहे। इसके लिए संपूर्ण समाज को सजग होना पड़ेगा खास कर के महिलाओं को, क्योंकि यदि नारी अपने अधिकारों के लिए अडिग हो जाये तो दुनिया की ऐसी कोई ताकत नहीं कि उनकी मांगों को मानने के लिए विवश न हो, चाहे कितना ही शक्तिशाली पुरुष अथवा सामंतवादी मानसिकता रखने वाला समाज क्यों न हो।

सहायक ग्रंथ स्रोत

1. नीरा देशाई, वूमन इन इण्डियन सोसायटी, नेशनल बुक ट्रस्ट, इंडिया, 2001.
2. गिरालडिन फॉरबिड्स, वुमेन इन मोडर्न इंडिया, कैम्ब्रीज यूनिवर्सिटी प्रेस, 1999.
3. राधा कुमार, स्त्री संघर्ष का इतिहास, वाणी प्रकाशन, नई दिल्ली, 2009.
4. डॉ. गोपा जोशी, भारत में स्त्री असमानता एक विमर्श, हिन्दी माध्यम कार्यान्वयन निदेशालय, दिल्ली विश्वविद्यालय, 2006.
5. सुभाष शर्मा, भारतीय महिला: दशा और दिशा, पटना, 2000.
6. साधना आर्य, निवेदिता मेमन, जिनी लोकनीता (सं.), नारीवादी राजनीति संघर्ष एवं मुद्दे, हिन्दी माध्यम कार्यान्वयन निदेशालय, दिल्ली विश्वविद्यालय, 2001.
7. सुधारानी श्रीवास्तव, मानव अधिकार और महिला उत्पीड़न, दिल्ली, 2009.
8. बृदां करात, भारतीय नारी संघर्ष और मुक्ति, ग्रंथ शिल्पी, नई दिल्ली. 2008.
9. सुभाष शर्मा, भारतीय महिलाएं: दशा एवं दिशा, शताब्दी प्रकाशन, पटना, 2000.
10. महिलाओं के सुरक्षा हेतु निर्मित प्रमुख कानूनी प्रावधान

Modeling and Analysis of A Probe-Fed Stacked Patch Antenna

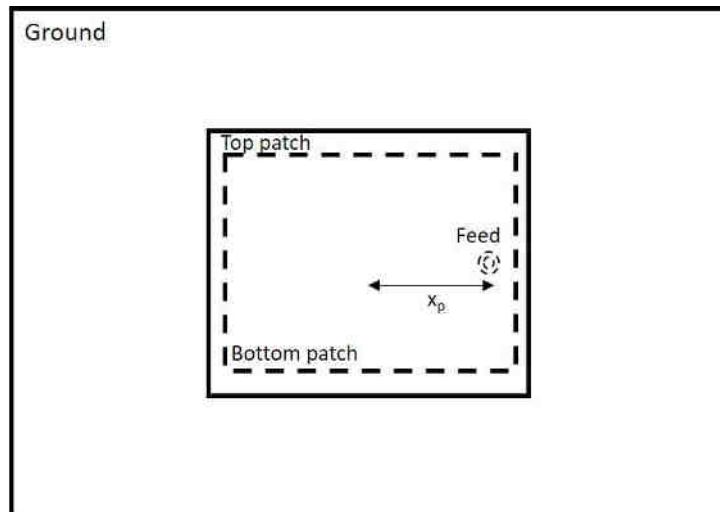
Dr. Shankar Prasad Singh*

ABSTRACT

This example shows the steps to model and analyze a probe-fed stacked patch antenna. The standard rectangular microstrip patch antenna has a narrow impedance bandwidth typically lesser than 5%. The stacked patch configuration is one of the ways of increasing the impedance bandwidth of these antennas to be greater than 25% [1]. There are different ways of designing stacked patches, primarily differing in the way their feed is designed [2]. The two types of feeding mechanisms are probe-feed and aperture coupled. These two mechanisms have a role in the impedance bandwidth behavior as well as the radiation characteristics of the antenna.

THE PROBE-FED STACKED PATCH GEOMETRY

The stacked patch comprises of two patches of slightly different sizes positioned over each other along the z-axis and separated by a dielectric material. Both patches are centered relative to the groundplane. The gap between the lower patch and the groundplane is also filled with a dielectric material. Either the top or the bottom patch is driven with a coaxial probe when used in a single feed configuration. A plan view of the geometry is shown in the sketch here.



*Assistant Professor (Physics) Laxminath College Bangaon, Saharsa/BNMU, Madhepura (Bihar).

DEFINE UNITS

Define standard units for distance, frequency and resistance as well as their multiplicative equivalents for this example.

```
meter = 1;
hertz = 1;
ohm = 1;
am = 1e-3*meter; GHz = 1e9*hertz;
```

ANTENNA DIMENSIONS

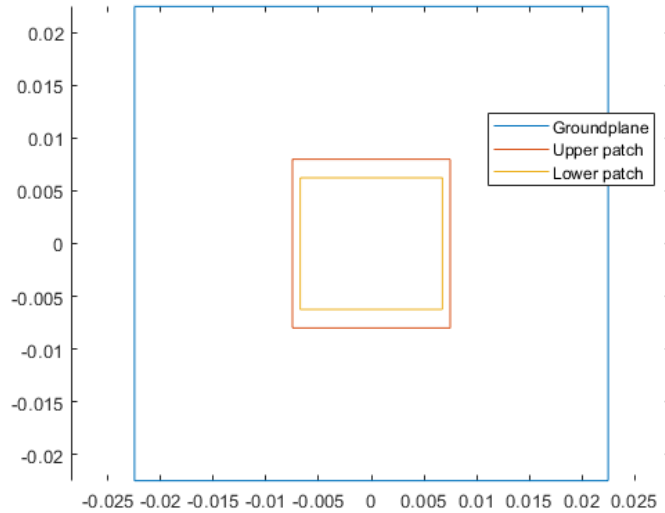
The antenna dimensions are provided in [1] for a probe-fed rectangular stacked patch with two substrate layers. The variables names are identical to those mentioned in [1] barring those of the groundplane. For this example, a square groundplane is chosen with size of three times the length of the top patch. The dimensions of the two patches are chosen to maximize the impedance bandwidth and guidelines are provided in [1] for designing such patch antennas together with a sensitivity analysis. For the geometry being modeled, the upper patch is slightly larger than the lower one.

```
L1 = 13.5*mm;
W1 = 12.5*mm;
L2 = 15*mm;
W2 = 16*mm;
d1 = 1.524*mm;
d2 = 2.5*mm;
xp = 5.4*mm;
r_0 = 0.325*mm;
Lgnd = 3*L2;
Wgnd = 3*L2;
```

CREATE LAYER SHAPES AND SUBSTRATES

Layers Use the rectangle shape from the catalog to create the three metal layers required for the stacked patch, namely for the upper patch, the lower patch and the groundplane. All the layers are centered about the coordinate axis origin. Plot the layer boundaries to confirm the their sizes and positions.

```
pU = antenna.Rectangle('Length',L2,'Width',W2);
pL = antenna.Rectangle('Length',L1,'Width',W1);
pGnd = antenna.Rectangle('Length',Lgnd,'Width',Wgnd);
figure
plot(pGnd)
hold on
plot(pU)
plot(pL)
grid on
legend('Groundplane','Upper patch','Lower patch','Location','best')
```



Dielectric Substrates The stacked patch antenna in this example has a dielectric substrate between the upper and lower patches as well as between the lower patch and the groundplane. The lower patch has higher relative permittivity than the upper patch. This implies a loose electrical coupling between the two patches.

```

epsr_1 = 2.2;
tandelta_1 = 0.001;
dL = dielectric;
dL.Name = 'Lower sub';
dL.EpsilonR = epsr_1;
dL.LossTangent = tandelta_1;
dL.Thickness = d1;

```

```

epsr_2 = 1.07;
tandelta_2 = 0.001;
dU = dielectric;
dU.Name = 'Upper sub';
dU.EpsilonR = epsr_2;
dU.LossTangent = tandelta_2;
dU.Thickness = d2;

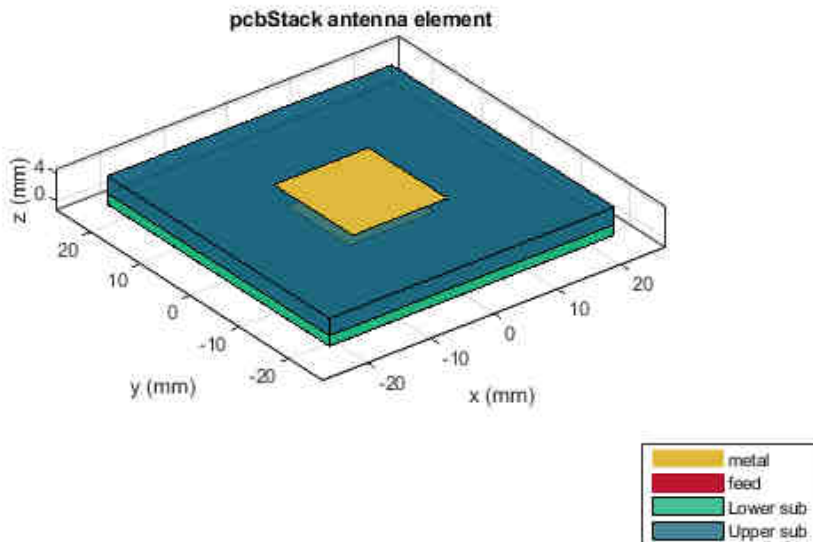
```

CREATE THE STACKED PATCH MODEL

Create the stacked patch antenna model by using `pcbStack`. Assign the layers starting from the top-most layer, in this case the metal layer for the upper patch and proceed to the lowest layer which is the groundplane. The probe-feed is specified between the lower patch and the ground plane. To

improve the accuracy of the model, we switch the feed model to be a solid column approximated to a square shape. The default feed model is a strip wherein the strip approximation to a cylinder is used.

```
p = pcbStack;
p.Name = 'Stacked patch - Waterhouse';
p.BoardShape = pGnd;
p.BoardThickness = d1+d2;
p.Layers = {pU,dU,pL,dL,pGnd};
p.FeedLocations = [xp 0 3 5];
p.FeedDiameter = 2*r_0;
p.FeedViaModel = 'square';
figure
show(p)
```



IMPEDANCE ANALYSIS

Analyze the stacked patch impedance over the frequency range 6-9 GHz. The stacked patch structure over this range should show two closely spaced parallel resonances. Prior to analysis, mesh the structure.

```
fmax = 9*GHz;
fmin = 6*GHz;
deltaf = 0.125*GHz;
freq = fmin:deltaf:fmax; mesh(p,'MaxEdgeLength',.01,'MinEdgeLength',.003)
```

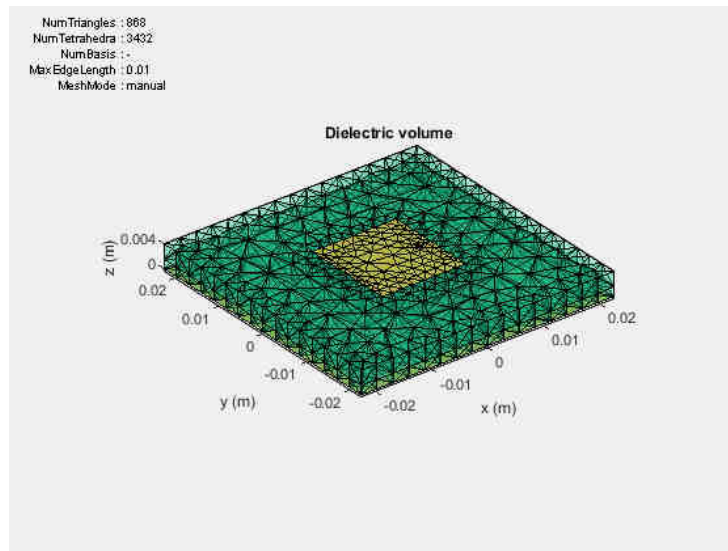
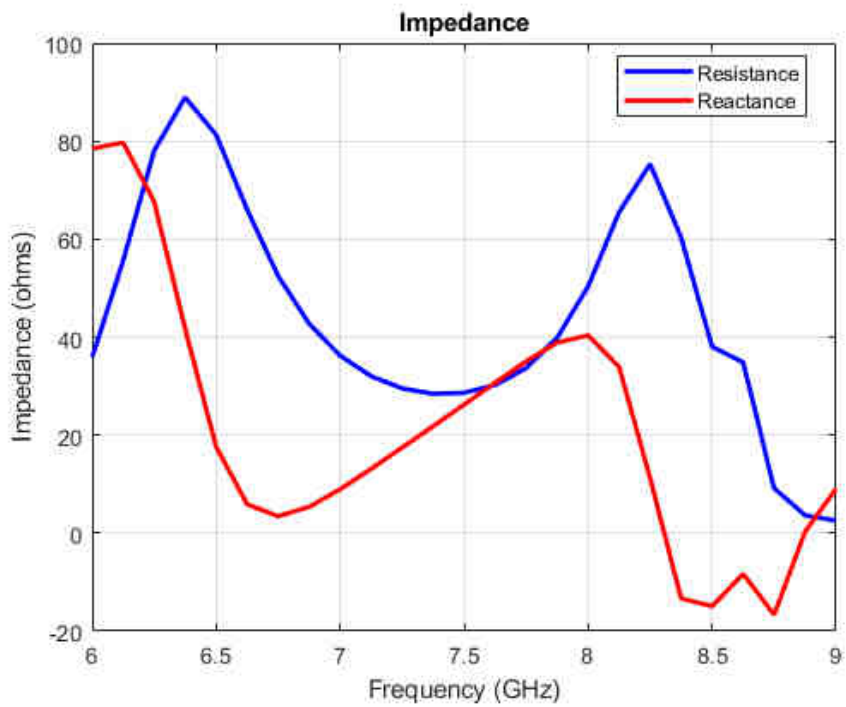



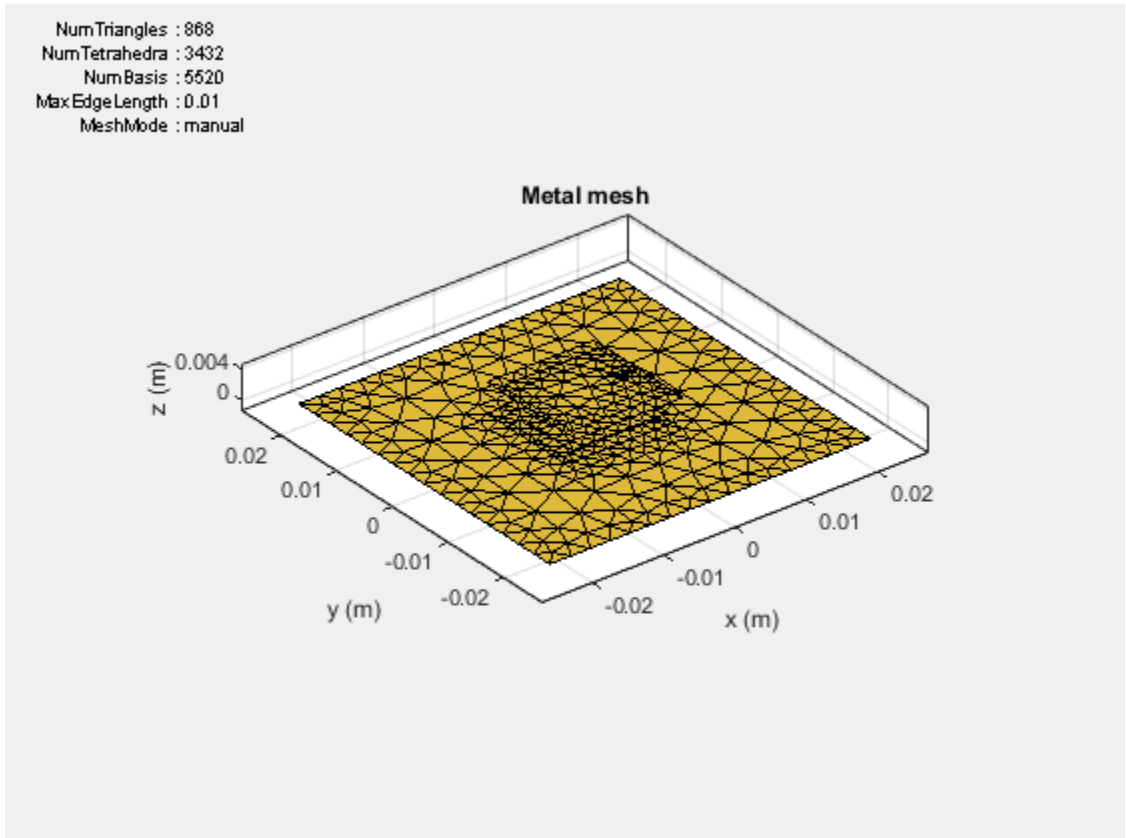
figure
impedance(p,freq)



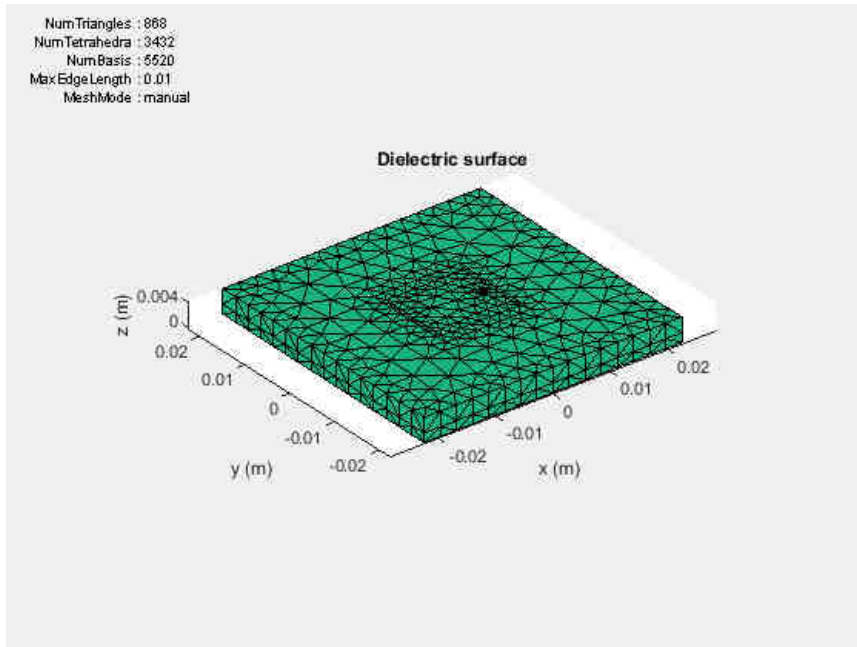
STACKED PATCH MESH

The impedance analysis over the frequency range 6 - 9 GHz, results in automatic mesh generation at the highest frequency. The mesh consists of triangles, which discretize all metal surfaces of the antenna and tetrahedra, which discretize the volume of the dielectric substrates. Plot the mesh for the metal surfaces and dielectric surfaces.

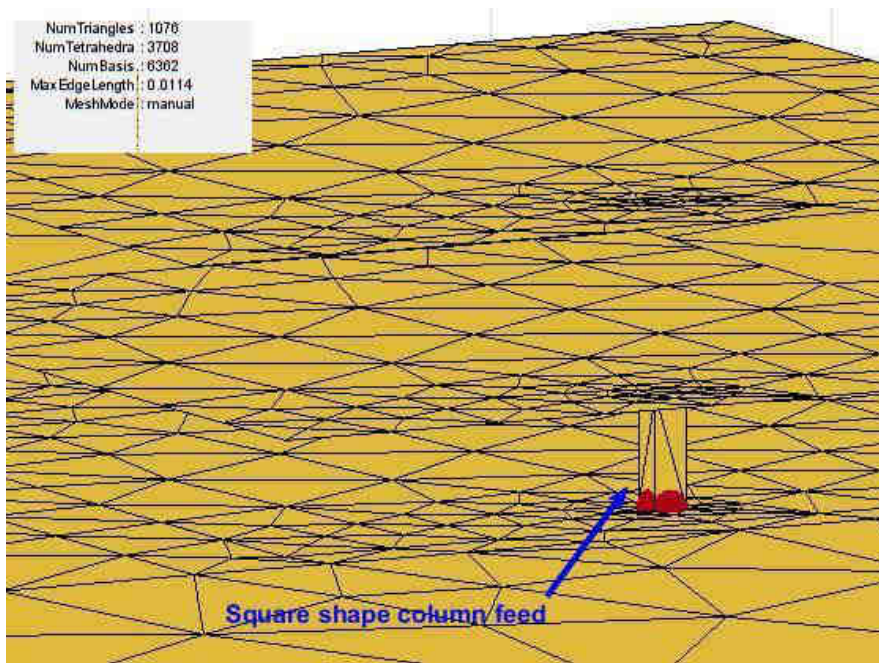
```
figure
mesh(p,'view','metal')
```



```
figure
mesh(p,'view','dielectric surface')
```



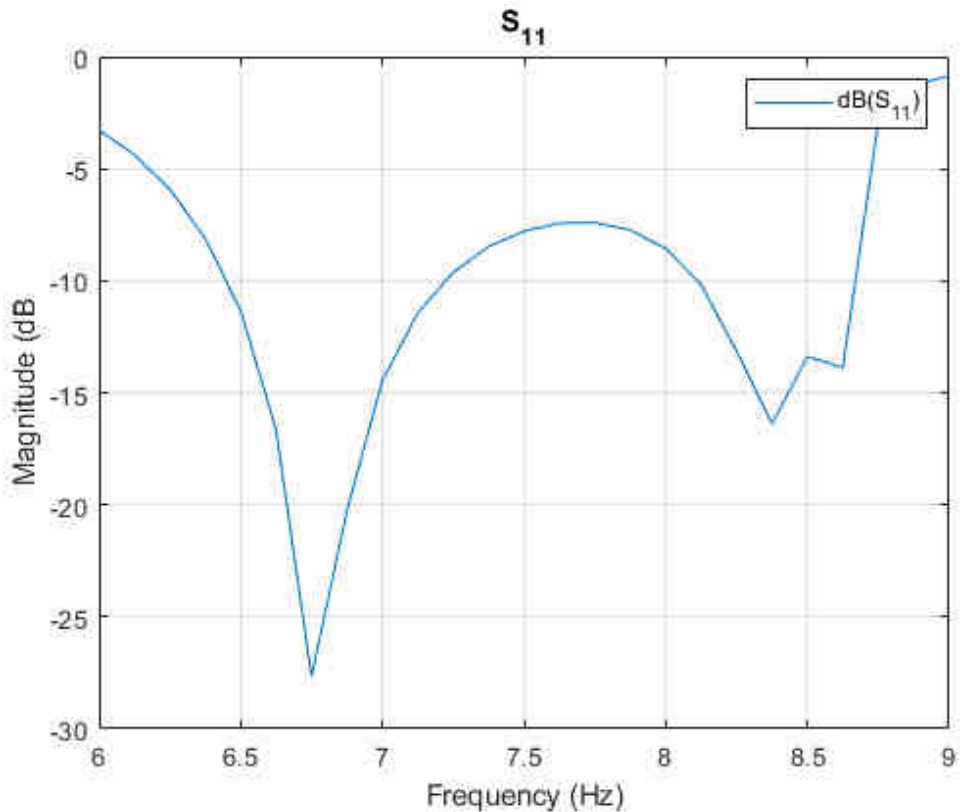
Note that a column feed model with square shaped side walls approximating a cylindrical feed is used in this patch antenna. Use the metal mesh to get a closer view of this feed structure.



REFLECTION COEFFICIENT

Since the antenna is excited by a coaxial probe, calculate the reflection coefficient at the input relative to 50-ohm reference impedance.

```
Zref = 50*ohm;
s = sparameters(p,freq,Zref);
figure
rfplot(s,1,1)
title('S_1_1')
xlabel('Frequency (Hz)')
ylabel('Magnitude (dB)')
```



```
figure
smplot = smithplot(s);
smplot.TitleTop = 'Input Reflection Coefficient'; smplot.LineWidth = 3;
```

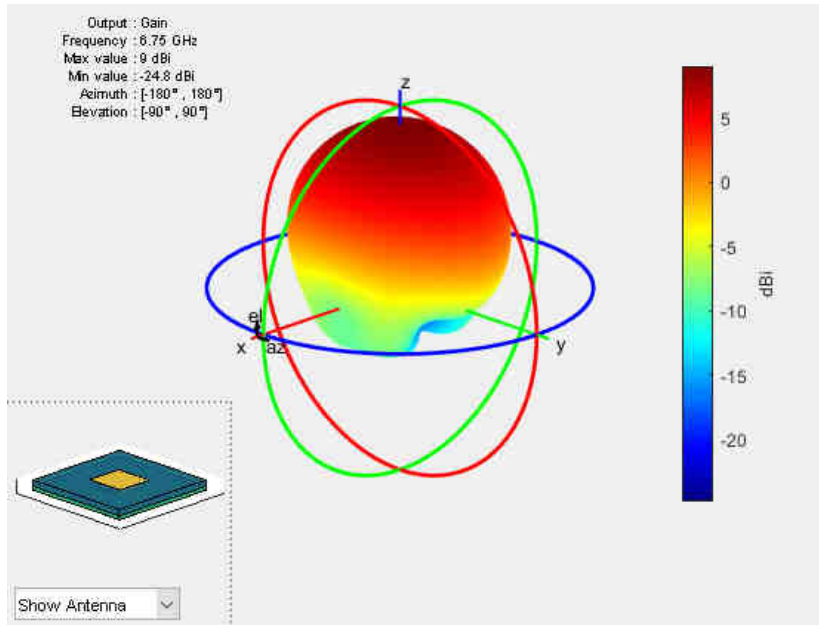
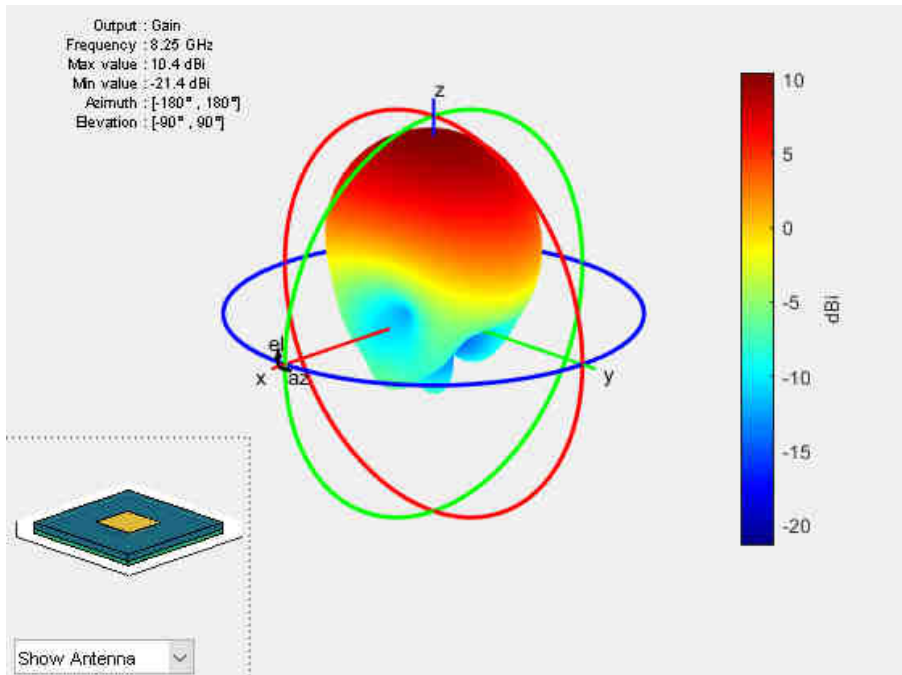



figure
pattern(p,freq(freqIndx(2)))



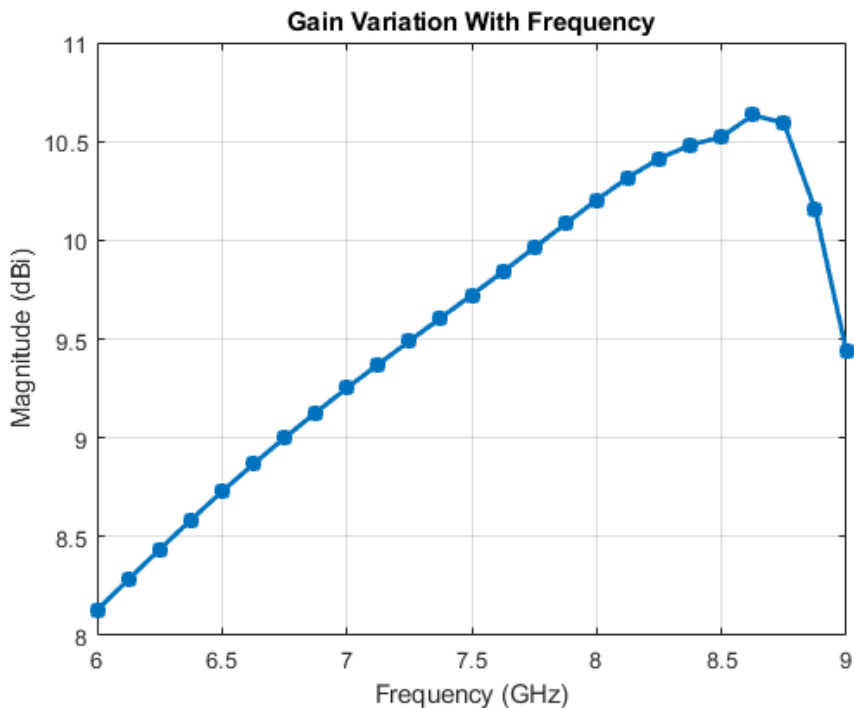
REALIZED GAIN VARIATION ACROSS THE BAND

The pattern is relatively stable at higher elevation angles close to zenith. However, note that the radiation towards the horizon and backlobe seems to grow at the higher frequency end of the 6-9 GHz band. These results account for the losses in the dielectric but not for the impedance mismatches that might exist at the feed point. To understand the effect of the impedance mismatch, calculate the realized gain at zenith and compare it with the gain.

```
D = zeros(1,numel(freq));
az = 0;
el = 90;
for i = 1:numel(freq)
D(i) = pattern(p,freq(i),az,el);
end
```

Plot Gain

```
h = figure;
plot(freq./GHz,D,'-s','LineWidth',2)
xlabel('Frequency (GHz)')
ylabel('Magnitude (dBi)')
grid on
title('Gain Variation With Frequency')
```



Calculate mismatch factor

```
gamma = rparam(s,1,1);
mismatchFactor = 10*log10(1 - abs(gamma).^2);
```

Compute Realized Gain

```
Gr = mismatchFactor.' + D;
figure(h)
hold on
plot(freq./GHz,Gr,'r-')
legend('Gain','Realized Gain','Location','best')
title('Variation of Gain and Realized Gain with Frequency')
hold off
```

SUMMARY

The experimental results of the stacked patch design reported in [1] agree well with the analysis results shown in this example. In addition the antenna exhibits good stability in gain variation close to zenith with higher variations in shape near the horizon and the backlobe regions. The maximum realized gain at zenith is achieved at the lower and upper frequency ends of the 6 - 9 GHz band, especially at the notches in the input reflection coefficient where the match is the best. Within the 7 - 9 GHz range observe that the realized gain only drops off by about 0.6 dB. The reduced values of the realized gain below 6.5 GHz and above 8.5 GHz are due to the impedance mismatch.

REFERENCES

1. R. B. Waterhouse, "Design of probe-fed stacked patches," in *IEEE Transactions on Antennas and Propagation*, vol. 47, no. 12, pp. 1780-1784, Dec 1999.
2. D.Orban and G.J.K.Moernaut, *The Basics of Patch Antennas*, Updated, Orban Microwave Products.
3. C. A. Balanis, 'Antenna Theory. Analysis and Design,' p.514, Wiley, New York, 3rd Edition, 2005
4. Kazanci A. Synthesis of polymeric Schiff bases and metal complexes, investigation of their catalytic activities [PhD thesis]. Adana: University of Çukurova; 2010 Feb.
5. Köse M, Ceyhan G, Tümer M, et al. Monodentate Schiff base ligands: their structural characterization, photoluminescence, anticancer, electrochemical and sensor properties. *SpectrochimActa, Part A*. 2015;137:477–485.
6. Gönül İ, Köse M, Ceyhan G, et al. Methoxy group containing bidentate Schiff base ligands and their transition metal complexes: synthesis, structural characterisation, photoluminescence, antioxidant capacity and superoxide dismutase activity studies. *Inorg Chim Acta*. 2016;453:522–530.
7. Webb JE. Administrator of the National Aeronautics and space administration, with respect to an invention of Gaetano F. D'Alelio, Notre Dame, Ind. United States patent US 3,516,971. 1970 Jun 23.
8. Jin JZ. Catalytic synthesis of n-butyl acetate by silicotungstic acid supported on bentonite. *Adv Mater Res*.
9. Parida KM, Behera GC. A facile synthesis of vanadium phosphate: an efficient catalyst for solvent free esterification of acetic acid. *Catal Lett*. 2010;140:197–204.
10. Xin N, Jian L, Li-na Y, et al. Catalytic synthesis of sec-butyl acetate on sulfoacid resin. *Int J Adv Res Tech*. 2013;2:1–5.

Wide-Band Dual-Layer Patch Antenna Fed by a Modified L-Strip

Dr. Shankar Prasad Singh*

ABSTRACT

A wideband patch antenna is proposed. By using the dual-layer patch configuration and modified L-strip feed technique, the impedance bandwidth of the patch antenna for $VSWR < 1.2$ is broadened to 22% with respect to 900 MHz, which is superior to the other available patch antennas. In addition, by means of the modified L-shaped strip, the high cross polarization levels of the proposed antenna are suppressed effectively. Simulation results are compared with the measurements, and a good agreement is obtained. The measurements show that the antenna has a low cross-polarization level (< -20 dB) and an acceptable gain level (~ 9 dBi) across the operating bandwidth. At last, a parametric study and a design guideline of the proposed antenna are also presented to facilitate the design and optimization processes for engineers.

Index Terms:- Good Impedance Matching, Cross-Polarization Suppression, Wideband, Modified L-Strip, Dual-Layer Patch Antenna.

INTRODUCTION

Currently, microstrip patch antennas are widely used due to their low cost, light weight, and ease of manufacture. However, a single patch antenna has a narrow impedance bandwidth. Some excellent techniques [1]-[7] have been proposed to broaden the impedance bandwidth, including the use of thick and low-permittivity dielectric substrates, different shape patches [1], [2] and ground [3], [4], addition of parasitic patches [5], [6]. For examples, the two E-shaped stacked patch antenna achieves an impedance bandwidth of 54% [5] for $VSWR < 2$ and the impedance bandwidth is further increased to 59.7% [6] by using a U-slotted patch instead of the fed E-shaped patch. More recent research on probe-fed stacked patch for ultra-wideband (UWB) applications has resulted in 102.36% bandwidth

[7]. In light of the foregoing survey, using the $VSWR < 1.2$ requirement, the impedance bandwidth of the available patch antennas is still narrow (less than 10%). As we known, the $VSWR$ of the antennas for DAB (Digital Audio Broadcasting) and DVB (Digital Video Broadcasting) transmission system is needed to be less than 1.2. So the colossal growth of DAB and DVB necessitates the development in the $VSWR < 1.2$ bandwidth broadening

techniques. Another issue is that the foregoing techniques [1]-[7] have the disadvantage of high cross-polarization levels. In particular, the beam widths with the cross-polarization levels 20 dB lower than co-polarization levels are only few degrees near the boresight direction in H-plane. This is evidently a limitation to the applications, such as adaptive antenna arrays for cellular or satellite communications, where wide coverage is usually required. In view of this, using differential feeds [8], a half wavelength strip [9], or a meandered strip [10], the cross-polarization can be suppressed

*Assistant Professor, (Physics) Laxminath College Bangaon, Saharsa / BNMU, Madhepura (Bihar).

effectively. However, the method of differential feeds [8] needs a 180° wideband feeding network that increases the complexity of the antenna configuration. For [9], the cross-polarization levels would be increased dramatically if using a higher patch height ($> 0.06\lambda_0$). In addition, the meandering strip [10] is not easily manufactured, especially when the substrate is used.

To solve these problems, a novel wideband patch antenna is proposed in this paper. By using the dual-layer patch configuration and modified L-strip feed technique, the impedance bandwidth of the patch antenna for $VSWR < 1.2$ is broadened to 22% with respect to 900 MHz. Furthermore, by means of the modified L-strip, the high cross polarization levels of the proposed antenna are suppressed effectively. The antenna has a cross-polarization level of less than -20 dB and a gain level of about 9 dBi across the operating bandwidth. In the next section, the antenna structure is presented, followed by experimental results and analysis.

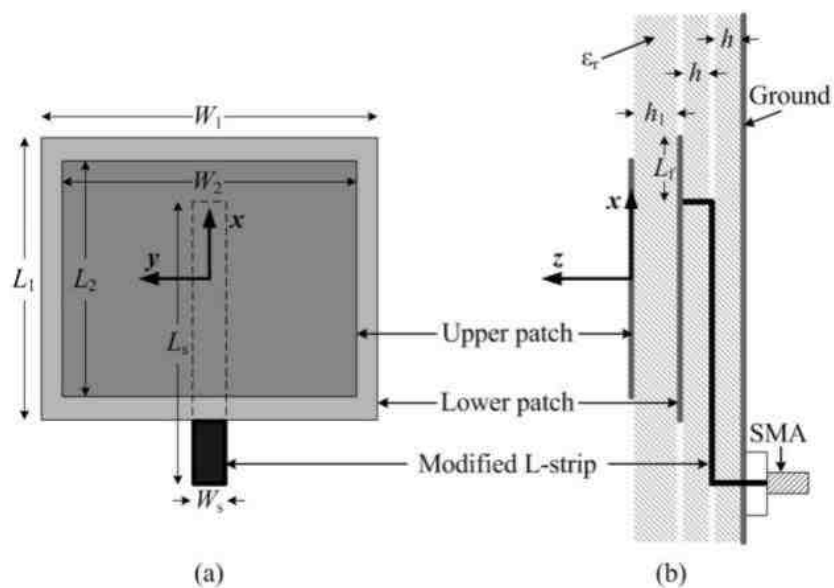


Fig. 1. Geometry of the proposed antenna.

ANTENNA STRUCTURE

The geometry of the stacked patch antenna is shown in Fig. 1. The centre frequency of the proposed antenna is chosen at $f_0 = 900$ MHz ($\lambda_0 = 333$ mm), and the antenna dimensions are determined after a detailed parametric study of the performance of the antenna. The feed strip, lower and upper patches are made of the 0.1 mm thick copper foil, which are supported by foam layers. The relative dielectric constant of the foam is 1.05. The lower and upper patches are rectangle in shape and have dimensions $L_1 \times W_1 = 134 \times 160$ mm² ($0.40\lambda_0 \times 0.48\lambda_0$) and $L_2 \times W_2 = 113 \times 140$ mm² ($0.34\lambda_0 \times 0.42\lambda_0$), respectively. The antenna has a ground plane with dimensions 300 mm \times 350 mm ($0.9\lambda_0 \times 1.05\lambda_0$) and the patch position is placed at the centre of the ground plane. The spacing between the lower patch and the ground is chosen as 18 mm ($0.05\lambda_0$). To broaden the impedance bandwidth, the height h_1 between the upper patch and the lower patch is optimized to 24.5 mm ($0.07\lambda_0$). A narrow copper strip of dimensions $W_s \times L_s =$

14.5×133mm² is horizontally placed between the lower patch and the ground both at the distance of 9 mm and is symmetrically located along the midline of the patches. A 50Ω SMA connector excites one end of the strip with the other end vertically extended to the lower patch. By properly selecting the distance between the vertical strip and the lower patch edge ($L_f=37\text{mm}$), one can control impedance matching condition between the probe-fed strip and the lower patch.

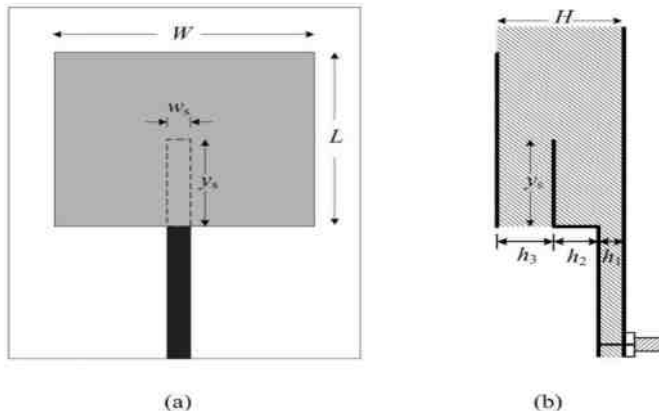


Fig. 2. L-strip proximity fed rectangular patch antenna presented in [11].

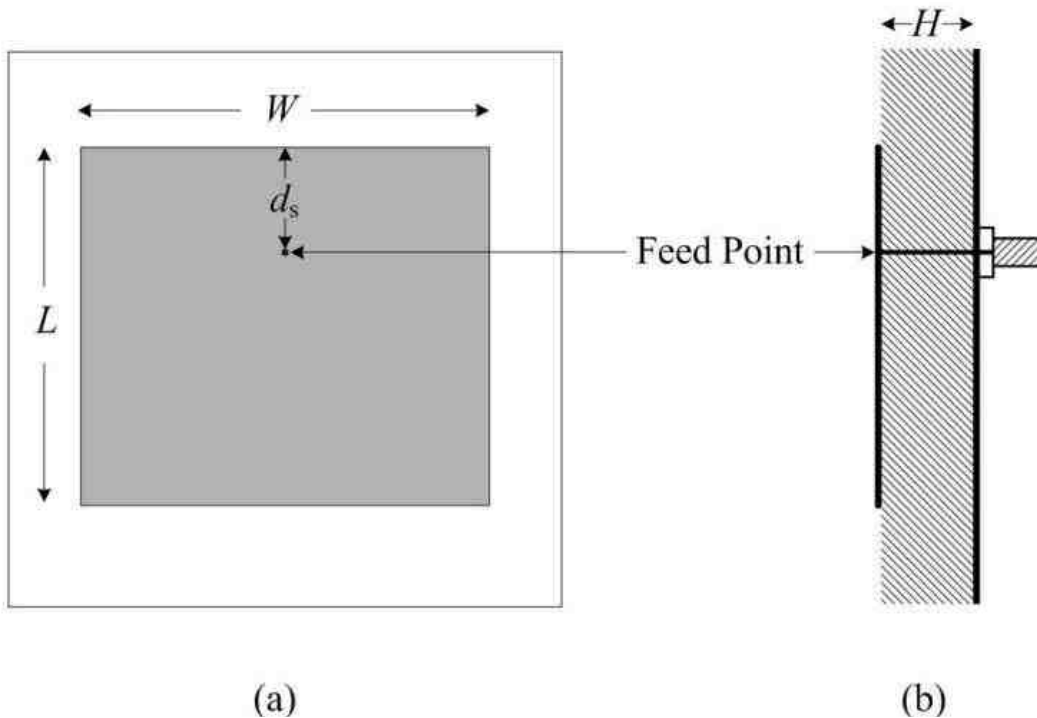


Fig. 3. Probe-fed rectangular patch antenna presented in [12].

The feed structure of the proposed antenna is a little similar to the L-strip proximity feed shown in Fig. 2. It is well known that L-strip proximity fed patch antenna is a popular wideband antenna, and impedance matching can be obtained by adjusting the length of the vertical and horizontal portion of the L-strip (h_2 and y_s). However, the effects of h_2 and y_s on input resistance and reactance are dependent, which result in a complex design process. Fig. 3 gives a probe-fed patch antenna. The probe-fed technique is early proposed and widely used. One advantage of the probe-fed patch antenna [12] is that the input resistance is only determined by the feed point (d_s). Based on the L-strip proximity feed and probe-fed techniques, a novel feed structure is introduced and named modified L-strip feed in this paper. The modified L-strip feed structure can easily determine input resistance and reactance, which is certified by parametric studies in the section IV. Furthermore, the modified L-strip feed structure with two vertical segments is similar to the differential feed scheme [9]. Therefore, the high cross polarization levels of the proposed antenna can be suppressed effectively. However, the present scheme differs from those of [9], in which a broadband impedance matching network is inserted by means of the electromagnetic coupling between the modified L-strip and the lower patch.

EXPERIMENTAL RESULTS AND ANALYSIS

The VSWR of the fabricated prototype were measured by an HP8753D vector network analyzer and the far-field performances were obtained using the SATIMO measurement system in an anechoic chamber. In addition, the commercial software called HFSS (High Frequency Structure Simulator) was also used to simulate the antenna performance.

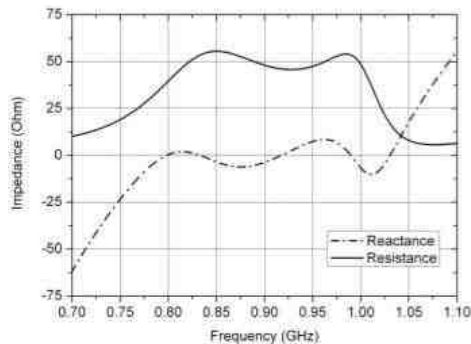


Fig. 4. input impedance of the proposed antenna

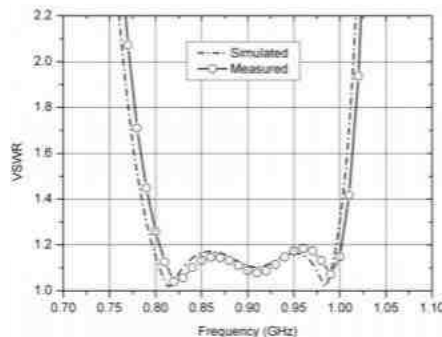


Fig. 5. Comparison of the simulated and measured VSWR.

Fig. 4 gives the simulated input impedance curve. It is clearly observed that the input resistance varies around the 50Ω and the input reactance keeps small within a broad frequency range to achieve a good impedance matching. The large reactance usually resulted from the feed probe can effectively be cancelled out by the strong electromagnetic coupling, such as coupling between the feed strip and the lower patch. The 50Ω resistance can be obtained by properly selecting the position of the feed point at the lower patch. So good impedance matching can be obtained by adjusting the size of the antenna (L_f , L_s , W_s , and h_1).

A comparison between the simulated and measured VSWR shows good agreement, as displayed in Figure 5. The VSWR curve of the proposed antenna is similar to that of a third-order chebyshev filter, which implies that there are three resonance frequencies of the proposed antenna well excited around 900 MHz. Consequently, the impedance bandwidth of the proposed antenna can reach up to 22% from 804 MHz to 1002 MHz for $VSWR < 1.2$, which attributes to the dual-layer patch configuration and modified L-strip feed technique. A comparison of the simulated and measured gain against the frequency is shown in Fig. 6. The antenna has a gain level of about 9 dBi across the operating bandwidth.

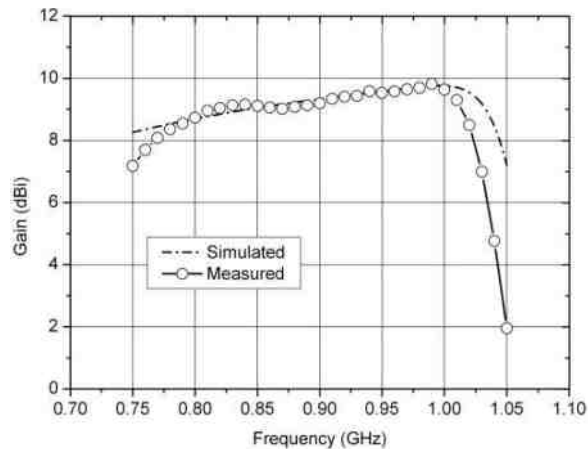


Fig. 6. Comparison of the simulated and measured antenna gain.

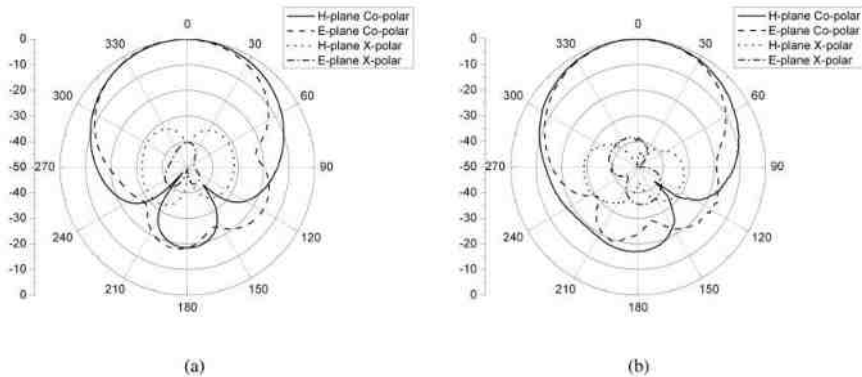


Fig. 7. Radiation patterns of the proposed antenna at 804MHz:

(a) simulated and (b) measured.

Fig. 7, 8 and 9 give the simulated and measured radiation patterns of the proposed antenna in E-plane (x-z) and H-plane (y-z) at 804, 900 and 1002 MHz, respectively. It is observed that both of the simulated and measured cross-polarization levels are 20 dB or more below the maximum co-polarization levels within the operating frequencies. The radiation performances of the probe-fed patch antennas is investigated experimentally by Z. N. Chen and M. Y. W. Chia [13]. Their studies clearly show that the degradation of the radiation performances of the broadband probe-fed patch antennas stems significantly from the excitation of higher order modes rather than the probe-radiation.

The higher order modes distort the distributions of the induced electric currents, especially near the feed points at the patch. Typically, on boresight, the cross-polarization level remains fairly low, however off-boresight angles in the H-plane, the cross-polarization levels can be increased dramatically. In the E-plane, the effect of the higher order modes is to distort the co-polarized pattern, usually causing an undesirable null on one side. In this study, by the introduction of a modified L-strip, the effect of the higher order modes can be significantly reduced. This is because the two vertical segments at the front and back end of strip with the currents of a 180° phase shift act as the dual-probe feeding structure [9]. The resultant cross-polarization levels in H-planes come down.

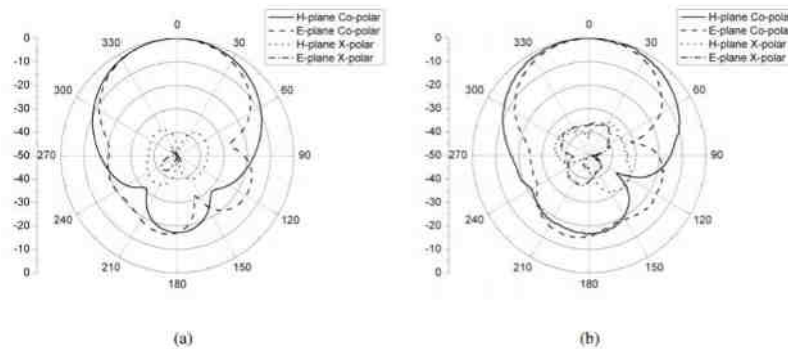


Fig. 8. Radiation patterns of the proposed antenna at 900MHz:
(a) simulated and (b) measured.

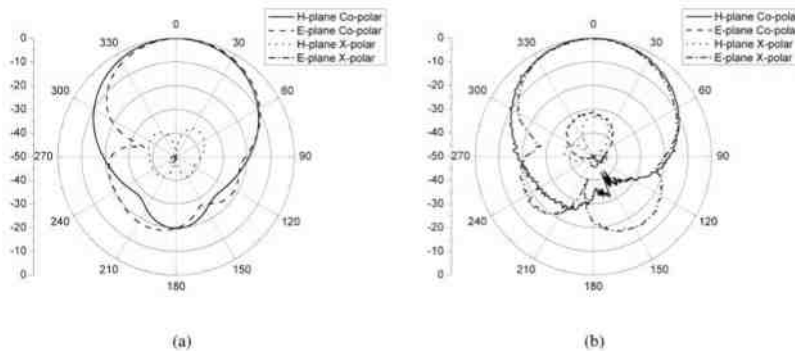


Fig. 9. Radiation patterns of the proposed antenna at 1002MHz:
(a) simulated and (b) measured.

Table:- Half Power Beamwidths

Frequency (MHz)	Half power beamwidths			
	E-plane		H-plane	
	Simulated	Measured	Simulated	Measured
804	65°	67°	76°	78°
900	60°	58°	69°	75°
1002	62°	58°	64°	62°

Simulated and measured results of the half power beamwidth extracted from the radiation patterns are summarized in Table I. The measured half power beamwidths are 58° in the E-plane and 75° in the H-plane at the center frequency (900 MHz), which is in good agreement with the simulated half power beamwidths of 60° in the E-plane and 69° in the H-plane. Results in Table I show that the half power beamwidths are stable in both E- and H-planes within the operating bandwidth.

At last, the back-lobe radiation levels of the proposed antenna are less than -16dB within the operating bandwidth, which are somewhat low mainly due to the use of the finite-size ground plane in the tests.

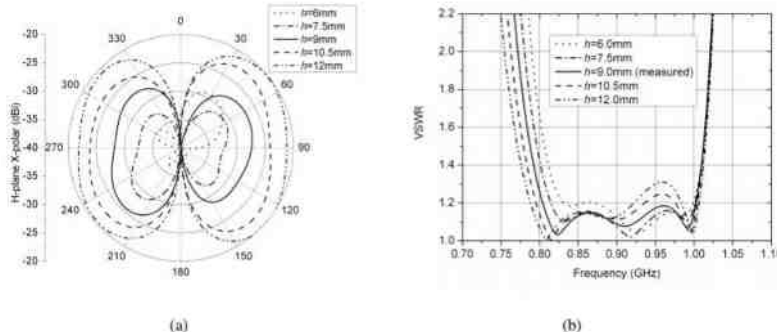


Fig. 10 Effect of the height of the lower patch on the antenna performance. (a) H-plane x-polar at 900MHz. (b) VSWR.

PARAMETRIC STUDIES AND DESIGN GUIDELINE

Parametric studies are conducted to provide more detailed information about the antenna design and optimization. The parametric study is carried out by simulation because good agreement between the simulation and measurement has been observed. The parameters under study include the height of the patches, the distance between the vertical segment of the modified L-strip and the edge of the lower patch, the width of the modified L-strip, and the length of horizontal segment of the modified L-strip. Since the effects of some parameters (such as the size of the patches) and the gain performance of the dual-layer patch antenna, have been well known, the study of these parameters and performances is excluded in this paper. To better understand the influence of the parameters on the performance of the antenna, only one parameter at a time will be varied, while others are kept unchanged unless especially indicated.

HEIGHT OF THE LOWER PATCHES (2*H)

Fig. 10 shows the effect of the height of the lower patch on the H-plane cross-polarization and VSWR of the antenna. It is found that increasing the height h from 9 mm to 12 mm causes higher cross-polarization levels and a narrow impedance bandwidth due to the larger inductance shown in Fig. 11. The decreasing of h drops down the cross-polarization levels and achieves better impedance matching. However, over decreasing of h (such as $h = 6$ mm) will degrade the impedance bandwidths.

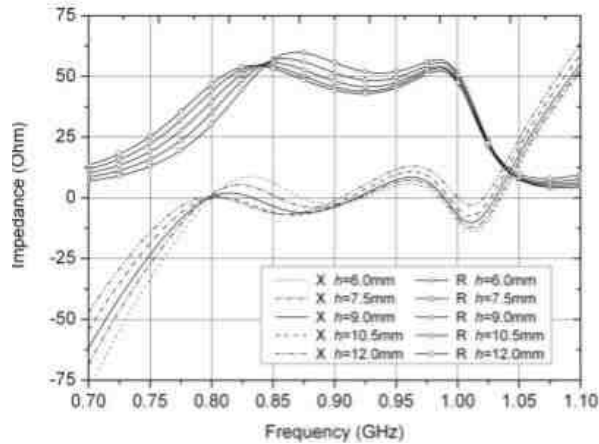


Fig. 11 Effect of the h on the input impedance.

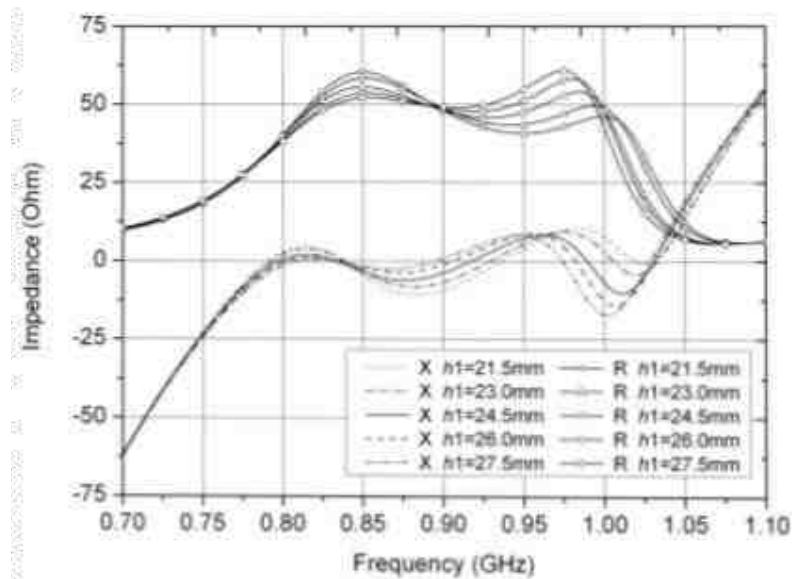


Fig. 12 Effect of the h_1 on the input impedance.

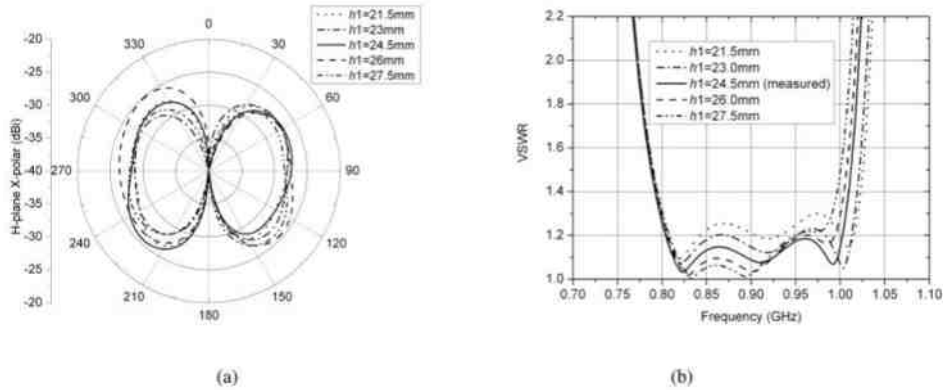


Fig. 13 Effect of the height of the upper patch on the antenna performance. (a) H-plane x-polar at 900MHz. (b) VSWR.

DISTANCE BETWEEN VERTICAL SEGMENT OF MODIFIED L-STRIP AND Edge of Lower Patch (L_f)

Fig. 14 gives the effect of L_f on the H-plane cross-polarization and input impedance of the antenna. It is found that the cross polarization level diminishes as the feed point close to the edge of the lower patch and the input resistance increases, this variation of which is similar to that of the probe-fed patch antenna [12]. The maximum input resistance can be achieved by locating the feed point at the edge of the lower patch. The magnitude of input resistance can vary from a few Ohms to about one hundred Ohms. Compare to the probe-fed single-layer rectangular patch antenna (the maximum input resistance is about 140 Ohm for the first resonant mode) [12], the maximum input resistance of the antenna is less. This means that the feed point of the dual-layer patch antenna closer than that of probe-fed single-layer patch antenna to the edge of the patch under the condition of 50Ω impedance matching. Therefore, the dual-layer patch configuration lowers the cross-polarization level in some degree.

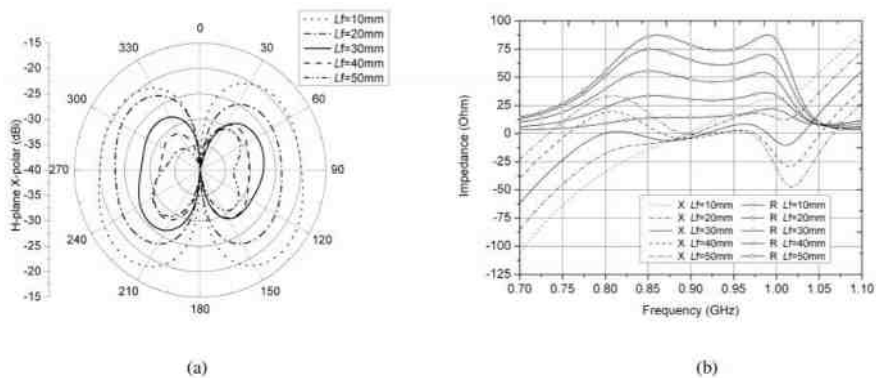


Fig. 14 Effect of the L_f on the antenna performance. (a) H-plane x-polar at 900MHz. (b) input impedance.

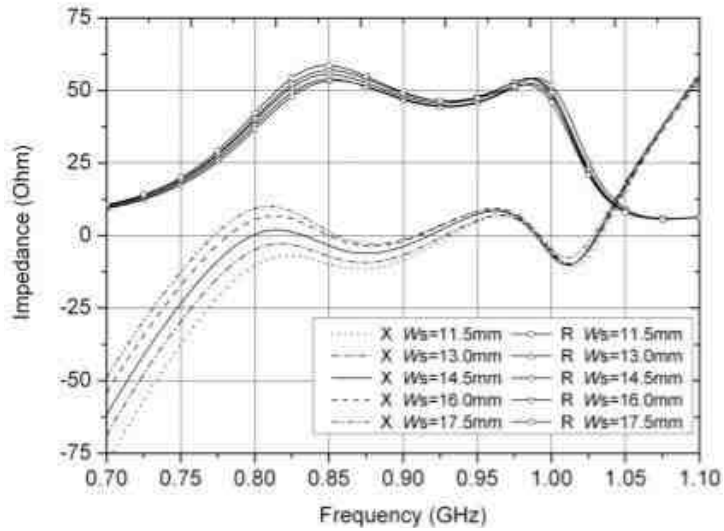


Fig. 15 Effect of the W_s on the input impedance.

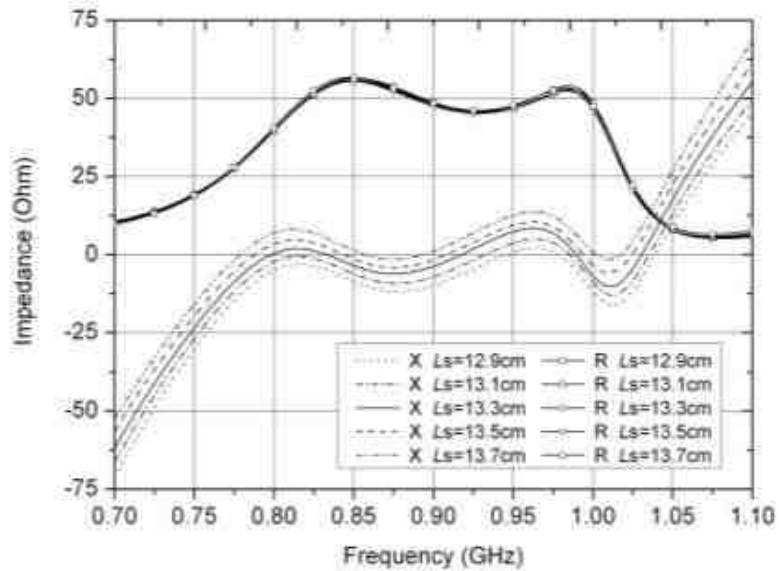


Fig. 16 Effect of the L_s on the input impedance.

D. WIDTH OF MODIFIED L-STRIP (W_s)

Fig. 15 exhibits the effect of the width W_s of the modified L-strip on the input impedance of the antenna. It is found that a flatter input reactance curve can be obtained by tuning the width

W_s of modified L-strip, the effect of which on the input resistance is smaller. Similar to h_1 , the cross-polarization levels of the antenna is modestly affected by W_s so that the results are not exhibited.

Length of Horizontal Segment of Modified L-Strip (L_s)

Contrary to L_f , the length L_s of horizontal segment of the modified L-strip has a greater effect on input reactance of the antenna. As shown in Fig. 16, when changing the length L_s from 129 mm to 137 mm the input reactance is uniformly increased, meanwhile the input resistance is hardly affected. The length L_s has a greater effect on cross-polarization levels of the antenna, whereas the effect is slight if the length L_s is kept within 129–137 mm so that the results are also not exhibited.

Procedures of antenna design

Based on the foregoing parametric studies, the following procedures are suggested to design the antenna:

1. Calculate the resonant length of the patch L_1 and L_2 with $L_1 \approx 0.40\lambda_0$ and $L_2 \approx 0.34\lambda_0$.
2. Choose a spacing between the lower patch and the ground ($< 0.06\lambda_0$) for cross-polarization suppression.
3. Calculate the length of horizontal segment of the modified L-strip L_s with $L_s \approx 0.40\lambda_0$.
4. Determine the value of L_f for which the input resistance at the center frequency f_0 is 50 Ohm.
5. Determine the separation between the patches h_1 to obtain a flatter input resistance.
6. Determine the value of W_s in order to get a flatter input reactance.
7. Tune the value of L_s for which the input reactance is near zero.

REFERENCES

1. Y. H. Ge, K. P. Esselle, and T. S. Bird, "A Compact E-shaped Patch Antenna with Corrugated Wings," *IEEE Trans. Antennas and Propagation*, vol. 54, no. 8, pp. 2411-2413, Aug. 2006.
2. R. Chair, C. L. Mak, K. F. Lee, K. M. Luk, and A. A. Kishk, "Miniature Wide-Band Half U-Slot and Half E-Shaped Patch Antennas," *IEEE Trans. Antennas and Propagation*, vol. 53, no. 8, pp. 2645-2652, Aug. 2005.
3. K. L. Wong, C. L. Tang, and J. Y. Chiou, "Broad-band Probe-fed Patch Antenna with a W-shaped Ground Plane," *IEEE Trans. Antennas and Propagation*, vol. 50, no. 6, pp. 827-831, June 2002.
4. W. H. Hsu, and K. L. Wong, "Broad-band Probe-fed Patch Antenna with a U-shaped Ground Plane for Cross-Polarization Reduction," *IEEE Trans. Antennas and Propagation*, vol. 50, no. 3, pp. 352-355, Mar. 2002.
5. H. Ghannoum, S. Bories, and C. Roblin, "Probe Fed Stacked Patch Antenna for UWB Sectoral Applications," *Proc. IEEE International Conference on Ultra-Wideband*, pp. 97-102, 2005.
6. M. A. Matin, B. S. Sharif, and C. C. Tsimenidis, "Probe Fed Stacked Patch Antenna for Wideband Applications," *IEEE Trans. Antennas and Propagation*, vol. 55, no. 8, pp. 2385-2388, Aug. 2007.
7. M. T. Islam, M. N. Shakib, N. Misran, and B. Yatim, "Ultrawideband EH Shaped Stack Patch Antenna for Wireless Communications," *Proc. IEEE Wireless and Microwave Technology Conference*, pp. 1-4, 2009.
8. Q. Xue, X. Y. Zhang, and C. H. K. Chin, "A Novel Differential-fed Patch Antenna," *IEEE Antennas and Propagation Letters*, vol. 5, pp. 471-474, 2006.
9. Z. N. Chen, and M. Y. W. Chia, "Broad-band suspended probe-fed antenna with low cross-polarization levels," *IEEE Trans. Antennas and Propagation*, vol. 51, no. 2, pp. 345-346, Feb. 2003.

10. H.W. Lai, and K.M. Luk, "Design and Study of Wide-Band Patch Antenna Fed by Meandering Probe," IEEE Trans. Antennas and Propagation, vol. 54, no. 2, pp. 564-571, Feb. 2006.
11. M.K. Meshram, "Analysis of L-strip Proximity Fed Rectangular Microstrip Antenna for Mobile Base Station," Microwave and Optical Technology Letters, vol. 49, no. 8, pp. 1817-1824, Aug. 2007.
12. W. F. Richards, Y. T. Lo, and D. D. Harrison, "An Improved Theory for Microstrip Antennas and Applications," IEEE Trans. Antennas and Propagation, vol. 29, no. 1, pp. 38-46, Jan. 1981.
13. Z. N. Chen, and M. Y. W. Chia, "Experimental Study on Radiation Performance of Probe-Fed Suspended Plate Antennas," IEEE Trans. Antennas and Propagation, vol. 51, no. 8, pp. 1964-1971, Aug. 2003.

A Broadband Circularly Polarized Stacked Probe-Fed Patch Antenna for UHF RFID Applications

Dr. Shankar Prasad Singh*

INTRODUCTION

Radio frequency identification (RFID) technology has been rapidly developing in recent years and the applications have been found in many service industries, distribution logistics, manufacturing companies, and goods flow systems [1, 2]. The range and the scalability of RFID systems are strongly dependent on the operating radio frequency of the systems. The operating frequency can significantly affect reading distance, data exchange speed, interoperability, and so on.

However, the coexistence of the RFID systems with other existing radio systems, such as mobile phones, wireless local area networks, and marine/aeronautical radio systems, significantly restricts the range of operating frequency available for the RFID systems. As a result, only the frequencies that have been reserved specially for the ISM (industrial, scientific, medical) bands can be used. Due to the merits of high data transfer rate and long detection range, passive RFID systems at ultra high-frequency (UHF) band are preferred in many applications. However, there is not a UHF range worldwide accepted for RFID applications. For instance, the frequency range for UHF RFID application is 902–928 MHz in North America (USA, Canada) and South America (Brazil, Argentina, etc.), and 865.5–867.6 MHz in Europe (Finland, Germany, France, Italy, Sweden, UK, etc.). In Asia-Pacific, the UHF RFID frequency ranges from 840 MHz to 954 MHz in different countries/regions: 840.5–844.5 MHz, 920.5–924.5 MHz in China, 952–955 MHz in Japan, 865–867 MHz in India,

865–868 MHz, 920–925 MHz in Hong Kong, 908.5–910 MHz, 910–914 MHz in Korea, 866–869 MHz, 923–925 MHz in Singapore, 920–926 MHz in Australia, and so on. In short, the UHF used for RFID systems spans the range of 840–960 MHz. Therefore, a reader antenna covering whole RFID UHF band is conducive to system configuration, system implementation, and cost reduction.

This paper presents a broadband circularly polarized stacked probe-fed patch antenna for UHF RFID applications. The antenna is designed to cover entire RFID UHF band of 840–960 MHz with desired specifications such as high gain, low axial ratio (AR), and good impedance matching. The design is optimized and validated by measurement. The para-metric studies provide the engineers with information to design and modify such an antenna.

ANTENNA DESIGN AND RESULTS

The challenges of the RFID reader antenna design lie in having a good impedance matching, low axial ratio, and high gain with the constraints of size and cost. Many types of antennas can generate circularly polarized radiation, wherein patch antenna is one of the most commonly used. To achieve circularly polarized radiation, the patch antenna can be

fed either with a single strip line, a coaxial line, or a power splitting network to excite two orthogonal patch modes in phase quadrature [3, 4]. In this proposed design, a hybrid coupler is used to form a feeding network for the circular polarization radiation.

*Assistant Professor (Physics) Laxminath College Bangaon, Saharsa / BNMU, Madhepura (Bihar).

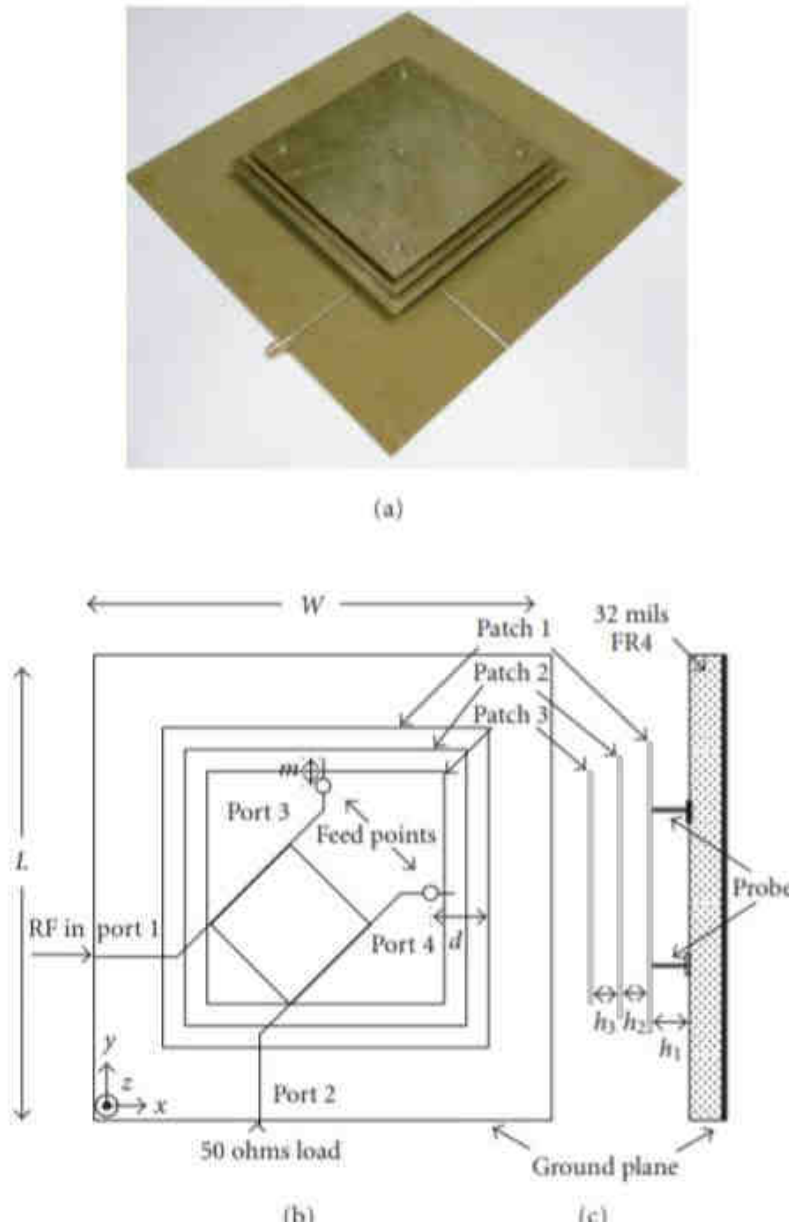


Figure 1: Geometry of the stacked patch antenna: (a) snapshot of proposed antenna; (b) schematic top view; (c) schematic side view.

The configuration of the proposed antenna is shown in Figure 1. The antenna is composed of a branch line hybrid coupler which is etched on an FR4 substrate ($\epsilon_r = 4.4$, $\tan \delta = 0.02$, thickness = 0.8128 mm), and three radiators which are all made of brass. The hybrid coupler has four ports. Port 1 is fed by

RF signal, port 2 is loaded by a 50Ω resistor, and port 3 and port 4 are used to excite the primary patch radiator. Such a feeding network features the high isolation between two feed ports and less reflection to the RF signal port because the power reflected from a mismatched antenna is absorbed by the resistive load. The primary radiator (patch 1, $150 \text{ mm} \times 150 \text{ mm}$, 0.5 mm thick) is fed by two feeding probes which are connected to the output ports of the hybrid coupler, that is, port 3 and port 4, respectively.

The feed points are positioned symmetrically with the square patches with a distance d of 18.5 mm away from the edge of the primary patch. The height of the feeding probes is 10 mm and the diameter is 2.2 mm . To further improve the bandwidth, two more 0.5 mm thick square brass patches ($138 \text{ mm} \times 138 \text{ mm}$, $130 \text{ am} \times 130 \text{ mm}$) are stacked over the primary patch with separation of $h_2 = h_3 = 5 \text{ mm}$ [5]. Referring to the configuration shown in Figure 1, the proposed antenna will generate a left-hand circularly polarized (LHCP) radiation. A right-hand circularly polarized (RHCP) radiation can easily be achieved by interchanging hybrid coupler's RF in and loading ports. The proposed antenna was designed with the aid of IE3D soft-ware, which is based on the method of moments [6].

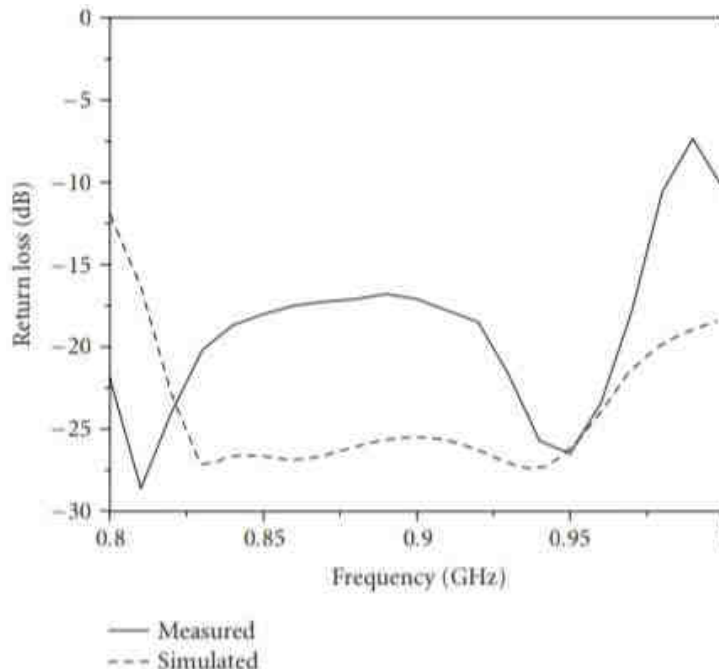


Figure 2: Measured and simulated return losses of the proposed antenna.

Based on the optimization by IE3D, the proposed antenna was fabricated and measured. The measurement was conducted in an anechoic chamber using an Agilent 8510C vector network analyzer (VNA) and a Midas 4.0 antenna measurement system. Figure 2 shows that the measured return loss of the proposed antenna is less than -15 dB over 800 MHz to 980 MHz . Figure 3 depicts that the measured gain is more than 6.5 dBic over 800 MHz to 980 MHz . There is a frequency shift of about 30 MHz for measured return loss and gain with respect to simulated results, which may be mainly caused by the fabrication tolerance as well as the possible uncertainty of in-house antenna assembly. In addition, the inaccuracy of the numerical mode used in the commercial simulator is the possible cause as well because of the 3-dimensional structure with finite-size dielectric substrate. The measured 3 dB

axial ratio shown in Figure 4 covers the range of 820–1000 MHz and the axial ratio is lower than 2.6 dB across 860–960 MHz. The measured radiation patterns for the proposed antenna in the x-z and y-z planes at 867 MHz, 915 MHz, and 954 MHz are shown in Figure 5. The normalized radiation patterns show symmetry and wide angular circular polarization performance especially in x-z plane where the angle for 3 dB axial ratio is up to 90°. The 15 dB front-to-back ratio is achieved in both planes at all frequencies.

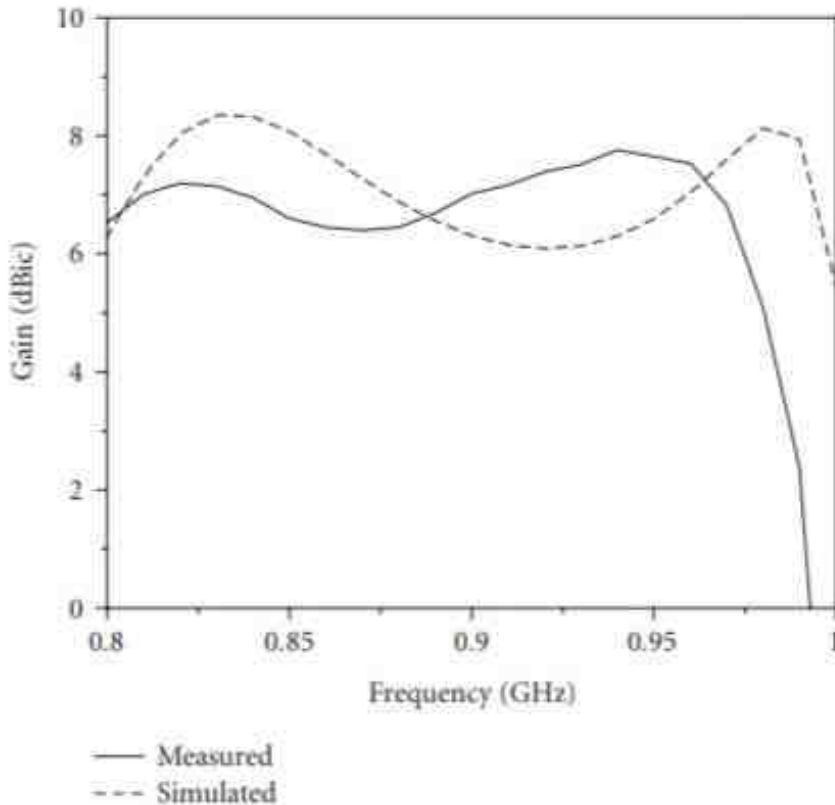


Figure 3: Measured and simulated gains of the proposed antenna.

PARAMETRIC STUDIES

The parametric studies were carried out to provide antenna engineers with the information for antenna design and optimization. The performance of the proposed antenna is mainly determined by the characteristics of the hybrid coupler, the feeding probes, the configuration of the radiators including dimensions and separations of the stacked patches, and the size of the ground plane. The hybrid coupler has been well studied by others so that we will not discuss it in this paper, but we would instead focus on the effects of the feeding probes, the stacked patches, and the ground plane on the performance of the antenna. The studies were conducted using IE3D. Each physical attribute of the antenna is independently varied, while all other parameters are kept unchanged.

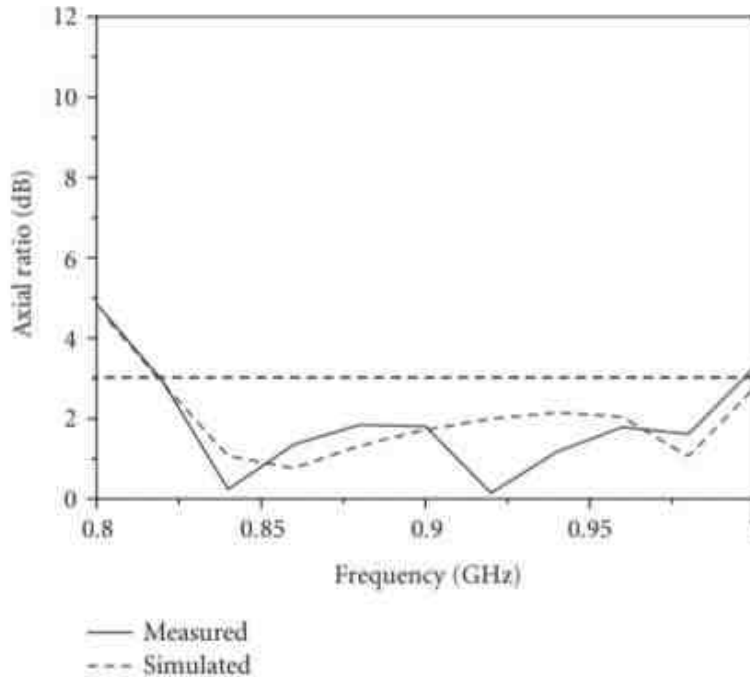


Figure 4: Measured and simulated axial ratios of the proposed antenna.

THE EFFECT OF THE FEEDING PROBES

As shown in Figure 1, the parameters related to the feeding probes are their position (d , m) and diameter (D). Figures 6–9 show the effects of these parameters on the impedance matching. As shown in Figure 6, the impedance matching is hardly changed with varying d . It suggests that the location of the feeding probes is not critical (of course they are required to be positioned symmetrically with the patch) for impedance matching, which offers more tolerance for feed points positioning.

Figure 7 shows the effects of the strip line extension (m) on the impedance matching. The larger extension of the strip lines exhibits a wider bandwidth for specific impedance matching since the lower edge of the operating frequency band is shifted down while the higher edge is kept unchanged. The return loss of the proposed antenna with different probe diameters is exhibited in Figure 8. The probe diameter does not affect the impedance matching at the lower frequencies, while the higher frequencies are shifted up as the diameter increases, and thus the impedance matching band-width is slightly widened. It is found that the dimensions of the feeding probes hardly affect the gain and axial ratio of the antenna. For brevity, the results are not shown here.

THE EFFECT OF THE PATCHES

Figure 9 illustrates the effect of the height of the primary patch, h_1 , on the antenna performance. Figure 9(a) shows the return loss of the proposed antenna against h_1 . It is obvious that the frequency band for impedance matching is shifted down when h_1 increases. From Figure 9(b), it is seen that h_1 has much impact on the gain performance of the proposed antenna. Higher primary patch broadens bandwidth of the gain especially at the lower frequency and offers flatter gain response. A similar

effect on the axial ratio performance is observed as shown in Figure 9(c). Increasing h_1 is an effective way to enhance the gain and axial ratio bandwidth of the antenna. However, it should be noted that larger h_1 mainly contributes to the overall height of the antenna. It is necessary to make a tradeoff between gain, axial ratio, and height of the antenna in practical design.

Figure 10 illustrates the effect of the height of the first stacked patch, h_2 , on the antenna performance. Figure 10(a) shows the return loss of the proposed antenna against h_2 . It is observed that the bandwidth for impedance matching is unchanged when varying h_2 . The h_2 shows the effect on antenna gain especially at higher frequencies as shown in Figure 10(b). Smaller h_2 shifts up the upper edge of the operating frequency band but degrades the gain flatness over the band. Figure 10(c) demonstrates the effect of h_2 on axial ratio; narrow bandwidth with better axial ratio over the band is observed for larger h_2 . Decreasing h_2 raises the higher frequencies and results in worse axial ratio performance. It is concluded that varying h_2 is helpful for optimizing gain and axial ratio over specified frequency bandwidth.

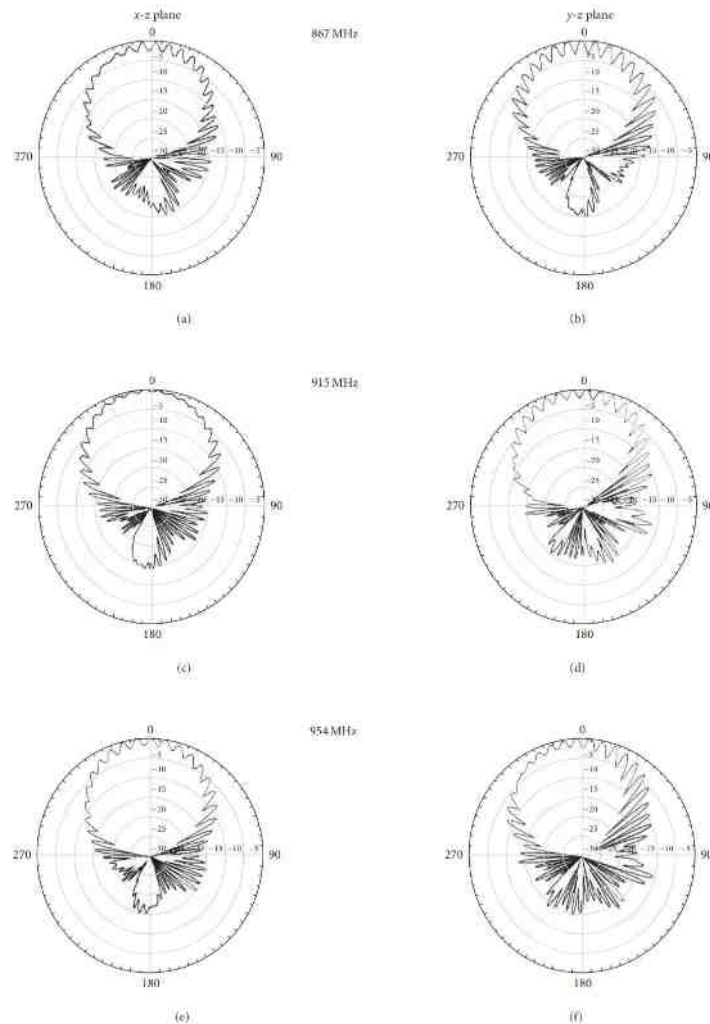


Figure 5: Measured radiation patterns of the proposed antenna.

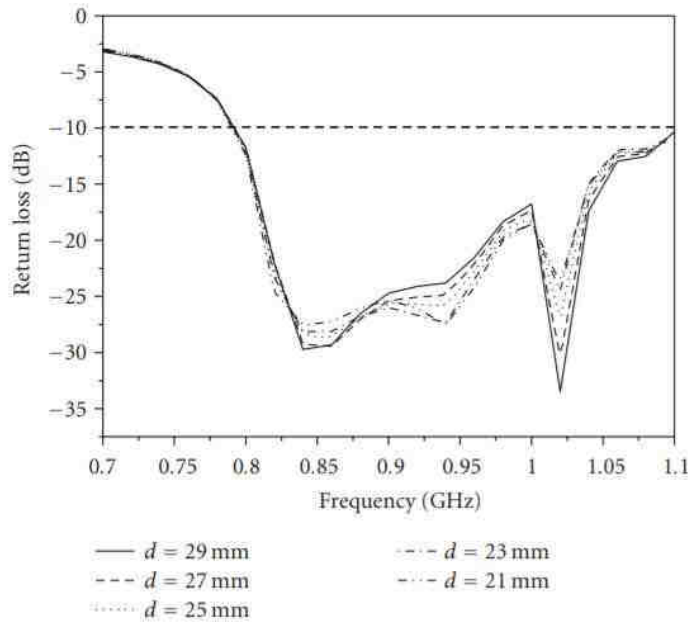


Figure 6: Effect of the position of the feeding probes on impedance matching.

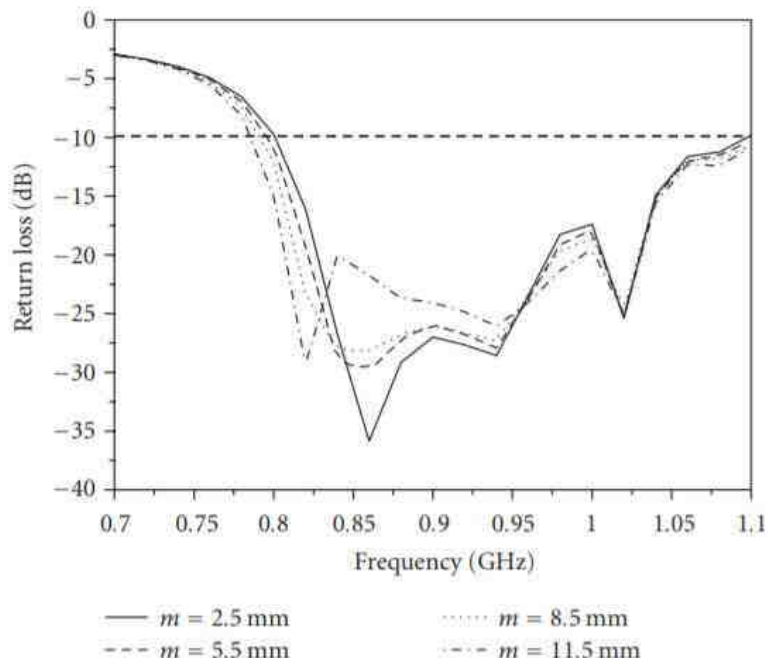


Figure 7: Effect of varying extensions of the feed lines on impedance matching.

Figure 11 illustrates the effect of the height of the second stacked patch, h_3 , on the antenna performance, which is similar to that of h_2 . However, compared to h_2 , h_3 shows less impact on the antenna as the second stacked patch is further separated from the primary patch and contributes less to the overall antenna radiation. The effect of the size of the patches on the performance of stacked patch antennas has already been discussed by Rowe et al. [7] and therefore it is not covered here.

THE EFFECT OF THE GROUND PLANE

The effect of the size of the ground plane on the antenna performance is illustrated in Figure 12. Figure 12(a) shows the return loss of the proposed antenna with respect to ground planes with different dimensions.

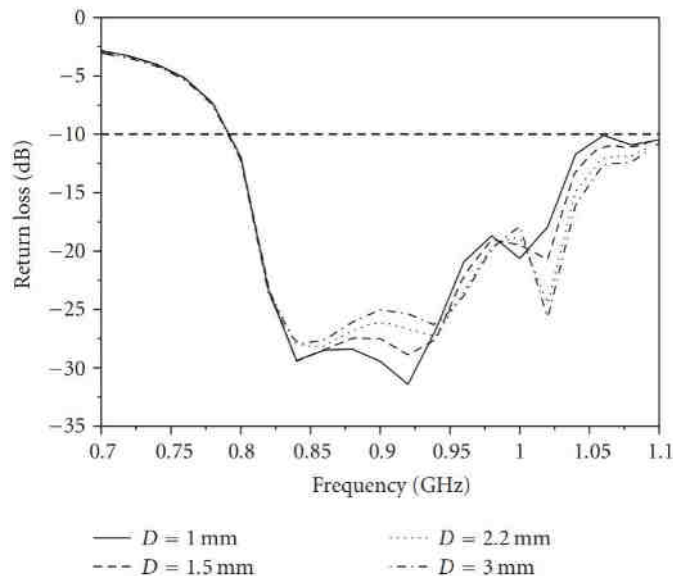


Figure 8: Effects of varying diameters of the feeding probes on impedance matching.

The best return loss performance is achieved for adequate ground plane size ($L = W = 250$ mm); bigger or smaller ground planes degrade impedance matching of the antenna. The gain response of the antenna against ground planes with different dimensions is shown in Figure 12(b). As expected, higher gain is achieved for the antenna with bigger ground plane, and more increase of gain is observed at lower frequencies.

As shown in Figure 12(c), the best axial ratio of the antenna is achieved with the adequate ground plane dimensions ($L, W = 250$ mm); other ground planes with different dimensions can broaden the bandwidth of the axial ratio of the antenna in one way or another. However, the axial ratio is degraded within the operating frequency. In conclusion, the size of ground plane shows observable effect on the antenna performance; it can be used to optimize the antenna for achieving required specifications.

CONCLUSION

In this paper, a broadband circularly polarized stacked probed-fed patch antenna has been proposed for UHF RFID applications. The measurement has showed that the optimized antenna can cover the

UHF band of 820–980 MHz (17.7%) with gain of more than 6.5 dBi, axial ratio of less than 3.0 dB, and return loss of less than -15 dB. Therefore, it is suitable for the UHF RFID reader antennas operating within the UHF band of 840–960 MHz. Moreover, the parametric studies have addressed the effects of the height of the patches, the locations of the feeding probes, and the size of the ground plane on the performance of the antenna. It has been found that the height of the primary patch has the largest effect on the performance of the proposed antenna, while the effects of the locations and dimensions of the feeding probes are very limited. Adequate size of the ground plane is helpful for optimizing the antenna for achieving specific design requirements. The information presented in this paper will be helpful for antenna engineers to design and optimize the antenna for UHF RFID applications.

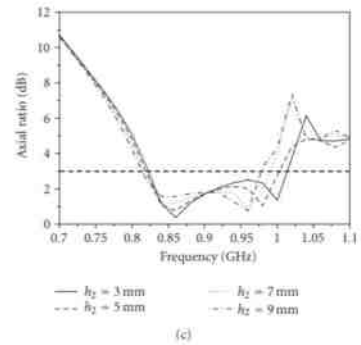
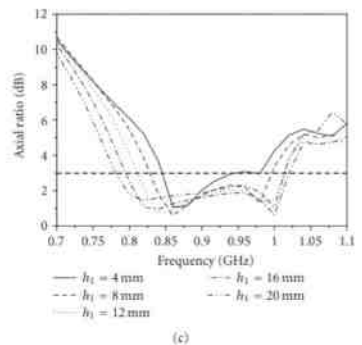
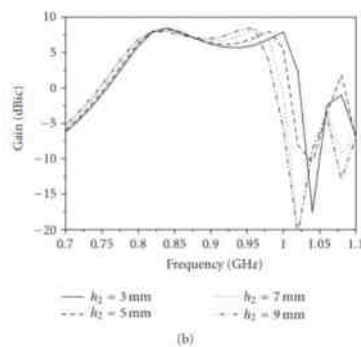
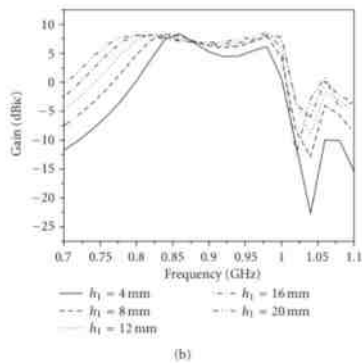
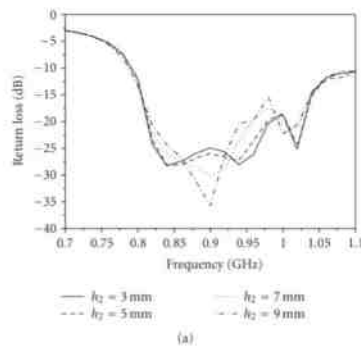
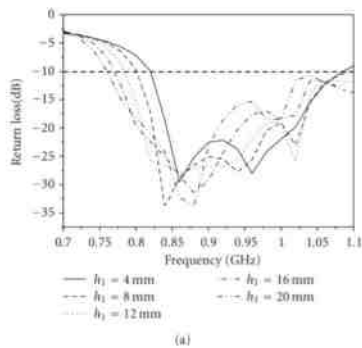


FIGURE 9: Effect of the height of the primary patch on the performance of the proposed antenna: (a) return loss; (b) gain; (c) axial ratio.

FIGURE 10: Effect of the height of the first stacked patch on the performance of the proposed antenna: (a) return loss; (b) gain; (c) axial ratio.

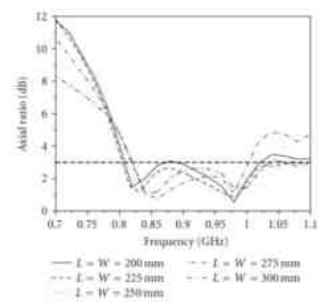
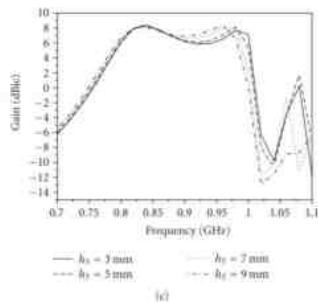
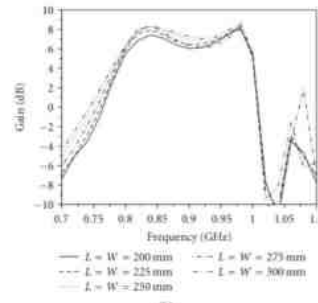
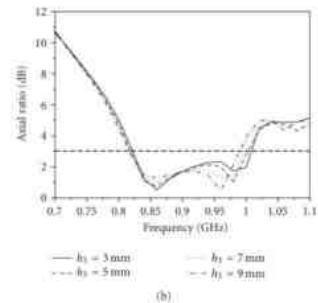
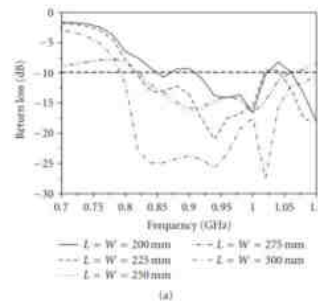
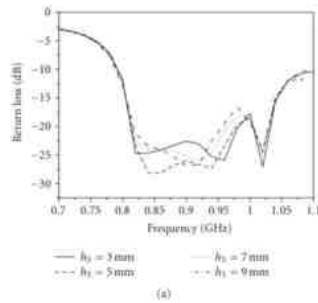


FIGURE 11: Effect of the height of the second stacked patch on the performance of the proposed antenna: (a) return loss; (b) gain; (c) axial ratio.

FIGURE 12: Effect of the size of the ground plane on the performance of the proposed antenna: (a) return loss; (b) gain; (c) axial ratio.

REFERENCES

1. L. Jeremy, "The history of RFID," IEEE Potentials, vol. 24, no. 4, pp. 8–11, 2005.
2. K. Finkenzeller, RFID Handbook, John Wiley & Sons, New York, NY, USA, 1st edition, 1999.
3. E. K. P. Nasimuddin and A. K. Verma, "Improving the axial-ratio bandwidth of circularly polarized stacked microstrip antennas and enhancing their gain with short horns," in The IEEE Antennas and Propagation Society International Symposium, pp. 1545–1548, Albuquerque, NM, USA, July 2006.
4. F.-S. Chang, K.-L. Wong, and T.-W. Chiou, "Low-cost broad-band circularly polarized patch antenna," IEEE Transactions on Antennas and Propagation, vol. 51, no. 10, part 2, pp. 3006–3009, 2003.
5. S. D. Targonski, R. B. Waterhouse, and D. M. Pozar, "Design of wide-band aperture-stacked patch microstrip antennas," IEEE Transactions on Antennas and Propagation, vol. 46, no. 9, pp. 1245–1251, 1998.
6. IE3D version 11.01, "Zeland Software Incorporation," Fremont, Calif, USA.
7. W. S. T. Rowe and R. B. Waterhouse, "Investigation into the performance of proximity coupled stacked patches," IEEE Transactions on Antennas and Propagation, vol. 54, no. 6, pp. 1693–1698, 2006.

महात्मा गाँधी एवं श्री एम.एन.राय का मानवतावाद: एक तुलनात्मक अध्ययन

डॉ. फरहा नाज*

सार-संक्षेप

महात्मा गाँधी जी ने व्यक्ति तथा समाज की गरिमा स्थापना एवं उन्नयन हेतु मानवीय और नैतिक मूल्यों तथा आस्थाओं को प्राथमिक माना। मानवीय आग्रहों के इस विकल्प को गाँधी जी की वैचारिक एवं व्यवहारिक समग्रता के परिप्रेक्ष्य में आंकना उचित होगा। गाँधी जी ने जिस सामाजिक-आर्थिक व्यवस्था, संरचना तथा व्यावहारिकता के विकल्प प्रस्तुत किये, उन्हें आदर्श अथवा परिकल्पना मानने से प्रश्न अनुत्तरित बना रहेगा। मानवीय विकास क्रम में गाँधी जी का कथन स्वयं चुनौतीपूर्ण है तथा सांदर्भिकता के अनुकूलन हेतु अनिवार्य है कि गम्भीर विश्लेषण किया जाय। दूसरी ओर मानवेन्द्रनाथ रॉय मानव के विकास की धारणा को स्वीकार करते हैं। मनुष्य भौतिक जगत् से ही उत्पन्न हुआ है। भौतिक नियमों के द्वारा ही शासित होता है। परिणामस्वरूप नैतिकता की सांदर्भिकता स्थापित है। मनुष्य विश्व समाज का अभिन्न अंग है। अतः नव-मानवतावाद में मनुष्य की सामाजिक सम्बन्धों से निरपेक्ष मनुष्य की कल्पना करना उचित नहीं है। नवीन मानवतावाद मनुष्य के सामाजिक सम्बन्धों को समग्र मानकर चलता है। शाश्वत एवं अपरिवर्तनीय मानव स्वभाव केन्द्रीय मान्यता नहीं है। नवीन मानवतावाद इस अर्थ में नवीन है कि वह मनुष्य के सम्बन्ध में एक नयी धारणा को स्वीकार करता है। उसका विश्वास है कि मनुष्य तत्त्वतः बौद्धिक प्राणी है, यह सिद्धान्त ऐतिहासिक तथा वैज्ञानिक दृष्टि से सत्य है।

परिचय

मानवतावाद वैज्ञानिक दृष्टि पर आधारित स्वतन्त्रता एवं मुक्ति का दर्शन है। रॉय ने प्राचीन मानववाद में अनेक कमियाँ पाईं। उन्हें प्राचीन मानववाद की धर्म प्रधानता स्वीकार नहीं थी। मनुष्य सत्ता से ऊपर रॉय किसी अधिदैविक अथवा अधिभौतिक सत्ता को स्वीकार नहीं करते थे। रॉय ने मानववादी की प्राचीन अधिमान्यताओं को समाप्त करके नवीन दृष्टिकोण अपनाया। यही नवीन दृष्टिकोण नव-मानववाद, मानव के प्रादुर्भाव, उसके अतीत तथा वास्तविकता की खोज के साथ जीवन के मूलभूत अनुभवों पर आधारित किया गया। नव-मानववाद कोई अमूर्त दर्शन या केवल आर्थिक राजनीतिक सिद्धान्त नहीं है, वे व्यक्ति को स्वयं के भाग्य का निर्माता बनाता है, और वह सुविधा प्रदान करता है, जिसके अपनाने से मनुष्य विश्व का निर्माण या पुनर्निर्माण करता हुआ, सतत् विकास की ओर प्रयत्नशील रह सकता है।

मानवीय विकास क्रम में गाँधी जी का कथन स्वयं चुनौतीपूर्ण है तथा सांदर्भिकता के अनुकूलन हेतु अनिवार्य है कि गम्भीर विश्लेषण किया जाय। दूसरी ओर मानवेन्द्रनाथ रॉय मानव के विकास की धारणा

*दर्शनशास्त्र अजहर कॉलोनी, आजाद नगर वार्ड नं०-12, मधेपुरा (बिहार) पिन- 852113।

को स्वीकार करते हैं। मनुष्य भौतिक जगत् से ही उत्पन्न हुआ है। भौतिक नियमों के द्वारा ही शासित होता है। परिणामस्वरूप नैतिकता की सांदर्भिकता स्थापित है। रॉय के मानवतावाद का दृष्टिकोण विश्व राज्यवादी है। उनके समाज दर्शन में राष्ट्रवाद अन्तिम अवस्था नहीं है राष्ट्रवाद का आधार जातिगत विद्वेष और जिस सीमा तक सामाजिक समस्याओं की उपेक्षा होती है वहाँ तक प्रतिक्रियावादी है। इसलिए राष्ट्रवाद की अपेक्षा विश्वबन्धुत्व की आवश्यकता है। गाँधी की भाँति रॉय भी सहकारिता मूलक संघ में विश्वास करते थे। वर्तमान सन्दर्भ में संतुलित समाज तथा स्वतन्त्र विश्व के आदर्श को साक्षाकृत करने के सन्दर्भ में यह शर्त है कि सर्वप्रथम नैतिक तथा आध्यात्मिक दृष्टि से मुक्त व्यक्तियों की जाति स्थापित की जाय। इसके लिए आवश्यक है कि व्यक्ति को ऐसी शिक्षा दी जाये जिससे वह स्वतन्त्रता को महत्व देना सीखते हैं। रॉय ने विश्व संघ का उत्साहयुक्त समर्थन किया। उनके अनुसार नवीन मानववाद विश्व राज्यव्यापी है। आध्यात्मिक दृष्टि से स्वतन्त्र व्यक्तियों का विश्व, राष्ट्रीय राज्यों की सीमाओं से परिबद्ध नहीं होगा। वर्तमान राज्य पूँजीवाद, समाजवादी, फासीवाद चाहे किसी प्रकार के क्यों न हो, रॉय के दृष्टिकोण से विश्व सरकार की स्थापना द्वारा राज्यों का निराकरण ही आवश्यक है।

‘नव-मानववाद’ के सिद्धान्त में जीवन के मूल्यों को प्रथम स्थान दिया है। स्वतन्त्रता की शाश्वत प्रेरणा को सर्वोच्च माना है। आधुनिक समाज की राजनीतिक विषमता का मुख्य कारण यही है कि मनुष्य नैतिक मूल्यों का परित्याग कर दिया है एवं केवल औपचारिक संस्थाओं को मान्यता दी है। रॉय के अनुसार लोकतन्त्र तभी सफल हो सकता है, जबकि सार्वजनिक मामलों का संचालन आध्यात्मिक दृष्टि से स्वतन्त्र व्यक्तियों के हाथ में होगा। अधिकतम व्यक्तियों का अधिकतम कल्याण तभी संभव है जब सरकारें सर्वप्रथम अपनी अन्तरात्मा के प्रति उत्तरदायी हों।

रॉय के मानववाद में दो प्राथमिक तत्त्वों का समन्वय है— प्राकृतिक विवेक एवं वस्तुगत इच्छा। प्रकृति ने व्यक्ति को विवेक प्रदत्त किया है, अतः व्यक्ति का मुख्य उद्देश्य यही है कि इस प्राप्त विवेक के द्वारा अनुभवों एवं प्रयासों से सीखकर निरन्तर उसका विस्तार करें। निरन्तर विवेक के विस्तार का नाम ही जीवन है। जीवन की समग्र इच्छा की ओर अग्रसर होते रहने की प्रक्रिया में रत रहना ही वास्तविक जीवन है। नव-मानववाद में व्यक्ति के विकास की ओर उत्कर्ष की कोई सीमा नहीं है। रॉय के अनुसार प्रत्येक व्यक्ति की अनुभव से ज्ञातव्यता होती है कि क्या उसके लिए हितकार है और क्या अहितकर। परिणामस्वरूप व्यक्ति जो उसके लिए हितकर तथा अहितकर होता है, उसका समन्वयीकरण करता है। नैतिकता का यही स्रोत है। ‘नैतिकता’ तथा मूल्य सदैव अनुभवजन्य होते हैं, इन्हीं को रॉय ने विकास का आधार माना है। निरपेक्ष इच्छा से अभिप्राय है कि विवेक से संचालित इच्छा। विवेक संचालित इच्छा उत्कर्ष की ओर ले जाने में सक्षम होती है।

जीवन संघर्षपूर्ण है, किन्तु जीवन को मात्र संघर्ष के रूप में ही देखें तो दिशाविहीन हो जायेंगे। क्योंकि संघर्ष जीवन की निर्णायकता नहीं है, यदि संघर्ष ही प्राथमिकता बन गया तो निरंकुशता समष्टि, एकाधिकारवाद व्यक्ति के मानस पर प्रभावित हो जायेंगे। यह स्थिति मानव जीवन की सकारात्मकता में हास करने लगेगी। अतः इन पस्थितियों के निराकरण के लिए आवश्यक है कि व्यक्ति संघर्षों का सम्मुख विवेक, ध्येय तथा साहस से करें। इस दृष्टिकोण से संघर्ष करने पर जीवन जीवन्तता तथा आशावाद के परिलक्षण का आभास व्यक्ति को सदैव होता रहेगा, जो कि उसके अस्तित्व तथा विकास दोनों के लिए नितान्त आवश्यक है।

दुर्भाग्यवश, वर्तमानयुग विध्वंस का भी युग है, व्यक्तित्व, समाज एवं मूल्यों, दर्शन सिद्धान्त तथा संस्थाओं की सृजनशील मंतव्य से विलग कर, विध्वंस प्रेरित प्रयोजन मानव संस्कृति पर अतिक्रमण है। व्यक्ति मानवीय मूल्यों को विस्मृत करता जा रहा है। अर्थतन्त्र में अन्याय तथा भ्रटाचार व्याप्त है। राजनीति साधन होनी चाहिए। किन्तु आधुनिक सन्दर्भ में इसका स्थान आत्मकेन्द्रित स्वार्थवृत्ति ने ले लिया है। राजनीति साधन नहीं 'शक्ति' का ऐसा स्रोत बन गई है, जिसका संचय व्यक्ति स्वहितार्थ अतिशय रूप में करने की प्रवृत्ति की ओर अग्रसर है। ऐसी विषम परिस्थितियों में रॉय का नव-मानववाद एक नवीन जीवन तथा दृष्टिकोण की सृष्टि के संदेश का मूलक है।

रॉय के वैचारिक विकास क्रम में नव-मानववादी चिन्तन के अनुस्थापन का शुभारम्भ 'रेडिकल डेमोक्रेटिक पार्टी' के सक्रिय कार्यकर्ताओं के एक महत्वपूर्ण शिविर द्वारा हुआ, जो देहरादून के पास गढ़ी में 8 मई से 18 मई 1946 तक आयोजित किया गया। इस शिविर में रॉय ने अपने भाषणों में स्पष्ट किया कि मार्क्सवाद अब कोई अप्रत्यक्षीकृत स्वप्नलोक नहीं है। सोवियत रूस में जो कुछ घटित हो रहा है, उसके महत्वपूर्ण मुद्दे दिखाई देते हैं। साम्यवादी सिद्धान्तों तथा व्यवहारिक ह्रास का कारण मानव प्रगति में विचारों के सर्वोपरि महत्वहीन समझ पाना है। रेडिकल डेमोक्रेटिक पार्टी का अखिल भारतीय सम्मेलन दिसम्बर 1946 में मुम्बई में आयोजित किया गया। रॉय ने 22 सूत्रीय सिद्धान्त प्रस्तुत किए जो नव-मानववाद के सिद्धान्त सूत्र स्वरूप उभरे। इनमें नव-मानववादी दर्शन के वैयक्तिक तथा सामाजिक पक्षों के सिद्धान्तों की झलक मिलती है। सम्मेलन में 22 सिद्धान्त सूत्र से सम्बन्धित रॉय के विचारों को 'बियाण्ड कम्युनिज्म' शीर्षक से इसका प्रकाशन किया गया। इस घोषणा में सामाजिक विचारधाराओं की अक्षमताएँ, साम्यवाद सिद्धान्त एवं व्यवहार का ह्रास तथा नव-मानववाद की संज्ञा दी गयी।

1948 में कलकत्ता में अखिल भारतीय सम्मेलन में पार्टी को समाप्त करने का निर्णय ले लिया गया। राजनैतिक, पार्टियों एवं सत्ता की राजनीति से सम्बन्धित उनके भाषणों एवं लेखों को 'पॉलिटिकल पॉवर एण्ड पार्टीज' शीर्षक में प्रकाशित किया। पार्टी भंग होने के पश्चात् रॉय के अनुयायियों ने रेडिकल ह्यूमनिस्ट मूवमेंट प्रारम्भ किया, जो आगे चलकर रेडिकल ह्यूमनिस्ट एसोसिएशन बना। अपने जीवन के अन्तिम वर्षों में रॉय ने 'रीजन, रोमारण्टिसिज्म, एण्ड रेवोल्यूशन-पुस्तक लिखी। प्रथम जिल्द उनके जीवनकाल में प्रकाशित हो गयी दूसरी मरणोपरान्त। इसमें मानव प्रगति में विचारों का योगदान दर्शन की दृष्टि से पाश्चात्य विचारों का विवेचन प्रस्तुत किया गया है। रॉय का नवीन मानववाद विश्व राज्यवादी है, आध्यात्मिक दृष्टि से स्वतन्त्र व्यक्तियों का विश्व राज्य, राष्ट्रीय राज्यों की सीमाओं से परिबद्ध नहीं होगा। वे राज्य पूँजीवादी, फासीवादी, समाजवादी, साम्यवाद, किसी भी प्रकार क्यों न हो, राष्ट्रीय राज्य मानव के 20वीं शताब्दी के पुनर्जागण के पश्चात् धीरे-धीरे विलुप्त हो जायेगा।

रॉय ने विश्वराज्य तथा आध्यात्मिक समाज व विश्व राज्यवादी मानववाद का समर्थन किया, जब मानववाद को वैज्ञानिक मानववाद भी कहा गया। निष्कर्ष पर पहुँचने के लिए वैज्ञानिक दृष्टिकोण को अपनाकर मानव के विवेक, उसके अन्य मानवों से सम्बन्ध एवं संसार में उसके स्थान को अन्य समझने का प्रयास किया गया। जिस दृष्टिकोण को विज्ञान के लिए अपनाया जाता है, उसका उपयोग दर्शन के लिए भी किया जाता है, वैज्ञानिक दृष्टिकोण के आधार हैं:- प्रकृतिवाद, कार्यकारण के आधार पर निश्चयवाद तथा एकत्ववाद।

प्रकृतिवाद प्रकृति के अस्तित्व को स्वीकार करता है तथा मानता है कि वस्तु प्रकृति के अंश के रूप में ही अस्तित्व के यथार्थ को स्वीकारता है। यदि संसार के सभी तत्वों को पूरी तौर से जाना जा सकता है तो उनके अस्तित्व से इन्कार नहीं किया जा सकता। प्रकृतिवाद दृश्यमान अनुभूत संसार को भ्रम माया नहीं मानता है। कार्यत्र-कारण निश्चयवाद का आशय है कि विश्व नियमबद्ध व अनुशासित है। प्रकृति के नियम निश्चयात्मक हैं। कोई घटना बिना कारण घटित नहीं होती है। एक तत्वात्मक प्रकृतिवाद मूलतः भौतिकवादी दृष्टिकोण है, जिसमें एक तत्व के रूप में प्रकृति के नियम निश्चात्मक है। कोई घटना बिना कारण घटित नहीं होती है। एक तत्वात्मक प्रकृतिवाद मूलतः भौतिकवादी दृष्टिकोण है, जिसमें एक तत्व के रूप में प्रकृति को स्वीकार किया जाता है। इस सिद्धान्त में समस्त अस्तित्व का आधार एक मात्र भूत पदार्थ को स्वीकार किया गया है। वह विश्व के अस्तित्व को 'द्वैत' नहीं स्वीकारता अपितु समस्त अस्तित्व के आधार को एक तत्व मानता है। प्रकृतिवाद के अनुसार जिस वस्तु का अस्तित्व है वह प्रकृति का अंश है। रॉय मानव के विकास की धारणा को स्वीकार करते हैं। उनके अनुसार मनुष्य भौतिक जगत् से ही उत्पन्न हुआ है। भौतिक जगत् द्वारा संचालित होता है। मनुष्य इस जगत् का अभिन्न अंग है। मनुष्य बौद्धिक प्राणी इसलिए है कि सामन्जस्यपूर्ण भौतिक जगत् से ही उसका उद्भव हुआ है। मनुष्य के जीवन तथा व्यक्तित्व में जो बुद्धि देखने को मिलती है, वह सार्वभौम सामंजस्य की ही प्रतिध्वनि है।

बुद्धि सहज तात्त्विक वस्तु नहीं है, वरन् जैविक विकास की प्रक्रिया में उसका प्रादुर्भाव हुआ है। मानव बुद्धि की एक कसौटी पर ही नैतिक मापदण्डों को परखना होगा, मनुष्य सामाजिक सामंजस्य तथा कल्याणकारी सामाजिक मेल-मिलाप की खोज करता है। इसी के परिणामस्वरूप नैतिकता का जन्म होता है। भौतिक एवं सामाजिक सम्बन्धों से हीन, निरपेक्ष मनुष्य की कल्पना करना अनुचित है। नवीन मानववाद मनुष्य के सामाजिक सम्बन्धों को समग्र मानकर चलता है, शाश्वत एवं अपरिवर्तनशील मानव स्वभाव उसकी केन्द्रीय मान्यता नहीं है।

नवीन-मानववाद भौतिक विज्ञानों, समाजशास्त्र, कार्य-विज्ञान तथा ज्ञान की अन्य शाखाओं में हुए अनुसंधानों पर आधारित है। उसका दार्शनिक आधार भौतिक है, भौतिकवाद है तथा पद्धति यांत्रिक है। उसे मनुष्य की सृजनात्मक शक्तियों में विश्वास है। उसके इस विश्वास का आधार वैज्ञानिक तथा ऐतिहासिक अनुसंधानों का वह विवश साक्ष्य है, जिसने मनुष्य की मौलिक तथा सृजनात्मक शक्तियों को प्रमाणित कर दिया है। नव-मानववाद मनुष्य को इसलिए सर्वोच्च मानता है, क्योंकि इतिहास मनुष्य के क्रिया-कलापों का लेखा-जोखा है तथा समाज का यह अधिकार नहीं है कि वह एक विशाल शक्ति के रूप में स्वयं को व्यक्ति पर थोप दे। नवीन मानववाद का आधार यांत्रिक ब्रह्माण्ड मनोवेगों के काल्पनिक आधारों पर निर्भर नहीं है। वह बुद्धिवाद पर आधारित है और मनुष्य की बौद्धिकता का स्रोत मुख्यतः प्रकृति का बौद्धिक स्वभाव है, मनुष्य अपनी बौद्धिकता को नैतिक विकास द्वारा प्राप्त करता है।

नव-मानववादी दर्शन में स्वतन्त्रता तथा मुक्ति प्राथमिक है। स्वतन्त्रता से रॉय का आशय एक विचार, जीवन का आधार तथा अन्तःक्रिया की स्पष्टता है। नव-मानववाद में तीन तत्व आधारभूत मूल्यात्मक तत्व हैं- स्वतन्त्रता, बुद्धि, नैतिकता। ये तीनों तत्व काल्पनिक नहीं हैं। वे उन अनुभवों का प्रतिफल है जो कि लम्बे ऐतिहासिक विकास की उपज है, प्रत्येक प्राणी को जीने के लिए संघर्ष करना होता है। आत्मपरीक्षण तथा आत्मपुनर्जन्म के लिए किया गया संघर्ष ही स्वतन्त्रता की धारणा का आधार है। स्वतन्त्रता, ब्रह्माण्ड से परे

की वस्तु नहीं है। इसे संसार में साक्षात्कृत करना है। रॉय ने जीवन तथा आत्मपरीक्षण के लिए संघर्ष को स्वतन्त्रता माना है। रॉय के अभौतिकवादी ब्रह्माण्ड में स्वतन्त्रता को निरपेक्ष आत्मा का निर्विकल्प सार नहीं माना है। जीवन के लिए जो जैविक संघर्ष चलता है, वही भावनात्मक तथा संज्ञात्मक स्तर पर स्वतंत्रता की खोज का रूप धारण कर लेता है। स्वतन्त्रता के तीन प्रमुख आयाम हैं, मानववाद, व्यक्तिवाद, बुद्धिवाद।

मानव की आकांक्षा है कि वह मानव के रूप में जीवित रहे। भौतिक मानववाद के अनुसार मानव की आकांक्षा स्वतन्त्रता की आकांक्षा का सार है। स्वतन्त्रता भौतिक मानव मूल्य है, जो सभी मानवीय मूल्यों का आधार है। स्वतन्त्रता का अर्थ है, बन्धनहीनता। सभी प्रकार के बन्धन समाप्त हो जायें तथा मानव क्षमताओं को प्रतिबन्ध से मुक्त कर विकास का अवसर मिले। इस रूप में स्वतन्त्रता एक पूर्व अवधारणा है। जिसके अनेक पक्ष हैं, राजनीतिक क्षेत्र में स्वतन्त्रता का आशय, भौतिक अधिकारों का उपभोग है। जैसे सूचना प्राप्त करने का अधिकार, मत व्यक्त करने का अधिकार, संगठन, राजनीतिक दल बनाने का अधिकार, व्यक्ति को स्वतंत्र रूप से अपना विचार रखने का अधिकार, किसी भी धर्म की मानने का या न मानने का अधिकार। सामाजिक क्षेत्र में स्वतन्त्रता का अर्थ तर्कहीन परम्परा व रूढ़ियों का अभाव, जिनका सम्बन्ध व्यक्तियों/व्यक्तियों के सम्बन्धों से है। जाति, समुदाय के सम्बन्ध भी इसी क्षेत्र में आते हैं। सामान्यतः राजनीतिक तथा सामाजिक प्रतिबन्ध साथ-साथ रहते हैं, अधिनायकवादी समाज में अधिनायकवादी सत्ता स्थापित करने की प्रवृत्ति होती है।

निष्कर्ष

निष्कर्ष के तौर पर कहा जा सकता है कि गाँधी जी ने जिस सामाजिक-आर्थिक व्यवस्था, संरचना तथा व्यावहारिकता के विकल्प प्रस्तुत किये, उन्हें आदर्श अथवा परिकल्पना मानने से प्रश्न अनुत्तरित बना रहेगा। मानवीय विकास क्रम में गाँधी जी का कथन स्वयं चुनौतीपूर्ण है तथा सांदर्भिकता के अनुकूलन हेतु अनिवार्य है कि गम्भीर विश्लेषण किया जाय। दूसरी ओर मानवेन्द्रनाथ रॉय मानव के विकास की धारणा को स्वीकार करते हैं। मनुष्य भौतिक जगत् से ही उत्पन्न हुआ है। भौतिक नियमों के द्वारा ही शासित होता है। परिणामस्वरूप नैतिकता की सांदर्भिकता स्थापित है। मनुष्य विश्व समाज का अभिन्न अंग है। अतः नव-मानवतावाद में मनुष्य की सामाजिक सम्बन्धों से निरपेक्ष मनुष्य की कल्पना करना उचित नहीं है। नवीन मानवतावाद मनुष्य के सामाजिक सम्बन्धों को समग्र मानकर चलता है। शाश्वत एवं अपरिवर्तनीय मानव स्वभाव केन्द्रीय मान्यता नहीं है। नवीन मानवतावाद इस अर्थ में नवीन है कि वह मनुष्य के सम्बन्ध में एक नयी धारणा को स्वीकार करता है। उसका विश्वास है कि मनुष्य तत्त्वतः बौद्धिक प्राणी है, यह सिद्धान्त ऐतिहासिक तथा वैज्ञानिक दृष्टि से सत्य है।

संदर्भ स्रोत

1. गोपाल प्रसाद शर्मा, मानवतावाद एवं भारतीय संस्कृति, पृ. 5-6.
2. रामचन्द्र शुक्ल, मानववाद का सिद्धान्त, पृ. 98.
3. आशीर्वादी लाल श्रीवास्तव, मध्यकालीन भारतीय संस्कृति, पृ. 55.
4. डॉ. ताराचन्द्र, इन्प्लूएन्स ऑफ इस्लाम आन इण्डियन कल्चर, पृ. 188.
5. डॉ. एस. राधाकृष्णन, हिन्दु भियू ऑफ लाइफ, पृ. 88.

महात्मा गाँधी एवं एम.एन.राय के चिन्तन की सामाजिक, राजनीतिक एवं दार्शनिक पृष्ठभूमि

डॉ. फरहा नाज*

सार-संक्षेप

गाँधी एवं राँय को व्यक्ति की असीमित सदगुणी क्षमताओं में विश्वास था। दोनों विचारकों ने स्वीकारा कि व्यक्ति ने अपने बेहतर स्वार्थों एवं मूलभूत आवश्यकताओं की पूर्ति के लिए समाज के उन्नयन धारा एवं सर्वांगीण कल्याण का मार्ग प्रशस्त किया। व्यापक दृष्टि गाँधी जी राज्य की अपेक्षा समाज को अत्यधिक महत्त्वपूर्ण मानते हैं। गाँधी जी ने माना कि राज्य का आधार हिंसा है, जबकि समाज ही वास्तव में लोकशक्ति का संग्रहण है। समाज की इकाई के रूप में गाँधी ने 'व्यक्ति' को स्वीकारा तथा व्यक्ति की उन्नति हेतु आवश्यक है। व्यक्ति के विकास में ही समाज का विकास समव है। गाँधी जी का मानना था कि केवल व्यवस्था में ही परिवर्तन पर्याप्त नहीं है। व्यक्ति के स्वभाव तथा आचरण में भी परिवर्तन होना चाहिए। वे मनुष्य का मानसिक पुनरुद्धार करना चाहते थे, क्योंकि उनका विश्वास था कि मनुष्य की प्रकृति में प्रारंभ से ही दैवीय अंश विद्यमान है।

परिचय

महात्मा गाँधी एवं मानवेन्द्रनाथ राय के विचारों का केन्द्र बिन्दु मानव की अस्मिता की स्थापना, उन्नयन स्वतन्त्रता की असीमित उपलब्धि रही है। इन्हीं विचारों की क्रियान्विति के प्रयास दोनों विचारकों ने किये। व्यक्ति समाज का आद्य रूप हैं। सहयोगशील सामाजिक सम्बन्ध वैयक्तिक क्षमताओं को विकसित करने में सहायक है। लेकिन व्यक्ति का विकास, सामाजिक प्रक्रिया की कसौटी है, सामूहिकता व्यक्ति के अस्तित्व की पूर्व धारणा से अनुप्राणित है। व्यक्तियों द्वारा वास्तव में उपभोग की जाने वाली स्वतन्त्रता एवं कल्याण संकल्पना के अभाव में, सामाजिक स्वतन्त्रता और विकास काल्पनिक आदर्श है। किसी भी प्रकार से मानव समाज पर सामूहिक अहम् (राष्ट्र वर्ग) आदि आरोपित करना गलत है। सामूहिक कल्याण का कोई विकल्प नहीं है। स्वतन्त्रता की खोज एवं सत्य का अन्वेषण, मानवी समाज के विकास का आधारभूत-प्रेरणा है। स्वतन्त्रता की खोज अस्तित्व हेतु जैविक संघर्ष की बुद्धि एवं संवेग के स्तर पर जारी ज्ञान की व्यक्ति को प्राकृतिक चमत्कार, भौतिक तथा सामाजिक पर्यावरण से मुक्त होने की योग्यता प्रदान की है।

नवीन समाज के निर्माण का आधार ज्ञान है। नये समाज का उद्देश्य है व्यक्ति की स्वतन्त्रता के संरक्षण हेतु योजना बनाना, अर्थात् व्यक्ति को स्वतन्त्रता की सामाजिक सर्वोपरिता। नवीन समाज प्रजातान्त्रिक होगा केवल राजनीतिक, आर्थिक, सांस्कृतिक रूप से। प्रजातन्त्र के व्यापक सन्दर्भ में ही समाज का कल्याण संभव है। सामाजिक उन्नयन हेतु अर्थव्यवस्था का रूपान्तरण भी आवश्यक है। राजनीतिक संस्थाएँ शक्ति (सत्ता) के

*दर्शनशास्त्र, अजहर कॉलोनी, आजाद नगर वार्ड नं०-12, मधेपुरा (बिहार) पिन- 852113।

प्रत्यायोजन पर आधारित हो तो समाज में विकेन्द्रित व्यवस्था के लाभ उपलब्ध होते हैं। व्यक्ति की संस्थाओं में पूर्ण प्रत्यक्ष सहभागिता हो तो नवीन सामाजिक संरचना के निर्माण में सहायता होती है। गाँधी तथा राय, दोनों ने नव-व्यवस्था का प्रावधान प्रस्तुत किया। गाँधी जी “सर्वोदयी समाज” के माध्यम से व्यक्ति को ऐसी व्यवस्था, करना चाहते हैं, जिसमें व्यक्ति के व्यक्तित्व से सम्बन्धित सामाजिक, आर्थिक तथा राजनीतिक पक्षों के सन्दर्भ में विकास सम्भव हो। मानवेन्द्रनाथ राय ने भी व्यक्ति के उत्कर्ष की स्थापना के लिए नव-मानववाद सम्बन्धी अपने विचार दिए। दोनों ही विचारकों का मानना है कि समाज को घनिष्ठ होने की बजाए श्रमनिष्ठा होना चाहिए, अर्थात् उत्पादन में श्रम लगाना चाहिए जो आवश्यक हो। वर्तमान में श्रम, धनोपार्जन के साथ जुड़ गया। व्यक्ति उस उत्पादन में श्रम लगाता है जो अधिक धन उपलब्ध करा सके। इसमें केन्द्रीकरण की प्रवृत्ति बढ़ती है। समाज की सहयोगात्मक प्रवृत्ति का स्थान स्वार्थपरक प्रवृत्ति ने ले लिया है। व्यक्ति, व्यक्ति के मध्य अलगाव की स्थिति समक्ष आयी है। सामाजिक संस्थायें अप्रभावी हो गयी हैं। व्यक्ति की भूमिका गौण हो गयी है, वह संयंत्र मात्र बनकर रह गया है। ऐसी परिस्थिति में गाँधी एवं रॉय द्वारा दिये गये निर्वचन व्यक्ति की पुनर्स्थापना का प्रयास है।

गाँधी एवं रॉय को व्यक्ति की असीमित सद्गुणी क्षमताओं में विश्वास था। अतः दोनों विचारकों ने स्वीकारा कि व्यक्ति ने अपने बेहतर स्वार्थों एवं मूलभूत आवश्यकताओं की पूर्ति के लिए समाज के उन्नयन धारा एवं सर्वांगीण कल्याण का मार्ग प्रशस्त किया।

व्यापक दृष्टा गाँधी जी राज्य की अपेक्षा समाज को अत्यधिक महत्त्वपूर्ण मानते हैं। गाँधी जी ने माना कि राज्य का आधार हिंसा है, जबकि समाज ही वास्तव में लोकशक्ति का संग्रहण है। समाज की इकाई के रूप में गाँधी ने ‘व्यक्ति’ को स्वीकारा तथा व्यक्ति की उन्नति हेतु आवश्यक है। व्यक्ति के विकास में ही समाज का विकास समव है। गाँधी जी का मानना था कि केवल व्यवस्था में ही परिवर्तन पर्याप्त नहीं है। व्यक्ति के स्वभाव तथा आचरण में भी परिवर्तन होना चाहिए। वे मनुष्य का मानसिक पुनरुद्धार करना चाहते थे, क्योंकि उनका विश्वास था कि मनुष्य की प्रकृति में प्रारंभ से ही दैवीय अंश विद्यमान है।

गाँधी जी का समाज व्यक्ति के लिए कृत्रिम (आरोपित) नहीं है, अपितु स्वाभाविक संस्था है, जिसके अन्तर्गत ही व्यक्तित्व का विकास सम्भव है। मनुष्य एक सामाजिक प्राणी है। अतः उसकी स्वतन्त्रता सामाजिक नियमों के पालन में ही निहित है। यद्यपि गाँधी जी व्यक्ति को महत्ता को स्वीकारते हैं। किन्तु अनियन्त्रित व्यक्तिवाद के विरोधी हैं। व्यक्ति की इच्छाएँ, आकांक्षाएँ, सामाजिक इच्छाओं तथा आकांक्षाओं का रूप ले लेती है। सामाजिक संस्थाएँ व्यक्ति के ऊपर आरोपित नहीं की जा सकती। इन संस्थाओं के सदस्य रूप में तथा स्वतन्त्र रूप में व्यक्ति ही सामाजिक कार्यों का लक्ष्य एवं आधार है। अतः गाँधी जी ने यही विचार दिया कि यदि व्यक्ति का आचरण दृढ़ बन जाए तो समाज में सुधार स्वतः ही हो जायेगा।

गाँधी जी के आदर्श समाज की कल्पना को ‘यूटोपिया’ कहा गया, किन्तु वास्तविकता यह है कि गाँधी जी आदर्श समाज की स्थापना सर्वोदयी समाज के रूप में करना चाहते थे। ‘सर्वोदय’ प्रतीक है ‘सर्वादय’ की भावना का। जहाँ उपयोगितावादी अधिकतम व्यक्तियों के अधिकतम सुख की धारणा को स्वीकारते हैं, वहीं, ‘सर्वोदय’ की धारणा सभी के कल्याण की अनिवार्यता पर आधारित है। गाँधी जी ने ‘सर्वोदय’ का विचार रस्किन की कृति ‘अन टू द लास्ट’ से लिया। इसका नामकरण गुजराती में अनुवाद करके ‘सर्वोदय’ रखा। सर्वोदय

में निहित सिद्धान्त है कि श्रमयोग्य जीवन ही जीने योग्य है, एवं प्रत्येक व्यक्ति को उसकी आवश्यकतानुसार कार्य मिलना चाहिए। गाँधी जी के सर्वोदय सिद्धान्त में सर्वकल्याण की भारतीय कल्पना, सुकरात की सत्य, साधना बाइबिल की मानवता, रस्किन की अन्यन्योदय की अवधारणा सभी समन्वित हैं।

सर्वोदयी समाज के माध्यम से गाँधी जी राजनीति में आमूल परिवर्तन करना चाहते हैं। केन्द्रकृत स्वराज्य के स्थान पर लोकशक्ति की स्थापना, दण्ड शक्ति के स्थान पर जन शक्ति तथा शासन युक्त समाज के स्थान शासनमुक्त समाज होगा। सेवा सार्वभौम एवं सत्ता सेविका होगी। निर्वाचन सर्व सहमति से नहीं हो सकते, लेकिन सहमति से निर्विरोध होना ही ग्राम स्वराज्य तथा रामराज्य है।

सर्वोदय समाज सत्ता के विकेन्द्रीकरण पर आधारित होगा, ऐसा समाज जिसमें केवल मात्र राजनीतिक दृष्टि से ही नहीं अपितु आर्थिक, सामाजिक दृष्टि से भी विकेन्द्रीकरण का आधार महत्त्वपूर्ण है। इस प्रकार अहिंसा, असहयोग एवं विकेन्द्रीकरण पर आधारित वर्गरहित एवं राज्य रहित समाज की अवधारणा ही सर्वोदयी समाज है।

सर्वोदयी समाज राज्यरहित लोकतन्त्र है, प्रबुद्ध और जागृत अवस्था, जिसमें सामाजिक जीवन इतनी पूर्णता को पहुँच जाता है कि वह स्वयं शासित एवं स्वयं नियन्त्रित बन जाता है। वे उस राज्य को उत्तम मानते हैं, जो कम से कम शासन करता है। साम्यवादी दर्शन के अनुसार समाज का अन्तिम रूप वह होगा, जिसमें राज्य का अन्त हो जाये। गाँधी जी व्यावहारिक उपयोगिता को समझते थे, इसलिए ग्राम-स्वराज्य का विचार उनकी संरचना का मूलाधार है। ग्राम-स्वराज्य में राज्य का अन्त नहीं होगा किन्तु राजसत्ता विकेन्द्रीकरण सम्भव है तथा लोकशक्ति स्थापना अनिवार्य है।

आधुनिक लोकतन्त्रों में चुनाव की प्रधानता तथा पार्टियों का प्रभुत्व होता है, जिनका एक मात्र लक्ष्य सत्ता प्राप्ति है। समस्त जन शासन तंत्र केन्द्रित पद्धति से चलाया जाता है। वर्तमान में समस्त राजनीति पार्टियों का, चाहे वे पूँजीवाद हो, साम्यवाद हो, समाजवाद हो, प्रधान लक्ष्य सत्ता का केन्द्रीकरण हैं। इन पद्धतियों के अन्तर्गत चलने वाले 'राजतन्त्र अत्यन्त विशाल बन जाते हैं, जिनकी व्यवस्था कठिन हो जाती है। व्यक्ति का इनमें कोई महत्त्व नहीं रहता, यद्यपि मतदाताओं की भूमिका के रूप में उन्हें स्वामी कहा जाता है। समय-समय पर जो चुनाव होते हैं, उनमें व्यक्ति मात्र मतदाता के रूप में अपनी भूमिका का निर्वाह करता है। वास्तव में राजनीतिक चेतना का अभाव बना रहता है। अतः यह राजनैतिक कार्य व्यक्ति केन्द्रित पार्टी संगठन के दबाव में आकर तथा समाचार पत्रों के मार्गदर्शन के अनुसार करता है। समाचार पत्र मुख्यतः केन्द्रित अधिक सत्ताधारियों के हाथ के खिलौने मात्र होते हैं। व्यक्ति, सरकार की नीतियों के निर्माण में सहभागी नहीं होता। लोक कल्याणकारी सर्वसत्तावादी राज्य में व्यक्ति नागरिक अधिकारों के कृत्रिम वृत्त में एक घोषित, मूक तथा राज्य संचालित पशु बन जाता है।

इस सर्वोदयी समाज में व्यवस्था के लिए सांविधानिक संयंत्र, कानून, राजनीतिक दल व्यवस्था, चुनाव, प्रतिनिधि तंत्र आदि के स्थान पर पृथक् व्यवस्था होगी। सर्वोदयी समाज में शासन मुक्त समाज का प्रावधान है। गाँधी जी प्रारम्भिक अवस्था में एक सीमा तक शासन-व्यवस्था की आवश्यकता का अनुभव करते हैं, लेकिन अन्ततः शासन की आवश्यकता नहीं मानते। इस व्यवस्था शून्य समाज की ओर अग्रसर होने के लिए वह अधिराज्य को आवश्यक नहीं मानते। व्यवस्था और समाज के विकेन्द्रीकरण द्वारा गाँधी जी सामाजिक

शक्ति के पक्षधर हैं। अन्तिम स्थिति में कोई शासन नहीं रहेगा, केवल नैतिक नियम होंगे। ऐसा आत्मनिर्भर समाज निर्माण करने के लिए सर्वत्र स्वपोषी, स्वावलम्बी क्षेत्र बनाने होंगे।

राज्य व्यक्तियों पर कई शताब्दियों से शासन करता आया है, ताकि एक ऐसी व्यवस्था स्थापित हो, जिसमें व्यक्तियों के जीवन को व्यवस्थित किया जा सके। व्यक्ति राज्य के अनिवार्य शासन के आदी हो गए हैं। राज्य संगठित रूप में हिंसा का प्रतिनिधित्व करता है। इसको हिंसा से पृथक् नहीं किया जा सकता, क्योंकि यह आत्मविहीन मशीन है। इसके द्वारा सुदृढ़ कर हमेशा रहने वाले सामाजिक राजनीतिक सुधार नहीं लाये जा सकते। समाजवाद, जो कि राज्य द्वारा संघर्षपूर्ण साधनों से लाया गया है, को अहिंसात्मक साधनों द्वारा नहीं रखा जा सकता। राज्य जो कि हिंसा का प्रतिनिधित्व करता है, उसके हाथ में राजनीतिक तथा आर्थिक शक्तियाँ केन्द्रित नहीं की जानी चाहिए। हालांकि राज्य विहीन समाज असम्भव प्रतीत होता है, किन्तु स्मरणीय है कि विश्व विहीन समाज असम्भव प्रतीत होता है, किन्तु स्मरणीय है कि विश्व इतिहास में कभी भी राज्यविहीन व्यवस्था की स्थापना का प्रयास नहीं किये गये। यदि राजनीतिक शक्ति यथावत बनी रहेगी तो अवश्य ही व्यक्ति तथा समाज की मूल स्थिति में परिवर्तन सम्भव है। गाँधी की आकांक्षा थी कि राष्ट्रीय जीवन इस स्तर पर पूर्ण बन जाये कि वह स्वसंचालित हो। जब समाज का सामाजिक, आर्थिक तथा राजनीतिक जीवन स्वसंचालित हो तो एक परिष्कृत शासन व्यवस्था प्रस्तुत होगी।

इस व्यवस्था में प्रत्येक व्यक्ति अपना स्वयं का शासक होगा और स्तरीय अस्मिता का संवर्द्धन करेगी। अन्यो के जीवन में हस्तक्षेप नहीं होगा। इस प्रकार के आदर्श सर्वोदय समाज में कोई राजनीतिक शक्ति नहीं होगी, क्योंकि जब प्रत्येक व्यक्ति स्वयं अपना शासक होगा तो राज्य जैसी शासन करने वाली संस्था की आवश्यकता ही नहीं होगी। स्वशासन ही स्वराज्य का दर्शन है। प्रत्येक अनुभूति यही होगी कि वह मेरा राज्य है, यही है सबका राज्य। यही है राम राज्य। जहाँ प्रत्येक को अनुभव होगा कि उसकी सत्ता है, वहाँ सबकी सत्ता सर्वराज्य बनता है। स्वराज्य का शास्त्र नित्य विकासरत है। उसकी पद्धति देश कालानुसार सतत् बदलती रहती है, फिर भी उसके मूलतत्त्व शाश्वत रहते हैं। शासन मुक्त समाज व्यवस्था नहीं रहेगी, ऐसी बात नहीं। व्यवस्था ग्राम्याधारित रहेगी। राजशक्ति की आवश्यकता नहीं होगी। समाज में नैतिक विचार इतने मान्य होंगे कि समाज के आचरण को दिशा प्रदान करेंगे। आज समस्त विश्व व समाज अगर किसी रोग से पीड़ित हैं तो वह सरकार तथा राज्य रूपी रोग से पीड़ित है। राज्य तथा सरकार निहित स्वार्थपरायणता से प्रभावित है तथा दलगत रूप में निर्णायक है। वर्तमान व्यवस्थाएँ अधिकतर मात्रात्मक सहमति पर निर्भर है। व्यवस्था संवर्द्धन मूलतः यान्त्रिक नागरिकता का पोषण मात्र है। सम्पूर्ण प्रक्रिया व्यावसायिक बन गई है। राष्ट्रवाद स्वयं एक संकुचित तथा घातक कथन है। सर्वोदयी दृष्टिकोण इसका खण्डन करता है। यदि हर नागरिक के मत, इच्छा, आकांक्षा को महत्वपूर्ण समझा जायें तो ऐसी स्थिति में बहुमत के आधार पर नहीं अपितु सर्वसम्मति के आधार पर कार्य वांछनीय होगा।

निष्कर्ष

गाँधी एवं राय विश्व-समाज में समस्त कृत्रिम बन्धनों को दूर करके एक अहिंसात्मक, शोषणरहित, नीतिमूलक समाज की स्थापना करना चाहते थे। गाँधी एवं राय ने नैतिक आधारों का समर्थन किया। इनका

विश्वास था कि सत्य और अहिंसा को साधन बनाने से जो आर्थिक एवं राजनीतिक विषमताएँ हैं स्वतः ही दूर होने लगेंगी। जब मनुष्य ईश्वरीय पथ का अनुश्रवण करेगा तो संसार में व्याप्त, संघर्ष, दुर्भाव, युद्ध भी गौण होते चले जायेंगे। व्यक्ति कर्तव्य पथ का अनुसरण करेगा तो स्वतः ही दूसरों के अधिकारों की रक्षा के लिए अपने अधिकारों को एकल स्तर पर नहीं मानेगा। इस प्रकार गाँधी विश्वस्तर पर आदर्श समाज की स्थापना करना चाहते थे।

संदर्भ स्रोत

1. रामाश्रय राय, सेल्फ एण्ड सोसायटी, रोज पब्लिकेशन, नई दिल्ली, 1984, पृ. 123
2. जे.पी. कृपलानी, गाँधी हिज लाईफ एण्ड थाट पब्लिकेशन डिविजन, नई दिल्ली, 1971 पृ. 123
3. डॉ. वी.पी. वर्मा, दी पालिटीकल फिलोसफी ऑफ महात्मा गाँधी एण्ड सर्वोदय, लक्ष्मीनारायण अग्रवाल, आगरा, 1980, पृ. 223
4. महात्मा गाँधी : हिन्द स्वराज, नवजीवन प्रकाशन, अहमदाबाद, 1959, पृ. 107
5. डॉ. धीरेन्द्र मोहन दत्त : महात्मा गांधी का दर्शन, बिहार हिन्दी ग्रंथ अकादमी, पटना पृ. 82.

भारतीय प्रमाणमीमांसा: एक ऐतिहासिक विश्लेषण

डॉ. सरिता कुमारी

विषय: प्रवेश

ज्ञान प्राप्त करना मनुष्य का स्वामाव है। सामान्यतः हम विषयों का ज्ञान प्राप्त करते हैं, पर ज्ञान की सूक्ष्मता में प्रवेश करने पर ज्ञान स्वयं अपने आप में चिन्तन का विषय बन जाता है। दर्शन जिसका अभीष्ट सर्वोच्च परम तत्त्व पदार्थों का सर्वोच्च ज्ञान है, ज्ञान-विषयक चिन्तन की उपेक्षा नहीं कर सकता। (भारतीय दर्शन आध्यात्मिक परम्परा का प्रतिनिधित्व करता है जिसमें तत्त्वमीमांसा के साथ-साथ ज्ञानमीमांसा पर भी गहन विचार-विमर्श हुआ है इसका साक्ष्य दार्शनिक कृतियाँ हैं। अतः भारतीय ज्ञानमीमांसा न केवल विचार की दृष्टि से उच्चतर तथा श्रेष्ठतर है बल्कि जीवन में पुरुषार्थ-सिद्धि की दृष्टि से भी महत्त्वपूर्ण तथा लाभकारी है

ज्ञान मीमांसा की पृष्ठभूमि

ज्ञानमीमांसा को अंग्रेजी में Epistemology कहते हैं “Epistemology” शब्द का सर्वप्रथम प्रयोग J.F Ferries ने किया था उनके अनुसार Episteme अर्थात् ज्ञान (knowledge) एवं logos अर्थात् सिद्धान्त (Theory) से बना है जिसका अर्थ हुआ ज्ञान-सिद्धान्त या ज्ञान शास्त्र। दर्शन शास्त्र की तीन शाखाएँ तत्त्वमीमांसा (Metaphysics) सृष्टिमीमांसा (Cosm-ology) तथा ईश्वरमीमांसा (Theology) सत्ता (Reality) का विवेचना करती हैं जबकि ज्ञानमीमांसा सत्ता के ज्ञान की विवेचना करती है। ज्ञान का प्रश्न दर्शन के लिए बड़ा ही महत्त्वपूर्ण है। (सभी शाखाओं को प्रायः ज्ञानमीमांसा की सहायता लेनी पड़ती है) इसमें ज्ञान के अर्थ, स्वरूप साधन, लक्ष्य, ज्ञाता और ज्ञेय का सम्बन्ध, ज्ञान की प्रामाणिकता सीमा आदि विषयों की छान-बीन की जाती है। यद्यपि ज्ञान-सम्बन्धी जिज्ञासा का प्रदर्शन प्राचीन काल से ही मिलता है, पर पश्चिमी दर्शन के इतिहास में इसका समुचित विकास बहुत पीछे हुआ है। ज्ञानमीमांसा को स्वतंत्र स्थान देकार्त के युग में मिला है, लॉक ने एक नई धारा विकसित की कांट की ज्ञानमीमांसा समन्वयवादी है। आधुनिक युग में इसका विकास अन्य शाखाओं की तरह अपेक्षाकृत अधिक हुआ है। कतिपय विद्वान तो इसी को दर्शन का प्रणा मानने लगे हैं तथा कहने भी लगे हैं कि “A true system of philosophy must begin with Epistemology”.

भारतवर्ष में दर्शन का प्रारम्भ ज्ञान की प्राप्ति अर्थात् आत्म-ज्ञान के लिए ही हुआ है। आध्यात्मिक दर्शन स्व और वस्तु के साक्षात्कार की दिशा में गतिशील रहें हैं। यहाँ ज्ञान की प्राप्ति का उद्देश्य कौतूहल तुष्टि कभी नहीं रहा है बल्कि इसका लक्ष्य उस आध्यात्मिक तत्त्व की साक्षात् अनुभूति करनी है जो परम की सत् है। परम सत् के साक्षात्कार में ही मानव-जीवन की निःमेयसता (summum borum) निहित है। ज्ञान का समप्रत्य न केवल आध्यात्मिक दर्शनों को आकारित किया बल्कि बौद्धिक दर्शनों के विचारकों को भी अपनी ओर खींचा। यही कारण है कि वे भी स्व और वस्तु से सम्बन्धित समस्याओं को बुद्धि से सुलझाते रहें हैं। आधुनिक युग में वैज्ञानिकों ने भी ज्ञान की सम्यक्ता पर बल देना प्रारम्भ कर दिया है। उनके अनुसार विकास के नये-नये

आयमों को तय करने में उत्तरोत्तर ज्ञान की अद्यतन उपलब्धि से ही मदद मिल रही है, नये-नये आविष्कार तथा चमत्कार संभव हो रहें हैं, स्पष्ट है कि ज्ञान की दार्शनिक उपयोगिता के साथ-साथ वैज्ञानिक उपयोगिता को भी नकारा नहीं जा सकता। यही कारण है कि अब अध्यात्म तथा विज्ञान के बीच समन्वय की बात की जा रही है और यह आज की आवश्यकता भी है।

यह तथ्य रेखांकित करने योग्य है कि प्रमाणमीमांसा के साथ-साथ तर्कशास्त्र का विकास एक विद्या के रूप में कुछ विलम्ब से हुआ। हमारी मान्यता है कि आध्यात्मिक दर्शनों ने देखने पर अधिक बल दिया, इसलिए वे तर्क-परम्परा का सूत्रपात नहीं कर सके। बौद्धिक दर्शनों का अध्यात्म के प्रति अपेक्षाकृत कम आकर्षण रहा, इसलिए उनका ध्यान प्रमाणमीमांसा तथा तर्कशास्त्र के विकास की ओर अधिक आकर्षित हुआ तर्कशास्त्र के विकास में बौद्ध न्याय वैशेषिक और मीमांसक अग्रणी रहें हैं। मीमांसक मनुष्य के अतीन्द्रिय ज्ञान को मान्यता प्रदान नहीं करते। न्यान-वैशेषिक दर्शन की पृष्ठभूमि में अध्यात्म का वह विकसित रूप नहीं है जो सांख्य दर्शन की पृष्ठभूमि में है। बौद्ध-दर्शन की पृष्ठभूमि पूरी-की-पूरी आध्यात्मिक है। जब तक भगवान बुद्ध और उनकी परम्परा के प्रत्यक्षदर्शी भिक्षु रहें तबतक बौद्ध-परम्परा में भी प्रमाणमीमांसा तथा तर्कशास्त्र की ओर लोग आकर्षित नहीं हुए। साधना का बल कम होता गया, प्रत्यक्षदर्शी भिक्षु कम होते गए, तब प्रमाणमीमांसा तथा तर्कशास्त्र के प्रति झुकाव होता गया। जैन परम्परा में प्रमाणीमीमांसा का विकास बौद्धों के बाद हुआ। इससे यह निष्कर्ष निकाला जा सकता है कि बौद्धों के अपेक्षा जैनाचार्य अधिक समय तक प्रत्यक्षदर्शी रहे हैं। प्रत्यक्ष-दर्शन की साधना कम होने पर ही हेतु या तर्क के प्रयोग की अधिक अपेक्षा होती है। हमारा तात्पर्य यह नहीं है कि प्रत्यक्ष द्रष्टा ऋषियों की उपस्थिति में हेतु या तर्क का उपयोग नहीं होता था बल्कि यह कहना अधिक समीचीन होगा कि उसका उपयोग बहुत ही नगण्य था। अतः संक्षेप में कहा जा सकता है कि भारतीय दर्शन में अध्यात्म और तर्क का मिला-जुला प्रयत्न चलता रहा है और इसी प्रयत्न के फलस्वरूप भारतीय प्रमाण मीमांसा तथा तर्कशास्त्र भी अपना स्वरूप ग्रहण करते रहे हैं परिष्कृत तथा परिवर्द्धित होते रहें हैं।

ज्ञान का अर्थ

प्रमाणमीमांसीय तथा तर्कशास्त्रीय चर्चा का केन्द्रीय तत्त्व 'ज्ञान' है और ज्ञान के अर्थ को भलीभांति समझना अपेक्षित है। ज्ञान एक सरल तथा मौलिक प्रत्यय है और सभी सरल प्रत्ययों की भांति इसकी भी परिभाषा करना कठिन है। "वाचस्पति मिश्र ने भामती में ज्ञान का लक्षण बताते हुए कहा है" योडमर्थप्रकाशः फलम् अर्थात् जिससे अर्थ अथवा विषय प्रकशित हो, वह ज्ञान है। किन्तु जब हम पूछते हैं कि 'प्रकाशित होने' से आपका क्या तात्पर्य है? संभवतः उनका उत्तर होगा कि 'प्रकाशित' होने का अर्थ 'ज्ञान कराने से है। इसके अतिरिक्त कुछ भी नहीं कहा जा सकता। स्पष्ट है कि प्रायः सभी मनुष्य यह दावा करेंगे कि उन्हें किसी-न-किसी प्रकार का ज्ञान है और साथ ही उन्हें इस तथ्य का भी ज्ञान है। किन्तु जब हम ज्ञान की परिभाषा करने बैठते हैं तो निश्चय ही हम पाते हैं कि हम अपने दावे के स्वरूप के सम्बन्ध में स्पष्ट नहीं हैं। फिर भी, हमें यह तो मानना ही पड़ेगा कि सम्पूर्ण ब्रह्माण्ड ज्ञानगम्य है। यह ज्ञान लौकिक अर्थात् ऐहिक और पारलौकिक अर्थात् पारमार्थिक दोनों प्रकार का होता है। इसलिए सृष्टि-प्रक्रिया में ज्ञान की उपोद्यता सर्वोपरि है क्योंकि स्थूल

तथा सूक्ष्म पदार्थों की भिन्नता का आधार यही है। प्रकारान्तर से इसी ज्ञान के उदय होने से विवेक उत्पन्न होता है और विवेक से ही नित्यानित्य वस्तु का अन्तर समझ में आता है , इनके प्रति दृष्टि स्पष्ट होती है।

व्युत्पत्ति कि अनुसार “ज्ञायते” अनने इति ज्ञानं “अर्थात् जिसके द्वारा सांसारिक पदार्थों को जाना जाय, वह ज्ञान है। ज्ञान का ही अबान्तर भेद ‘विद्या’ कहलाती है। यह भी विद् धातु से निष्पन्न होती है। सुषुप्त अन्तर्निहित भावों को विकसित करने वाली बुद्धि विद्या है। ज्ञान भी उसका पार्यय मात्र है। (‘ज्ञा’ धातु से ज्ञान की निष्पत्ति होती है) प्रेय एवं क्षेय दोनों विषयों की जानकारी तात्त्विक दृष्टि से अपेक्षित है। इसके कारण एक और लैकिक विषय—वासना आदि सुखों की उपलब्धि होती है और दूसरी ओर निःक्षेयस् की प्राप्ति का साधनभूत ज्ञान भी होता है। फलतः यम, नियम, आसन, प्राणायाम, प्रत्याहार, ध्यान, धारणा, एवं समाधि—इस अष्टांग मार्ग के माध्यम से साधक अपनी इन्द्रियों पर विजय प्राप्त कर मोक्ष पथ के अनुगामी बनते हैं।

भारतीय दर्शन में ‘ज्ञान’ शब्द का प्रयोग व्यापक तथा सीमित दोनों अर्थों में हुआ है। व्यापक अर्थ में जहाँ भी चेतना का प्रकाश हो , वह ज्ञान कहलाता है। प्रत्येक चेतना—स्थिति ज्ञान—स्थिति यहाँ यह कहना आप्रासंगिक नहीं होगा कि ज्ञान केवल मानव का एकाधिकार नहीं है, वरन् पशुओं को भी ज्ञान होता है। उच्च कोटि के प्राणियों में इस प्रकार के ज्ञान की संभावना में किसी को कोई आपत्ति नहीं होगी , किन्तु जब हम निम्न कोटि के प्राणियों के विषय में सोचते हैं तो कठिनाई का अनुभव होना स्वाभाविक है प्रायः यह माना जाता है कि मानव में चेतना स्पष्ट होती है जबकि अन्य प्राणियों में चेतना अस्पष्ट होती है। किन्तु चेतना जीव मात्र का अपरिहार्य गुण है जो पुद्गल के आवरण, से धूमिल तो हो सकता है , पर उसका उसमें सर्वथा अभाव असंभव है। जैन दार्शनिकों ने इसे स्पष्टतः स्वीकार किया है। इसके अतिरिक्त , शंकराचार्य भी मानते हैं कि चेतना की उपस्थिति सर्वत्र है, वह सर्वत्र व्याप्त है। श्री अरविन्द ने तो यहाँ तक काह है कि भूत भी , वास्तव में , चेतनरूप है, यद्यपि चेतना वहाँ सुषुप्त स्थिति में होती है। पाश्चात्य विचारक लाइबनिरस, हेगेल आदि भी मानते हैं कि चेतना की मात्रा में अन्तर भले ही हो , पर चेतना सभी चिद्—बिन्दुओं में व्याप्त है। यह अलग बात है कि कुछ चिद्—बिन्दुओं की चेतना स्पष्ट है और कुछ की चेतना अस्पष्ट। अतः कहा जा सकता है कि ज्ञान और चेतना समानार्थक है तथा यह ज्ञान की व्यापकता को सूचित करता है। दूसरी दृष्टि से विचार करने पर कहा जा सकता है कि व्यापक अर्थ में ज्ञान यथार्थ तथा अयथार्थ दोनों का बोधक है। उदाहरणार्थ, रात में किसी खम्भे को देखकर एक व्यक्ति उसे मनुष्य समझ लेता है और दूसरा उसे खम्भा ही समझता है। यहाँ ज्ञान दोनों को हो रहा है, पर एक का ज्ञान आयथार्थ है जबकि दूसरे का ज्ञान याथार्थ। अयथार्थ है अन्तर्गत—संशय, निवर्चय, विभ्रम तर्क आदि से सम्बन्धित ज्ञान आता है।

सीमित अर्थ में ज्ञान केवल यथार्थ तथा स्पष्ट चेतना का ही बोध कराता है। उदाहरणार्थ , यदि कोई व्यक्ति किसी घटना के सम्बन्ध में गलत बातें बताता है तो हम कह सकते हैं कि उसे घटना का ज्ञान नहीं है। सीमित अर्थ में ज्ञान सदैव एक निर्णय होता है और इस दृष्टि से सविकल्पक चेतना ही ज्ञान की कोटि में आती है। पश्चिमी दर्शन में ज्ञान का अर्थ हमेशा ही यथार्थ मूलक ज्ञान भी होता है क्योंकि अयथार्थ ज्ञान तो हमें हमेशा रहता ही है। अयथार्थता जब यथार्थता में परिणत हो जायः तब उसे ज्ञान कहेंगे। इसीलिए दार्शनिक शिरोमणि प्लेटो ने भी ज्ञान की याथार्थता एवं विशिष्टता पर बल दिया है। उनके अनुसार ज्ञान न प्रत्यक्ष है, न मत या विश्वास है और न समझ ही। यह तो शुद्ध विवेक का रूप है ज्ञान की प्रप्ति न भ्रान्ति से

होती है , ना संवेदना तथा इन्द्रिय-बोध से, न साहित्य और संगीत से , न गणित और विज्ञान से। इसकी प्राप्ति तो दर्शन द्वारा होती है।

पुनः ज्ञान न तो वस्तुओं की परछाइयों के बोध से होता है, ना वस्तुओं के बोध से और न विचार का स्वप्न देखकर होता है क्योंकि परछाईयाँ पूर्णतः अवास्तविक होती है, वस्तुएँ अर्द्ध-वास्तव होती हैं और विचार का स्वप्न सिर्फ समझ से सम्बन्धित होता है। ज्ञान तो सिर्फ शिव के स्वरूप के साक्षात् दर्शन से होता है। ज्ञान को प्रति न गुफास्वरूप अंधकारमय जगत में बन्दी रहने वाले भ्रान्त तथा अज्ञानी मानव कर सकते हैं, न विश्वास तथा श्रद्धा की धारा में बहने वाले सहित्यिक और संगीतज्ञ न मान्यताओं तथा परिकल्पनाओं से आबद्ध गणितज्ञ और वैज्ञानिक , इसकी प्राप्ति तो शुद्ध और पवित्र विवेक से प्रेरित होने वाले दार्शनिक ही कर सकते हैं। स्पष्ट है कि दर्शन में ज्ञान का विशिष्ट अर्थ है। उसकी उपादेयता न केवल सम्यक्ता की-प्रति तथा आध्यतिक सत्ता को साक्षात् अनुभूति तक सीमित है वरन् की वस्तुनिष्ठ सत्य की उपलब्धि भी ज्ञान की विषय-वस्तु में शामिल है। क्या ज्ञान गुण है या कर्म है या द्रव्य है?

ज्ञान के विषय में एक महत्त्वपूर्ण प्रश्न यह पूछा जा सकता है कि यह किस कोटि की सत्ता है ? विभिन्न मतों से इस प्रश्न के भिन्न-भिन्न उत्तर दिये गये हैं तथा इस दृष्टि से विभिन्न मतों को चार मुख्य श्रोणियों में विभक्त कर सकते हैं -ज्ञान गुण है, ज्ञान कर्म है, ज्ञान द्रव्य है तथा ज्ञान गुण , कर्म तथा द्रव्य नहीं है। जहाँ तक प्रथम श्रेणी का सबाल है, कुछ दार्शनिक ज्ञान को गुण के रूप में स्वीकार करते हैं। इन दार्शनिकों के भी दो मत हैं। एक मत ज्ञान को आगंतुक गुण मानता है जबकि दूसरा मत ज्ञान को अनिवार्य गुण। ज्ञान को आगंतुक गुण माननेवाले दार्शनिक पुनः दो शाखाओं में विभक्त हो जाते हैं। इनमें प्रथम चावकि दर्शन है जो ज्ञान को भैतिक तत्त्वों का आगंतुक गुण मानता है तथा द्वितीय न्याय वैशेषिक तथा प्रभाकर मीमांसा का मत है जो ज्ञान को आत्मा का आगंतुक गुण मानते हैं। जैन-दर्शन तथा रामानुज-दर्शन में ज्ञान को आत्मा का अनिवार्य गुण माना गया है। इसके विपरीत , भाट्ट-मीमांसक ज्ञान को आत्मा का गुण नहीं अपितु क्रिया स्वीकार करते हैं। उनके अनुसार जब मनुष्य ज्ञान नहीं प्राप्त कर रहा होता है तब इसे आत्मा में कर्म को योग्यता अर्थात् शक्ति के रूप में स्वीकार करते हैं। पुनः ज्ञान के विषय में तीसरा मत सांख्ययोग तथा अद्वैत-वेदान्त का है। उनके अनुसार ज्ञान स्वयं के द्रव्य है जिसे किसी अन्य अधिष्ठान की आवश्यकता नहीं है। ज्ञान के विषय में एक अन्य चौथे मत की चर्चा भी की जा सकती है। इसका प्रतिपादन माध्यमिक शून्यवादी करते हैं। उनके अनुसार ज्ञान न तो गुण ना कर्म है और ना द्रव्य ही। वे वस्तुतः ज्ञान को किसी कोटि में रखने को इच्छुक नहीं हैं। इन मतों पर हमारी टिप्पणी सिर्फ यही है कि ये विचार ऐकान्तिकता के दोष से ग्रसित है निरपेक्षतः ज्ञान को ना गुण कहा जा सकता है, ना कर्म ही कहा जा सकता है और न द्रव्य ही कहना संभव है। फिर भी , आंशिक तथा सापेक्षिक दृष्टि से उक्त विचार सही हैं। अपेक्षा-विशेष से ज्ञान गुण है, अपेक्षा-विशेष से ज्ञान कर्म है और अपेक्षा-विशेष से द्रव्य भी। वस्तुतः ज्ञान आत्मा का स्वरूप लक्षण है, वह आत्मा का गुणधर्म है , उसी के कारण विषय यथार्थतः ज्ञात होता है।

डॉ. शत्रुघ्न प्रसाद के उपन्यासों के शिल्पगत सौंदर्य

डॉ. ओंकार पासवान*

साहित्यकार की सृष्टि उसकी अभिव्यक्ति का माध्यम है। अभिव्यक्ति का कोई एक निश्चित रूप कभी भी सार्वदेशिक और सार्वकालिक नहीं रहा है। जिस तरह से परिवर्तन की यह प्रक्रिया कभी समाप्त नहीं होती, उसी प्रकार शिल्प का अस्तित्व भी कभी समाप्त नहीं होता। जबतक साहित्य के माध्यम से अभिव्यक्ति की अनिवार्यता बनी हरेगी तब तक अभिव्यक्ति के प्रकार के रूप में शिल्प का महत्व अक्षुण्ण रहेगा। संसार के सभी साहित्यों में जो अभिव्यक्ति के नाना प्रकार के प्रयत्न किये गये हैं। उन्होंने अनेक साहित्यिक कला रूपों को जनम दिया है। परिवर्तन का यह क्रम प्रत्येक साहित्य रूप में भी गतिशील रहा, जो आज भी गतिशील है। साहित्य में शिल्पगत परिवर्तन होता रहा है और होता रहेगा।

शिल्प के माध्यम से ही हम प्रबंध काव्य, महाकाव्य, खण्ड काव्य, मुक्तक, गीत, आख्यान, नाटक, एकांकी, कहानी और उपन्यास के अंतर को समझ हपाते हैं। अतः साहित्य का निर्धारण शिल्प के माध्यम से ही होने के कारण पाठकों के लिए इसकी अनिवार्यता अधिक बढ़ जाती है। पाठकों की भी अपनी पाठनाभिरुचि होती है। जिसके अनुसार ये विशेष साहित्य स्वरूप का ही अध्ययन करना चाहते हैं। अतः शिल्प पाठकों की अभिरुचि के अनुसार साहित्य के चुनाव में सहायता पहुँचाता है।

अकारगत परिचय प्रान कर शिल्प पाठकों को चुनाव करने में मात्र सहायक ही नहीं होता है। किसी भी कृति में कुछ थोड़ा ही ऐसा होता है जो पाठकों की स्मृति में शेष रह जाता है, उसके अतिरिक्त वह सब कुछ भूल जाता है। किसी भी कृति को पढ़ते समय जो पाठक को आवश्यक और अनावश्यक का बोध नहीं हो पाता और वह सब कुछ प्रेम पूर्वक पढ़ जाता है, उसके मूल में शिल्पगत आकर्षण ही होता है। कृति का वह सब कुछ जो अनावश्यक है, पढ़ते समय आकर्षण युक्त बना रहता है और रचना का अंतिम पृष्ठ तक पढ़ने के लिए पाठक विवश हो जाता है। उपन्यास के सन्दर्भ में प्रयुक्त शिल्प की गतिशीलता प्रमाणित है। इसकी गतिशीलता का नियम न करनेवाला एक तत्त्व है जिसे कला की संज्ञा दी जाती है। उपन्यास रचना एक कला है और उसका शिल्प कला की चरम परिणति। अतः शिल्प और कला यदि एक—दूसरे के पर्याय नहीं तो परस्पर संबंधित अवश्य है। सौन्दर्य के प्रसंग में और उकी अनुभूति के क्रम में कला अपने आप अवतरित होती है।

मानव की जानकारी के लिए उपयोग में आनेवाली वस्तुओं का निर्माण कला के द्वारा ही संभव होता है और निर्मिति ही कला है। प्रकृति द्वार प्राप्त सामग्री को जिस प्रकार कला सजाकर प्रस्तुत करती है, उसी प्रकार उपन्यास में गृहीत विषय, घटनायें एवं प्रसंगों को शिल्प के द्वारा सजाया जाता है।

भाषा विचारों और भावों की अभिव्यक्ति का एक सशक्त माध्यम है। भाषा ही वह आधार है, जिसके द्वारा व्यक्ति अपने विचारों को दूसरे तक पहुँचाने में समर्थ हाता है। जहाँ तक किसी साहित्यिक कृति की बात है

*शोधार्थी एम.ए., पी.एच.डी., म.वि.वि., बोधगया बी.एड.; इन्दिरा गाँधी राष्ट्रीय मुक्त वि.वि. न्यु दिल्ली हिन्दी शिक्षक; म.रा.ना.पुरी उ.वि. सकसोहरा, पटना।

वहाँ पर भाषा अपने आप में एक महत्वपूर्ण कड़ी होती है। जिससे लेखक के विचार पाठकों तक पहुँचते हैं। साथ ही पात्रों के विचारोद्घाटन में भी भाषा महत्वपूर्ण भूमिका अदा करती है। डॉ. शत्रुघ्न प्रसाद के उपन्यासों की भाषा इस दृष्टि से तथ्य के उद्घाटन एवं भाव प्रकाशन में सक्षम है।

भाषा सबसे पहले शब्द है और सबसे अंत में वह शब्द ही रहती है। शब्द प्रयोग की दृष्टि से उपन्यास का विश्लेषण करने पर उसे वैविध्य दृष्टिगोचर होता है। उपन्यास के सभी पात्र प्रायः एक ही संस्कार या आदर्श के नहीं होते, इसीलिए सभी की भाषा भी सामान नहीं होती। प्रो. शत्रुघ्न प्रसाद के उपन्यासों में तत्सम, तद्भव और विदेशी शब्दों के प्रयोग हुए हैं। हालांकि इनका सभी उपन्यास मुस्लिम-शासन काल से संबंधित है अतः अरबी-फारसी के शब्दों के अधिक दर्शन होते हैं। परिवेश की भाषा-निर्माण में महत्वपूर्ण भूमिका रहती है। यह बात अरबी-फारसी के शब्दों द्वारा अधिकाधिक स्पष्ट हो जाती है। भाषा-प्रयोग में लेखक ने पात्रों को भी आधार बनाया है। इनके पात्रों के संवाद में मुहावरा लोकोक्ति, सूक्ति परक वाक्य इत्यादि की अधिकता है। 'सिद्धियों के खंडहर' नामक उपन्यास में प्रो. शत्रुघ्न प्रसाद का मुहावरा परक वाक्य द्रष्टव्य है—'सुभद्रा की आँखें भर आयी। माँ और पिता की आँखों में रोष की आग थी। वह इसका अनुभव कर रही थी। उसे कभी एक क्षण के लिए अपने अपराध का मान होता, दूसरे क्षण वह अपने को अपराधी मानने को तैयार नहीं हो रही थी।''¹

प्रो. शत्रुघ्न प्रसाद ने 'सिद्धियों के खंडहर' नामक उपन्यास में प्रकृति का यथार्थ चित्रण किया है। प्रकृति-चित्रण के क्रम में वे कहते हैं कि दिनकर पश्चिम की ओर ढल रहा था। पर उसकी किरणों की तीखापन कम नहीं हुआ था। कुमार महेंद्र का रथ नगर में प्रवेश कर चुका था। पूरब से पश्चिम तक फैला हुआ महानगर पाटलिपुत्र अपने पूर्वी द्वार पर युवराज के रथ का स्वागत कर रहा था। आम्रवाटिका, ग्राम, हाट, पण्यवीथि, पुष्पवाटिका, पल्ली, टोले, उद्यान, दुर्ग की प्राचीर और प्राचीर के अन्दर मौर्य राजभवन-राजसभा-भवन के अवशेष इत्यादि का संगम है। कहा जा सकता है कि इस उपन्यास का शिल्प-सौन्दर्य उच्चकोटि का है।

'शिप्रा साक्षी' नामक उपन्यास में मगही के शब्दों का प्रयोग भी हुआ है। धनदत्त के शब्दों में — "श्रेष्ठियां, आदरणीय नगर श्रेष्ठि के विचारों को हमने सुना। उनका कथन सत्य है। परन्तु यह भी सत्य है कि हममें से कुछ व्यवसायी कतिपय सामग्री पर अतिरिक्त लाभ अर्जित करते हैं एकाध की सामग्री तो शुद्ध भी नहीं होती और हम सभी पर अपवाद लगता है। अपवाद को दूर करना चाहिए।"³ धनदत्त के इस पंक्ति में "एकाध" शब्द मगही के है। इस उपन्यास में सामंतों के विचारों को भी दर्शाया गया है। वे गाँव के छोटे-छोटे व्यवसायियों पर कर लगाते हैं। तब गाँव के सभी लोग मिलकर विरोध करते हैं।

प्रकृति चित्रण के प्रसंग में लेखक ने संध्या समय का वर्णन किया है। राजभवन के पश्चिम में सूर्य झुक गया था। यानी सूर्यास्त का समय था। वहाँ वर्षा हुई थी। अतः सभी जगहों पर पानी भरा हुआ था। वहीं वर्षा के जल से परिप्लावित सरोवर के मध्य में विद्युत लेखा का सुन्दर भवन बना हुआ था तथा सरोवर के उस पार नया महल बन रहा था। विद्युत लेखा अपने घर में श्रृंगार कर रही थी। वहाँ एक ओर से सरोवर की लहरों का संगीत आ रहा था और दूसरी ओर से राजा के उद्यान से भौरों का गुंजार के शब्द सुनाई दे रहे थे। पूणिर्मा के रजत पर्व महाराज ने विद्युत लेखा को 'शिप्रा' नदी में नौका विहार के लिए बुलाया था। विद्युत लेखा कभी भी अपने भवन से बाहर नहीं निकलती थी। परन्तु यही उसको मौला मिला कि घर से बाहर निकलना है वह पर्दे में रहने वाली महिला थी। उसने पाँच वर्षों से सामने के राजसरोवर, राजोद्यान और राजभवन के

अतिरिक्त कहीं भी नहीं गयी थी। प्रो. शत्रुघ्न प्रसाद अपने इस उपन्यास में मुहावरे से युक्त भाषा का प्रयोग किया है। उनकी कुछ पंक्तियाँ द्रष्टव्य हैं — द्वार पर किसी के आने की आहट हुई। विद्युत का हृदय धड़क उठा। भिक्षु ने भिक्षा के लिए आवाज लगा दी। उसका आवाहन और आग्रह सुनाई देने लगा। दासी ने भी भिक्षु के आगमन की सूचना दी। विद्युत लेखा उस समय शृंगार कर रही थी। अतः वह क्रोधित हो गयी। यहाँ 'धड़क उठा' एक मुहावरा के रूप में प्रयुक्त है।

प्रो. शत्रुघ्न प्रसाद इस उपन्यास में छुआछुत की बात भी स्वीकार की है। पहले के समय में लोग निम्न जाति वाले को नीच दृष्टि से देखते थे। लेखक कहता है कि अछूतों की बस्ती के बीच में एक बड़ का वृक्ष था। अछूतों की बस्ती में मिट्टी की दीवाल और फूस की झोपड़ी थी। वहाँ के बच्चे धूल और कीचड़ में खेल रहे थे। विदेशी शासन शोषण और दमन चक्र स्वयमेव रूक जाने पर जनतंत्र मुस्कुराता है। राष्ट्रीय विजय के उपलक्ष्य में विक्रम संवत् का प्रवर्तन हुआ। इस उपन्यास में मुहावरा परक वाक्य और सुक्ति परक वाक्य इस प्रकार हैं—आँखें बालक के मोहन रूप पर ठहर गई थी। वे मातृत्व की अनुभूति में बेसुध हो रही थी। (पृष्ठ-9) उसकी सुनहली मुस्कान पर शिप्रा की लहरें मचलने लगी। (पृष्ठ-13) द्वादश ज्योति पीठ, सप्तपरधा, पवित्र नदियाँ ये सभी भारत की सांस्कृतिक एकता को पुष्ट करती हैं। (पृष्ठ-24) वीणा के स्वर भी नुपूरों को मादक बनने लगे। (पृष्ठ-53) यौवन की दीपित से उद्भासित सौंदर्य यही तो मन्मथ है। पुरुष अपने को संभ नहीं पाते। (पृष्ठ-65) शक-सम्राट की आँखों में राजमद तथा विलास मद बारी से झलकने लगी। (पृष्ठ-187) पराजय, अत्याचार तथा दारिद्र्य की पीड़ा में कामदेवता की आराधना अपराध है। रामकृष्ण, चाणक्य तथा पुष्पमित्र का चिंतन, प्रलंकारी महाकाल की उपासना और संगठन एवं शास्त्र की साधना यही एक मात्र अभिष्ट है। (पृष्ठ-242) शैव, वैष्णव, जैन और बौद्ध सभी भारतीय हैं, भारतीय प्रजा हैं। उनकी धर्म-संस्कृति इस मिट्टी की उपज है। (पृष्ठ-292) प्रो. शत्रुघ्न प्रसाद के इस उपन्यास में पशु मनोविज्ञान भी चित्रित है। "अंधेरे में उलूकों की आँखें चमक रही थीं। पशुओं की आवाज गूँज रही थी। वे बढ़ते जा रहे थे। राजदूत को आश्चर्य हुआ। साथ ही उसमें आत्मविश्वास उत्पन्न हुआ। वह नये उत्साह से वन प्रान्तर को पर कर गया। "4 राजदूत रात्रि में जा रहा था तब उल्लू की आँखें चमकने लगी। रात्रि में पशु की आवाज भी सुनाई दी। इन पंक्तियों से ऐसा प्रतीत होता है कि प्रो. प्रसाद को पशु मनोविज्ञान का भी अच्छा ज्ञान था।

"हेमचन्द्र विक्रमादित्य" सोलहवीं शताब्दी से संबंधित उपन्यास है। इसमें राजा विक्रमादित्य की कथा वर्णित है। इस उपन्यास में लेखक ने मुहावरा के प्रयोग से इसकी कथा में रोजकता ला दी है—"नीचा दिखाने की कोशिश करते रहे हैं, मोहन के जमाल बन जाने पर इनको अवसर मिल गया। पंडित जी के कान भरते हैं। अब वे संभलकर कुछ करेंगे, हेमचंद्र की बुद्धिमत्ता और निर्भीकता से प्रतिष्ठा बढ़ी है।"⁵

जीवन रोना नहीं हंसना है जैसे आकाश में सूरज हंसता रहता है। (पृष्ठ-5) हेमू की आँखें भी पीछे मूड जाती थी। आँखें मिलती थी। आँखों में अलग होने का दर्द छलक उठता है। (पृष्ठ-15) हल्की सी ध्वनि हुई। दोनों संत उठ गए। वे भूल गए हैं कि वे बूढ़े हैं। वात्सल्य बुढ़ापे में नया जीवन ला देता है। (पृष्ठ-31) आज की स्थिति में अपने आराय के प्रति निष्ठावान बन निर्भीक होना बड़ी बात है। यही धर्म है। (पृष्ठ-33) साईदास ने इस संसार की नश्वरता की चर्चा करते हुए इस मानव जीवन को पाक-साफ रखकर जीने का संकेत दिया। इंसान को इंसान समझना ऊँच-नीच और अमीर-गरीब का ख्याल नहीं रखना ही इंसानियत

है। (पृष्ठ-220) लोग घरों में छिपकर अपने औद देश के दुर्भाग्य पर फूट-फूटकर रोने लगे। (पृष्ठ-366) शब्द चयन की दृष्टि से भी इन्होंने अरबी-फारसी के शब्दों का प्रयाग किया है, जैसे-नुमाइश, इश्क इत्यादि।

‘सुनो भाई साधो’ नामक उपन्यास कबीर के जीवन पर आघृत है। इस उपन्यास का प्रारम्भ कबीर के जन्म से ही हुआ है। इस उपन्यास में लेखक ने कबीर के निर्भीक, विनम्र और संत व्यक्तित्व को पूरे प्रसंग के साथ प्रस्तुत किया है। निष्कर्षतः यह कहा जा सकता है कि डॉ. शत्रुघ्न प्रसाद के सभी उपन्यासों में शिल्पगत सौन्दर्य अपनी चरम सीमा पर पहुँचा हुआ है। इन्होंने भारत की सांस्कृतिक चेतना एवं स्वतंत्रता संघर्ष को अत्यन्त ही सरल, सहज एवं ओजस्वी शैली में अभिव्यक्ति किया है।

संदर्भ

1. सिद्धियों का खंडहर
2. शिप्रा साक्षी है
3. हेमचन्द्र विक्रमादित्य
4. सुनो भाई साधो।

A Study of Unit Family in Relation to Childrens Personality in Psychological Perspective

Dr. Md. Firoj*

ABSTRACT

In the present study an attempt has been made to examine the unit family in relation to children's personality. Sample consisted of 147 boys and 103 girls from each school. Socio-economic status scale, Draw. A man test were administered of students and also school examination marks is assessing the educational progress. "Children coming from unit families will show greater improvements on test of intelligence and school examination marks" was confirmed. This results confirms the Hypothesis.

Keywords: Statistical Treatment, D.A.M., S.ES, Theroretical study, Scientific Journal articles.

INTRODUCTION

Family

A group consisting of two parents and their children living together as limit. The origin of the word 'Family' we can trace to Roman 'Families' 'a domestic slave' I collection of solves attached to the household. Later the family came to mean not merely the slaves but all the persons included within the house hold, more or less as property of the head of the family father.

As Maciver and page-apine the family is a group defined by sex-relationship sufficiently precise and enduring to provide for the procreation and upcoming of children and it may include collaterals or subsidiary relationships,, but it continued by the living together of mates forming with their offspring a distinctive unity.

Family Unit

A social group traditionally consisting of parents and children the traditional family unit of mother, father and two children.

The nuclear family consists of a man and his wife with their minor children living together in one household. This social limit is the basis of all types of family group. It is found in every society through there are a few societies in which the role of the husband and father is comparatively unimportant on all societies the nuclear family is the initial social matrix with in which a child is born and nourished. The nuclear family of household wife and children is always a part of a kingship system, which is turn, is an element of the larger social structure and culture.

REVIEW OF LITERATURE

In the Indian family the eldest son is a particularly favored person as compared to other relatives because naturally the first born child attracts greater part of attention and affection from the parents,

*I.D. College, Kanti, Muzaffarpur.

besides this after the father's death the eldest son has to take upon himself the burden of the whole family not only that he has the authority to offer the funeral cake (pinda) at the sradha ceremony ie the religious observance on the death anniversary of the father and other ancestors. On the birth of the first son, the father is freed from his debt to the names (Manix 106)

Even today according to A.R. Beals (1962) as quoted by Seay/Gottfried (1976) male body particularly the first son is most welcome females are not so welcome. Particularly in upper cast families where large dowries are required, Even SC Dube (1965) has said that between the father and mother, the father symbolizes authority to a greater degree while the constant association with the latter develops sympathetic understanding between her and children.

In a nuclear family he has to obey a few persons and he can agree, discuss or make out his care in a person's presence a smaller number of adults. He is more at ease in the presence of small gathering and can admit his faults more freely though this also depends on the strictness of the parents.

The members of nuclear family have no such large scale system of sharing of rights and duties among themselves because there is only the husband with his wife and children who have almost all common interests. Here the earning of the male member as well as the female member (of the earnings) does not need to be distributed and allocated to different wings.

RESEARCH VARIABLES AND HYPOTHESIS

In the present study for the following variables were concerned

- (a) Age 8 to 9 years (b) Schooling nearly equal number from each school (c) D.A.M. (Draw a man) test) scores Mean and S.D. (d) No. of boys and girls-147 boys and 163 girls in each group the boys were selected from boys schools and girls were selected from Girls Schools.

HYPOTHESIS

Hypothesis were formulated

Children coming from unit families will show greater improvement on tests of intelligence and also in examination marks because they have been consistently getting more care and attention from their parents and there by being more stimulated and encouraged to achieve cognitive skills.

METHODOLOGY

Sample

In the present sample, as stated earlier, families belonging to very high or very low socio-economic groups were not included, ultimately we have 147 boys and 153 girls in each, the ranges of the two groups with regard age being 8 and 9 years. S.E.S below and above average. D-A-M. scores little below and above average.

D-A-M test score Means were computed for the groups.

Measuring Instruments

1. Socio-Economic status scale-Kuppuswamy
Kuppuswamy scale for measuring socio-Economic status was used for determining the socio economic status of the parents.

2. Draw-A-man test (for Indian children Adopted by Dr. (Mrs.) Pramila pathak.
3. School examination marks.

PROCEDURE

Kuppuswamy's Socio-economic status scale forms were given to those children and after getting the relevant information.

Draw-A-man technique for measuring intelligences this was the first attempt to use standardized procedure to get a draw done by the child and to score it objectivity. Good-enough's Draw-A-man test was welcomed the by the workers in the field of mental testing.

For assessing the educational progress, marks obtained at the half yearly and annual examination held in 1976 and 1977 were noted down from the school registers and were added and averaged separate averages for Hindi, English, Aritthmetic, Social studies and science were computed.

RESULT AND DISCUSSION

In the present study socio-economic status scale were given to the children and they asked to get them filled up by the parents.

Draw-A-man Test

Table No. 1

Means & S.Ds Boys group		M and S.D of Girls group	
Testing	Unit Family	Testing	Unit Family
First Testing	N=147 M=102.66 SD=10.636	First Testing	N=103 M=106.16 S.D.=24.70
Second Testing	N=147 Mean=109.3 SD=31.20	Second Testing	N=103 M=108.31 S.D.=24.35

On the basis of table 01 that the unit family offers better environment for a child's intellectual development. In case of one year time in the Mean. I.Q. of the unit family children. It can be observed that the unit family climate is more suitable for a child's intellectual growth.

Belmant and Morolla (1973) have explained the negative effect of family size on intellectual development in terms of lesser personal attention by parents to any one child when there are many children in home.

School examination marks

The following tables present the different subjects Hindi, English, Arithmetic, Social Studies and Sciences of boys and girls groups.

Table No. 2

Subject	Boys Groups		Subject	Girls Groups	
Hindi	First mean	45.53	Hindi	First mean	45.009
	Second mean	49.59		Second mean	47.89
English	First mean	42.40	English	First mean	44.49
	Second mean	49.45		Second mean	48.269
Arithmetic	First mean	46.224	Arithmetic	First mean	46.097
	Second mean	55.367		Second mean	53.495
Social	First mean	44.537	Social	First mean	44.145
Studies	Second mean	53.040	Studies	Second mean	49.815
Science	First mean	42.387	Science	First mean	43.367
	Second mean	50.775		Second mean	48.427

On the basis of these results one can confidently say that unit families provide their children with more suitable environment from educational point of view even in languages in which large family size can be expected to be one of the facilitating factors the unit family children of this sample should better results.

CONCLUSION

A expected the unit family had comparatively higher scores and larger increase to their credits, on the tests of intelligence and in school examination marks and the first hypothesis of this research. That “children coming from unit families will show greater improvements on tests of intelligence and school examination marks” was confirmed.

REFERENCES

1. Clausen, John, A : Family structure, socialization and personality review of child development research.
2. Curry, R.L : The effect of socio economic status on scholastic achievement of sixth grade children; British Journal of educational Psychology.
3. Vintzileos A.M. & Ananth C.V (2010) How to write and publish an original research article. American Journal of obstetrics and Gynecology 202(4) Article cl-334. eb doi : 10.1016/J. ajog.2009.06.038
4. Wilkinson L (1999) statistical methods in Psychology Journals, Guidelines and explanations. American Psychologist, 54, 594-604 doi :10.1037/0003-066x.54.8.594
5. Drotar, D (2009) Editorial : thoughts on improving the quality of manuscripts submitted to the journal of pediatric psychology writing a convincing introduction journal of pediatric psychology 34(i), 1-3 doi : 10.1093/Jpepsy/Jsn.123

6. Chis; A. & Rusua, A.S (2016); connecting Emotional intelligence an Academic achievement A systematic Review, The European Proceedings of Social and behavioural sciences; 2016 ERD 201 : Education, Reflection, Development, Forth Edition, PP 91-100. Retrieved on 2nd January 2019 from https://www.futureacademey.org.uk/files/images/upload/ERD_2016FA013F.Pdf
7. Mandal, M.B.(2017) : Emotional intelligence and Academic Achievements of upper Primary Rural Students inrelation to their Gender, Family type and Economic Class. IOSR Journal of Research & Method Education (IOSR-JRME), Volume 7, Issue 1 Ver iv(Jan-Feb.2017), PP48-53 Retrieved on 2nd January 2019 from DOI ; 10.9790/7388-0701044853
8. Lawrence, A.S.A. (2017) General well-being of High secondary students, Journal on Educational Psychology, v10, n3 p20-27, Nov 2016-Jan 2017. Retrieved on 23rd June 2017 from https://eric.ed.gov/?id=EJ_1138673.
9. Benton : Journal of Genetic Psychology
10. Davis Ek Tyler, R : Intelligence and cultural differences Cicago.

Effect of Heavy Metals on the Ventilation and Opercular Movement in Heteropneustes Fossils

Shaheen Talat*

ABSTRACT

Several heavy metals which have been reported to disturb the eco-balance of various ecosystems, nevertheless, Various aspects of its toxicological action on the organs and systems of the fishes in the little explored. The present study has been aimed to regulate their entry in the various water bodies so that it can be ensured that they may not be adversely affected in any way. Many heavy metals have shown to affect the survival behaviour, growth, reproduction, physiology, biochemistry and pathology of fish with evidence of tissue damage.

The present study deals with opercular frequencies and respiratory deals with. It was found that there frequencies and distress were increased 2-4 times more than the control fish the operular frequency per minutes were observed in the air – breathing teleost Heteropneustes fossils at different concentration to two heavy metals salts i.e. CuSO₄ and K₂Cr₂O₇ pollutants in relation to exposure periods. At the initial stage of exposure no significant effect were noticed. However the opercular frequency was found in increasing there from 40mg/l to 265.4mg/l level but suddenly and abruptly declined at 517.9mg/l level up to 72hrs of exposure in both pollutants.

The initial increase in the opercular movement followed by a gradual decrease which becomes rapid just prior to death. The movement of Heteropneustes fossils towards water volume increased in almost all concentration to meet their O₂ requirement but it did not materialize in lethal concentration.

Keywords: Heavy metals, Heteropneustes, fossils, ventilation, opercular movement, CuSO₄, K₂Cr₂O₇.

INTRODUCTION

Intense activity in agriculture fields and industrial sectors has inevitably enhanced the level of heavy metals in waste water reservoir (Indra & Shivaji, 2006 and Sharma and Choudhary, 2007)

Heavy metals are serious pollutants of the aquatic environment due to their persistence and biomagnification properties (Young, 2005; Sobha, et al. 2007; Hano, et al., 2016). The natural aquatic systems many extensively contaminate with the heavy metals released from domestic, industrial and other man made activities (Vutukuru, 2003; Monozaki et al. 2015)

Fishes are widely used to evaluate the health of aquatic ecosystem. They respond sensitivity to an increased concentration of contaminants in water. Heavy metals at high concentrations can cause hazardous effects to metabolic, physiological and biochemical system of fish (Heath, 1987).

Among the heavy metals cadmium, lead, Mercury, Copper, Zinc, Chromium and nickel are notorious toxicants and most of their compounds are water soluble and non-degradable. Zinc and copper are used in agriculture works and are known as also reported toxic to fish (Singh & Singh 1979).

*Research Scholar, Lecture R.K.H.S. Muzaffarpur.

The initial increase in the opercular movement followed by a gradual decrease which become rapid just prior to death. These development depended mainly on the concentration limit and exposure period and normally this is concentration dependent.

The present study deals with the opercular frequencies and respiratory distress in the presence of undesirable concentration of CuSO_4 and $\text{K}_2\text{Cr}_2\text{O}_7$. It is an attempt towards the aim of reducing the level of pollution to those which can atleast be tolerated and beneficial to the fishes and other aquatic biota and also for maintaining healthy stock of fish.

MATERIALS AND METHODS

Mature specimen of healthy and alive *Heteropneustes fossilis* commonly known as Singhi of 36.5 ± 2.5 gm weight groups of both sexes collected from the aquatic resources situated in the vicinity of Muzaffarpur city and brought to the laboratory, where they wased for few minutes in 0.15% aqueous KMNO_4 solution to avoid any dermal infection.

The fish were not provided food twenty four hours prior to start the experiment to the Bioassay test:-

Static bioassay test for determining the acute toxicity or median lethal concentrations (LC_{50}) value at 24, 48, 72 and 96 hrs of exposure to the selected metallic salts (CuSO_4 & $\text{K}_2\text{Cr}_2\text{O}_7$) individually were patterned following the method described by Douduruff et. Al. (1951) and APHA (1995).

The opercular frequencies or each concentration and the controls at selected periods of exposures (i.e. 24, 48, 72 and 96 hrs. of exposure) were counted by visual observation/using magnifying glass for 5-10 minutes and average value minutes per fish were calculated and recorded.

RESULTS & DISCUSSION

During the experimental period no death was recorded in the test level and at the lowest concentration of heavy metals. At higher concentrations they began to show sings of distress. There was rapid opercular movement and the fish exhibited escaping tendency. The restlessness, rapid opercular movement and profused mucus secretion were the other observed behavioural responses. Beside the fish body got twisted and inverted just before death. Similar observation has been reported by Bengari and Patil (1984) in *Barbus aurilus* with lead acetate, Jha and Pandey (1990) in *channa punctatus* with lead nitrate and Mandal S (2008) on *clarius* to lead toxicity.

The restlessness and rapid opercular movement as noticed during present study can attributed to the hypoxic condition caused by CuSO_4 and $\text{K}_2\text{Cr}_2\text{O}_7$ toxicity. Lal et. al., (1984) have opined that the respiratory distress and increased opercular movement are indicative of oxygen depletion.

The poison symptomolgy usually started before three or four hrs. of death as observed by loss of equilibrium, Convulsion and erratic Jerky body action. The fish gradually became lethargic followed by paralysis and finally they settled down at the bottom of the container. The respiratory distress along with opercular frequency was seen to be increased by 2-4 times more than the control fish.

The opercular frequency per minute were observed in *H. fossilis* at different concentration level to both metal pollutants in relation to exposure periods. The frequency were studies at 24, 48, 72 and 96 hrs.

When *H. fossilis* exposed to 24, 48, 72 and 96 hrs. at different concentration level to CuSO_4 the opercular frequency was found 38 ± 2 at starting point and was found to be increased from 40 mg/l concentration to 365.4 mg/l level but suddenly and abruptly declined at 517.9 mg/l level.

The opercular movement of *H. fossilis* when exposed to $K_2Cr_2O_7$ AT different level at selected hours of exposures revealed more abruptly declining trend at 265.4 and 517.9 mg/l concentration level. At 48 hrs. of exposure almost similar trend was noticed when exposed to both pollutants but decreasing level was starting at 38 ± 3 and 39 ± 2 after increasing level to some concentration level, abruptly decreased to 29 ± 2 and 24 ± 2 and 20 ± 3 and 18 ± 2 respectively to both $CuSO_4$ and $K_2Cr_2O_7$. AT 72 hrs of exposure to both pollutants the opercular frequency was observed to be in the increasing, decreasing and increasing trends abruptly decreased to 19 ± 3 and 18 ± 3 respectively at 265.4mg/l level concentration and no movement was seen at 517.9mg/l concentration to both pollutants.

The opercular movement of *H. fossilis* to both pollutants at 96 hrs. Of exposure at different concentration level exhibited decreasing trend except in case of $CuSO_4$ exposure at 88 and 258.1mg/level concentration. This frequency was finally came to half at 265.4mg/l concentration level.

In the present study *H. fossilis* when exposed to both heavy metal salt different concentration and exposure hour, it was observed that the fish become sluggish and later on they started erratic swimming losing their equilibrium, loss of balance and sinking to bottom or floating on the surface just prior to death. Almost similar symptoms have been reported by several workers while different on different fishes when treated with different pollutants. Munsigeri and David(2003) in *C. mrigala*, Parsad et. al. (2005), sellers(1975), S. Thangamalathi et. al. (2020) in *C. reba* etc.

It can be safely concluded that the toxicant from the environment mainly enters the fish by means of their respiratory system. A mechanism of toxicant uptake through gills probably occurs through gills probably occurs through pores by simple diffusion and is then absorbed through cell membranes. From the result it is clearly evident that decrease in oxygen consumption by distresses which affect the opercular movement.

Table: Opercular frequency per minute in relation to exposure period and concentration of the heavy metal during acute exposure in *Heteropneustes fossilis*. (+ is standard error of 4 observation)

Heavy Metals salts	Concentration (PPM)	Starting Point	Hour of Exposure			
			24	48	72	96
TEST	0	38 ± 4	36 ± 3	38 ± 3	35 ± 3	38 ± 3
$CuSO_4$	40	38 ± 4	43 ± 3	41 ± 3	36 ± 3	27 ± 3
	60	38 ± 4	41 ± 3	42 ± 2	32 ± 2	27 ± 3
	88	38 ± 4	38 ± 3	41 ± 2	35 ± 2	29 ± 2
	127.4	38 ± 4	49 ± 2	41 ± 1	33 ± 2	29 ± 2
	182.2	38 ± 4	51 ± 1	45 ± 4	36 ± 1	28 ± 1
	285.1	38 ± 4	50 ± 4	37 ± 3	28 ± 4	20 ± 2
	265.1	38 ± 4	50 ± 3	29 ± 2	19 ± 3	-
	517.1	38 ± 4	35 ± 2	24 ± 2	-	-

Heavy Metals salts	Concentration (PPM)	Starting Point	Hour of Exposure			
K ₂ Cr ₂ O ₇	0	38+4	35+2	39+2	38+2	39+2
	40	38+4	36+2	41+2	38+2	34+2
	60	38+4	51+4	45+4	35+4	31+4
	88	38+4	41+5	42+5	41+5	28+5
	127.4	38+4	40+2	39+2	74+2	24+2
	182.2	38+4	52+4	45+2	33+4	18+4
	258.1	38+4	51+2	32+2	19+2	11+2
	265.4	38+4	28+3	20+3	18+3	-
	517.9	38+4	21+2	18+2	-	-

REFERENCES

1. APHA 1995:- Standard methods for the examination of water and waste waste(16th Ed). American pub. of Health Assoc., Washington D.C.
2. Roy, D.N. 2003:- Studies on the effect of chromium to the fish, *H. fossilis*. The ph.D. Thesis, L.N. Mithila University, Dharbhanga.
3. Gurusamy, K. and Ramadas, V.2000:- Impact of DDT on oxygen consumption and opercular activity of *Lepidocephalichthys thermalis* J. Ecotoxicol. Environ. Monit 10(4) 197207.
4. Mushigeri, S.B. and Devid, M.2003:- assessment of fenvalerate toxicity on oxygen consumption and ammonia excretion in the fresh water fish, *Cirrhinus mrigala* J. Ecotoxicol. Environ, Monit. 13(3):191-195.
5. Parsad D.D. and Roy, M.K.2003: Effect of copper sulphate and potassium Dichromate fish *Channa gachua*. J.Ecotoxicol. Environ. Monit 16(1) 71-76.
6. Vutukuru, S.S.200:- Chromium induced alterations in some biochemical profiles of the Indian major carp, *Labeo rohita* (Hamilton). Bull. Environ. Contam. Toxicol. 70, 118-123.
7. Roy, M.K.Rani Akriti and Deo, A.K.2020: Heavy metals induced isopathological changes in the liver of *C.reba* due to concentration of a polluted river, West Champaran, Bihar, IJAEMA Journal volume XII, Issue VII Page No.2863-2868.
8. Monazaki, S. et.al.2015: Xenobiotics and Bore mediation (Review), nature and science 13(2):113-115.
9. Thanga Malathi, S. and Anuradha,V.2020: Lithium induced toxicity profile of *Channa* and *oreochromis niloticus*. Nature Environment and pollution Technology Vol.19.No.2P-685.

कृषि भूमि की समस्यायें : बलरामपुर जनपद (उ०प्र०) का प्रतीक अध्ययन

डॉ. भूपेन्द्र कुमार मिश्र*

सामान्य परिचय

भूमि उपयोग भूमि के स्वाभाविक अभिलक्षणों के अनुसार भूतल का यथार्थ तथा विशिष्ट उपयोग है (FOX)। 1 इसका पारिस्थैतिक अध्ययन में अपना अप्रतिम महत्त्व है। 2 विशेष कर ग्रामीण क्षेत्रों में जहाँ कृषि ही आर्थिक विकास का आधार होती है, वहाँ कृषि के सन्दर्भ में भूमि उपयोग प्रतिरूप की भूमिका अति महत्त्वपूर्ण हो जाती है। वर्तमान में विकासशील राष्ट्रों में जहाँ जनसंख्या और मानव भूमि का बढ़ता हुआ असन्तुलन अत्यधिक अक्रान्त किए हुए हैं, वहीं इसके द्वारा भूमि उपयोग में परिवर्तन से कृषि भूमि उपयोग भी प्रभावित होने के साथ-साथ अनेक समस्याओं से ग्रस्त है।



प्रस्तुत अध्ययन का उद्देश्य सर्वेक्षित क्षेत्र के भूमि उपयोग प्रतिरूप एवं कृषि भूमि उपयोग की समस्याओं को प्रकट कर इसके निराकरण के उपाय ढूँढना है जो क्षेत्र के सन्तुलित विकास में सहायक हो सके। इस सन्दर्भ में यहाँ उत्तर प्रदेश के बलरामपुर जनपद जिसका अक्षांशीय विस्तार 27° 30' से 27° 50' तथा देशान्तरिय विस्तार 82° 2' 30" से 82° 46' पूर्वी देशान्तर के मध्य है की तीनों तहसीलों बलरामपुर, तुलसीपुर एवं उतरौला के एक-एक ग्राम को जो क्रमशः करमैती (विकास खण्ड—लालपुर विशुनपुर), धनखरपुर (विकास

*असि०प्र०-भूगोल विभाग श्रीमती जे० देवी महिला महाविद्यालय, बभनान-गोण्डा (उ०प्र०)

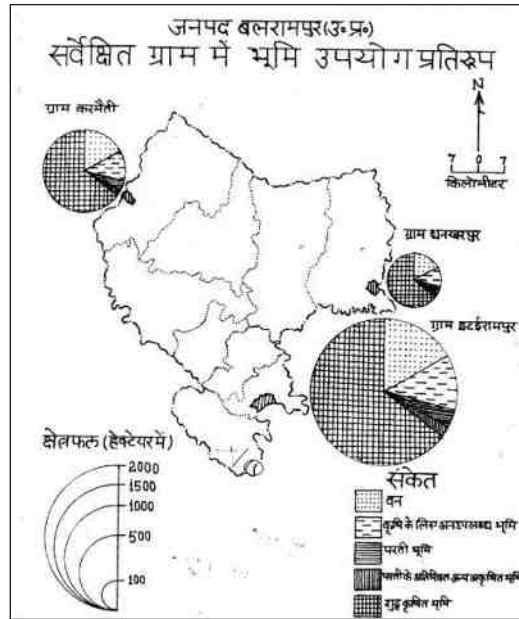
खण्ड—पंचपेड़वा) व इटई रामपुर (विकास खण्ड—गैंडास बुजुर्ग) है का प्रतीक अध्ययन किया गया है। यह समस्त क्षेत्र मैदानी एवं समुद्र तल से लगभग 95 से 105 मीटर ऊँचा है। यहाँ का

सर्वाधिक तापक्रम 40°C से 45°C के मध्य मई माह तथा न्यूनतम तापमान 40°C से 70°C के मध्य जनवरी माह में रहता है।

वर्ष 2011 की जनगणना के अनुसार सर्वेक्षित ग्राम करमैती, धनखपुर व इटई रामपुर की कुल जनसंख्या क्रमशः 1233, 1226, 14912 है तथा साक्षरता क्रमशः 22.38 प्रतिशत, 42.37 प्रतिशत व 22.61 प्रतिशत है। सर्वेक्षित तीनों ग्रामों में लिंगानुपात न्यून तथा 0 से 19 आयु वर्ग में सर्वाधिक जनसंख्या है। सर्वेक्षित तीनों ग्रामों की कुल मुख्य कार्यरत जनसंख्या का क्रमशः 67.1%, 65.8% व 66.3% कृषक; 22.2%, 21.61% व 22% कृषि श्रमिक एवं 10.07%, 12.6% व 11.7% अन्य कार्यों में संलग्न है।

भूमि उपयोग प्रतिरूप

सर्वेक्षित क्षेत्र के भूमि उपयोग को तालिका-1 द्वारा दर्शाया गया है। जिसमें भूमि सम्बन्धी आँकड़ों के विश्लेषण से स्पष्ट है कि तीनों ग्रामों करमैती, धनखरपुर व इटई रामपुर की कुल भूमि क्रमशः 554 हे०, 249.56 हे० व 1923.30 हे० है, जो विभिन्न भूमि उपयोग के अन्तर्गत है। इन आँकड़ों से भूमि उपयोग की निम्नलिखित विशेषताएँ हैं :-



1. तीनों सर्वेक्षित ग्रामों में शुद्ध कृषित भूमि का क्षेत्रफल सर्वाधिक है। जिसमें करमैती ग्राम में यह 64.65%, धनखरपुर गाँव में 65% एवं इटई रामपुर में 64.65% है।
2. सर्वेक्षित तीनों ग्रामों करमैती, धनखरपुर एवं इटई रामपुर में समस्त भूमि का क्रमशः 16.67%, 17.5% एवं 17% भाग वन क्षेत्र के अन्तर्गत है।

- सर्वेक्षित ग्रामों करमैती, धनखरपुर व इटई रामपुर में कृषि के लिए अनुपलब्ध भूमि क्रमशः 11.58%, 11% व 12.25% है जिसके अन्तर्गत तीनों ग्रामों में लगभग 1.5% व 2.25% भूमि ऊसर एवं कृषि अयोग्य है जबकि 9% से 10% भूमि कृषि से इतर अन्य कार्यों में संलग्न है।
- सर्वेक्षित तीनों ग्रामों करमैती, धनखरपुर व इटई रामपुर में परती भूमि 4%, 4.5% व 3.75% है। जिसके अन्तर्गत सभी ग्रामों में बंजर भूमि अभाव स्वरूप लगभग 0.5% है तथा वर्तमान परती 2.25% से 2.5% के मध्य है।
- परती भूमि के अतिरिक्त अन्य अकृषित भूमि तीनों ग्रामों करमैती, धनखरपुर व इटई रामपुर में क्रमशः 2.25%, 2% व 2.35% है। जिसके अन्तर्गत तीनों ग्रामों में चारागाह की सम्पूर्ण के सन्दर्भ में प्रतिशत हिस्सेदारी 1.75 से 2 के मध्य है।

तालिका-1
सर्वेक्षित ग्राम का भूमि उपयोग प्रतिरूप (2016)

क्र०सं०	भूमि उपयोग का प्रकार	करमैती		धनखरपुर		इटई रामपुर	
		क्ष. हे०में	प्र०श०में	क्ष. हे०में	प्र०श०में	क्ष. हे०में	प्र०श०में
1.	वन	82.35	16.67	43.67	17.50	326.96	17
2.	कृषि के लिए अनुपलब्ध भूमि	64.14	11.58	27.45	11.00	235.60	12.25
	(i) ऊसर एवं कृषि अयोग्य भूमि	8.75	1.58	4.99	2.00	43.27	2.25
	(ii) कृषि के अतिरिक्त अन्य उपयोग की भूमि	55.40	10.00	22.46	9.00	192.33	10.00
3.	परती भूमि	22.16	4.00	11.23	4.5	72.12	3.75
	(i) कृषि योग्य बंजर भूमि	2.77	0.50	1.62	0.65	7.69	0.40
	(ii) वर्तमान परती	13.84	2.50	5.99	2.40	43.27	2.25
	(iii) अन्य परती	6.54	1.00	3.62	1.45	21.16	1.10
4.	परती भूमि के अतिरिक्त अन्य अकृषित भूमि	12.47	2.25	4.99	2.00	45.20	2.35
	(i) चारागाह	1.39	0.25	0.62	0.25	10.56	0.55
	(ii) उद्यानों बागों एवं झाड़ियों के अन्तर्गत	11.08	2.00	4.37	1.75	36.62	1.8
5.	शुद्ध कृषित भूमि	362.87	65.50	162.21	65.0	1243.41	64.65
	सम्पूर्ण योग	554.00	100.00	249.56	100.00	1923.30	100.00

कृषि भूमि उपयोग

सर्वेक्षित ग्रामों में कृषि भूमि का उपयोग विवरण निम्नानुसार है :-

- तीनों सर्वेक्षित ग्रामों करमैती, धनखरपुर व इटई रामपुर में शुद्ध कृषित भूमि का क्षेत्रफल क्रमशः 65.50%, 65% व 64.65% है जो भूमि उपयोग के अन्य प्रकारों में सर्वाधिक है। इसका मुख्य कारण इस क्षेत्र की जनसंख्या का कृषि पर आधारित होना है (तालिका-1)।
- कुल फसली क्षेत्र (शुद्ध कृषित भूमि) के अधिकांश भाग पर खाद्यान्न फसलें हैं जिसमें करमैती, धनखरपुर व इटई रामपुर में इनकी हिस्सेदारी क्रमशः 91.71%, 90.19% व 92.68% है। शेष 8 से 10 प्रतिशत अन्य फसलें हैं (तालिका-2)।
- सर्वेक्षित तीनों ग्रामों करमैती, धनखरपुर व इटई रामपुर में शुद्ध कृषित भूमि का क्रमशः 85.08%, 41.2% व 70.16% खरीफ फसलों के अन्तर्गत तथा क्रमशः 92%, 114.75%, 51.82% रबी फसलों के अन्तर्गत आता है। उपर्युक्त वर्णित दोनों फसलों

के अलावा शेष जायद की फसलों का क्षेत्र तीनों सर्वेक्षित ग्रामों में मामूली है जो क्रमशः 0.98%, 1.88% व 0.55% है (तालिका-3)।

4. तीनों सर्वेक्षित ग्रामों करमैती, धनखरपुर एवं इटई रामपुर के कुल कृषित भूमि का क्रमशः 35%, 60% व 40% भाग सिंचित है जिससे सर्वाधिक योगदान नलकूपों का है। इन क्षेत्रों में नहरे, कुएँ, तालाब व अन्य सिंचाई के साधनों का योगदान मामूली है (तालिका-4)।

तालिका-2
सर्वेक्षित ग्राम का फसल प्रतिरूप (2016)

क्र०सं०	फसलें	ग्राम					
		करमैती		धनखरपुर		इटई रामपुर	
		क्षे. हे०में	प्र०श०में	क्षे. हे०में	प्र०श०में	क्षे. हे०में	प्र०श०में
1	अनाज	332.77	91.71	146.30	90.19	1152.41	92.68
2	दलहन	10.29	2.87	5.30	3.27	30.50	2.45
3	तिलहन	12.50	3.44	6.80	4.19	36.30	2.92
4	मसाले	2.01	0.55	1.01	0.62	7.00	0.56
5	अन्य	5.30	1.46	2.80	1.73	17.20	1.38
	योग	362.87	100	162.21	100	1243.41	100

तालिका-3

शुद्ध कृषि भूमि के अन्तर्गत के सर्वेक्षित ग्रामों में वर्ष की तीनों फसलों का प्रतिशत की मात्र (2016)

क्र०सं०	ग्राम	शुद्ध कृषित भूमि का प्रतिशत		
		खरीफ	रबी	जायद
1.	करमैती	85.08	92.0	0.98
2.	धनखरपुर	41.20	114.79	1.88
3.	इटईरामपुर	70.18	51.82	0.35

तालिका-4

शुद्ध कृषि भूमि का सिंचाई के विभिन्न साधनों द्वारा सिंचित मात्र (2007)

क्र०सं०	ग्राम	विभिन्न साधनों द्वारा शुद्ध कृषित भूमि का सिंचित भाग (प्र०श०) में					योग
		नहरे	नलकूप	कुएँ	तालाब	अन्य	
1.	करमैती	2	29.5	2	1.2	0.3	35
2.	धनखरपुर	4	51.0	3	1.5	0.5	60
3.	इटईरामपुर	3	32.3	2	1.3	0.4	40

कृषि भूमि उपयोग की समस्याएँ

कृषि भूमि का उपयोग प्रतिरूप मानवीय आवश्यकताओं के अनुरूप होता है। मनुष्य अपनी आवश्यकताओं के अनुरूप ही कृषि भूमि की गुणवत्ता में सुधार करता है। यदि किसी प्रदेश की जनसंख्या की गुणवत्ता उच्च स्तर की है एवं कृषि भूमि का स्तर निम्न हो तो उपयोग की समस्या उत्पन्न हो जाती है। यद्यपि सर्वेक्षित क्षेत्र में उच्च वर्गीय कृषि तकनीक को अपना रहे हैं किन्तु उनका प्रतिशत कम होने से भूमि उपयोग प्रतिरूप पर कोई विशेष सकारात्मक प्रभाव नहीं पड़ा है अपितु यहाँ सर्वेक्षित क्षेत्र के अधिकांश किसानों का निम्नवर्गीय होने तथा इनके तकनीकी ज्ञान के अभाव एवं कमजोर आर्थिक स्थिति के कारण अभी भी यहाँ की कृषि पिछड़ी हुई दशा में होते हुए अनेक समस्याओं से ग्रस्त है जो निम्न रूपों में वर्णित है।

भूमि का असमान वितरण

सर्वेक्षित क्षेत्र में बहुत से कृषक सीमान्त लघु श्रेणी या भूमिहीन कृषि श्रमिक के रूप में हैं, वहीं पर कुछ लोगों के पास इतनी जमीन है कि वे उचित ढंग से कृषि नहीं कर रहे हैं। इस असमानता के कारण सर्वेक्षित ग्रामों की स्थिति अत्यन्त दयनीय है।

खेतों का आकार

सर्वेक्षित क्षेत्र में कृषि सुव्यवस्था की प्रमुख समस्या खेतों के छोटे-छोटे टुकड़ों में विभाजित होने की है, जिसके कारण कृषि यंत्रों के उपयोग में कठिनाई होती है।

सिंचाई सुविधाओं का अभाव

सर्वेक्षित क्षेत्र में समुचित वर्षा जल का अभाव है जिसके कारण क्षेत्रों में सिंचाई की आवश्यकता पड़ती है। सिंचाई को यदि क्षेत्र के सन्दर्भ में देखा जाये तो यहाँ शुद्ध कृषित भूमि की कुल मात्रा का 35 प्रतिशत से 60 प्रतिशत भाग ही सिंचित है जिसमें नलकूप द्वारा सिंचाई की प्रधानता है। यहाँ सिंचाई के अन्य साधनों जैसे नहरें, तालाब, कुएँ आदि के समुचित विकास का अभाव है।

उर्वरक एवं खाद्य सम्बन्धी समस्याएँ

कृषि फसलों के विकास व उत्पादन हेतु जैविक खाद्यान्नों एवं रासायनिक उर्वरकों का प्रयोग अति आवश्यक होता है। इस दृष्टिकोण से सर्वेक्षित क्षेत्र में केवल कुछ ही कृषक जो आर्थिक दृष्टि से धनी हैं वे ही समुचित मात्रा में जैविक खादों व रासायनिक उर्वरकों का प्रयोग कर पाते हैं जबकि अधिकांश किसान आर्थिक दृष्टि से गरीब होने के कारण फसलों हेतु आवश्यक उर्वरकों व खादों का प्रयोग करने में असमर्थ हैं।

कृषकों की अशिक्षा निर्धनता एवं परम्परागत कृषि पद्धति

सर्वेक्षित ग्रामों के अधिकांश किसान निर्धन और अशिक्षित हैं। फलस्वरूप इनके कृषि का तरीका परम्परागत तथा कृषि में प्रयुक्त उपकरण, साधन, बीज आदि घटिया किस्म के हैं जिससे इनकी कृषि न्यून उत्पादकता के साथ-साथ अनेक समस्याओं से ग्रस्त हैं।

निराकरण के उपाय

1. सर्वेक्षित क्षेत्र में लोगों को शिक्षा के प्रति पूर्णरूपेण जागरूक किया जाये जिससे कि वे परम्परागत कृषि से हटकर नवीन कृषि अपनायें और समृद्धि हो सकें।
2. क्षेत्रों में चकबन्दी सुधार योजना लागू कर किसानों के बिखरे खेतों को इकट्ठा किया जाये जिससे कि किसान सुचारु रूप से कृषि कर सकें।
3. सरकार द्वारा कृषकों को वैज्ञानिक ढंग से कृषि करने हेतु प्रोत्साहित किया जाये।
4. किसानों को रासायनिक उर्वरक, बीज व अन्य कृषि के साधन उचित मूल्य पर अथवा अनुदान देकर उपलब्ध कराया जाना चाहिए।
5. कृषि के प्रमुख आवश्यक तत्व सिंचाई हेतु नलकूपों के और सुदृढ विकास से साथ-साथ नहरें, तालाब व अन्य सिंचाई के साधनों का विकास किया जाना चाहिए।

सन्दर्भ

1. लेजली सायमन अनुवादन श्याम सुन्दर कटारें : कृषि भूगोल, प्रथम संस्करण (1980), मध्य प्रदेश हिन्दी ग्रन्थ आकदमी पेज-244।
2. सी0 वन जेठी 1972 "लैण्ड यूज एण्ड नेचुरल विजीटेशन" "इण्टर नेशनल ज्योग्राफी" डब्लू0 पी0 एडम्स एवं एम0 एच0 फ्रेडरिक द्वारा सम्पादित टोरण्टो विश्वविद्यालय, पृष्ठ 1105-1106।
3. शर्मा, रंजन (2001) 'विलासपुर जनपद में कृषि एवं पोषण स्तर' उत्तर भारत भूगोल पत्रिका, गोरखपुर अंक-36, सं0-1 व 2 पृष्ठ-51।

संवेगात्मक बुद्धि का प्रत्यय और उसका महत्व

डॉ. मनीष कुमार द्विवेदी*

शिक्षा मनोविज्ञान में संवेगात्मक या भावात्मक बुद्धि का प्रत्यय एक अद्यतन चिंतन है जिसे मानसिक योग्यता से अलग रेखांकित किया जा रहा है। संवेग एक ऐसा पद है जिसका अर्थ हम सभी समझते हैं। क्रोध, भय, घृणा, खुशी आदि जीवन के प्रमुख संवेगों में हैं। मनोवैज्ञानिकों ने संवेग को परिभाषित करने की अनेक कोशिश की है। संवेग पद का अंग्रेजी रूपान्तर 'Emotion' है। जो लैटिन शब्द 'Emovere' से बना है। जिसका अर्थ उत्तेजित करना होता है। इस शाब्दिक अर्थ को ध्यान में रखकर यह कहा जा सकता है कि संवेग व्यक्ति को उत्तेजित अवस्था का दूसरा नाम है।

पी टी यंग के अनुसार:- संवेग व्यक्ति का कुल तीव्र उपद्रव है जो मनोवैज्ञानिक कारणों से उत्पन्न होता है तथा इसके अन्तर्गत व्यवहार, चेतन अनुभव तथा अंतरंग क्रियाएँ सम्मिलित होती हैं।¹

इंगलिश और इंगलिश के अनुसार:- संवेग एक जटिल भाव की अवस्था होती है। जिसमें कुछ खास शारीरिक क्रियाएँ एवं ग्रन्थीय क्रियाएँ होती हैं।²

इन परिभाषाओं से स्पष्ट है कि संवेग एक जटिल अवस्था है जिसमें कुछ आंगिक क्रियाएँ तथा व्यवहार परिवर्तन के तत्व शामिल होते हैं। संवेगों की मानवजीवन में महत्वपूर्ण भूमिका होती है। संवेगों की प्रकृति भावनात्मक होती है। जो व्यक्ति को क्षणिक उत्तेजना प्रदान करते हैं। संवेग वास्तव में एक अल्पकालिक मानसिक उपद्रव है जिसमें व्यक्ति अपनी सामान्य मनोदशा में नहीं रहता तथा बुद्धि और विवेक पर उसका पूर्ण नियंत्रण नहीं रह जाता। फिर भी संवेग मानवजीवन के लिए बहुत महत्वपूर्ण हैं तथा व्यक्ति के मानसिक विकास में संवेगात्मक परिपक्वता की महत्वपूर्ण भूमिका है।

मैकडुगल ने संवेगों पर विस्तृत रूप से विचार किया तथा 14 प्राथमिक संवेग बताए जो किसी विशेष मूल प्रवृत्ति से संबंधित होते हैं।³

क्र० सं०	मूल प्रवृत्ति	संवेग
1	पलायन	भय
2	युयुत्सा	क्रोध
3	विकर्षण या निवृत्ति	घृणा
4	सन्तानकामना	वात्सल्य

*बी०एड० विभाग आ०न०दे० किसान पी०जी० कालेज बभनान गोण्डा (यू०पी०)।

क्र० सं०	मूल प्रवृत्ति	संवेग
5	शरणागति	करुणा
6	कामप्रवृत्ति	कामुकता
7	उत्सुकता या जिज्ञासा	आश्चर्य
8	दैन्य	आत्महीनता
9	आत्मगोरण	आत्माभिमान
10	सामूहिकता	एकाकीपन
11	भोजन तलाश	भूख
12	संग्रहण	अधिकार
13	रचनाधर्मिता	कृतिभाव
14	हास्य	आमोद

इनसे से कुछ संवेग जन्मजात तथा कुछ अर्जित किए जाते हैं। संवेग प्राणी के समुचित शारीरिक और मानसिक विकास होने पर जागृत हो जाते हैं तथा अनुभव और परिपक्वता से प्रभावित होते हैं। वंशानुक्रम, स्वास्थ्य, सामाजिक तथा पारिवारिक वातावरण, मानसिक अभियोग्यता आदि कारक संवेगात्मक विकास को प्रभावित करते हैं। मानसिक बुद्धि शैक्षिक बुद्धि आदि के अनुरूप ही भावात्मक या संवेगात्मक बुद्धि का भी प्रत्यय विकसित किया गया। 80 के दशक में पीटर सैलोवे तथा जान मेयर को भावात्मक बुद्धि को परिभाषित करने तथा उसके एक व्यापक सिद्धान्त को प्रस्तुत करने का श्रेय दिया जा सकता है। उनके अनुसार संवेगात्मक बुद्धि को सामाजिक बुद्धि का एक अनुवर्ग मानना चाहिए जिसमें अपनी तथा दूसरे लोगों को भावनाओं एवं संवेगों का अनुश्रवण करने, उनमें विभेद कर सकने तथा इस सूचना के आधार पर अपने चिंतन एवं व्यवहार को निर्देशित करने की क्षमता निहित होती है।⁴

किन्तु 'संवेगात्मक बुद्धि' के प्रत्यय को व्यापक आधार तथा लोक प्रियता प्रदान की मनोवैज्ञानिक डेनियल गोलमैन ने अपनी पुस्तक "Emotional Intelligence" के द्वारा उन्होंने कहा— वे कौन से कारक उत्तर दायी होते हैं जब अधिक बुद्धिलब्धि के व्यक्ति लड़खड़ा जाते हैं तथा मामूली बुद्धि के व्यक्ति आश्चर्यजनक रूप से अच्छा करते हैं। उनमें यह अंतर एक अन्य अभियोग्यता पर निर्भर करता है। जिसे मैं कहूँगा — संवेगात्मक बुद्धि। जिसमें आत्मनियंत्रण उत्साह तथा निरंतरता शामिल होती हैं। यह योग्यताएँ बच्चों को बेहतर विकास हेतु सिखायी जा सकती हैं जिससे वे स्वयं को अभिप्रेरित कर सकें।⁵

गोलमैन ने इसे इस प्रकार परिभाषित किया—“संवेगात्मक बुद्धि वह क्षमता है जिसके माध्यम से हम अपनी तथा अन्य व्यक्तियों की भावनाओं को पहचानते हैं, हम अपने को अभिप्रेरित करते हैं तथा अपने सम्बन्धों में पाए जाने वाले संवेगों को भली प्रकार प्रबन्धित कर लेते हैं।⁶

गोलमैन ने उक्त परिभाषा के आधार पर संवेगात्मक बुद्धि को पांच विभागों में उल्लेख किया जिसका कार्य जगत की परिस्थितियों में भाव व्यवहार को समझने की दृष्टि से विशेष महत्व है।⁷ ये आयाम हैं—

1. **आत्म अभिज्ञता-** जिसकी मुख्य विशेषता है आत्म अवबोध तथा किसी समय पर वास्तविक भावनाओं की जानकारी।
2. **आत्म प्रबंधन-** जिससे तात्पर्य है किसी कार्य विशेष में अवरोध के बजाय सरलता लाने की दृष्टि से अपने संवेगों पर नियंत्रण रख सकना नकारात्मक संवेगों से विरत हो सकना तथा समस्या समाधान के उद्देश्य से एक रचनात्मक मार्ग अपना सकना।
3. **आत्म अभिप्रेरणा -** जिसमें बांछित लक्ष्य की ओर बढ़ते रहना, तथा नकारात्मक आवेगी प्रवृत्तियों पर विजय प्राप्त करना तथा वांछित परिणाम की प्राप्ति हेतु अपने प्रलोभनों पर अंकुश लगा सकना मुख्य विशेषताएं हैं।
4. **तदनुभूति-** जिसका अर्थ है— दूसरों की भावनाओं को समझना एवं उन्हें प्रदर्शित करना तथा यह अनुमान लगा सकना कि दूसरे लोग कैसा महसूस करते हैं। तथा वे क्या चाहते हैं?
- 5- **सामाजिक दक्षताएं-** जिसके तहत सामाजिक परिस्थितियों को भौंप लेने दूसरों के साथ आसानी से अन्तर्क्रिया एवं सम्बन्ध जोड़ लेने, दूसरे के संवेगों तथा वे जिस प्रकार का व्यवहार करते हैं उनके प्रति मार्ग दर्शन कर सकते की क्षमता शामिल हैं।⁸

स्पष्ट है कि संवेगात्मक बुद्धि व्यक्ति के सामाजिक वातावरण को समझने तथा उसे प्रगति की ओर प्रेरित करने में सहायता करती है। विभिन्न व्यक्तियों में संवेगात्मक प्रकृति की सूचनाओं के प्रक्रमीकरण करने की योग्यता भिन्न-भिन्न होती है। इसके अलावा व्यक्ति में योग्यता तथा संवेगात्मक व्यवहार तथा अनुकूलात्मक व्यवहार की विशेषताएं भी भिन्न-भिन्न होती हैं।

डेनियल गोलमैन ने अपने सहयोगी बोयाटजिस के साथ मिलकर संवेगात्मक बुद्धि के मापन के लिए वर्ष 1999 में 'The Emotional competency Inventory (ECI)' का निर्माण तथा वर्ष 2007 में इसका नवीन संस्करण 'The Emotional and Social Competency Inventory (ESCI)' के नाम से प्रस्तुत किया। जिसके द्वारा संवेगात्मक बुद्धि का मापन किया जाता है। इलाहाबाद में प्रोफेसर के0एस0 मिश्रा द्वारा भी संवेगात्मक बुद्धि परीक्षण का निर्माण किया गया है। इसमें 33 बहुविकल्पीय प्रश्न हैं। और उत्तर दाता को प्रत्येक प्रश्न के लिए दिये गये चार विकल्पों में एक का चयन करना होता है। चौसठ छात्रों के प्रतिदर्श पर इस परीक्षण की परीक्षण की परीक्षण-पुनर्परीक्षण विश्वसनीयता का मान .87 पाया गया है। जबकि कूडर-रिचर्डसन विधि से विश्वसनीयता गुणांक का मान .79 प्राप्त हुआ। इलाहाबाद विश्वविद्यालय के प्रोफेसर एस0पी0 गुप्ता द्वारा संवेगात्मक बुद्धि प्रश्नावली (EIQ) का निर्माण किया गया है। जिसमें 25 परिकल्पित संवेगात्मक परिस्थितियों को प्रस्तुत करते हुए प्रत्येक के लिए चार विकल्प दिए गये हैं।⁹

मानव जीवन में कई कारणों से संवेगात्मक बुद्धि का विशेष महत्व है। वस्तुतः मानव जीवन के विभिन्न पहलुओं को प्रभावित करने वाली संवेगात्मक बुद्धि का तनाव दूर करने, द्वन्द्वों व दुविधाओं से निबटने, सामाजिक समायोजन करने तथा चुनौतियों का बुद्धि का तनाव दूर करने, द्वन्द्वों व दुविधाओं से निबटने, सामाजिक समायोजन करने तथा चुनौतियों का सामना करने में अत्यधिक सार्थक भूमिका रहती है। मानव जीवन में

संवेगात्मक बुद्धि के महत्व को चार पक्षों—कार्य निष्पादन, तनाव मुक्ति, मानसिक स्वास्थ्य तथा सामाजिक सम्बन्ध के सापेक्ष स्पष्ट किया जा सकता है। वस्तुतः संवेगात्मक बुद्धि मानव जीवन के इस चार पक्षों को अत्यधिक प्रभावित करती है।

- i. **कार्य निष्पादन में संवेगात्मक बुद्धि** - व्यक्ति की संवेगात्मक बुद्धि उसे उसके कार्य निष्पादन में सकारात्मक ढंग से सहायता करती है। उच्च संवेगात्मक बुद्धि वाले व्यक्ति अपने कार्य स्थल की सामाजिक जटिलताओं (Social Complexities) को अच्छे ढंग से निष्पादित कर पाते हैं, अन्य व्यक्तियों को अभिप्रेरित कर पाते हैं, नेतृत्व प्रदान कर पाते हैं तथा अपने कैरियर के उच्चतम शिखर तक पहुँचने में सफल हो जाते हैं। अनेक प्रवेश व प्रतियोगात्मक परीक्षाओं में अब सामान्य बुद्धि, विषयगत ज्ञान तथा तकनीकी योग्यता के साथ-साथ संवेगात्मक बुद्धि के मापन को भी समाहित करने लगे हैं।
- ii. **तनाव मुक्ति में संवेगात्मक बुद्धि**- तनाव मुक्ति में भी संवेगात्मक बुद्धि एक महत्वपूर्ण भूमिका अदा करती है। तनाव के कारण व्यक्ति का शरीर तथा मन दोनों ही नकारात्मक रूप से प्रभावित होते हैं तनाव के काफी लम्बे समय तक बने रहने पर उच्च रक्तचाप, हृदयाघात तथा उम्रदराजी की सम्भावनायें बढ़ जाती हैं। उच्च संवेगात्मक बुद्धि वाले व्यक्ति अपने तनाव को कम करके दिशा परिवर्तित करके एवं संवेगों पर नियंत्रण रखकर इन नकारात्मक सम्भावनाओं को कम कर देते हैं। अभिव्यक्ति क्षमता, योग तथा ध्यान आदि के द्वारा उच्च संवेगात्मक बुद्धि के व्यक्ति अपने तनाव को सहजता से दूर करते हैं।
- iii. **मानसिक स्वास्थ्य बनाने में संवेगात्मक बुद्धि**- अनियंत्रित तनाव का दुष्प्रभाव व्यक्ति के मानसिक स्वास्थ्य पर भी पड़ता है। ऐसे व्यक्ति प्रायः भगनासा तथा खिन्नचिन्ता के जल्द शिकार हो जाते हैं। जब व्यक्ति अपने संवेगों को समझने व तदनु रूप कार्य करने में असमर्थ रहता है तब उसकी मनोस्थिति में झूलों की तरह से हानिकारक ढंग से उतार-चढ़ाव आते हैं। इसी प्रकार से दृढ़ व स्थायी सामाजिक सम्बन्ध बनाने में असफल व्यक्ति में अकेलेपन व अलगाव की भावना पनपने लगती है। परन्तु उच्च संवेगात्मक बुद्धि से युक्त व्यक्ति अपना मानसिक स्वास्थ्य बनाये रखने में सफल होता है।
- iv. **सामाजिक सम्बन्धों में संवेगात्मक बुद्धि** - कोई व्यक्ति अन्य व्यक्तियों से किस प्रकार के सम्बन्ध बना पाता है एवं उनका किस प्रकार से निर्वाह करता है, यह भी काफी हद तक उसकी संवेगात्मक बुद्धि पर निर्भर करता है। कोई भी व्यक्ति अपने व दूसरे के संवेगों को समझकर, उनके प्रभाव को जानकर तथा उनका सही ढंग से प्रबन्धन करने पर ही अन्यो के साथ सकारात्मक सम्बन्ध बना सकता है तथा उनका निर्वाह कर सकता है। अपनी भावनाओं को अभिव्यक्त करने व दूसरों की भावनाओं को समझने पर ही कोई व्यक्ति प्रभावी ढंग से सम्प्रेषण कर पाता है जो वैयक्तिक व सामाजिक जीवन में तथा कार्य स्थल पर अन्य व्यक्तियों से घनिष्ठ सम्बन्ध बनाने में समर्थ होता है। उच्च संवेगात्मक बुद्धि वाला व्यक्ति ही इस दिशा में प्रभावी ढंग से क्रियाशील होता है।

संदर्भ ग्रंथ सूची

1. गुप्ता, एस0पी0 उच्चतर शिक्षा मनोविज्ञान (2008), शारदा पुस्तक भवन, इलाहाबाद, पृष्ठ 224
2. सिंह, अरुण कुमार, सामान्य मनोविज्ञान (2003) मोती लाल बनारसीदास, दिल्ली, पृष्ठ-402
3. गुप्ता, एस0पी0 वहीं, पृष्ठ-227
4. पाण्डेय, कामता प्रसाद, नवीन शिक्षा मनोविज्ञान (2007) विश्वविद्यालय प्रकाशन, वाराणसी, पृष्ठ- 372
5. Goleman, Daniel, Emotional Intelligence, Bantam Books (1996) Newyark, P-XII
6. Goleman, Daniel, Emotional Intelligence, Bantam Books (1996) Newyark, P-48-49
7. Goleman, Daniel, Emotional Intelligence, Bantam Books (1996) Newyark, P-46-47.
8. पाण्डेय, कामता प्रसाद वहीं – पेज 373
9. गुप्ता, एस0पी0, वहीं, पेज- 300

कौटिल्य का युद्धदर्शन

डॉ. स्मिता पाण्डेय*

युद्ध कला के प्रकाण्ड पंडित, महान कूटनीतिज्ञ आचार्य कौटिल्य (विष्णु गुप्त या चाणक्य नाम से भी आचार्य जी प्रसिद्ध थे) ने अपने युद्ध सम्बन्धी विचारों को अपनी महानकृति "अर्थशास्त्र" में संजोकर रख दिया है।

इस प्रतिभाशाली सैन्य विशेषज्ञ के प्रयत्नों के फलस्वरूप भारत प्रभुता सम्पन्न राष्ट्र के रूप में सर्वप्रथम विकसित हो सका और 'मौर्यकालीन' सैन्य पद्धति का चरमोत्कर्ष हुआ।

युद्ध के हर क्षेत्र में पूर्ण हस्तक्षेप करने वाले इस महान युद्ध शास्त्री का सैन्य दर्शन अनूठा और बेजोड़ है। आज के मनोवैज्ञानिक एवं कूटनीतिक युद्धों में उसकी कूटनीति, राजनीति एवं परराष्ट्र नीति अपना महत्वपूर्ण स्थान रखती है, वास्तव में "उसमें स्तालिन का प्रजातन्त्र, हिटलर की निपुणता, विल्सन का विज्ञानवाद, विन्सटन चर्चिल का साम्राज्याभिमान और च्यांग की देशभक्ति एक साथ समायोजित है" एस0सी0 सरकार –

सेनाङ्ग एवं संगठन सम्बन्धी विचार (दर्शन) : आचार्य कौटिल्य ने 'चतुरंग बल' (पैदल, रथ, अश्व, गज) की प्रधानता होते हुए भी 'सहायक बलों' के रूप में चार अन्य बलों का उल्लेख किया।

1. नौबल— (जल सेना)
2. विष्ट बल— (रसद और अस्त्र-शस्त्र एवं अन्य साज सामानों की पूर्ति का विभाग)
3. चर बल— दूत एवं गुप्तचर विभाग।
4. देशिक बल— (स्थल विशेष की जातियों से निर्मित सेना) 'चतुरंग बल' के अन्तर्गत उसमें गतिशीलता का महान गुण होने के कारण 'अश्व सेना' को प्राथमिकता दी। उन्होंने गज सेना को राजाओं की जीत का एक साधन माना है।

"हस्ति प्रधानों द्वि विजय राज्ञाम्"

अश्वसेना : शिविर के लिए उचित भूमि ढूढना, विषम स्थानों को पार करना, युद्ध सामग्री ले जाना, शत्रु से लड़ना, अपनी सेना की रक्षा करना, शत्रु सेना का पीछा करना, शत्रु कोष को छीनना आदि अश्व सेना का कार्य बतलाया है।

आचार्य ने 'अश्व सेना के कुशल निर्देशन के लिए अश्ववाध्यक्ष की नियुक्ति का समर्थन किया और अश्ववाध्यक्ष को घोड़ों की आयु, वर्ण, चिन्ह और कुल के आधार पर सूची बनाने का आदेश दिया।

आचार्य कौटिल्य ने अश्वों को 5 प्रकार की ट्रेनिंग (प्रशिक्षण) देने का उल्लेख किया।

1. बल्गन — (गोलाकार गति करना)
2. नीचेगर्त — (सिर को कानों की सीध में रखते हुए धीमा चलना)
3. लांघना — (कूदना)
4. धोरण — (सरपट चाल चलना)
5. नारोष्ट्र — (संकेतानुसार गति करना)

*असिस्टेंट प्रोफेसर, सैन्य विज्ञान, आचार्य नरेन्द्र देव किसान पी0जी0 कालेज, बभनान-गोण्डा।

गजसेना : अपनी सेना के आगे चलना, नये मार्ग, निवास स्थान, जलमार्ग बनाना, शत्रुओं को पीछे हटाना, जल को पार करना, घने जंगल में घुसना, आग बुझाना शत्रु सेना को तितर-वितर करना, शत्रुकोष को लादकर लाना, शत्रु दुर्गों के ऊँचे द्वार एवं अटारियों को तोड़ना आदि गजसेना का कार्य बताते हुए महान कूटनीतिज्ञ कौटिल्य ने हाथियों को सात प्रकार के प्रशिक्षण का निर्देश दिया।

1. उपस्थान : (अंगों को ऊपर-नीचे करना)
2. संवर्तन : (सोना, उठना, बैठना, लाघना आदि)
3. संयात : (सीधा, तिरक्षा गोलाकार गति करना)
4. बधाबध : (सूड़, दाँत तथा शरीर से आक्रमण करना)
5. हस्ति युद्ध : (हाथियों का हाथियों से युद्ध)
6. नागरापण : (दुर्गों के द्वार तथा दिवार तोड़ना)
7. संग्रामिक : (युद्ध करना)

रथ सेना : आचार्य ने अपनी सेना की रक्षा, शत्रु की चतुरंगणी सेना के मार्ग में रुकावट डालना, बिखरी सेना को एकत्रित करना आदि रथ सेना का कार्य बताया। लम्बाई, ऊँचाई के आधार पर सात तथा प्रयोग के आधार पर छः प्रकार के रथों का उल्लेख कौटिल्य ने किया।

पैदल सेना : आचार्य कौटिल्य ने विजित क्षेत्र पर आधिपत्य स्थापित करने, विजय को सुदृढ़ करने और सभी प्रदेशों और ऋतुओं में काम आने वाली पैदल सेना के महत्व को समझा और उसका बार-बार उल्लेख किया।

बिष्टबल : कौटिल्य ने सहायक बलों के रूप में समय-समय पर सैन्य आवश्यकताओं की पूर्ति एवं प्रबन्ध के साथ ही सेना का शिविर लगाने, रास्ता ठीक करने, पुल बनाने, यातायात के साधन जुटाने के लिए सेना के साथ विष्ट बल को रखना आवश्यक बताया।

नौ बल : आचार्य ने समुद्री डाकुओं को नष्ट करने, अपनी सामुद्रिक सीमाओं की सुरक्षा एवं व्यापारिक नौकाओं की देखभाल हेतु नौ बल को महत्वपूर्ण बताया साथ ही 'नावाध्यक्ष' की नियुक्ति का निर्देश दिया।

चर बल : आचार्य ने असैनिक बल के रूप में सफल राज्य संचालन एवं बौद्धिक कार्यवाहियों में सफलता हेतु राजा को दूत एवं गुप्तचरों की नियुक्ति का आदेश दिया।

देशिक बल : स्थल विशेष पर सेना का पथ प्रदर्शन करने या जंगली जातियों, लड़ाकू जातियों को सेना में भर्ती का आदेश देकर देशिक बल का उल्लेख किया। आचार्य कौटिल्य ने सेना को भी निम्न छः भागों में विभाजित किया है।

1. मौल बल : यह स्थायी सेना, नियमित वेतन भोगी तथा दीर्घकाल तक सेवा करने वाले क्षत्रिय सैनिकों से निर्मित थी। यह विशेषकर स्रात्तेजित महत्व के स्थानों की रक्षा के लिए तथा रणक्षेत्र में निर्णयात्मक बिन्दुओं पर प्रयोग की जाती थी।
2. भृतक बल : यह उन वेतन भोगी सैनिकों द्वारा निर्मित थी जो संकट काल में भर्ती किये जाते थे इनको युद्ध कौशल में द्वितीय स्थान प्राप्त था।
3. श्रेणीबल : विभिन्न श्रेणियों व संघों द्वारा निर्मित गिरोह बनाकर लड़ने वाली सेना जो शत्रु द्वारा घोखे की लड़ाई प्रारम्भ करने पर प्रयुक्त होती थी।

4. मित्र बल : मित्र राजाओं की सेनाएं।
5. अमित्र बल : शत्रु राजा की सेनाएं जो अधिकार में की गई हो।
6. अटवी बल : सीमावर्ती प्रान्तों व वनों में रहने वाली युद्ध प्रिय असभ्य जातियों द्वारा निर्मित सेना।

सैन्य भर्ती, वेतन एवं सैन्य प्रशिक्षण सम्बन्धी विचार : आचार्य कौटिल्य ने अन्य वर्गों की तुलना में क्षत्रिय वर्ग को युद्ध कार्यों के लिए श्रेष्ठ माना है किन्तु यौद्धिक आवश्यकताओं को देखते हुए अन्य जातियों के लोगों को भी सैनिक रूप में नियुक्त करने का समर्थन किया है। सेना की समुचित व्यवस्था एवं कार्य कुशलता में वृद्धि हेतु कौटिल्य ने अलग-अलग सेनाध्यक्षों की नियुक्ति का निर्देश दिया है। साथ ही राजा को विद्या की योग्यता तथा कर्म की कुशलता देखकर कर्मचारियों एवं मजदूरों के वेतन देने का सलाह दिया। कौटिल्य ने कर्मचारियों को 250 पण प्रतिवर्ष और सेनापतियों को 48000 पण प्रतिवर्ष वेतन देने की सलाह दी। आचार्य ने युद्ध में मारे गये सैनिकों के परिवारों को भी भत्ता तथा वीर सैनिकों को पुरस्कार दिये जाने की वकालत की।

आचार्य ने स्थायी सैनिकों, सेनापतियों, राजकुमारों, नवयुवक एवं नवयुवतियों तक को सैन्य प्रशिक्षण दिये जाने पर बल दिया। साथ ही उसने तक्षशिला विश्वविद्यालय में इस प्रशिक्षण की व्यवस्था करके अपनी सैन्य अभिरुचि को प्रमाणित किया।

शस्त्रास्त्र सम्बन्धी विचार : आचार्य कौटिल्य ने दो प्रकार के शस्त्रास्त्रों का उल्लेख किया है। 1. आक्रमण आत्मक 2. सुरक्षात्मक

1. आक्रमणआत्मक हथियार : इसमें निम्न प्रकार के हथियार होते थे।
 - (अ) स्थिर यन्त्र : इन शस्त्रों का प्रयोग एक स्थान पर रखकर किया जाता था। यह 10 प्रकार के होते थे।
 1. सर्वतोभद्र : एक स्थान पर स्थित चारों ओर पत्थर फेंकने वाला भारी यन्त्र।
 2. बहुमुख : यह किले के ऊपर बनी चर्म (चमड़े) से ढकी चहुंमुखी अट्टालिका होती थी। इसमें बैठकर अनेक धनुर्धर सभी ओर से बाण चला सकते थे।
 3. संघाटि : यह अट्टालिका (किले के चारों कोने पर बनी ऊँची सुरक्षा चौकी-टावर के समान) तथा दुर्ग के ऊँचे हिस्सों पर आग लगाने वाला एक लम्बा डण्डा होता था।
 4. विश्वासघाती : यह ऐसा स्थित यन्त्र होता था जो प्रवेश द्वार पर फाटक के समान कैचीनुमा रखा रहता था। जब शत्रु प्रवेश द्वार से होकर गुजरने का प्रयास करता था तो उसे गिराकर शत्रु को मार दिया जाता था।
 5. यानक : यह पहियों पर रखा जाने वाला एक लम्बा यंत्र होता था।
 6. पर्जन्यक : अग्नि बुझाने वाला यन्त्र।
 7. जामदग्न्य : यह बाण फेंकने वाला एक बड़ा यन्त्र होता था।
 8. बाहुयन्त्र : यह यन्त्र पर्जन्यक की भांति होता था।
 9. ऊर्ध्वबाहु : यह एक भारी स्तम्भ (खम्भा) होता था।
 10. अर्धबाहु : यह ऊर्ध्वबाहु की भांति होता था, परन्तु आकार में उसका आधा होता था।
 - (ब) चल यन्त्र : इसके अन्तर्गत विभिन्न प्रकार (17) के शस्त्र होते थे।

1. पांचालिक : यह लकड़ी का एक फलक (तख्ते के समान) होता था, जिस पर नुकीले मुख बने होते थे। इसे दुर्ग के बाहर पानी से भरी खाई में छोड़ा जाता था।
 2. देव दण्ड : यह परकोटे (दुर्ग की चहरदीवारी) के ऊपर रखा जाने वाला एक भारी स्तम्भ होता था।
 3. सूकरिका : यह चर्म का एक आवरण था जिसमें रुई भरी रहती थी।
 4. मूसल यष्टि : यह खैर (कत्था) लकड़ी के बने मूसल (पहरूआ) के समान एक मजबूत डण्डा होता था जिसके अग्रभाग में एक शूल होता था।
 5. हस्तिवारक : दो या तीन मुखों वाला भारी लौह दण्ड (डण्डा) जिससे शत्रु हाथियों को पीछे हटाया जाता था।
 6. मुग्दर : एक लम्बा लौह दण्ड।
 7. गदा : भारी लौह दण्ड।
 8. स्पृक्तला : नुकीले कांटो वाली गदा।
 9. आस्फोटिम : स्तम्भ युक्त चमड़े का थैला। इससे स्फोट (आवाज) किया जाता था।
 10. उत्पाटिम : किलों को गिराने वाला यन्त्र।
 11. शतघ्नी : कीलयुक्त महास्तम्भ जो दीवार के ऊपर रखा जाता था। यह यन्त्र एक बार में शत (सौ) गोले फेंकता था।
 12. त्रिशूल : तीन नोंक वाला शस्त्र।
 13. चक्र : एक गोल तश्तरी के समान हथियार।
 14. तालवृत : चारों ओर घूमकर प्रहार करने वाला यन्त्र।
 15. द्रुघण : यह मुगदर की भांति होता था।
 16. उद्घाटिम : यह भी मुगदर की भांति आकार वाला अस्त्र था।
 17. कुद्दाल : यह फावड़े के समान होता था।
- (स) हल मुख आयुध (हथियार)
- यह तीक्ष्ण मुख वाले हल्के एवं भारी शस्त्र होते थे।
1. शक्ति : यह कनेर के पत्ते के समान लोहे का बना चार हाथ लम्बा आयुध था।
 2. प्रास : 24 इंच लम्बा दो मुठवाला दुधारी (दोनों तरफ धार वाला) हथियार।
 3. कुन्त : यह 5 से 7 हाथ लम्बा लकड़ी तथा लोहे का बना हथियार था।
 4. भिण्डपाल : यह 1½ फीट लम्बा भारी गदा की भांति होता था।
 5. शूल : भारी शिरा वाला तीक्ष्ण मुखदण्ड।
 6. तोमर : 4 से 5 फीट लम्बा छड़ की भांति एवं अग्रभाग बाण की भांति होता था।
 7. कणय : 20 से 24 इंच लम्बा, दोनों तरफ 3-3 कीलों से युक्त लौह दण्ड।
 8. कर्पण : एक हाथ से फेंका जाने वाला बाण (हथगोला)
 9. त्रासिका : प्रास के समान लोहे का हथियार।
 10. हाटक : यह कुन्त के समान तीन कांटो वाला अस्त्र होता था।

11. वारहकर्ण : सुअर की कान के आकार वाला दुधारी शस्त्र।

उपरोक्त शस्त्रास्त्रों के अतिरिक्त कौटिल्य ने निम्न आक्रमणात्मक शस्त्रास्त्रों का भी उल्लेख किया है।

1. खड्ग (तलवार) : यह तीन प्रकार का होता था।

(1) निस्मिश (2) मण्डलाग्र (3) असियष्टि

2. धनुष : यह चार प्रकार के होते थे।

(1) कार्मुक (2) कोदण्ड (3) द्रूण (4) धनु

3. बाण : यह पांच प्रकार के होते थे।

(1) वेणु (2) शर (3) शलाका (4) दण्डासन (5) नाराच

4. क्षुरकल्प : तेज धार वाले हथियार जैसे— कुटार, परशु, क्रकच, खनित्र आदि।

उपरोक्त हथियारों के साथ आचार्य कौटिल्य ने युद्ध के समय आग्नेयास्त्रों के प्रयोग का भी उल्लेख अपनी पुस्तक 'अर्थशास्त्र' में किया है।

सुरक्षात्मक साधन : आचार्य कौटिल्य ने निम्नलिखित सुरक्षात्मक साधनों का भी उल्लेख किया है जो हाथी, नीलगाय, बैल, गैड़ा के चमड़ों, सींग, खुरों, लोहे आदि के बने होते थे।

1. लौह जाल : सम्पूर्ण शरीर को ढकने वाला आवरण।

2. लौह जालिका : सिर के अतिरिक्त सभी अंगों को ढकने वाला आवरण।

3. लौह पट्ट : शरीर के आगे और पीछे के भाग को ढकने वाला आवरण।

4. लौह कवच : वक्ष और पीठ को ढकने वाला आवरण।

5. सूत्र कंकण : सूत (धागा) का बना हुआ कवच।

6. शिरस्त्राण : सिर की रक्षा करने वाला (हेलमेट)।

7. कण्ठत्राण : गले की रक्षा करने वाला कवच।

8. कूर्पा : आधी बांह को ढकने वाला कवच।

9. नगोदारिका : हाथ की अंगुलियों में पहनने वाला (दस्ताना)।

10. चर्मढाल : चमड़े की ढाल।

11. तालमूल : लकड़ी की ढाल।

दुर्ग एवं शिविर निर्माण सम्बन्धी विचार : आचार्य कौटिल्य का कथन है कि देश के चारों तरफ सीमाओं पर राजा युद्धोचित प्राकृतिक दुर्गों का निर्माण कराये और देश के बीच में धनवृद्धि के केन्द्र नगरों और राजधानी की स्थापना करें। आचार्य ने सुरक्षा की दृष्टि से चार प्रकार के दुर्गों के निर्माण का सुझाव दिया है।

1. औदक दुर्ग : यह दुर्ग चारों ओर से नदियों एवं तालाबों से घिरा होता था अर्थात् चारों ओर जल से घिरा हुआ दुर्ग। (जैसे लंका दुर्ग)

2. पार्वत दुर्ग : यह दुर्ग प्राकृतिक गुफाओं से सुरक्षित बड़े-बड़े पत्थरों व पर्वतों से घिरा होता था। कौटिल्य ने सुरक्षा की दृष्टि से इसे महत्वपूर्ण बताया है।

3. धान्वन दुर्ग : यह दुर्ग घास, वनस्पति व जलरहित रेगिस्तानी स्थानों पर बनाया जाता था।

4. वन दुर्ग : इस प्रकार के दुर्ग दलदली भूमि तथा झाड़ियों से घिरे रहते थे।

पार्वत और औदक (जल) दुर्ग को अधिक महत्वपूर्ण मानते हुए कौटिल्य ने इन दुर्गों में आपत्ति से पूर्व ही पर्याप्त मात्रा में अस्त्र-शस्त्र खाद्य सामग्री (रसद) एवं अन्य युद्धोपयोगी सामान एकत्र करने का स्पष्ट निर्देश भी दिया है। आचार्य का कहना है कि प्रत्येक दुर्ग के चारों तरफ 6-6 फीट की दूरी पर तीन खाइयाँ खुदवानी चाहिए जो क्रमशः 56, 48 और 40 हाथ चौड़ी हो। खाई के तट पत्थर एवं ईंटों से निर्मित हो। इनकी गहराई 84, 72 तथा 60 फीट हो। प्रत्येक खाई जलपूर्ण हो तथा इस खाई में मांसाहारी जीव जन्तु जैसे मगरमच्छ, सांप, कछुआ आदि जीव छोड़ दिये जाय, कमल के पुरुषों को लगा दिया जाय, और इनकी तलहटी में नुकीले शस्त्रास्त्र डाल दिये जाय। दुर्गों की दीवारों पर चारों ओर धनुंधारी सैनिकों को बैठने के लिए अट्टालिकाएँ (बुर्जों या सुरक्षा चौकी) बनाई जाए जिससे धनुंधारी शत्रुओं पर दूर से बाण वर्षा कर सके।

कौटिल्य ने दुर्ग के अन्दर सड़कों, गुप्त मार्गों, एवं भवनों के निर्माण का भी सुझाव दिया है। उसने दुर्ग (किला) के अन्दर ऐसे कुओं के बनवाने का उल्लेख किया है जिसमें भिन्न-2 प्रकार के अस्त्र-शस्त्र व साज सामान भरे रहे।

आचार्य ने शत्रु सम्भावित सभी मार्गों को यथासम्भव कटंकाकीर्ण बनाने का भी सुझाव दिया है जैसे-शत्रु द्वारा प्रयोग किये जाने वाले मार्गों पर गड्ढे, कुएँ, खोद दिये जाय और उन्हें घास फूस से ढक दिया जाय, लकड़ी या लोहे के खूटें गाड़ दिये जाय, रास्तों में जहरीले, खुजली उत्पन्न करने वाली वनस्पतियाँ बिछा दी जाय, हड्डी तथा लोहे के चूर्ण बिछा दिये जाय जिससे शत्रु आसानी से दुर्गों तक न पहुँच सके।

आचार्य कौटिल्य ने दुर्गों पर अधिकार करने के उपायों का उल्लेख करते हुए बताया है कि घेरा डालकर, कपट उपायों का प्रयोग करके तथा दुर्गों में आग लगाकर विजय प्राप्त किया जा सकता है। उन्होंने दुर्गों में आग लगाने की विधि का उल्लेख करते हुए बताया कि बाज, काक, गिद्ध, तोता, मैना, उल्लू, कबूतर आदि पक्षियों को पकड़कर उसकी पूँछ में आग उत्पन्न करने वाली वस्तु बांध कर शत्रु के किले में छोड़ दे जिससे दुर्गों में आग लग जाय।

दुर्गों की भांति आचार्य ने सेना के ठहरने एवं युद्ध सामग्री की सुरक्षा आदि के लिए उपयुक्त स्थल का चुनाव कर शिविर निर्माण का सुझाव दिया है। उसने लिखा है कि वास्तु विद्या (भवन-निर्माण काल) के पारंगत पुरुषों द्वारा अनुमोदित वास्तुभूमि पर मुख्य वर्धकि (राजगीर या मिस्त्री) तथा मौहूर्तिकरण (ज्योतिषी) गोलाकार, लम्बा, चौकोर अथवा निर्माण भूमि के अनुसार आकार का चार फाटक और उत्तर-दक्षिण लम्बाई में तीन-तीन, कुल 6 मार्गों और 9 संस्थान युक्त स्कन्धाकार (कालम) सैनिक शिविर बनाये जाय। इनके चारों तरफ मजबूत परकोटा (चहरदीवारी) तथा गहरी खाई हो। परकोटे के बाहरी परिधि में शिकारी कुत्तों को रखने वाले तथा अग्नि और तुरही बाजे के संकेत से शत्रु के आने की सूचना देने वाले गूढ़ रक्षक पुरुष होने चाहिए। शत्रु सम्भावित मार्गों को कटंकाकीर्ण बनाकर मौल, भूतक आदि छः प्रकार की सेना के तीन-तीन कुल 18 सैनिक पहरा देने के लिए लगाना चाहिए। यह पहरा दिन-रात चलता रहे। शिविर के भीतर आने-जाने वालों के पास राजमुद्रांकित आज्ञा-पत्र हो तथा सेना में कठोर अनुशासन का पालन होना चाहिए।

सैन्य अभियान एवं व्यूह रचना सम्बन्धी विचार : आचार्य कौटिल्य ने शक्ति देश और काल से समन्वित विज्येच्छुक (विजय की इच्छा करने वाला) राजा मार्गशीर्ष (अगहन) अथवा चैत्रमास में चढ़ाई करने का निर्देश दिया है। उसने कम वनस्पति एवं जंगल विहीन वाले प्रदेशों में हेमन्त ऋतु में, बर्फीले तथा पर्याप्त वर्षा वाले

सघन वनों से युक्त क्षेत्रों में आक्रमण हेतु ग्रीष्म ऋतु को अधिक उपयोगी माना है। आचार्य के अनुसार युद्ध यात्रा आरम्भ करने से पूर्व आवश्यक तैयारियाँ कर लेना चाहिए तथा वाह्य एवं आन्तरिक विपत्तियों की सम्भावना पर विचार कर उनका प्रतिकार कर लेना चाहिए। युद्ध यात्रा करते समय शुभ लगन, मुहूर्त एवं नक्षत्र आदि की बहुत परवाह नहीं करना चाहिए। जब भी अपनी शक्ति सुदृढ़ हो, शत्रु पर आक्रमण कर देना चाहिए।

शत्रु को आश्चर्य चकित करने और अपनी शक्ति के क्षय को रोकने के लिए आचार्य ने सैन्य अभियानों में व्यूहों का सहारा लेकर चलने का आदेश दिया है। आचार्य ने एक ही प्रकार की सेना द्वारा निर्मित व्यूह को 'शुद्ध व्यूह' तथा कई प्रकार की सेनाओं (रथ सेना, हस्त सेना, पैदल या रथ सेना) द्वारा निर्मित व्यूह को 'मिश्रित व्यूह' की संज्ञा दी है।

कौटिल्य के अनुसार सामने से शत्रु आक्रमण की सम्भावना पर 'मकर व्यूह' (मकड़े के आकार में फैले हुए सैनिक) अपनाकर आगे बढ़ना चाहिए। पीछे से शत्रु के आने की सम्भावना पर 'वज्र व्यूह' तथा चारों तरफ से शत्रु आक्रमण के आने की सम्भावना पर 'सर्वतोभद्र व्यूह'। किसी एक ओर या संकुचित मार्ग से शत्रु आक्रमण की सम्भावना पर 'सुचि व्यूह' बना कर चलना चाहिए। आचार्य कौटिल्य ने संग्राम भूमि के अन्तर्गत निम्न चार प्रकार के व्यूहों को अपनाने का निर्देश दिया है।

1. दण्ड व्यूह : जिस व्यूह में सैनिक पंक्तिबद्ध होकर खड़े हो।
2. भोग व्यूह : जिसमें सैनिक एक कतार में सर्प (साँप) की भाँति या गौ मूत्र द्वारा भूमि पर बनी आकृति में खड़े हो। जैसे—सर्प व्यूह, मकर व्यूह, गोमूत्रिका व्यूह आदि।
3. मण्डल व्यूह : जिसमें सैनिक गोलाई में खड़े हो। जैसे— सर्वतोभद्र व्यूह।
4. असंहत व्यूह : जिसमें सैनिक अलग-अलग टुकड़ियों में विभक्त होकर खड़े हो। जैसे—बज्र व्यूह, श्रङ्गी व्यूह आदि।

उपरोक्त सभी व्यूह भूमि की बनावट के अनुसार बनाये जाते थे, समतल भूमि पर दण्ड और मण्डल व्यूह तथा असमतल भूमि पर भोग और असंहत व्यूह की रचना की जाती थी। सभी व्यूह आक्रमण तथा सुरक्षा दोनों की कार्यों के लिए प्रयुक्त होते थे।

युद्ध संचालन एवं विदेश नीति सम्बन्धी विचार : आचार्य कौटिल्य ने युद्ध संचालन हेतु विभिन्न विभागों की स्थापना हेतु विशेष बल देने के साथ ही उनके उत्तरदायित्वों का स्पष्ट विवेचन प्रस्तुत किया है।

1. युद्ध समिति : कौटिल्य का मत है कि राजा को सभी कार्यों का प्रारम्भ विचार—विनिमय के साथ करना चाहिए। इसीलिए उसने इसके लिए एक परामर्शदात्री समिति के गठन की बात कही तथा योजना बनाने एवं नीति निर्धारण हेतु 'युद्ध समिति' के गठन पर बल दिया है। युद्ध परिषद युद्ध सम्बन्धी निर्णय लेने के साथ ही युद्ध के दौरान समय-समय पर सामरिक स्थितियों का निरीक्षण करते हुए तदानुकूल निर्णय लेने का महत्वपूर्ण उत्तरदायित्व का भी निर्वाह करती थी।

आचार्य ने योजना एवं नीति निर्धारण के पश्चात् उसे कार्यान्वित करने के लिए 'युद्ध कार्यालय' का भी उल्लेख 'अर्थशास्त्र' में किया है।

2. युद्ध वित्त विभाग : सैन्य आवश्यकताओं और युद्ध योजनाओं की पूर्णता हेतु वित्त व्यवस्था को महत्वपूर्ण मानते हुए कौटिल्य ने वित्त विभाग की स्थापना का निर्देश दिया। यह विभाग सैनिकों एवं अफसरों

आदि के वेतन, मृत्यु सैनिकों के परिवार को आर्थिक सहायता, शस्त्रास्त्र एवं अन्य सैन्य आवश्यकताओं पर होने वाले व्यय का लेखा-जोखा रखता था।

3. आयुधागार : आयुधागार को ही शस्त्रास्त्र निर्माण का एक मात्र विभाग स्वीकार करने वाले कौटिल्य ने शस्त्रास्त्र निर्माण हेतु कारीगरों की व्यवस्था, उनके कार्यों की देखरेख, शस्त्रास्त्रों की गणना एवं देखभाल, उनके रखने के स्थान की व्यवस्था हेतु आयुधागाराध्यक्ष की नियुक्ति का निर्देश दिया एवं उपरोक्त कार्यों का पूर्ण उत्तरदायित्व उसका कर्त्तव्य बताया।
4. दूत एवं गुप्तचर व्यवस्था : आचार्य कौटिल्य ने विदेशनीति को प्रभावशाली ढंग से लागू करने के लिए राजदूत (दूत) एवं चरों (गुप्तचरों) की उपयोगिता पर विशेष बल दिया। अन्तर्राष्ट्रीय सम्बन्धों को बनाने के लिए राजदूतों को व्यवहार में लाया जाता था। शत्रु का भेद लेने के लिए गुप्तचरों का प्रयोग किया जाता था।

दूत : दूत (राजदूत) का अभिप्राय संदेशवाहक से होता है। (जैसे-अंगद, राम के दूत के रूप में रावण के पास गये, श्रीकृष्ण पाण्डव के दूत बनकर कौरव के पास गये, हनुमान भी राम के दूत रूप में लंका गये एवं यूनान के राजा सिल्यूकस का राजदूत बनकर मेगस्थनीज चन्द्रगुप्त मौर्य के राज्य में नियुक्त थे)

आचार्य कौटिल्य के अनुसार दूत राजा के मुंह कान एवं नेत्र के समान होते थे। उन्होंने दूतों के कार्यों एवं प्रकारों को तीन श्रेणियों में विभाजित किया है।

1. निःसृष्टार्थ : इस प्रकार के दूत वेदों के ज्ञाता एवं मंत्री के सभी गुणों से युक्त, देशकाल के ज्ञाता होते थे। इन्हें राजा की ओर से कोई भी निर्णय लेने का अधिकार प्राप्त था।
2. परिमितार्थ : जिस दूत को स्वयं निर्णय लेने का अधिकार नहीं रहता था, वह परिमितार्थ या 'मध्यम नर' कहलाता था। यह राजा की स्वीकृत के बिना कोई अन्तिम निर्णय नहीं ले सकते थे।
3. शासनहर : इस प्रकार के दूत अपने राजा का विशेष सन्देश पहुँचाने का कार्य करते थे। आचार्य के अनुसार दूतों को वाक्पटु और मृदभाषी होना चाहिए उसे प्रतिभावान और मंत्री के गुणों से युक्त होना चाहिए। (दूतों को मदिरा तथा परस्त्री से कोई सम्बन्ध नहीं रखना चाहिए)

आचार्य कौटिल्य ने राजदूत को शत्रु देश में रहते हुए वहाँ के अधिकारियों से मेलजोल बढ़ाने, सेना के ठहरने योग्य स्थान, युद्ध स्थल, यथासमय भागने के मार्ग आदि का पता लगा लेना चाहिए। शत्रु दुर्ग, धन-एतान्य, रक्षा के साधनों तथा शत्रु के कमजोर स्थलों का पता लगाने के साथ तोड़-फोड़ की कार्यवाही करने उसके मित्रों में फूट डालने, अपने राजा की शक्ति का बखान करने और उसके आवश्यक सन्देशों को शत्रु देश में पहुँचाने आदि का कार्य करना चाहिए।

गुप्तचर : प्राचीन काल से लेकर आजतक विश्व के सभी राष्ट्र शान्ति एवं युद्धकाल में दूसरे राष्ट्र के प्रशासनिक एवं सैनिक गतिविधियों की सूचनाएँ गुप्त रूप से एकत्रित करते हैं। इस महत्वपूर्ण कार्य को करने वाले गुप्तचर या चर (जासूस) कहलाते हैं।

महान कूटनीतिज्ञ आचार्य कौटिल्य ने कुशल राज्य एवं युद्ध संचालन हेतु गुप्तचर विभाग पर विशेष बल दिया। प्रजा के विरुद्ध होने वाले षड्यन्त्रों की सूचना, राज्य कर्मचारियों की शुद्धता का पता लगाने, विरोधी स्वभाव वालों की सूचना राजा तक पहुँचाना, शत्रु शक्ति का पता लगाना, शत्रु जनता एवं सेना में अफवाहें,

फैलाकर उनके मनोबल को तोड़ना आदि गुप्तचरों का प्रमुख कार्य बताया है। युद्ध में जासूसी के महत्व को स्वीकार करते हुए आचार्य ने प्रस्थान करती हुई सेना के साथ सैन्य शिविरों तथा युद्धरत सेना के साथ भी गुप्तचरों को रखने की सलाह दी है।

आचार्य ने बताया है कि किसी भी गुप्तचर के द्वारा भेजी गई सूचना को तभी प्रामाणिक माना जाय जब विभिन्न गुप्तचरों ने वैसी ही सूचना दी हो। युद्ध की अपेक्षा बुद्धि को अधिक शक्तिशाली समझने वाले आचार्य कौटिल्य का स्पष्ट मत है कि "धनुधारी के धनुष से छोड़ा गया बाण सम्भव है किसी एक भी पुरुष को मारे या न मारें, किन्तु बुद्धिमान व्यक्ति द्वारा किया गया बुद्धि प्रयोग गर्भ स्थित प्राणियों को भी नष्ट कर देता है। "

आचार्य कौटिल्य ने गुप्तचरों के दो प्रकार बताये है।

1. संस्थाचर : यह स्थायी चर होते थे और एक ही स्थान में रहकर जासूसी का कार्य करते थे। यह राज्य की घटनाओं के विषय में राजा का कार्य करते थे। यह पांच प्रकार के होते थे।

(क) कापटिक : कपट वेश (जैसे छात्र रूप में) धारण करके गुप्तचरी करने वाले चर।

(ख) उदास्थित : यह सन्यासी या साधु के वेश में रहने वाले चर होते थे। जो धार्मिक स्थलों को बनाकर रहते थे।

(ग) गृहपतिक : यह गुप्तचर गृहस्थ कृषक के रूप में अपना कार्य करते थे।

(घ) वैदोहिक : यह शत्रु देश में व्यापारी के रूप में कार्य करते थे।

(ङ) तापस : सिर मुड़ाकर या जटाधारी साधु के भेष में तपस्या का ढोंग करके गुप्तचरी करने वाले गुप्तचर। उपरोक्त चरों को राज्य की तरफ से आर्थिक सहायता प्रदान की जाती थी।

2. संचार-चर : (भ्रमणशील चर) : इस प्रकार के चर राजा द्वारा नियुक्त अत्यन्त विश्वासपात होते थे। यह भ्रमणशील चर होते थे जो दूसरे राज्यों में जाकर सूचनाएँ लाते थे। यह चार प्रकार के होते थे।

(क) सन्त्री : ज्योतिष, जादूगरी, नृत्य एवं गायन द्वारा जासूसी करने वाले।

(ख) तीक्ष्ण : इन्हें जादूगर, मदारी या नट के रूप में कार्य करना पड़ता था।

(ग) रसद : इन श्रेणी में क्रूर, निर्दयी एवं आलसी व्यक्तियों की भर्ती की जाती थी। विभिन्न वेशों में रहकर, किसी की हत्या करना, आग लगाना, विष देना इनके लिए अत्यन्त सरल कार्य था।

(घ) भिक्षुकी या परिव्राजिक : यह सन्यासिनी बनकर भिक्षा मांगने या मंत्री के के घरों में नौकरानी बनकर गुप्तचरी का कार्य करती थी।

3. परराष्ट्र विभाग (या परराष्ट्र नीति, विदेश नीति) या अन्तर-राज्य सम्बन्धी विचार)

प्राचीन भारतीय सैन्य पद्धति के अन्तर्गत वैदेशिक नीति एवं अन्तर्राष्ट्रीय सम्बन्धों की स्थापना का बहुत कुछ श्रेय आचार्य कौटिल्य को ही है। युद्ध संचालन हेतु परराष्ट्र विभाग की स्थापना इसका प्रत्यक्ष प्रमाण है। अन्तर-राज्य सम्बन्ध के अन्तर्गत आचार्य कौटिल्य ने दूसरे राज्यों के साथ वैदेशिक सम्बन्ध स्थापित करने के लिए निम्नलिखित छः प्रमुख नीतियों का वर्णन किया है।

1. सन्धि : इसका तात्पर्य मेल या मित्रता स्थापित करना होता है। यह एक शान्तिपूर्ण नीति है। आचार्य ने छः प्रकार की सन्धियों का वर्णन किया है।

2. हीन सन्धि : इसके अन्तर्ग सम्पूर्ण सेना का समर्पण या धन या भूमि प्रदान करके शत्रु से सन्धि किया जाता है।
3. पण बन्ध सन्धि : अयुद्ध सन्धि (अनाक्रमण सन्धि)
4. मित्र सन्धि : पारस्परिक सहायता की सन्धि।
5. भूमि सन्धि : सीमा परिवर्तन सन्धि।
6. कर्म सन्धि : दूसरे राज्यों की सहायता से दुर्ग, सेतु, मार्ग आदि बनाने की सन्धि।
7. अनवसित सन्धि : निर्जन भूमि पर सामूहिक अधिकार सन्धि।
2. यान (आक्रमण) : इस नीति के अन्तर्गत एक राज्य दूसरे-राज्य के विरुद्ध सशस्त्र संघर्ष की कार्यवाही करता है। आचार्य के अनुसार यदि विजयी होने का इच्छुक राजा यह सोचे कि शत्रु के दुर्ग तथा जनपद आदि का विनाश उस पर चढ़ाई करने से ही सम्भव है तथा इस कार्य में अपने राज्य की हानि नहीं होगी तब 'यान' की नीति अपनानी चाहिए।
3. विग्रह : इसका अर्थ दूसरे राज्य के विरुद्ध शीतयुद्ध की कार्यवाही करना होता है। इसमें शत्रु राज्य के विरुद्ध प्रचार करने तथा इसकी प्रजा व अधिकारियों में विद्वेष पैदा करने का कार्य किया जाता है। कौटिल्य के अनुसार जब शत्रु देवी विपदाओं (अकाल, बाढ़ आदि) में फंसा हो, उसकी शक्ति क्षीण हो चुकी हो, वह अपनी रक्षा करने में असमर्थ हो, तब उस पर आक्रमण कर देना चाहिए।
4. आसन : इसमें राज्य तटस्थता की नीति का सहारा लेता है। आचार्य के अनुसार जब कोई राजा यह समझे कि शत्रु मेरे दुर्ग आदि को नहीं नष्ट कर सकता और मैं भी उसके दुर्ग को नहीं नष्ट कर पाऊँगा, तो ऐसी स्थिति में अपनी शक्ति की वृद्धि करनी चाहिए और आसन की नीति अपनानी चाहिए।
5. संश्रय : इसका तात्पर्य अपने से अधिक शक्तिशाली राजा का आश्रय लेना होता है।
6. द्वैधी भाव : एक ही उद्देश्य की प्राप्ति के लिए एक के साथ सन्धि और दूसरे के साथ विग्रह करना द्वैधीभाव है। इस नीति के दो अर्थ हैं।
 1. एक शत्रु से सन्धि करना तथा दूसरे शत्रु से सन्धि विच्छेद करना।
 2. शत्रु के साथ मित्रता का ढोंग रचाना परन्तु गुप्त रूप से उसे नष्ट करने का प्रयत्न करना।
 आचार्य कौटिल्य ने परराष्ट्र नीति के इन सिद्धान्तों को कार्यान्वित करने के लिए साम, दाम, भेद, दण्ड उपायों के प्रयोग पर बल दिया है।
 1. साम : अपनी नीति को अमल में लाने के लिए दूसरे राज्य के साथ बातचीत तथा अनुनय का सहारा लेना 'साम' कहलाता है। यह दो प्रकार का होता है (क) सत्य साम (ब) असत्य साम।
 2. दाम : जब शत्रु 'साम' (वार्तालाप) द्वारा सन्तुष्ट न हो, तब उसे आर्थिक, राजनैतिक व सैनिक लालच देकर अपनी नीतियों का पालन करवाना चाहिए। इसको ही 'दाम' कहते हैं।
 3. भेद : जब शत्रु साम व दाम से प्रभावित न हो तब फूट डालने की नीति अपनानी चाहिए। यह फूट शत्रु की सेना, अधिकारियों, मंत्रियों आदि के मध्य डलवाना चाहिए। इसे भेद की नीति कहते हैं।
 4. दण्ड : जब उपरोक्त तीनों उपाय असफल हो जाय, तब शत्रु को दण्डित करने का निर्णय लेना चाहिए। इसमें शत्रु पर आक्रमण करके उसे नष्ट कर दिया जाता है। यही दण्ड नीति कहलाती है।

युद्ध भेद एवं युद्ध कला सम्बन्धी विचार : विश्व के महान कूटनीतिज्ञ आचार्य कौटिल्य ने युद्ध के प्रकारों एवं युद्ध विधि पर महत्वपूर्ण विचार प्रस्तुत करते हुए अपनी अमर कृति 'अर्थशास्त्र' में तीन प्रकार के युद्धों का वर्ण किया है, जो निम्न हैं।

1. प्रकाश युद्ध : जब कोई राजा किसी निश्चित स्थान तथा समय पर युद्ध लड़ता था, तो उसे 'प्रकाश युद्ध' कहते थे। महाकाव्यकाल में इसे 'धर्मयुद्ध' कहा जाता था।
2. कूट युद्ध : जो युद्ध नियम विरुद्ध लड़े जाते थे। कूट युद्ध कहलाते थे। कौटिल्य के अनुसार थोड़ी सेना को बढ़ा चढ़ाकर प्रस्तुत करके, शत्रु सेना में भय पैदा करना, उसके दुर्गों व भण्डार गृहों को जला देना उसकी सम्पत्ति को लूट लेना चाहिए। जब वह आमोद-प्रमोद, व्यसन या प्राकृतिक आपदाओं से घिरा हो उस पर आक्रमण करना चाहिए। एक मोर्चे के अतिरिक्त दूसरे मोर्चे पर आक्रमण करना भी कूटयुद्ध कहलाता था।
3. तूष्णी युद्ध : गुप्तचरों द्वारा स्याह (काला) प्रचार से, विष, औषधि अथवा भेद व छल से शत्रु के मनोबल को गिराना या शत्रु गतिविधियों में परिवर्तन कराने वाला युद्ध तूष्णी युद्ध कहलाता था। आचार्य ने कूट एवं तूष्णी युद्धों को श्रेष्ठ युद्ध की संज्ञा दी है।

आचार्य कौटिल्य के अनुसार व्यूह रचना के उपरान्त शत्रु के दुर्बल अंगों पर सम्पूर्ण शक्ति के साथ भीषण आक्रमण करना चाहिए। सामने के आक्रमण असफल होने पर शत्रु के पृष्ठ भाग पर आक्रमण करना चाहिए और यदि सम्भव हो तो शत्रु बाजुओं पर भी आक्रमण करना चाहिए। सोते हुए सैनिकों पर आक्रमण की व्यवस्था करनी चाहिए। लूट-पाट, मार-काट कराकर अथवा शत्रु दुर्गों या शिविरों में आग लगाकर, रात्रि को शत्रु को जगाये रखकर, दिन में उसके थके होने पर तीव्रगति से भीषण आक्रमण की व्यवस्था करनी चाहिए।

उपरोक्त अध्ययन से हम इस निष्कर्ष पर पहुँचते हैं कि कौटिल्य का 'युद्धदर्शन' पूर्ण वैज्ञानिक था। उसकी महान कृति 'अर्थशास्त्र' आज भी सम्पूर्ण विश्व के लिए राजनयिक एवं सैनिक सम्बन्धों के दिशा-निर्देश का मूल आधार है। उसके द्वारा प्रतिपादित 'युद्ध दर्शन' तथा राज्य की सुरक्षा से सम्बन्धित महत्वपूर्ण सिद्धान्त भारत ही नहीं, अपितु सम्पूर्ण विश्व में आज भी उतने ही सार्थक व तर्कसंगत हैं जितने कि उस काल में थे। कौटिल्य के इस 'युद्ध दर्शन' ने मौर्य साम्राज्य का बहुमुखी मार्ग दर्शन किया।

सन्दर्भ ग्रन्थ

1. बी०के० मजूमदार : मिलिट्री सिस्टम इन ऐंशियेंट इण्डिया।
2. मेजर श्यामलाल : सैन्यविज्ञान भाग-एक।
3. के०के० यादव : भारतीय सैन्य कला का इतिहास।
4. बी०एन० मालीवाल : सैन्य विज्ञान।
5. मेजर आर०सी० कुलश्रेष्ठ : भारतीय सैन्य विज्ञान।
6. बाबूराम पाण्डेय : सैन्य अध्ययन।
7. डॉ. राधा कुमुद मुखर्जी : चन्द्रगुप्त मौर्य एण्ड हिज टाइम्स।
8. बी०आर० रामचन्द्र दीक्षितार : वार इन ऐंशियेन्ट इण्डिया।

प्राचीन भारतीय वाङ्मय में वर्णित दूतों (राजदूत) के व्यक्तित्व का मूल्यांकन

डॉ. सुरेन्द्र कुमार पाण्डेय*

आधुनिक काल की भांति प्राचीन कालीन भारत में भी दूतों (राजदूत) को महत्वपूर्ण स्थान प्राप्त था। अन्तर राज्य सम्बन्धों तथा राज्य के पारस्परिक संगठन-संबंधों को बनाये रखने का एक महत्वपूर्ण साधन भी 'दूत' ही होता था। प्राचीन भारतीय वाङ्मय-ऋग्वेद, रामायण, महाभारत, मनुस्मृति, पुराण, अर्थशास्त्र एवं अन्य ग्रन्थों में 'दूतों को अतिप्रतिष्ठित स्थान दिया गया है। आचार्य कौटिल्य ने राजदूत को राजा का मुख्य माना है। 1 मनुस्मृति में दूत की प्रशंसा करते हुए कहा गया है कि दूत ही शत्रु से मेल करा देता है, जिससे (मिले हुए भी) मनुष्य परस्पर में फूट जाते हैं। 2 कामन्दक का कहना है कि राजा अपने दूत-मुख द्वारा बात किया करते हैं और चर-चक्षु द्वारा देखा करते हैं। राजा के सो जाने पर भी ये दोनों इन्द्रियाँ निरन्तर कार्य किया करती हैं। 3 कामन्दक तो यहाँ तक कहते हैं कि दूतों से रहित राजा अंधे मनुष्य के समान होता है। 4 अग्निपुराण में दूतों को प्रकट रूप से कार्य करने के कारण 'प्रकाशचर' कहा गया है। 5 संगमकालीन ग्रंथों में भी दूतों को महत्वपूर्ण स्थान दिया गया है। इस काल में दूत संस्था को राजा की महत्वपूर्ण पाँच संस्थाओं में से एक माना जाता था। 6

प्राचीनतम वेद ऋग्वेद में सरमा की कथा में सरमा का इन्द्र की दूती बनकर पणिगणों के पास जाने का उल्लेख है। 7 इस ग्रंथ में अनेक स्थलों पर दूतों का उल्लेख मिलता है। 8 दीक्षितार⁹ की मान्यता है कि ऋग्वेद-काल से ही 'दूत' और 'चर' का प्रमाण मिलने लगता है।

ऋग्वेद के एक प्रसंग में सूर्य का दूत अग्नि को बताया गया है। 10 अग्नि को देवताओं का भी दूत कहा गया है। अन्य वैदिक साहित्यों में अग्नि को दूत की उपाधि प्रदान की गई है। कतिपय पक्षियों को भी दूत बनाने की ओर वेदों में संकेत किया गया है। ऋग्वेद में 'यम' के ऐसे कुछ दूतों का उल्लेख है। 'कपोत', और 'उलूक' पक्षी यम देव के विशेष दूत बतलाये गए हैं। 11 ऋग्वेद में 'कपोतों' और 'उलूकों को निऋति देव के दूत की संज्ञा दी गई है। 12

वैदिक काल के उपरान्त दूत-प्रथा में अधिक विकास हुआ। पाणिनी के अनुसार राज शासन में दूत का महत्वपूर्ण स्थान था। इनके अनुसार जिस देश या जनपद में दूत नियुक्त होता था उसी के नाम से उसकी संज्ञा प्रसिद्ध होती थी। जैसे कौशल जनपद का जो दूत मथुरा में नियुक्त होता था उसे माथुर कहा जाता था। 13 इसी प्रकार का उल्लेख पतंजलि ने महाभाष्य में किया है। उनके अनुसार म्रुघ्न देश का दूत म्रुघ्न कहलाता था। 14 पाणिनी ने समाचार लेकर जाने वाले धावन को जंघाकर कहा है। 15 जिन्हें कौटिल्य ने जंघारकि कहा है। एक योजन, दो योजन, पाँच योजन एवं दस योजन इत्यादि भिन्न-भिन्न दूरियों तक संदेश ले जाने वाले धावन को उन-उन नामों से सम्बोधित किया जाता था। पाणिनि ने एक योजन दौड़ने वाले धावन को योजनिक कहा है। 16 कात्यायन ने सौ योजन वाले धावन को योजनशतिक नाम से अभिहित किया है।

*अध्यक्ष, सैन्य विज्ञान विभाग आ0न0 देव किसान स्नातकोत्तर महाविद्यालय, बभनान-गोण्डा।

अर्थशास्त्र में भी एक योजन से सौ योजन दूरी तक संदेश ले जाने वाले धावनों का उल्लेख मिलता है और यह बताया गया है कि उन्हें दस योजन की दूरी तक प्रति योजन पर एक पण वेतन दिया जाता था। उसके बाद प्रति दस योजन की दूरी के लिए वेतन क्रमशः दुगुना होता जाता था। 17 राज-शासन में धावन संस्था के संगठन का प्रचलन अन्य देशों में भी था। पाणिनी के समकालीन प्राचीन ईरान के हखमनी साम्राज्य में क्षयार्ष नाम राजा ने भी इसी प्रकार की संस्था की व्यवस्था की थी। 18

महाकाव्यों में अनेक स्थलों पर 'दूत' नियुक्त किये जाने का उल्लेख मिलता है। रामायणकाल में दूतों की बहुत बड़ी उपयोगिता स्पष्ट परिलक्षित होती है, क्योंकि दूत असाध्य कार्यों को भी साध्य बनाने में सफल हो जाते थे। दूतों द्वारा राजाओं में परस्पर संदेश के आदान-प्रदान की यह प्रणाली तत्कालीन समय में प्रचलित थी। महाराज दशरथ ने अपने यज्ञ में सम्मिलित होने के लिए सत्यपराक्रमी, शूरशिरोमणि, वेद और सब शास्त्रों में निष्णत महाभाग मिथलाधिपति जनक, देवतुल्य काशी नरेश, केकयराज, अंगदेशाधिपति सोमपाद इनके अतिरिक्त पूर्व देश, सिन्धु देश, सौवीर, दक्षिण देश के राजाओं तथा पृथ्वीमण्डल के अन्य उच्चकोटि के राजाओं को तथा ब्राह्मणों, क्षत्रियों और वैश्यों को दूतों द्वारा ही परस्पर उच्चस्तरीय बातचीत करके बुलवाया था। 19

दूत द्वारा ही सन्धि अथवा युद्ध की अन्तिम चेतावनी दे दी जाती थी। महाभारत में उल्लेख है कि श्री कृष्ण पाण्डवों के दूत बनकर हस्तिनापुर कौरवों की सभा में गये थे, जिन्होंने युद्ध को टालने और कौरवों-पाण्डवों में संधि कराने का प्रयास किया था। 20 रामायण में उल्लेख है युवराज अंगद राम के दूत बनकर लंका नृपति रावण की सभा में पहुँचे थे जिनके द्वारा रावण को अंतिम संदेश भेजा गया था कि या तो सीता को लौटा दो या सर्वनाश के लिए तैयार हो जाओ। 21

सन्देशवाहक के रूप में दूतों का महत्त्व हमें श्री दुर्गा सप्तशती के कई अध्यायों में प्राप्त होता है। मार्कण्डेय पुराण के अनुसार भगवती दुर्गा ने भगवान शिव को 'दूत' बनाकर शुम्भ-निशुम्भ नामक दानवों के पास भेज था। देवी ने यह संदेश भेजा था कि दैत्यों! यदि तुम जीवित रहना चाहते हो तो पाताल को लौट जाओ। इन्द्र को त्रिलोकी का राज्य मिल जाय और देवता यज्ञभाग का उपभोग करें। चूँकि देवी ने भगवान शिव को 'दूत' के कार्य में नियुक्त किया था, इसलिए वह 'शिवदूती' के नाम से संसार में विख्यात हुई। 22 बुद्धचरित में बुद्ध के अस्थि-अवशेष को प्राप्त करने के लिए मल्लों के पास उसके पड़ोसी सात राजाओं द्वारा अपना-अपना दूत भेजने का उल्लेख मिलता है। 23 सिकन्दर द्वारा भारत पर आक्रमण के पूर्व ही 3 तक्षशिला के वृद्ध राजा और उसके पुत्र आम्बि²⁴ (ओम्फिस) ने बुखारा में उसके पास दूत भेजकर सहायता का वचन दिया था। क्रेटियस के अनुसार, उसने सिकन्दर की 65 हाथी, बहुत अधिक संख्या में स्वस्थ भेंड़ें तथा 300 अच्छे नस्ल के बैल देकर सहायता की थी। 25

मौर्यकाल में दूत-प्रथा में अधिक विकास दृष्टिगत होता है। इस काल में भारत का पश्चिमी देशों से राजनीतिक सम्बन्ध बहुत बढ़ गया था। सेल्सुकस ने मेगस्थनीज को अपना राजदूत बनाकर चन्द्रगुप्त के दरबार में भेजा था। वह लगभग छह वर्ष तक पाटलिपुत्र में रहा और 'इण्डिका' नामक पुस्तक लिखी। 26

अशोक के तेरहवें शिला-लेख के अनुसार उसने सीरिया के शासक अंतियोकस, मिस्र के शासक तुरमय (टालेमी फिलाडेल्फस), मेसीडोनिया के शासक अंतकिन (एंटिगोनस), साइरीन के शासक मग (मगस) और एपिरस के शासक अलिकसुन्दर (एलेक्जेण्डर) की राजसभा में अपना दूत भेजा था। 27 मालविकाग्निमित्रम्

के एक प्रसंगानुसार विदर्भराज यज्ञसेन के चचेरे भाई माधवसेन ने अपने एक दूत के साथ बहुत से कीमती रत्न, हाथी, घोड़े आदि वाहन विविध प्रकार के शिल्पी एवं दास-दासियों को महाराज अग्निमित्र की सेवा में भेंट स्वरूप प्रदान किया था। 28

दूतों का प्रयोग अन्तर-राज्यीय सम्बन्ध बनाये रखने के लिए भी किया जाता था। यदि कोई सम्राट किसी विदेशी शासक से सैनिक सहायता प्राप्त करना चाहता था तो दूतों का सहारा लेता था। उदाहरण के लिए, चीनी ग्रन्थों के अनुसार कनिष्क ने चीनी सम्राट के समक्ष अपनी समानता प्रकट करने के लिए एक राजदूत के माध्यम से प्रस्ताव रखा था कि चीनी राजकुमारी का विवाह उसके साथ कर दिया जाय, किन्तु चीनी सेनापति पान-चाओ ने इस प्रस्ताव से अपने सम्राट के प्रति अपमान का अनुभव किया और कनिष्क के राजदूत को बंदी बना लिया, जिसके परिणामस्वरूप दोनों सम्राटों में युद्ध हुआ। 29 इसी प्रकार 29 ई० में रोमन सम्राट आगस्टस के सिंहासनारूढ होने के पश्चात् अनेक भारतीय राजाओं ने धन्यवाद प्रस्ताव के साथ कई दूत-मण्डल रोम भेजे थे। उन राजाओं में पोरस का नाम अग्रगण्य है। 30 रालिंसन ने इस भारतीय राजा पोरस की पहचान कुषाण-शासक कदाफिसेज प्रथम से ही है। 31 रोमन सम्राट ट्रेजन द्वारा पार्शियनों की विजय पर किसी कुषाण-सम्राट ने ट्रेजन के पास धन्यवाद प्रस्ताव के साथ अपना दूत मण्डल भेजा था। बाशम³² ने इस कुषाण शासक की पहचान कनिष्क द्वितीय से की है। भाष्कर चट्टोपाध्याय³³ के अनुसार वह शासक कनिष्क प्रथम का पौत्र तथा वासिष्क का पुत्र कनिष्क था। पश्चिम में ससानियनों तथा उत्तर में हूणों की बढ़ती हुई शक्ति को रोकने के लिए कुषाण-नरेश वासुदेव द्वितीय ने 230 ई० में अपना दूत-मण्डल चीनी शासक के पास सैनिक सहायता प्राप्त करने के लिए भेजा था। 34

संगमकालीन दक्षिण भारतीय ग्रन्थों में बड़ी संख्या में दूत नियुक्त होने का उल्लेख मिलता है। उदाहरण के लिए, सेंगुट्टुवन के पास हजार दूत नियुक्त रहते थे। 35 इसके दूत एक विशेष प्रकार का कपड़ा पहनते थे जिसे "कुंजुगम" कहा जाता था। 36

दूतों की योग्यताएँ

ऋग्वेद के एक प्रसंग में यह संकेत किया गया है कि दूत मित्र, वरुण और अर्यमा के समान होना चाहिए। इससे ध्वनित होता है कि दूत मित्र देव के समान प्राणीमात्र का हितैषी, वरुण के समान उदार और अर्यमा के समान न्यायकारी होना चाहिए। ऋग्वेद के इसी प्रसंग में उल्लेख किया गया है कि जो पुरुष इन गुणों से युक्त अपने दूत रखते हैं, वे विजयी होते हैं। इन गुणों से युक्त दूत सफल श्रेणी में परिगणित होते थे। ऋग्वेद के अन्य प्रसंग में संकेत किया गया है कि दूत अग्नि के समान गृहपतियों एवं राष्ट्रवासियों (विश) में आनन्द की वृद्धि करने वाला होना चाहिए। 37 इस संकेत के आधार पर दूत का आचरण एवं व्यवहार राष्ट्रवासियों एवं शासक वर्ग, दोनों को आनन्दित करने वाला होना चाहिए। 38 ऋग्वेद के एक अन्य स्थल पर दूत के विशेष गुणों की ओर संकेत किया गया है। वे हैं— यथोक्त कथन और संदेश करने एवं उसके प्रस्तुत करने में विलम्ब न करना। 39

इस प्रकार ऋग्वेद में दूत पद के लिए उच्च कोटि की योजनाएँ निर्धारित की गई हैं। ये गुण अथवा अर्हताएँ मुख्य तीन श्रेणियों में परिगणित की जा सकती हैं। प्रथम श्रेणी की योग्यता के अन्तर्गत कुछ की

श्रेष्ठता बतलायी गई है। इस योग्यता के अनुसार दूत का वरण श्रेष्ठ (उच्च) कुल में उत्पन्न व्यक्तियों में से किया जाना चाहिए। इस प्रसंग में श्रेष्ठ कुल से ऋग्वेद का क्या तात्पर्य है, स्पष्ट नहीं है। सम्भवतः श्रेष्ठ कुल का तात्पर्य आचरणवान कुल से समझा गया हो, अर्थात् वह कुल अथवा परिवार जो शुद्ध एवं शिष्ट आचरण के लिए ख्याति प्राप्त कर चुका हो।

दूसरी श्रेणी में दूत की वे योग्यताएँ होती हैं, जिनका सम्बन्ध दूत के व्यक्तित्व से होता है। इस श्रेणी की योग्यताओं के अनुसार दूत बल सम्पन्न, प्रसन्न मुद्रा में रहने वाला एवं चरित्रवान् व्यक्ति होना चाहिए। उसे प्राणी मात्र का हितैषी, उदार, न्यायप्रिय और भ्राता के समान दूसरों की सहायता करने वाला होना चाहिए। तीसरी श्रेणी के अन्तर्गत दूत पद के लिए विशेष रूप से वांछनीय जो गुण एवं अर्हताएँ निर्धारित की गई हैं वे हैं— यथोक्तवादिता, शीघ्र कार्य कर देने की क्षमता और भ्राता तुल्य सहायक होना चाहिए। वास्तव में दूत निन्दारहित पुरुष व श्रेष्ठ व्यक्ति होना अनिवार्य है। 40

इन गुणों एवं योग्यताओं के अतिरिक्त वैदिक साहित्य के अनुसार दूत पद के लिए परम उपयोगी एवं आवश्यक गुण कार्यपटुता है, अर्थात् राजदूत की विशेष सफलता इसमें है कि इसमें चरित्र बल, व्यवहार पटुता एवं बुद्धिकौशल इस मात्रा में होना चाहिए जिसका आश्रय लेकर वह 5 अपने स्वामी के कष्टसाध्य कार्य को भी सरल साध्य बना दे। उदाहरण के लिए ऋग्वेद में इन्द्र की दूती 'सरमा' और शतपथ ब्राह्मण में देवों के दूत अग्नि को सफल कोटि के दूतों में परिगणित किया गया है। उनकी सफलता का प्रमुख कारण उनमें इन्हीं गुणों और योग्यताओं का विशेष रूप से होना था। इन्हीं गुणों एवं योग्यताओं का आश्रय लेकर 'सरमा' और अग्नि ने क्रमशः इन्द्र और देवों के कष्ट साध्य कार्य को सरल साध्य बना दिया था। 41 मनुस्मृति के अनुसार दूत को सभी शास्त्रों का विद्वान, इंगित (वचन तथा स्वर), आकार (क्रमशः प्रेम एवं उदासीनता का सूचक—प्रसन्नता एवं उदासीनता) और चेष्टा (क्रोधादि का सूचक—नेत्रों का लाल होना, भौंह टेढ़ा करना आदि) को जानने वाला, शुद्ध हृदय (राजधन को अर्द्धि क व्यय करना, स्त्री—आसक्ति, द्यूत, मद्यपान आदि से रहित), चतुर तथा कुलीन होना चाहिए। अनुरक्त शुद्ध, चतुर, स्मरणशक्ति वाला, देश और काल का जानकार, सुरुप, निर्भय और वाग्मी—इन गुणों से युक्त दूत श्रेष्ठ होता है। 42

महाभारत में दूत की अद्योलिखित सात अर्हताओं पर प्रकाश डाला गया है—कुलीनता, उच्च कुलोत्पन्नता, वाग्मिता, दक्षता, प्रियभाषिता, निर्देशानुसार संदेश वाहिता तथा स्मृति सम्पन्नता। 43

आचार्य कौटिल्य ने दूत के गुण अमात्य के समान बताये हैं। 44 अमात्य को हृदय का पवित्र, कार्य करने में समर्थ, प्राणों के भय को उत्पन्न करने वाली आपत्ति में भी राजा की सहायता करने वाला बुद्धिमान जिसके पिता और पितामह भी इसी पद पर कार्य कर चुकें हो, नीतिशास्त्र में निपुण, वीर योद्धा होना चाहिए। इन सभी गुणों से युक्त व्यक्ति दूत होना था। 45

मानवधर्मशास्त्र, के अनुसार दूत की कुलीन, चतुर, ईमानदार, परिश्रमी, सभी शास्त्रों का ज्ञाता, दूसरों को जान लेने वाला, साहसी, राजभक्त, काल तथा स्थान के अनुसार उचित निर्णय करने में चतुर तथा एवं स्पष्ट वक्ता होना चाहिए। 46 कामंदकनीतिसार के अनुसार वाचाल, बात को याद रखने वाला, विशेष वक्ता, अस्त्र—शस्त्र में पण्डित, कार्य का अभ्यास किये हुए ही राजा के दूत हो सकते हैं। 47

अर्थशास्त्र और महाभारत की ही भांति रामायण में दूत के गुण अमात्य के समान बताये गए हैं। आदिकवि बाल्मीकि का कहना है कि यदि एक अमात्य बुद्धिमान, स्थिरबुद्धि, विचार कुशल और नीतिशास्त्र में अभ्यस्त हो तो राजा को विजयलक्ष्मी प्राप्त करा सकता है। उसी प्रकार दूत भी ईमानदार, कुलपरम्परागत, शुद्ध हृदय, श्रेष्ठ स्वभाव, यथोक्तवादी होना चाहिए। राम द्वारा भरत से चित्रकूट पर पूछे गए राजनीतिक प्रश्नों से भी दूत सम्बन्धी योग्यताओं का आभास होता है।

हे भरत! अपने ही राज्य के रहने वाले, दूसरे के अभिप्राय को जानने वाले, समर्थ, हाजिर जवाब (प्रत्युत्पन्नमति) यथोक्तवादी और दूसरे की कही गई बातों को तर्क से खण्डन करने वाले पुरुष को तुमने अपना राजदूत बनाया है अथवा नहीं। 48

रामायण में राम के निकट सुग्रीव द्वारा दूत के रूप में हनुमान के गुणों का बखान करने के माध्यम से भी दूतों की योग्यता का वर्णन किया गया है, जिसके अनुसार दूत को त्रयीज्ञान सम्पन्न, सुरुचिपूर्ण व्यक्तित्व वाला मृदुभाषी अपने दोषों को छिपाने में पटु, संस्कार सम्पन्न तथा दूसरे के हृदय को जीतने में सक्षम होना चाहिए। 49 हनुमान में एक कुशल दूत के सभी गुण मौजूद थे। इसी कारण उनको दूत के कर्तव्यों की पूरी जानकारी थी।

संगमकालीन दक्षिण भारतीय ग्रन्थों के अनुसार दूत को व्यवहारकुशल, उच्चकुलीन, विनीत (कोमल व्यवहार वाला), वाक्पटु, आकर्षक व्यक्तित्व वाला, उत्तम और उच्च शिक्षा वाला होना चाहिए तथा वह संदेश देने की ऐसी क्षमता रखता हो जिससे कि न तो उससे भय और न तो किसी तरह के पक्षपात का ही भाव प्रकट हो एवं इतना साहस-सम्पन्न हो कि साक्षत मृत्यु को भी देखकर भयभीत न होने वाला हो। 50 बौद्ध ग्रन्थ विनयपटिक में दूतों में निम्नलिखित आठ गुणों के होने का उल्लेख है श्रोता (सुनने वाला), श्रावयिता (सुनाने वाला), उद्गृहीता (ग्रहण करने वाला), धारयिता (स्मरण रखने वाला), विज्ञात, हित-अहित में कुशल (चतुर), विज्ञापयिता और जो कलह कारक न हो। 51 आचार्य शुक्र ने दूत को मंत्रिपरिषद् का सदस्य माना है। दूत को इंगित और आकार का ज्ञाता, स्मृतिवान, देशकाल का ज्ञाता, षाड्गुण्य नीति का पण्डित, वाग्मी और निर्भीक होना चाहिए। 52

उपर्युक्त तमाम विवरणों के आधार पर कहा जा सकता है कि दूत के पद पर उसी व्यक्ति को नियुक्त किया जा सकता था, जो विद्वान, साहसी, वीर, मनोविज्ञान के सिद्धान्तों का ज्ञाता, राजभक्त तथा स्पष्ट एवं मधुरभाषी होता था। चूँकि यह पद महान उत्तरदायित्व वाला होता था, इसलिए योग्यतम व्यक्ति को ही इस पद पर नियुक्त किया जाता था।

दूतों के प्रकार

योग्यता एवं अधिकारों की दृष्टि से कौटिल्य ने दूतों को तीन श्रेणियों में विभक्त किया है : (1) निःसृष्टार्थ (2) परिमितार्थ (3) शासनहार। रामायण में इन्हें उत्तम, मध्यम तथा अधम श्रेणियों में विभक्त किया गया है। 53

निःसृष्टार्थ (निःसृष्टार्थ)

जिस दूत में अमात्यपद के लिए निर्धारित योग्यता हो, उसे निःसृष्टार्थ दूत कहा गया है। 54 इस श्रेणी के दूतों को विशेष अधिकार प्राप्त थे। इस श्रेणी के दूत राजा का संदेश दूसरे राजाओं के सम्मुख और उन

राजाओं का संदेश अपने राजा के समक्ष प्रस्तुत करते थे। साथ ही उन्हें कतिपय अन्य अधिकार भी प्राप्त थे। उदाहरणार्थ इन दूतों को अपनी स्वतन्त्र बुद्धि से अपने राजा की कार्य सिद्धि के लिए आवश्यक बातचीत चलाने का भी अधिकार प्राप्त था। इस प्रकार के दूत का पद आधुनिक काल के राजदूतों के समान प्रतीत होता है। अतः विशेष प्रकार की योग्यता वाले व्यक्ति की निस्सृष्टार्थ दूत के पद पर नियुक्त किये जाते थे।

महाभारत में श्रीकृष्ण इसी कोटि के दूत थे। रामायण ने इन्हें उत्तम श्रेणी का दूत कहा है। हनुमान इसी श्रेणी के दूत थे। कम्बन् ने बताया है कि किस सभा में रावण को सामने देखकर क्रुद्ध हुये हनुमान ने बड़ी नीतिमत्ता एवं चिन्तनशीलता का परिचय देते हुए अपने रोष का संवरण किया जिससे कि वे अपने स्वामी का अर्थात् हितसाधन कर सकें। इसलिए वे हनुमान को 'नीतिज्ञ' कहते हैं। 55 सच्चे सेवक का लक्षण बताते हुए गोस्वामी जी कहते हैं— सेवक वही है जो दूसरों के भला-बुरा कहने की चिन्ता न करता हुआ स्वामी के हित को सर्वोपरि मानकर आचरण करता है। इसी कारण गोस्वामी जी ने हनुमान के लिए ज्ञानधन⁵⁶ ज्ञानिनामग्रगण्यम्, सकलगुण-निधान⁵⁷ बल-बुद्धि-निधान⁵⁸ आदि विशेषणों का प्रयोग करते हुए उन्हें 'रघुपतिवर दूत' की उपाधि से विभूषित किया है। रावण की सभा में अंगद का आचरण भी ऐसा ही था। इस दृष्टि से हनुमान के बाद दूसरा स्थान उन्हें ही प्राप्त था। दूत का एक अन्य अत्यधिक आवश्यक गुण यह है कि वह शत्रु द्वारा दिखाये गए प्रलोभन या उसकी भेद-नीति से विचलित न होकर अपने स्वामी के प्रति अडिग निष्ठा बनाये रखे। रावण ने अंगद पर इन नीतियों का प्रयोग करके देख लिया वह सफल नहीं हुआ। 59 इसीलिए अंगद भी उत्तम दूत की कोटि में परिगणित है। गोस्वामी जी ने अंगद के लिए बुद्धि-बल, गुण धाम, परम चतुर आदि विशेषणों का प्रयोग किया है। 60

परिमितार्थ

परिमितार्थ दूत की योग्यता में अमात्य की योग्यताओं से कुछ न्यून योग्यताएँ हो सकती हैं। कौटिल्य के अनुसार अमात्य पद के लिए निर्धारित योग्यताओं में तीन चौथाई योग्यताएँ इस पद के लिए वांछनीय मानी गयी हैं। 61 निःसृष्टार्थ दूत की अपेक्षा परिमितार्थ दूत के अधिकार सीमित थे। परिमितार्थ दूत राजा द्वारा निर्धारित अधिकार-सीमा के भीतर ही दूसरे राजा से बात करने का अधिकार रखता था।

रामायण के अनुसार जो भृत्य किसी एक कार्य के लिए नियुक्त किये जाने पर अपने राजा के हितकर अन्य कार्यों के उपस्थित होने पर अपनी सामर्थ्यानुसार उन्हें पूरा नहीं करता, वह मध्यम श्रेणी का दूत कहलाता है। 62 कम्बन् के अनुसार बिना अपनी ओर से कुछ मिलाए यथोचित रीति से कह देने वाले को 'मध्यम दूत' कहा जाता था। 63 दशरथ को राम विवाह का संवाद देने वाले जनक के दूत ऐसे थे।

(3) शासन हर : तीसरी श्रेणी के दूतों के लिए कौटिल्य ने अमात्यवाद की अर्धयोग्यता मात्र निर्धारित की है। 64 इस कोटि के दूत अपने राजा का संदेश दूसरे राजा के पास ले जाने एवं दूसरे राजा का संदेश अपने राजा के पास ले जाने मात्र का अधिकार रखते थे। इसके अतिरिक्त इन्हें अन्य अधिकार नहीं प्राप्त थे। रामायण के अनुसार जो सामर्थ्यवान होकर भी राजा द्वारा निर्दिष्ट कार्य को यत्नपूर्वक पूरा नहीं करता वह 'अधम श्रेणी' का दूत कहलाता है। 65

याज्ञवल्क्य स्मृति,⁶⁶ कामंदकनीतिसार,⁶⁷ एवं अग्निपुराण⁶⁸ में भी कौटिल्य द्वारा उल्लिखित तीन प्रकार के दूतों का ही उल्लेख मिलता है। केवल कामंदकनीतिसार में परिमितार्थ के स्थान पर मितार्थ नाम का उल्लेख है।

दूतों का आचरण एवं व्यवहार

प्राचीन ग्रन्थों में दूतों की मान्य आचरण संहिता के स्वीकृति-प्राप्त नियम विद्यमान थे। दूत के लिए यह आवश्यक था कि वह दूसरे पक्ष के राजा की आज्ञा प्राप्त कर राजधानी में प्रवेश करें तथा शिष्टता और विनम्र भाव से अपने को उसके सम्मुख प्रस्तुत करें। 69 उसके पश्चात् वह प्राण का संकट उत्पन्न होने पर भी अपने स्वामी के संदेश को यथावत् निवेदन करें। दूसरे राज्य में सत्कार प्राप्त होने पर भी गर्व न करें और जब तक आज्ञा न मिले शत्रु देश के नगर को नहीं छोड़ें। विदेश के प्रवास-काल में दूत को सुरा-सुन्दरी से दूर रहना चाहिए और एकान्त में अकेले सोना चाहिए। उसके कार्य में विलम्ब होने पर उसे शीघ्रता की प्रार्थना करनी चाहिए। दूत का व्यवहार नम्र होना चाहिए तथा किसी अपमानजनक स्थिति को भी सहन कर लेना चाहिए, जिससे विरोधी को क्रुद्ध होने का मौका न मिले। अपने दायित्वों का ध्यान रखते हुए दूत को शत्रु देश के नागरिकों तथा अधिकारियों से खुलकर मिलना चाहिए जिससे उनकी निष्ठा और स्वामिभक्ति का अन्दाज लगाया जा सके। उसे शत्रु की शक्ति से भयभीत नहीं होना चाहिए, वरन् अपने स्वामी के हित की दृष्टि से उसका आकलन करना चाहिए। 70

महाभारत में उल्लेख है कि धृतराष्ट्र ने संजय को दूत के रूप में भेजते हुए कहा था कि सभी लोगों की मंगल कामना करते हुए युधिष्ठिर से कहना कि—“मैं शान्ति ही चाहता हूँ ऐसी बातें तुम उनसे करना जो विपक्षी से करनी चाहिए भरतवंश के लिए कल्याणकारी हो और जिनसे युद्ध प्ररोचना न हो।” संजय ने भी पाण्डवों के यहाँ जाकर शिष्टतापूर्ण शब्दवली में यह कहा—“जय या पराजय में मुझे कोई मंगल दिखाई नहीं देता। मैं विनीत होकर कृष्ण और वृद्ध पांचाल राज के सामने प्रणत हो रहा हूँ और सभी के कल्याण के लिए सन्धि की प्रार्थना करता हूँ। भीष्म और धृतराष्ट्र यही चाहते हैं कि आप लोग शान्ति स्थापित कर लें। 71 महाभारत में दूत को अपना कार्य सफल होने के पूर्व शत्रु से किसी वस्तु को स्वीकार करने से मना किया गया है। 72 रामायण में दूत की पूर्ण आचरण-संहिता का सारांश सुरक्षित है, जहाँ यह स्पष्ट किया गया है कि दौत्य कर्म की सफलता अथवा असफलता दूतों के बुद्धि, विवेक तथा समय और देश के उनके ज्ञान पर अवलम्बित होती है। 73 महाभारत में दूत के रूप में कृष्ण वासुदेव की बुद्धिमत्ता का उदाहरण उपलब्ध है। जहाँ उन्होंने अन्य राजकुलों के मुकाबले कौरवों के गुणों का बखान कर धृतराष्ट्र को जीतने का प्रयास किया था। 74

दूत की आचरण संहिता से यह स्पष्ट है कि वह संदेश को यथावत् निवेदन करने के लिए कर्तव्यबद्ध होता था और इस कारण यदि संदेश अपमानजनक तथा अवज्ञापूर्ण होता तो शत्रु क्रुद्ध हो सकता था। रामायण में इस कोटि के दूत के रूप में हनुमान का उल्लेख है। जिन्होंने लंका में अपने शरारत उद्धृतपूर्ण आचरण से लंकेश रावण को क्रुद्ध कर दिया। 75 रामायण में अनुचित आचरण करने वाले दूत को भी अवध्य बतलाया गया है। यहाँ तक कि महाभारत में दूत के प्रति कड़े शब्दों का भी निषेध किया गया है क्योंकि वह यथानिर्दिष्ट ही निवेदन करता है। 76 उदाहरण स्वरूप दुर्योधन-पाण्डवों के दूत कृष्ण को मारने के लिए उद्यत हो गया था और रावण ने राम के दूत हनुमान की प्राण रक्षा का ध्यान रखते हुए उन्हें अन्य प्रकार से दण्डित किया। फिर भी अनुचित आचरण के लिए दूत को हल्के दण्ड देने की प्रथा का प्रचलन था।

अर्थशास्त्र में दूतों के आचरण एवं व्यवहार के विषय में उल्लेख है कि जब तक शत्रु-राजा उसे अपने राज्य से जाने की आज्ञा न दें तब तक वहीं रहे। शत्रुओं के बीच रहता हुआ अपने को वह बलवान न समझे।

स्त्री-प्रसंग और मद्यपान को सर्वथा त्याग दे। अपने स्थान में एकांकी ही शयन करे। मद्य पीने तथा दूसरों के साथ सोने से प्रमादवश या स्वप्नावस्था में मन के गुप्त रहस्यों के प्रकट हो जाने का भय बना रहता है। शत्रु राजा के कार्यों की जानकारी अपने गुप्तचरों से प्राप्त करता रहे। यदि इन गुप्तचरों से भी कार्य सिद्ध न हो तो भिक्षु, मत्त, उन्मत्त तथा सोते समय प्रलाप करने वाले व्यक्तियों के माध्यम से शत्रु के कार्यों का पता लगाकर तदनुसार भेदरूप उपायों का प्रयोग करे। कार्य सिद्ध हो जाने पर भी यदि शत्रु-राजा उसे रोकता है तो रोके जाने के कारणों का ठीक-ठीक पता लग जाने पर उचित समझे तो रुके, अन्यथा वहाँ से चल दे। 77 कामंदकनीतिसार के अनुसार दूत को चाहिए कि वह शत्रु के अनिष्ट वचन को भी सहन करे, काम और क्रोध को वर्जि करें, दूसरों के साथ न सोये और अपने भाव की रक्षा करता हुआ दूसरे का भाव जानें। 78

दूतों के अधिकार

प्राचीन भारतीय ग्रन्थों में दूतों के अधिकारों की ओर इंगित किया गया है। वास्तव में दूतों का व्यक्तित्व इतना पवित्र होता था कि अनुचित आचरण करने पर भी अवध्य बतलाया गया है। प्राचीन भारतीय मनीषियों ने एकमत होकर दूतों के वध के निषेध सम्बन्धी व्यवस्था की घोषणा की है। यहाँ तक कि महाभारत में दूत के प्रति कड़े शब्दों का भी निषेध किया गया है, क्योंकि वह यथानिर्दिष्ट ही निवेदन करता है। 79 रामायण में जब रामदूत हनुमान को रावण प्राण दण्ड देने का आदेश देता है तो विभीषण बोल उठते हैं। “हे लंकेश! दूत चाहे साधु हो अथवा असाधु यह वास्तविक प्रश्न नहीं है, क्योंकि वह अन्य के द्वारा भेजा गया केवल दूत है और वह दूसरे के हित में भाषण करता है। अतः दूत को कभी मृत्यु दण्ड नहीं दिया जा सकता। 80 पुनः लंकेश कहता है, इस दूत ने स्वयं ही आचरण संहिता का उल्लंघन किया है इसीलिये उसे प्राणदण्ड अवश्य देना चाहिये।” तब विभीषण कहते हैं कि— “हे राजन! क्रोध को शान्त करें और क्षमा ग्रहण कर आप प्रकृतिस्थ हो जायें और मेरी बात कृपा कर सुनें। वह राजा जो विधि का ज्ञान रखता है, कदापि दूत के वध का आदेश नहीं देगा। इस दूत का वध करना राजधर्म के विरुद्ध ही नहीं बल्कि लोकाचार से भिन्न है। सन्तों ने निर्देश दिया है कि दूत की हत्या की अनुमति नहीं दी जा सकती, क्योंकि दूत के लिए अन्य कई दण्डों का विधान है। 81 तब लंकेश कहता है कि हे विभीषण तुम्हारे तर्कों में बल है। मैं स्वीकार करता हूँ कि दूत का व्यक्तित्व पवित्र होता है, इसलिए उसकी हत्या नहीं की जा सकती और यही नहीं उसकी कानून में भी भर्त्सना की गई है। 82

इसी तरह जब कृष्ण हस्तिनापुर कौरव पक्ष के यहाँ दूत बनकर गये थे तो दुर्योधन ने श्रीकृष्ण के प्रति कठोर शब्दों का प्रयोग किया था जिस पर सभा के सबसे वयोवृद्ध सदस्य भीष्म पितामह इतने दुःखी हुए कि दुर्योधन के प्रस्ताव की भर्त्सना करने के अनन्तर वे सभा से उठकर बाहर चले गये। भीष्म का स्पष्ट मत है कि राजा कभी किसी आपत्ति में भी किसी दूत की हत्या न करे। दूत का वध करने वाला राजा अपने मंत्रियों सहित नरक में जाता है। 83 आचार्य कौटिल्य के अनुसार दूत अपने संदेश को सही ढंग से ही शत्रु राजा से निवेदित करते हैं। यहाँ तक कि प्राणघातक स्थिति आ जाने पर भी दूत सही संदेश ही निवेदित करते हैं। अतः यदि कोई कोई चांडाल भी इस कार्य के लिए नियुक्त किया गया हो तो राजधर्मानुसार वह भी अवध्य है। 84 बौद्ध एवं जैन ग्रन्थों से भी ज्ञात होता है कि दूत अवध्य होते हैं। उदाहरण के लिए दूतजातक में दूत

के वध का निषेध किया गया है। 85 इसी प्रकार एक जैन ग्रंथ में राजा जितशत्रु एवं अन्य पाँच राजाओं द्वारा प्रेषित दूतों को मिथिलानरेश द्वारा अपमान करके पीछे वाले द्वार से बाहर निकाल देने का उल्लेख है। 86 गौतमधर्मसूत्र में भी दूत के वध का निषेध मिलता है। 87 संगमकालीन दक्षिण भारतीय ग्रन्थों से यह स्पष्ट होता है कि इस काल में दूतों को अवध्य माना जाता था। इन ग्रन्थों में उल्लेख है कि दूत राजा के गर्वीले शब्दों को सहन नहीं करता था, बल्कि शीघ्रता से उसकी बातों का खण्डन करके अपने राजा की ख्याति को स्थापित करता था। 88 यह परम्परा परवर्ती काल में भी विद्यमान रही। नीति प्रकाशिका के अनुसार युद्ध छिड़ जाने पर भी दूत और उसके साथी अवध्य है। 89 किन्तु यदि वह अनुचित आचरण करें तो उसे विरूप करके या लोहे से दाग कर निकाला जा सकता है।

दूतों के कार्य : मनुस्मृति के अनुसार “वह (राजदूत), इस (शत्रु-राजा के कृत्यों) कर्तव्य (अर्थात् धन, स्त्री, पद या राज्य भाग के द्वारा राजदूतों को वश में करना आदि) में शत्रु-राजा के अनुचारों के इंगित (अभिप्रायसूचक बात और स्वर आदि) तथा चेष्टाओं (हाथ, मुख, अंगुली आदि की इशारेबाजी) से (शत्रु-राजा के) क्षुब्ध या लुब्ध भृत्यों में (शत्रु-राजा के) आकार (मुख की प्रसन्नता या उदासीनता आदि) इंगित, चेष्टा और चिकीर्षित (अभिलषित कार्य) को मालूम करें। “ शत्रु-राजा के चिकीर्षित (अभिलषित कार्य) को ठीकठाक मालूम कर वैसा प्रयत्न करे जिससे अपने को कष्ट न हो। 90 महाभारत में अनेक स्थलों पर दूतों के माध्यम से संदेश पहुँचाने का उल्लेख है।

रामायण के अनुसार दूत का परम कर्तव्य है कि वह वनपाल, सीमापाल, नगर तथा राष्ट्र में निवास करने वाले अन्य प्रधान व्यक्तियों से मित्रता स्थापित करे शत्रु देश में पहुँचे हुए दूत को अपनी और शत्रु की सेनाओं के ठहरने तथा युद्ध करने योग्य स्थान का पता लगाने का प्रयास करना चाहिए। शत्रु राजा के दुर्गों की संख्या, राज्य का सीमा-विस्तार, धन-धान्य की उत्पत्ति, नागरिकों की जीविका तथा राजा के या उसकी सेना के दोषों का ज्ञान प्राप्त करना चाहिये। गूढ़ पुरुषों तथा सेना को भगा देना, पुरानी संधि की रक्षा करना, गुप्त रहस्यों को जानने के लिए गुप्तचरों की नियुक्ति करना, अपने स्वामी का संदेश शत्रु के पास पहुँचाना और इसका उत्तर अपने राजा के पास भेजना, अवसर आने पर बल प्रदर्शन करना, गुप्तचरों के संवादों का समुचित संग्रह करना आदि के बारे में जानकारी प्राप्त करे। 92

उक्त जितने भी दूत के कर्तव्य हैं, ये सभी राम और रावण के दूतों में विद्यमान थे। जैसे हनुमान ने समय आने पर अपना बल प्रदर्शन किया। लंका के गुप्त रहस्यों की खोज, सैन्य शक्ति, खाई, दुर्ग परकोटे, सीमा-विस्तार इत्यादि सबके बारे में पता लगाकर किष्किंधा लौटकर सुग्रीव और राम को अवगत कराया था। वाल्मीकि ने इनका बड़े ही सुन्दर ढंग से वर्णन अपने काव्य में किया है। जब लंका से हनुमान लौटते हैं तो राम ने जो उनसे राजनीतिक प्रश्न पूछा, उससे दूत के कर्तव्यों का स्पष्ट पता चलता है। 93 स्वयं हनुमान सीता की खोज करने के बाद रावण के बारे में पता लगाना चाहते थे। सम्भवतः इसलिए उन्होंने अशोक वाटिका का विध्वंस करना प्रारम्भ किया था, क्योंकि हनुमान कहते हैं—मुख्य कार्य को पहले करके और मुख्य कार्य को हानि न पहुँचाते हुए, जो दूत और भी कई कार्य पूरे कर डाले, तो वही दूत वास्तव में कार्य करने के योग्य कहा जा सकता है। 94 हनुमान बल प्रदर्शन की चर्चा करते हुए राम से कहते हैं कि—“मैंने लंका जला डाली है और लंका का परकोटा गिरा दिया है तथा लंका की चौथाई सेना का विध्वंस कर दिया है। “

युवराज अंगद ने भी देत के कर्तव्यों का विधिवत निर्वाह किया। वे अन्तिम शान्ति का संदेश लेकर लंकेश रावण के पास जाते हैं और राम के संदेश को बहुत ही अच्छे ढंग से लंकेश के सामने प्रस्तुत करते हैं, समझौते को अस्वीकार कर रावण अंगद को मार डालने की आज्ञा देता है। जब अंगद अपने शौर्य का प्रदर्शन करते हैं।

कौटिल्य अर्थशास्त्र में राजदूत के निम्नलिखित कार्य लिखे गये हैं-

(1) प्रेषण—अपने राजा के संदेश को पहुँचाना। (2) सन्धिपालत्व— सन्धियाँ करना और यह ध्यान रखना कि उनका यथोचित रूप में पालन किया जाए। (3) प्रताप— अवसर के अनुसार विदेशी राजा को चुनौती देना। (4) मित्रसंग्रह— अन्य राज्यों के साथ मैत्री करना। (5) उपजाप— विदेशी राज्य में षडयंत्र करना। (6) सुहृद भेद— जिन विदेशी राज्यों में सौहार्द्र सम्बन्ध हों, उनमें भेद उत्पन्न करके उनके सौहार्द्रभाव को नष्ट करना। (7) गूढदण्डातिसारण— अपनी सैन्य शक्ति को गुप्त रूप से शत्रु राज्य में पहुँचाना। (8) बन्धुरत्नापहरण— शत्रु राज्य के राजा के बन्धुबान्धवों और सम्पत्ति का अपहरण करवाना। (9) चार ज्ञान—विदेशी राज्यों के गुप्तचरों की गतिविधि का पता रखना। (10) पराक्रम— आवश्यकता पड़ने पर पराक्रम प्रदर्शित करना। (11) समाधिमुख— जिस विदेशी राज्य के साथ जो सम्बन्ध विद्यमान हों, उसे भंग कर नये सम्बन्ध स्थापित करना। 96 निसंदेह, ये सब कार्य अत्यन्त महत्व के थे। विदेशी राज्यों में नियुक्त राजदूत जहाँ अपनेराजा के सन्देश पहुँचाने का कार्य करते थे, वहाँ साथ ही विदेशों के साथ सम्बन्धों को निर्धारित करना भी प्रधानतया उन्हीं का कार्य था। विदेशी राज्यों द्वारा नियुक्त राजदूतों (परदूतों) की रक्षा करना राज्य के लिए आवश्यक माना जाता था। साथ ही यह भी ध्यान में रखा जाता था, कि विदेशी दूत राज्य को किसी प्रकार से क्षति न पहुँचाने पाएँ। इसके लिये उन पर अनेक गुप्तचर तथा 'रक्षी' नियुक्त किये जाते थे, जो कि दृश्य और अदृश्य दोनों प्रकार के होते थे। 97 इन गुप्तचरों और रक्षियों के कारण विदेशी राजदूतों के लिये राज्य को क्षति पहुँचा सकना सुगम नहीं रहता था। दूतों से यह भी आशा की जाती थी, कि विदेशी राज्य में निवास करते हुए वे उनके अन्त्यपालों, अटविमुख्यों, पुरमुख्यों और राष्ट्र (जनपद) मुख्यों के साथ सम्पर्क स्थापित करें विदेशी राज्य के अनीकस्थान (स्कंधावार आदि सैनिक स्थान), युद्धप्रतिग्रह (युद्ध के साधन तथा सामग्री) और अपसार भूमि (जहाँ से सैन्य संचालन किया जा सके) के सम्बन्ध में परिचय प्राप्त करें और अपने राज्य की इन बातों के साथ उनकी तुलना करें और यह जानकारी प्राप्त करें कि विदेशी राज्य के दुर्गों (दुर्ग रूप नगरों) और राष्ट्र (जनपद) का कितना प्रमाण (आकार—प्रकार) है, और उसके कौन से स्थल सशक्त है, कौन से निर्बल हैं, और कौन से सुगुप्त रूप हैं। 98

कामंदकनीतिसार के अनुसार दूत को चाहिए कि वह मित्र तथा जंगल के रहने वालों को अपने अंतःपुर का रक्षक नियुक्त करें, अपनी सेना की सिद्ध के लिए स्थल और जल के मार्गों को जाने। 99 इसके अतिरिक्त उसे शत्रु के राज्य की सारवत्ता, किले और उस किले की रक्षा, कोष, मित्र बल और शत्रु के छिद्र आदि की जानकारी रखनी चाहिए। 100 जातकों में एक राजा का दूसरे राजा के पास संदेश ले जाना ही उनका कार्य बतलाया गया है। 101 संगमकालीन कवि ओरम्बोगियार ने दूतों का एक विचित्र कार्य बताया है। उनके अनुसार दूत अपने राजा की सहायता के लिए याचना करते थे और उसकी अभीष्ट सिद्धि के लिए सहायता के लिए याचना करते थे और उसकी अभीष्ट सिद्धि के लिए सहायता एकत्रित करते थे। 102

सन्दर्भ एवं टिप्पणियाँ

1. अर्थशास्त्र-अधिकरण-1, प्रकरण-11, अध्याय-15
2. मनुस्मृति, अध्याय-7, श्लोक-66
3. कामंदकनीतिसार, 12/28-30
4. वही, 15/52
5. अग्निपुराण-अध्याय-233, श्लोक-14
6. मदुरैक्कांजी, 510
7. ऋग्वेद-10/108/2-3
8. वही, 3/3/2, 6/8/4, 7/3/3
9. वी0आर0 रामचन्द्र दीक्षितार; 'वार इन ऐंश्येंट इण्डिया' पृ0 337
10. ऋग्वेद, 1/58/1
11. वही, 4/165/10
12. वही, 2/26/6
13. वासुदेवशरण अग्रवाल; 'पाणिनिकालीन भारतवर्ष', वाराणसी (1969), पृ0 397, अष्टाध्यायी, 4/3/85
14. महाभाष्य, 1/3/10 पृ0 40
15. वासुदेवशरण अग्रवाल; 'पूर्वोल्लिखित' पृ0 397, अष्टाध्यायी, 3/2/21
16. वही, 5/1/74
17. अर्थशास्त्र, 5/91/3
18. वासुदेवशरण अग्रवाल; 'पूर्वोल्लिखित', पृ0 402
19. बाल्मीकि रामायण, 1/13/20-26
20. प्रो0 लल्लन जी सिंह; भारतीय सैन्य इतिहास और युद्ध के सिद्धान्त पृ0 122
21. वही, बाल्मीकि रामायण, युद्ध काण्ड, 41/19
22. श्री मार्कण्डेय पुराण, अध्याय-8, श्लोक 28, श्री दुर्गासप्तशती; अनुवाद-पं0 श्री रामनारायण दत्त जी, गीताप्रेस गोरखपुर, 2004 पृ0 138
23. बुद्धचरित-18/1
24. रामसिंह : प्राचीन भारतीय युद्ध व्यवस्था, राधा कृष्ण प्रकाशन, नई दिल्ली 1967 पृ0 162
25. वही, पृ0 162
26. वही, पृ0 162
27. वही, पृ0 163
28. वही, पृ0 163
29. भास्कर चट्टोपाध्याय, कुषाण स्टेट एण्ड इण्डियन सोसाइटी, पृ0 136
30. स्ट्रैवो-ज्योग्राफी, 15, 4, 73
31. एच0 जी0 रालिंसन, इण्टरकोर्स बिटविन इण्डिया एण्ड वेस्टर्न वर्ल्ड पृ0 107-109
32. ए0 एल0 बाशम, स्टडीज इन इण्डियन हिस्ट्री एण्ट कल्चर, पृ0 136-140
33. भास्कर चट्टोपाध्याय, पूर्वोल्लिखित पृ0 141
34. वही
35. सिलप्पदिकारम 26/138 राम सिंह; पूर्वोल्लिखित, पृ0 163

36. वही, पृ० 164
37. ऋग्वेद, 4/26/1
38. ऋग्वेद, 5/36/1
39. ऋग्वेद, 8/43/5
40. प्रो० लल्लन जी सिंह; पूर्वोल्लिखित, पृ० 240
41. वही
42. मनुस्मृति, 7/63/64
43. महाभारत, शान्तिपर्व 6/15/28
44. अर्थशास्त्र 1/8
45. प्रो० लल्लनजी सिंह; पूर्वोल्लिखित पृ० 240
46. मानवधर्म शास्त्र; 7/63/64
47. कामंदकनीतिसार, 12/12
48. अयोध्या काण्ड 1/100/35
49. प्रो० लल्लनजी सिंह; पूर्वोल्लिखित पृ० 241
50. कुरल, 69वाँ अध्याय तुलनीय—एन० सुब्रह्मण्यन; पूर्वोल्लिखित पृ० 99
51. विनयपिटक : अनु० राहुल सांस्कृत्यायन, पृ० 491
52. शुक्रनीति, 2/86
53. प्रो० लल्लनजी सिंह, पूर्वोल्लिखित
54. अर्थशास्त्र, 1/11/15
55. कम्बरामायण 6/36/25
56. श्रीरामचरितमानस, सुन्दरकाण्ड, श्लोक : 3
57. वही
58. वही
59. कम्बरामायण, 6/13/26
60. श्रीरामचरितमानस 6/17/6-7
61. अर्थशास्त्र, 1/11/15
62. बाल्मीकि रामायण, 9/1/9
63. कम्बरामायण, 1/13/1-3
64. अर्थशास्त्र, 1/11/15
65. प्रो० लल्लनजी सिंह; पूर्वोल्लिखित' पृ० 242
66. याज्ञवल्क्य स्मृति, 13/349
67. कामंदकनीतिसार, 13/349
68. अग्निपुराण, 241/8
69. महाभारत, उद्योगपर्व, 59/3
70. प्रो० लल्लनजी सिंह; पूर्वोल्लिखित पृ० 244
71. महाभारत, उद्योगपर्व, 95/6
72. महाभारत, उद्योगपर्व, 91/18

73. बाल्मीकि रामायण, सुन्दरकाण्ड, 2/37-38
74. महाभारत, उद्योगपर्व, 95/6
75. बाल्मीकि रामायण, सुन्दरकाण्ड, 38
76. महाभारत, उद्योगपर्व, 162/38-39
77. अर्थशास्त्र, 1/11/15
78. कामंदकनीतिसार, 12/13, 15
79. महाभारत उद्योगपर्व, 162/38/35
80. बाल्मीकि रामायण, सुन्दरकाण्ड, 52/21
81. वही, 5/55/52/15
82. वही, 6/3/2
83. महाभारत, शान्तिपर्व, 58/26:67
84. अर्थशास्त्र, 1/11/15
85. दूतजातक, 2, 261
86. ज्ञातृधर्मकथा, 8, 122
87. गौतम धर्मसूत्र, 10
88. सिलप्पदिकारम्, 28/187-88
89. नीतिप्रकाशिका, 7/64
90. मनुस्मृति, 7/67-68
91. महाभारत, उद्योगपर्व 30/4, 33/2/85/1-2
92. प्रो० लल्लनजी सिंह; पूर्वोल्लिखित पृ० 243
93. वही
94. वही
95. वही
96. कौटिल्य अर्थशास्त्र, 1/16 सत्यकेतु विद्यालंकार; मौर्य साम्राज्य का इतिहास, पृ० 199
97. वही
98. वही
99. कामंदकनीतिसार, 12/5
100. वही, 12/7
101. महाउम्मंग जातक, 546, 132-138
102. पुरनानुरु पृ० 284

नारी शिक्षा का संक्षिप्त इतिहास

डॉ. विजय नारायण तिवारी*

वर्तमान वैज्ञानिक युग में शिक्षा विकास का प्रबल माध्यम है। शिक्षा व्यक्ति को ज्ञान से पूर्ण करती है तथा उसे एक कुशल नागरिक बनाती है। वैदिककाल से ही हमारे देश में शिक्षा सर्वोपरि रही है। जिस समय अन्य देश घोर अंधकार में भटक रहा था उस समय हमारा देश नारी शिक्षा में उच्च शिखर पर विद्यमान था। वैदिक काल में नारी शिक्षा चरमोत्कर्ष पर थी। स्त्रीयाँ अध्ययन के साथ साथ संहिताओं की भी रचना करती थी। विद्व तसमाज में स्त्रियाँ शास्त्रार्थ भी करती थी। वैदिक काल की विदुषी महिलाओं में मैत्रेयी, गार्गी, घोषा, लोपामुद्रा, अपाला, विश्वसारा, रोमसा, कात्यायनी, सरस्वती, आत्रेयी, जुहू, अनसूइया, शकुन्तला आदि हैं। स्त्रियाँ विविध शास्त्रों की भी प्रकाण्ड पण्डित होती थी। कभी-कभी नारीयाँ केवल शास्त्रार्थ में ही भाग लेकर पुरुषों की समकक्षता करती थी, अपितु शास्त्रार्थ में मध्यस्थ भी बनायी जाती थी। वैदिककालीन नारी शिक्षा की विशेषता यह थी की नारियों को शिक्षा प्राप्त करने का पूर्ण अधिकार था। ब्रह्मचर्य व्रत से सम्पन्न शिक्षित कन्या को ही गृहस्थ आश्रम में प्रवेश करने का अधिकार था। समय की गति के साथ समाज में स्त्रियों का महत्व घटा उसके फलस्वरूप उनका शिक्षा अधिकार कम होता गया। वैदिक काल में सह शिक्षा का प्रचलन था। बालिकाओं को साहित्य, नृत्य, संगीत, काव्य-रचना, वाद-विवाद, सिलाई-बुनाई, पाकशास्त्र आदि विषयों की शिक्षा दी जाती थी। शिक्षा मुक्ति का साधन मानी जाती थी।

सा विद्या या विमुक्तये

वैदिक कालीन शिक्षा मानवीय सिद्धान्तों पर आधारित है। प्राचीन शिक्षा शास्त्रियों ने शिक्षा का स्वरूप चित्तवृत्ति निरोध माना है।

योगश्च चित्त वृत्ति निरोधः।

भारतीय नारी की पवित्रता तथा सतित्व बहुमूल्य निधि है जो उसे अतीत काल से प्राप्त हुई है। श्रद्धा, आत्मविश्वास एवं आत्मबल जगाने का उपाय केवल यही है की प्रत्येक नवयुवक और नवयुवती सुशिक्षित तथा सुसंस्कृतवान बने। वर्तमान कन्यायें ही विश्व की मातायें तथा जननी होंगी। स्त्री शक्ति की सजीव प्रतीमा है। मनु ने कहा है— जहाँ स्त्रियों का आदर होता है वही देवता प्रसन्न रहते हैं और जहाँ उनका आदर नहीं होता है वहाँ सारे कार्य और यत्न निष्फल हो जाते हैं।

यत्र नार्यस्तु पूज्यन्ते रमन्ते तत्र देवताः।

यत्रैतास्तु न पूज्यन्ते सर्वास्तत्राफलाः क्रियाः।।

स्त्रियों की अनेक समस्याओं का निदान शिक्षा द्वारा हो सकता है। आधुनिक युग में नारीयाँ को आत्मरक्षा के उपायों को भी सीखना चाहिए। संघमित्रा, लिला, अहिल्याबाई, मीराबाई, झाँसी की रानी के आदर्शों को अपनाकर स्त्रियों की उन्नति से संस्कृति, ज्ञान, शक्ति और भक्ति का देश में जागरण होगा। आधुनिक युग में

*असिस्टेंट प्रोफेसर, एम.एड. शिक्षा संकाय संत तुलसीदास पी.जी. कॉलेज, कादीपुर सुल्तानपुर, उत्तरप्रदेश, 228145।

स्त्रियों को शिक्षा का कार्य भी अपने हाथ में लेना चाहिए। सुशिक्षित और चरित्रवती ब्रह्मचारिणियाँ शिक्षा का कार्यभार अपने हाथ में ले। ग्रामों और शहरों में केन्द्र खोलकर स्त्री शिक्षा के प्रचार का प्रयत्न करे। ऐसी सच्चरित्र, निष्ठावान उपदेशिकाओं के द्वारा स्त्री शिक्षा का यथार्थ प्रचार होगा। इतिहास और पुराण, गृह-व्यवस्था और कला-कौशल, गृहस्थ-जीवन के कर्तव्य और चरित्र गठन के सिद्धान्तों की शिक्षा देनी होगी और दूसरे विषय जैसे- सीना, पीरोना, गृह कार्य नियम, शिशु पालन इत्यादि भी सिखाये जाये।

महर्षि दयानन्द सरस्वती ने स्त्री शिक्षा का समर्थन किया है। उनके अनुसार वेदों में स्त्री शिक्षा का विरोध नहीं है। इदं मन्त्रं पत्नीं पठेत्। अर्थात् यह मन्त्र पत्नी पढ़े। वेद के इस मन्त्र से प्रकट है कि यदि पत्नी अशिक्षित होगी तो वह वह यज्ञ में सम्मिलित न हो सकेगी। अतः स्त्री को भी पुरुष के समान शिक्षा प्राप्त करनी चाहिए। अथर्ववेद में लिखा है— ब्रह्मचर्येण कन्या युवानं बिन्दते पतिम्। ब्रह्मचर्य व्रत का पालन करते हुए कन्या युवा पति का वरण करें। इस भारतीय नारी की पवित्रता तथा सतित्व बहुमूल्य निधि है जो उसे अतीत काल से प्राप्त हुई है। इसलिये स्वामी दयानन्द के स्त्री शिक्षा सम्बन्धी विचारों को श्री मेधाप्रताचार्य ने लिखा है—

द्वृतं संस्कृत भाषिणीं रमा सुमहाराष्ट्रज विप्रवंशजम्।

विदुषीं पठितुं निधेदुधीप्रधिराजोऽवददेवमेकदा। ।

अर्थात् ब्राह्मण वंश में उत्पन्न रमा महाराष्ट्री महिला थी जो संस्कृत में धारा प्रवाह बोलती थी। वह विदुषी स्वामी जी से दर्शनशास्त्र पढ़ती थी। एक दिन स्वामी जी ने देवी से कहा—

निर्जावजातेस्तनुजादशाऽधुना नितान्तशोच्य सुशिक्षर्णविना।

कुरीत केल्या मलना महालयं न भान्ति वत्से ! जननी पदं गतः। ।

अर्थात् हे वत्से ! इस युग में अपनी आर्य जात की पुत्रियों की दशा शुभ शिक्षण के बिना अत्यन्त शोचनीय है। समस्त कुरीतियों की महालय बनी हुई है। ऐसी देवीयाँ मातृ पद को प्राप्त करके सुशोभित नहीं होती है।

तद् ब्रह्मचारिणी भूत्वा सुलभेव तपोधना।

श्रुतिविद्योपदेशैस्तास्संकारय कुलांगनाः। ।

इसलिए तुम सुलभा समान यशस्विनी ब्रह्मचारिणी बनो और उत्तम वैदिक धर्म ज्ञान के उद्देश्यों से इन कुलांगलाओं के हृदयों में शुभ संस्कार डालो। स्वामी जी सह— शिक्षा के घोर विरोधी थी। किन्तु नारी शिक्षा के परम समर्थक थे। कन्याओं की पाठशाला में सभी शिक्षक, स्त्रियाँ हो और बालकों की पाठशाला में पुरुष शिक्षक हो। द्विज अपने घर में लड़कों का यज्ञोपवीत और लड़कियों का भी यथायोग्य संस्कार करके अपनी-अपनी पाठशाला में भेज दें।

वैदिक काल में नारी शिक्षा के प्रमुख केन्द्र आश्रम ही थे। जिसमें सहशिक्षा का प्रचलन था। वशिष्ठ आश्रम, वाल्मीकि आश्रम, याज्ञवल्क्य आश्रम, विश्वामित्र आश्रम, संदीपनी आश्रम आदि वैदिक कालीन शिक्षा के प्रमुख अध्ययन केन्द्र थे। बौद्धकाल में नारी शिक्षा समाज में अधिक प्रशंसनीय हो नहीं थी। मठों में सह शिक्षा का बोल बाला था। मठ में स्त्री पुरुषों के साथ सामान्य रूप से रहकर शिक्षा ग्रहण करती थी। जिससे व्यभिचार बढ़ता गया। अतः नारी शिक्षा अत्यन्त दयनीय हो गयी। बौद्धकालीन शिक्षा में स्त्रियों की शिक्षा पर कठोर नियंत्रण लगा दिया गया। संघ में स्त्रियों को प्रवेश करने की अनुमति पर रोक लगा दिया गया। बोद्ध

काल में विद्याध्ययनकाल तक ब्रह्मचर्य का पालन करना पड़ता था। उन्हें अपने आदर्श चरित्र की रक्षा करनी पड़ती थी। अतएव चरित्र भ्रष्ट होने के डर से महात्मा बुद्ध ने मठ में स्त्रियों के प्रवेश पर रोक लगा दिया। लेकिन अपने विमाता महाप्रजाति तथा शिष्य आनन्द के अधिक आग्रह करने पर बुद्ध ने स्त्रियों को भी संघ में प्रवेश करने की अनुमति दे दी। फलस्वरूप नारी शिक्षा को प्रोत्साहन प्राप्त हुआ। स्त्रियों के लिए अलग से मठ एवं विहार स्थापित किए गए यहाँ रहकर स्त्रियों ने चरित्र, ब्रह्मचर्य का पालन करते हुए धर्मशास्त्र तथा साहित्य का अध्ययन किया। शिक्षा प्राप्त करने का अधिकार उच्च वर्ग की तथा व्यावसायिक वर्ग की स्त्रियों को ही दिया गया था। बौद्धकाल की विदुषी नारीयों में शील भट्टारीका, विजयांका, प्रभुदेवी, रानी नयनीका, रानी प्रभावती गुप्त, संघमित्रा, राज्यश्री आदि थी। मुस्लिम काल में नारी शिक्षा पर्दे के पीछे ही सीमित थी। नारीयों के लिए अलग से शिक्षण संस्थाएँ नहीं थी। व्यक्तिगत शिक्षा की व्यवस्था थी। मुस्लिम काल में केवल छोटी उम्र की बालिकाएँ मकतबों में जाकर बालकों के शिक्षा ग्रहण करती थी। उच्च शिक्षा की व्यवस्था नहीं थी। मध्यवर्ग की बालिकाओं को अपेक्षाकृत शिक्षा के अधिक अवसर उपलब्ध थे। ये बालिकाएँ मकतबों में न जाकर व्यक्तिगत शिक्षा स्त्रियों द्वारा चलाये जा रहे अपने मकतबों में ग्रहण करती थी। निजी घरों में बालिकाओं को धार्मिक शिक्षा, कुरान, गुलिस्तों, सदाचार की पुस्तकें पढ़ाई जाती थी। मदरसों में छात्राओं को नृत्य, संगीत, सीलाई-बुनाई इत्यादि की शिक्षा दी जाती थी। मुस्लिम नारीयों में रजीया सउलतान, गुलबगन बेगम, सलीमा सुलताना, नूरजहाँ, जोबुन्निशाँ बेगम, चाँद सुलताना, मुमताज महल, जहाँनारा, आदि प्रमुख विदुषियाँ थी। गृह शिक्षा के द्वारा ही इनको शिक्षा प्राप्त हुई।

स्वतंत्रतापूर्व ब्रिटिश काल में नारी शिक्षा का प्रारम्भ मिशनरीयों के आगमन पर हुआ। मिशनरीयों ने भारतीय नारी शिक्षा पर व्यय करना प्रारम्भ किया। कालान्तर में मैकाले का शिक्षात्मक विवरण प्राप्त हुआ किन्तु इस पत्र में नारी शिक्षा पर कोई चर्चा नहीं थी। 1854 में वुड के घोषणा पत्र के अनुसार सरकार ने नारी शिक्षा का भार अपने उपर ले लिया। इसमें स्त्री शिक्षा के उपर विशेष ध्यान दिया गया। बालिका विद्यालयों का निर्माण किया गया। फलस्वरूप नारीशिक्षा की प्रगती अबाधित गती से होती चली गयी। 1882 ई. में नारीयों के लिए सभी प्रकार के विद्यालयों की संख्या 2697 थी जिसमें 127066 छात्राएँ शिक्षा प्राप्त कर रही थी। भारत की विशाल जनसंख्या को देखते हुए छात्राओं की यह संख्या नगण्य थी। स्वतंत्रता के पश्चात् भी स्त्री शिक्षा कुछ कारणों से बाधित थी जैसे—

1. स्त्री शिक्षा अनावश्यक समझी जाती थी।
2. भारत में बाल-विवाह की प्रथा प्रचलित थी।
3. पर्दा-प्रथा का प्रचलन था।
4. रूढ़िवादिता का बोल बाला था।

किन्तु, कालान्तर में नारियाँ प्राथमिक विद्यालय में अध्यापिकाओं का कार्य प्रारम्भ कर दी थी। इस समय स्त्री प्रशिक्षण का कार्य प्रारम्भ हो गया था। भारत सरकार को नारी शिक्षा को जागरूक करने का श्रेय एक विख्यात समाज सेविका मिस कारपेन्टर को प्राप्त है। उसी के अनुरूप आज नारी शिक्षा चरमोत्कर्ष पर है।

आधुनिक काल में सरकार द्वारा विद्यालयों में निःशुल्क शिक्षा, मध्याह्न भोजन, ड्रेस, छात्रवृत्ति, साइकिल इत्यादि की व्यवस्था की गयी है। महिला शिक्षा की देख-भाल के लिए राज्य शिक्षा निदेशालयों में अलग-अलग

शाखाओं का स्थापना, बालिकाओं के लिए पॉलिटेक्निक की स्थापना, महिला अध्यापकों के लिए ग्रामीण क्षेत्रों में आवास की स्थापना, बालिकाओं के लिए छात्रावास का निर्माण, संक्षिप्त शिक्षा पाठ्यक्रमों का आयोजन, महिला शिक्षा के क्षेत्र में कार्यरत गैरसरकारी संस्थाओं की सहायता और विभिन्न राज्यों में महिला शिक्षा सम्बन्धी समस्याओं और कार्यक्रमों पर विचार-विमर्श करने के लिए गोष्ठियों का आयोजन आदि को शामिल किया गया है। फलस्वरूप वर्तमान काल में नारी शिक्षा अबाधगति से शत-प्रतिशत साक्षरता के लक्ष्य को प्राप्त करने के लिए अग्रसर हो रही है।

संदर्भ ग्रंथ सूची

- उपनिषद
- योगदर्शन
- मनुस्मृति
- स्वामी विवेकानन्द शिक्षा, श्री रामकृष्ण आश्रम, नागपुर, पृ.- 43
- मेधव्रताचार्य, दयानन्द दिग्विजय, त्रयोदश सर्ग, पृ.- 67
- वही, पृ.- 68
- वही, पृ.-70
- वही, पृ.- 71

Applicability of Curriculum and Assessment in the Process of Education

Priyadarshi Mishra*

Education has an important role and space in our life. It is education which makes us civilized. No one should be left out from the preview of education. The expression of global concern on 'Education for All' echoes India's preoccupation with Universalizing Elementary Education (UEE) by addressing the issue of access, equity and quality. Research findings from across the globe indicate that schools and teachers are struggling to respond to wide array of students. At the school level Inclusive Education seeks to address the learning need of all with a specific focus on those who are vulnerable to marginalization and exclusion. The regular schools with inclusive orientation are the most effective means of combating discrimination, creating welcoming communities, building an inclusive society and achieving Education for all (UNESCO,1994). This has further restated in World Education Forum that school should accommodate all children regardless of their physical, intellectual, social, emotional, linguistic and other cognition (Dakar, 2000).The Indian National Policy on Education (NPE-1986, PoA 1992) and National Curriculum Framework for school education emphasized the need for integration of all children special needs in the regular schools. Keeping in view the observation of NPE-1986, then 'Persons with Disabilities (Equal Opportunities, protection of rights and full participation Act (1995),The Rights of Persons with Disabilities and other national & international developments necessitate integration of all children in regular schools and common classrooms.

The Salamanca Conference reaffirmed the right to education of every Individual, as enshrined in 1948's Universal declaration of Human Rights and renewed the pledge made by the world community at the 1990's World Conference on Education for all to ensure that right for all regardless of individual difference.

The concept of curriculum is as dynamic as the changes that occur in society. In its narrow sense, curriculum is viewed merely as a listing of subject to be taught in school. In a broader sense, it refers to the total learning experiences of individuals not only in schools but in society as well.

The teacher is required to achieve the aims of education. For that purpose he has to employ suitable instructional methods and procedures. But this he can do only when he knows what efforts he is to make and in what order. In other words, he should know the content of curriculum which consists of subjects, activities and experiences in the properly graded form.

HISTORY OF CURRICULUM

The NCERT was established in 1961 by government of India with the agenda to design and support a common system of education which is national in character and also enables and encourages the diverse culture across the country. Based on the recommendations of the Education Commission (1964-66), the first national policy statement on education was issued in 1968. The policy endorsed the adoption of a uniform pattern of school education across country consisting of 10 years of general education program followed by 2 years of diversified schooling.

The Curriculum for the Ten-year school: This framework came in 1975. It emphasized that a curriculum based on the principles laid out in the framework has to be developed on the basis of

*Research Scholar, Sanskriti University, Mathura.

research. Thus for NCERT, the 1970s was a decade flushed with curriculum research and development activities to relate the content and process of education to Indian realities.

National Curriculum for Elementary and Secondary Education: This revised curriculum framework came in 1988 after the National Policy on Education (1986). It encompassed 12 years of school education and suggested a reorientation of curricular and instructional materials to make them more child-centered. It advocated bringing out examination reforms and the implementation of Continuous and Comprehensive Evaluation (CCE) at all stages of education.

National Curriculum Framework for School Education: This framework came in 2000. It stressed the need for a healthy, enjoyable and stress-free childhood and reduction of the curricular load. Thus an integrated and thematic approach was suggested, environmental education was emphasized upon and language and mathematics got integrated in the first two years of schooling.

National Curriculum Framework: The council came up with a new National Curriculum Framework in 2005, drafted by a National Steering Committee. This exercise was based on 5 guiding principles:

1. connecting knowledge to life outside school
2. shift from the rote method of learning
3. enriching the curriculum for overall development of children so that it goes beyond textbooks
4. making examinations flexible and integrating them with classroom life
5. Nurturing an identity informed by caring concerns.¹

MEANING OF CURRICULUM

T.P. Nunn-“The curriculum should be viewed as various forms of activities that are grand expressions of human spirit and that are of the greatest and most permanent significance to the wide world”.

Modern Concept of Curriculum

Modern education is the combination of two dynamic processes. The one is the process of individual development and the other is the process of socialization, which is commonly known as adjustment with the social environment.

Cunningham - “Curriculum is a tool in the hands of the artist (teacher) to mould his material (pupils) according to his ideas (aims and objectives) in his studio (school)”.

Points of View on Curriculum Development

From the various definitions and concepts presented, it is clear that curriculum is a dynamic process. Development connotes changes which are systematic. A change for the better means any alteration, modification or improvement of existing condition. To produce positive changes, development should be purposeful, planned and progressive. This is how curriculum evolves. Hamid Hasan (1988) telling that curriculum concept can be evaluated in four dimension, i.e.

1. Curriculum as an idea, yielded pass or through research and theory's, especially in the field of education and curriculum.
2. Curriculum as plan written, as materialization of curriculum as an idea; what in it load about target, materials, activity, appliances, and time.
3. Curriculum as an activity, representing execution of curriculum as a plan written; in the form of study practice.
4. Curriculum as a result of representing consequence of curriculum as an activity, in the form of got of curriculum target namely reaching of change of certain ability or behavior from all educative participants.

Scope of curriculum

1. Goals: the benchmark or expectations for teaching and learning often made explicit in the form of a scope and sequence of skill to address;
2. Methods: The specific instructional methods for the teacher, often described in a teacher's edition;
3. Materials: The media and tools that are used for teaching and learning;
4. Assessment: The reasons for and methods of measuring student progress.

Curriculum need and Importance

1. Achievement of educational aims;
2. Criteria of suitable teachers;
3. Selection of suitable methods;
4. Reflects trends in education;
5. Providing suitable knowledge;
6. Providing suitable activities and experiences;
7. Providing wholesome influences.

MAIN FACTORS OF EDUCATIONAL PROCESS

1. *Achievement of Educational Aims*

Merely defining the aims of education is futile. There should be well planned efforts to achieve the aims of education. We must think of knowledge, activities, experiences and other influences which help in the achievement of aims of education.

2. *Criteria of Suitable Teachers*

It is curriculum which can show what types of teachers are required in the schools. We should know what type of work they are required to do and this is according to the requirements of curriculum.

3. *Selection of Suitable Methods*

Curriculum enables the teacher to select suitable methods of teaching. 'How to teach' will be determined by 'what to teach'.

4. *Reflects Trends in Education*

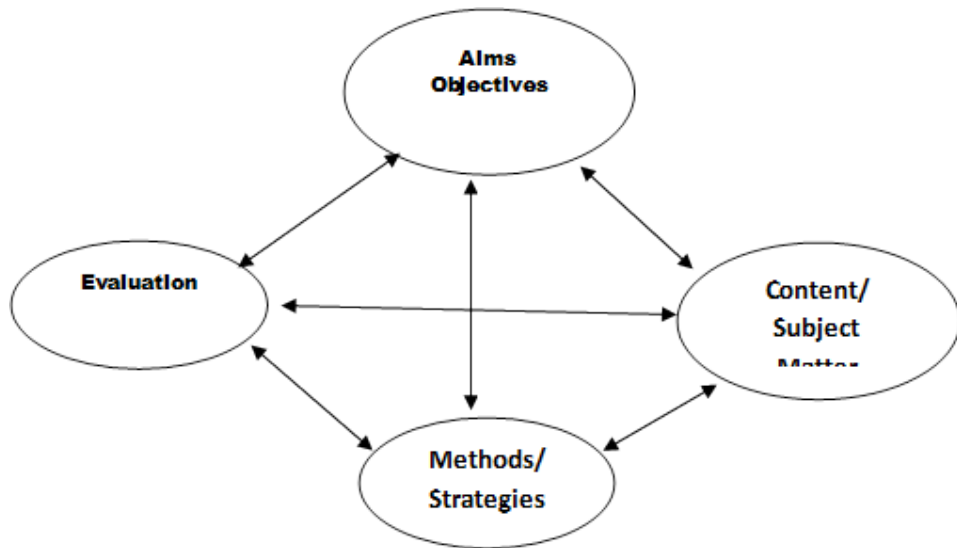
Curriculum is a means to achieve the aims of education which are dynamic and go on changing with the changing social requirements. Naturally, the curriculum will reflect the trends in education. For example, modern education places following demands on the curriculum:

- (a) Providing Suitable Knowledge: Curriculum should include suitable knowledge which will help in the achievement of aims of education.
- (b) Providing Suitable Activities and Experiences. Curriculum includes well selected activities and experiences needed for the development of pupils according to social requirements.
- (c) Providing Wholesome Influences. Curriculum should provide wholesome school programme to develop the desirable behaviour patterns in the pupils.

Thus we see that curriculum is an important instrument or means to achieve the ends of education.² We have had following seven dimensions of curriculum³:

1. Philosophical
2. Historical
3. Political

4. Ethical/Moral
5. Cultural
6. Global
- 7 Technological



COMPONENTS OF THE CURRICULUM

- Component 1- Curriculum Aims, Goals and Objective
- Component 2 – Curriculum Content or Subject Matter
- Component 3 – Curriculum Experiences
- Component 4 – Curriculum Evaluation

Diagram: components of curriculum

As Allan Glatthorn (2000) describes seven types of curriculum operating in the schools as per the need that may be summed as:

1. *Recommended curriculum*- proposed by scholars and professional organizations.
2. *Written curriculum*- appears in school, district and division or country documents.
3. *Taught curriculum*- what teachers implement or deliver in the classrooms and schools
4. *Supported curriculum*- resources textbook, computers, audio visual materials which support and help in the implementation of the curriculum.
5. *Assessed curriculum*, that which is tested and evaluated.
6. *Learned curriculum*-what the students actually learn and what is measured
7. *Hidden curriculum*- the unintended curriculum.

CURRICULUM DESIGN MODELS

1. *Subject-centered design model*
 - a. Subject design
 - b. Discipline design
 - c. Correlation design

- d. Broad field design/interdisciplinary
- 2. *Learner-centered design*
 - a. Child-centered design
 - b. Experience-centered design
 - c. Humanistic design.
- 3. *Problem-centered design*
 - a. Life-situation design
 - b. Core design 4

We may consider some criteria which can be used in the selection of subject matter, content or knowledge for the curriculum.

1. Self-sufficiency
2. Significance
3. Validity
4. Interest
5. Utility
6. Learn ability
7. Feasibility

KEY FEATURES OF AN INCLUSIVE CURRICULUM

A competency-based approach may be understood as a powerful tool to achieve an inclusive curriculum – It provides an innovative way of conceiving and organizing the curricular structure and objectives as well as the syllabus, in order to develop autonomous, critical and assertive citizens. An evidence-based approach can greatly impact misguided perceptions of what works at the classroom level.

CHALLENGES TO FOSTERING AN INCLUSIVE CURRICULUM

1. Move away from rigid disciplinary and decontextualised content and towards multiplicity of contextualized, inter-disciplinary and significant resources for the student. Traditional forms and contents of knowledge organization and modes of instruction, as well as disciplinary identities and boundaries, must be revised in line with the EFA goals and with universal cross-cutting issues.
2. There is no universal model for fostering and implementing an inclusive curriculum.
 - Multiple stakeholders = multiple visions and approaches (e.g. the competency-based approach; evidence-based approach; problem-based approach etc.)
 - It implies the construction of a curricular vision to synthesize and integrate this diversity of views and interests
3. The lack of clear objectives and definitions gives rise to dilemmas in trying to understand and measure the efficiency and effectiveness of inclusion in schools.

Successful progress depends greatly on how countries understand and define quality and success in education, as well as how they implement their vision through the curriculum. The sharing of experiences and effective practices can strengthen the understanding of IE and therefore, benefit inclusive curricular development (evidence-based approach)

An inclusive curriculum is only as good as its development in the classroom, and thus the teacher.

- Teachers are key partners in curricular development and must be involved in all aspects and at all levels.
- Teacher education curricula (pre-service and in-service), and more generally teachers' professional development, must be reviewed to prepare teachers for an inclusive education system.

- Appropriate resources and materials, strong networks (communities of practices), as well as community and institutional support are all essential in engaging and supporting teachers.⁵

INTRODUCTION TO ASSESSMENT AND OVERVIEW

An assessment in special education is the process used to determine a child's specific learning strengths and needs, and to determine whether or not a child is eligible for special education services. Assessment in special education is a process that involves collecting information about a student for the purpose of making decisions. Assessment, also known as evaluation, can be seen as a problem-solving process (Swanson & Watson, 1989) that involves many ways of collecting information about the student. According to Gearheart and Gearheart (1990; cited in Pierangelo and Giuliani, 2006), assessment is "a process that involves the systematic collection and interpretation of a wide variety of information on which to base instructional/intervention decisions and, when appropriate, classification and placement decisions. Assessment is primarily a problem-solving process".

WHY TO DO ASSESSMENT?

Why do we assess learners and their learning outcomes in universities? This may seem like a redundant question, but it is important for all teaching staff to reflect on the purpose of assessment. Reasons generally proposed for assessment include (Broadfoot and Black, 2004):

1. it encourages learning
2. it provides feedback on learning and teaching to both the learner and the teacher
3. it documents competency and skill development
4. it allows learners to be graded or ranked
5. it validates certification and license procedures for professional practice
6. it allows benchmarks to be established for standards.
7. developmental levels
8. social needs
9. medical needs
10. educational needs
11. family needs
12. communication needs
13. requirements of aids and adaptations
14. likes and dislikes
15. to know what and how to teach
16. to identify appropriate programmes and strategies
17. to select appropriate strategies and procedures
18. to adapt the environmental needs

Assessment tasks determine to a significant extent what learners will learn, and the methods they will employ to retain, reproduce, reconstruct and engage with learnt material (Biggs, 2002). Learner responses to perceived, or actual, assessment tasks will often dominate other extrinsic or intrinsic motivators that initially drive learner behavior.⁶

ASSESSMENT AND FEDERAL LAW V/S RPWD ACT 2016

The Individuals with Disabilities Education Act (IDEA), Public Law 105-476, lists 13 separate categories of disabilities under which children may be eligible for special education and related services. These are:

- **Autism:** a developmental disability significantly affecting verbal and nonverbal communication and social interaction, generally evident before age 3
- **Deafness:** a hearing impairment that is so severe that the child is impaired in processing linguistic information, with or without amplification
- **Deaf-blindness:** simultaneous hearing and visual impairments
- **Hearing Impairment:** an impairment in hearing, whether permanent or fluctuating
- **Mental Retardation:** significantly sub-average general intellectual functioning existing concurrently with deficits in adaptive behavior
- **Multiple Disabilities:** the manifestation of two or more disabilities (such as mental retardation-blindness), the combination of which requires special accommodation for maximal learning
- **Orthopedic impairment:** physical disabilities, including congenital impairments, impairments caused by disease, and impairments from other causes
- **Other health impairment:** having limited strength, vitality, or alertness due to chronic or acute health problems
- **Serious emotional disturbance:** a disability where a child of typical intelligence has difficulty, over time and to a marked degree, building satisfactory interpersonal relationships; responds inappropriately behaviorally or emotionally under normal circumstances; demonstrates a pervasive mood of unhappiness; or has a tendency to develop physical symptoms or fears
- **Specific Learning Disability:** a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, which may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or do mathematical calculations
- **Speech or language impairment:** a communication disorder such as stuttering, impaired articulation, a language impairment, or a voice impairment
- **Traumatic brain injury:** an acquired injury to the brain caused by an external physical force, resulting in total or partial functional disability or psychosocial impairment, or both
- **Visual impairment:** a visual difficulty (including blindness) that, even with correction, adversely affects a child educational performance.

Whereas The Rights of Persons with Disabilities Act – 2016, an outcome of UNCRPD, passed by government of India has categorized following types of disabilities. It is to be noted that the types of disabilities have been enhanced to 21 from erstwhile 7 types as mentioned in PWD Act – 1995.

1. Blindness
2. Low-vision
3. Leprosy Cured persons
4. Hearing Impairment (deaf and hard of hearing)
5. Locomotor Disability
6. Dwarfism
7. Intellectual Disability
8. Mental Illness
9. Autism Spectrum Disorder

10. Cerebral Palsy
11. Muscular Dystrophy
12. Chronic Neurological conditions
13. Specific Learning Disabilities
14. Multiple Sclerosis
15. Speech and Language disability
16. Thalassemia
17. Hemophilia
18. Sickle Cell disease
19. Multiple Disabilities including deafblindness
20. Acid Attack victim
21. Parkinson's disease

Provisions relating to Education as described in the Act

Chapter III of the Right of Persons with Disabilities Act, 2016 speaks about provisions relating to education of children with disabilities as well as duties of educational institutions.

Sec 16 specifically deal with the duties of educational institutes. It states that the State shall endeavour to:

1. To admit children with disability without any discrimination and provide equal opportunities to them with regards to education, sports and recreational;
2. Make buildings, campus and other facility accessible to children with disability;
3. To provide specific supports to such children in order to maximise academic and social development;
4. To make arrangements for students who are deaf or blind or both;
5. To provide for transportation facilities to children with high support needs.

Sec 17 of this Act, deals with measures to facilitate inclusive education. It makes the following provisions:

1. To make surveys from time to time to assess if special needs of children are being catered to;
2. To establish schools for children with disability and to train teachers to teach such students;
3. To provide books and other assistive educational tools to students;
4. To provide for scholarships to motivate such children;
5. To promote research to improve both teaching and learning skills.

GOALS/PURPOSES OF ASSESSMENT

It is easy to become so immersed in the job of teaching that we lose sight of the exact purpose of a particular element of assessment. There is then the possibility that we are not achieving that purpose, or that we overlook another form of assessment which might be more appropriate. We actually assess students for quite a range of different reasons - motivation, creating learning opportunities, to give feedback (to both students and staff), to grade, and as a quality assurance mechanism (both for internal and external systems). Because all too often we do not disentangle these functions of assessment, without having really thought it through assessments are frequently trying to do all these things, to varying degrees. In fact it is arguable that while it is desirable for assessments meeting the first three of these functions to be conducted as often as possible, the final two do not need to be done anywhere near so frequently; it is simply important that they are done somewhere. The implications of this are that while an essay question, where all the answers are double marked and the marks

count towards the students' final grades, may fulfill all these functions, for all assessments to be this rigorous would be prohibitively expensive in staff time, while a peer-assessed seminar presentation, which does not count towards the students' final grades but is simply a course requirement, could fulfill the first three functions and may not even require a tutor to be present.

The four main purposes of assessment should be:

1. **To improve** – The assessment process should provide feedback to determine how the administrative unit can be improved.
2. **To inform** – The assessment process should inform department heads and other decision-makers of the contributions and impact of the administrative unit to the development and growth of students.
3. **To prove** – The assessment process should encapsulate and demonstrate what the administrative unit is accomplishing to students, faculty, staff and outsiders.
4. **To support** – The assessment process should provide support for campus decision-making activities such as unit review and strategic planning, as well as external accountability activities such as accreditation.

PURPOSE

- Communication purpose
- Valuing what we teach
- Reporting out
- Not Sorting / Not Ranking

CHALLENGES IN ASSESSING CHILDREN WITH SPECIAL NEEDS

- Wide variety of needs.
- Inconsistent behaviour
- Variable sensory function.
- Ill health and many other conditions affecting multi sensory impaired and VIAD Basic perceptual differences between child and assessor.
- Attention span may be limited.
- Child may respond in different ways making interpretation difficult.
- Medication may have an effect on the responses.

What might be going wrong?

- Focus on deficits rather than skills
- Ignoring the child's motivators
- The pacing is inappropriate for the child, their health, their alertness level, the time of day, the place, the activity, the people present, & the materials used
- The task is too complicated and too challenging
- Too serious - where's the play?
- Expectation that the child will 'Pass or Fail'
- Inappropriate assessment tools
- Mimicry of standardized clinical assessment procedures (timing, positioning, materials, expected outcomes)
- Lack of a whole-child perspective
- The assessor is wearing blinkers ("This is what I want to see, now!")

During assessment

- Consult those who know the child better than you do
- Identify the child's motivators
- It's okay to match different sensory inputs
- Relax/arouse the child
- Position the child to facilitate functional skills
- Allow the TIME necessary for the loop of sensory perception, interpretation, and response

Assessment that focuses on processes rather than discrete skills eg

- Ability to maintain & modulate state
- Preferred learning channels
- Ability to learn, remember & anticipate routines
- Ability to accommodate new experiences with existing schemes
- Approach taken to solve problems
- Ability to form social attachments & interact
- Communication modes

PRINCIPLES OF ASSESSMENT

- Reliability
- Validity

Principles of Assessment for Learning (AFL) to guide classroom practice

- AFL should be part of effective planning of teaching and learning
- AFL should focus on how students learn
- AFL should be recognized as central to classroom practice
- AFL should be regarded as a key professional skill for teachers
- AFL should be sensitive and constructive because any assessment has an emotional impact
- AFL should take account of the importance of (and foster) learner motivation
- AFL should promote commitment to learning goals and a shared understanding of the criteria by which they are assessed
- AFL develops learners' capacity for self-assessment so that they can become reflective and self-managing
- AFL should recognize the full range of achievements of all learners
- Learners should receive constructive guidance about how to improve.⁷

RELEVANCE AND TRANSFERABILITY

- Make the child at ease
- Determine the child's bio-behavioral state
- Determine the child's interest

FOLLOW THE CHILD'S INTEREST

Every Assessment Rests on Three Pillars:

- A model of how students represent knowledge and develop competence in a content domain.
- Tasks or situations that allow one to observe students' performance
- An interpretation method for drawing inferences from performance evidence.

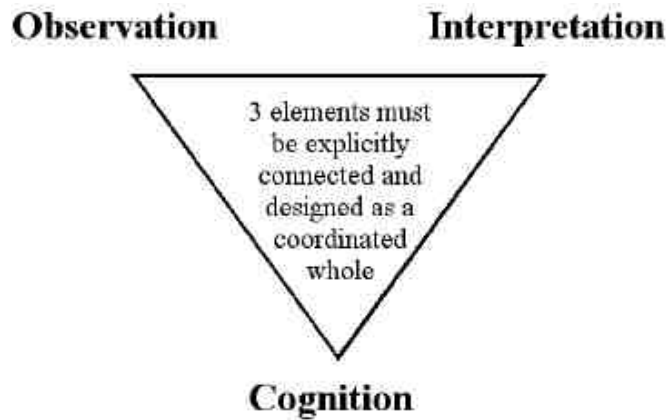


Fig: The Assessment Triangle National Research Council (2001) Knowing What Students Know.

Continuous and Comprehensive Evaluation

Continuous and comprehensive evaluation (CCE), indicates the school based evaluation of students, in which all aspects of students, development are covered. Term 'continuous' is a process, hence the evaluation should completely be incorporated in teaching and learning. Student's learning process should be continuous and Continuous also means regular testing and analyzing the limitation of learning and applying the remedial means and teachers and students for self evaluation reexamining and obtaining the feedback. Thus, continuous evaluation provides the opportunity to know, what the child knows, what he does not know, what the difficulties he meets in learning situation are, and what is his progress in learning, which is the aim of education.

Comprehensive is a term which indicates the development of students, both in academic and co-academic areas. The aims of institution are not only to build cognitive abilities of the student, but also to develop non-cognitive abilities. In academic area, the understanding of the subject and ability to apply it in non-familiar situations are included. Co-academic or non-academic area is related to students, attitude, interest, personal and social characteristics and health related required behaviour. In order to evaluate students' all round development, multiple technique of evaluation, a set of multiple techniques and different people as teachers, students, parents and society, etc. are included. CCE needs to be institutionalized for all stages of school education.

BASES OF CONTINUOUS AND COMPREHENSIVE EVALUATION

- 1 Written Examination: In written examination, objective, short answer and long answer questions are included.
- 2 Mental/ Oral test: Skills, which cannot be evaluated by written examination, are listed through oral examination.
- 3 Sessional Work done by a student: In addition to written and oral examination, sessional work should also be assessed. The following are included in the assessment of sessional work:
 - a. Alloted homework (Research work /project work).

- b. Discussion on classroom work.
- c. Use of library.
- d. Practical work done in laboratory.
- e. Craft work

Personality and character development, physical development should also be included in assessment.

Benefits of Continuous and comprehensive Evaluation: continuous and comprehensive evaluation reduces the stress of learners.

- 1 To encourage learning with the help of teaching or aids.
- 2 The learners' activities to be included in learning process.
- 3 To recognize specific abilities of learners and encourage them, especially who do not do well in educational area, but perform well in co-scholastic areas.
- 4 To indicate the progress of learning on regular interval for small portion of subject matter.
- 5 Based on the needs and abilities of different students, remedial ways to be used for teaching.

Misconception about CCEs: There are some misconceptions about CCE which are listed below:

- 1 Teacher feels that for student's learning assessment, they then have to do daily homework. This creates burden on teachers and students both.
- 2 When the students work for their projects at home, then it is not waste of their time. Actually, these activities increase the understanding of concepts.
- 3 There is more testing and less teaching in it. Actually, continuous and comprehensive evaluation is a part of teaching. In it, there is a series of testing and lesser number of examinations.
- 4 Continuous and comprehensive evaluation does nothing except converting number into grade. Actually, CCE is about the all round development of the child
- 5 The students, whose continuous and comprehensive evaluation is done, they feel that are always under observation and the errors committed in CCE, that student should never feel that he is under surveillance.⁹

Characteristics of Effective Assessment

Effective administrative unit assessment should answer these questions:

1. What are you trying to do?
2. How well are you doing it?
3. Using the answers to the first two questions, how can you improve what you are doing?
4. What and how does an administrative unit contribute to the development and growth of students?
5. How can the student learning experience be improved?

(Adapted from Hutchings and Marchese, 1990)

Additionally, assessment is effective when:

1. Assessment is viewed as a comprehensive, systematic and continuous activity.
2. Assessment is viewed as a means for self-improvement.
3. Assessment measures are meaningful.
4. Assessment utilizes multiple measures and multiple sources.
5. Assessment is used as a management tool.
6. Assessment results are valued, and are genuinely used to improve administrative units' structure, services, and processes.
7. Assessment is coordinated by one person or a team and reviewed by a committee.

8. Assessment should involve the participation and input of all faculty and staff.
9. Assessment includes student involvement.

In Indian scenario, when we look into the curriculum and the assessment pattern we find a contrast difference. At the national level we have National Council of Educational Research and Training which is responsible for curriculum development at school level (NCERT) and few boards which is responsible for assessment and certification of the students, out of which Central Board of Secondary Education (CBSE) has the largest network. Other major players include ICSE & NIOS. Similarly at the state level we have various state boards which are responsible for assessment and certification of the students including PWDs. Till few years back, there was no separate provision of assessment for PWDs. However, of late things have started changing towards sweet note as there have been tremendous developments for the genuine evaluation of the students with disabilities by way of various modifications, alterations and omissions of the evaluation patterns/ questions.

REFERENCES

1. Main article - National curriculum framework (NCF)
2. <http://www.preservearticles.com/2012010920288/need-and-importance-of- curriculum-may-be-summed-up-as-follows.html>
3. The concept of curriculum INYERE Biodun Favour VTE (computer education)
4. <https://www.thoughtco.com/curriculum-design-definition>
5. Inclusive education, inclusive curriculum and inclusive teachers: Moving the EFA agenda forward Renato Operti Teacher Education for Inclusion Project Kick Off Meeting Dublin, Ireland, 1-3 October 2009
6. www.adelaide.edu.au/learning/teaching/assessment/introduction/NASET
7. www.assessmentgroup.org.uk
8. Knowing What Students Know (p.44) National Research Council (2001)

Guidelines for Contributors

1. Two copies of manuscripts typed in English on one side of the A4 size paper should be submitted along with an abstract not more than 200 words. The length of a paper including tables, diagrams, illustration etc., should be between 3000 to 5000 words. Papers/articles should be original and unpublished contribution. Papers should be accompanied by a declaration that the material is original, has not been published elsewhere in part or full and the same has not been submitted for publication in any other book or journal of elsewhere. Leave the margin of at least one inch on all sides of paper and one and half inches on left side of the paper. Electronic version of the paper must accompany CD-ROM in MS-Word document format and it should be identical in all respect of the hard copy. Paper without CD will be rejected. Electronic copy must sent to the given E-mail addresses. Article must be in MS-Word in Times New Roman in font size 12. Refused articles/papers will not returned if the self-addressed and Rs. 50/- stamped envelope not attached with paper.
2. Short communication to review articles, reports of conference, summary or views on Government reports, debatable issues, etc., are also published.
3. Authors/Publishers are also welcome to send books or book review of the Editor for the publication of review in the journal.
4. The Paper once submitted to this journal should not be resubmitted simultaneously to other journals of else when for consideration.
5. All Papers submitted to the journal will be the property of **APH Publishing Corporation** and subject to blind review. To ensure anonymity, the author's name, designation, affiliation, official and residential address and other details about author should only appear on the first page along with the title of the paper. Second page should start with the title of paper again followed by text.
6. Footnotes in the text should be numbered consecutively in plain Arabic superscripts. All the footnotes, if any, should be typed under the heading 'Footnotes' at the end of the paper immediately after 'Conclusion'.
7. (a) For citation of books the author's name should be followed by the (b) title of the book (c) year of publication or edition or both (d) page number (e) name of publishers and place of Publication.
8. All references should be alphabetically arranged at the end of the text. Style should follow: Author's name, forename/initials, date of publication (italicized in case of a book and in double quotations in case of an article and the source, Journal or book underlined or italicized), place of publication, publisher, page numbers and any other additional information. Journal articles should contain complete information regarding volume number, issue number, date, etc. A few examples are as follows:
 - * **Malik, A.P. (1998).** *Education Policy and Perspective*. New Delhi: Allied Publishers.
 - * **Majumdar, Ramesh (1997)** "The Role of the Society", *Journal of Educational Views*, 1 (3 & 4), July-October, pp. 1-11.
 - * **Ganeshan, P.R. (1989).** "Educational Finances in a Federal Government", Seminar on Mobilisation of Additional Resources for Education. New Delhi: National Institute of Economic Planning (mimeo).
 - * **Saley, Hans (1996).** "Perspective of Education: An Internal View", in Abdul Raza (ed.) *Educational Policy: A Long Terms Perspective*. New Delhi: Concept, for the National Institute of Law and Administration, pp. 70-92

APH PUBLISHING CORPORATION

4435-36/7 ANSARI ROAD, DARYAGANJ, NEW DELHI-10 002



Tel.: 011-23274050/011-23285807

Mobile: 9810121903/9810136903/9818581487

E-Mail: aphbooks@gmail.com

Ordering Policy:-

1. Orders can be given to us at Telephone Nos. 011-23274050/09810121903/09810136903/09818581487
You can E-Mail us your orders at our e-mail address: aphbooks@gmail.com
2. Delivery will be done by Govt. Post at our expense (Delivery charges will be free for Institution)
3. It will take 5-6 days time for the Journals to be delivered to your Institution
4. Payment option - Cheque/Demand Draft is to be made in favour of "APH PUBLISHING CORPORATION"
5. You can also instruct us to deliver the Journals to you on Cash on Delivery Basis