



# INTERNATIONAL JOURNAL of INTEGRATED RESEARCH AND DEVELOPMENT

(UGC Enlisted Sl. No. 448; Journal No. 41601, Peer Reviewed and Multi-disciplinary)

ISSN : 2278-8670 ■ ISSUE-14, DECEMBER 2018 ■ VOLUME-2



Haney Comb

Cover: Asit Sain, Mecheda, Purba Medinipur, W.B., India

Managing Editor  
Biswajit Maiti

Additional Editor  
Debabrata Das

Editor-in-Chief  
Barin Kumar Pramanik



Volume: 1/Issue: 13/July 2018-ISSN: 2278 8670

# International Journal of Integrated Research and Development

ISSN: 2278-8670

**Editor-in-Chief: Barin Kumar Pramanik**

**Managing Editor: Biswajit Maiti**

## **PEER REVIEW BOARD:**

**President: Sudhir Chakraborty Sahitya Academy Awarded Eminent Bengali Scholar.**

**Vice-President: Prabir Kumar Das Retd. WBSSES, Former Member Secretary, Higher Education Council, Govt. of W.B.**

## **Honorable Members: From Abroad**

- 1. Andrew Nicholson** Professor, Department of Asian American Studies, Stoney Brook University, USA, 11794.
- 2. Hans Harder** Professor of Modern South Asian Languages and Literatures (Modern Indology). Haidelberg, Head of the Department of Modern South Asian Languages and Literatures, Heldelberg University, Germany.
- 3. Madhab Prasad Pokhrel** Professor, Department of Linguistics, Tribhuvan University, Nepal.
- 4. Niaz Ahmed Khan** Chair Professor, Department of Development Studies, University of Dhaka, Bangladesh.
- 5. Toni Guerra** Teacher, Autonomous University of Mexico, University of Guadalajara, Jalisco; Chief Executive Officer and Founder Director of Exagono (Independent Fine Arts Workshop); Member of the Modern Art, Center of Guadalajara, Jalisco, Mexico.



**From India**

6. Mohd. Shahid Hussain      Professor, Centre for Indian Languages, SLL & CS, Jawaharlal Nehru University (Urdu & Persian), Academy Awarded Scholar, New Delhi.
7. Nandalal Chakraborty      Associate Professor, Political Science, Presidency University, Eminent Scholar and writer about Netaji.
8. Goutam Kumar Chatterjee      President, Abhinavagupta Academy, Department of Journalism and Mass Communication, Banaras Hindu University and Film maker of Theory of Aesthetics, U.P.
9. Rampratap Sinha      Associate Professor in WBES, Department of Economics, Government College of Engineering and Leather Technology, W.B.
10. S. K. Mollay      IFS, Divisional Forest Conservator, North Division, Siliguri, W.B.
11. Pankaj Kumar Roy      Associate Professor & H.O.D of Commerce, New Alipur College, W.B.
12. Raghunath Ghosh      Honorary Director, ASC and Retired Professor & Head, Dept. of Philosophy, North Bengal University, W.B.
13. Madhusudan Mondal      Retired Scientist and Additional Director, Botanical Survey of India, W.B.
14. Debabrata Chowdhry      Textile Engineer (Manchester), MBA (PE, Chartered Engineer FIE (I) FII Prod., FCA & FIV, General Secretary: INDIAN SOCIETY OF ENGINEERS, Kolkata, W.B.
15. Sibsankar Pal      Associate Professor & H.O.D of Bengali, Govt. General Degree College at Tehatta, W.B.
16. Debabrata Das      Associate Professor & H.O.D of Botany, Govt. General Degree College at Lalgah, W.B.



## **BOARD OF ASSOCIATE EDITORS:**

### **SOCIAL SCIENCE, LANGUAGE, LITERATURE AND ARTS**

- 1. Tapas Kumar Pal** Associate Professor & H.O.D of Economics, Darjeeling Gov. College, W.B.
- 2. Preetam Ghoshal** Associate Professor, Department of Philosophy, Jadavpur University, W.B.
- 3. Arun Mahata** Associate Professor, Department of Philosophy, Jadavpur University, W.B.
- 4. Biswajit Roychoudhury** Assistant Professor of Geography, Vidyasagar College, Kolkata, W.B.
- 5. Sanjit Kumar Das** Vice-Principal, Bhairab Ganguly College, Kolkata, W.B.
- 6. Surajit Sengupta** Assistant Professor, Department of Commerce, Bhairab Ganguly College, W.B.
- 7. Aditi Parta** Assistant Professor, Department of Philosophy, Hooghly Mohsin College, W.B.
- 8. Suparna Sengupta** Assistant Professor, Department of Sanskrit, Hooghly Mohsin College, W.B.
- 9. Sanghamitra Mukherjee** Assistant Professor, Department of Sanskrit, Ramkrishna Sarada Mission Vivekananda Vidya Mission, W.B.
- 10. Tanwi Mukhoadhyay** Assistant Professor, Department of Bengali, Bethune College, W.B.

### **SCIENCE AND TECHNOLOGY**

- 11. Phalguni Gupta** Associate Professor, Department of Physics, Dinabandhu Andrews College, Kolkata, W.B.
- 12. Swapan Kumar Ghosh** Associate Professor, Department of Physics, Durgapur Govt. College, W.B.



13. Partha Sarathi Singha      Officer-in-Charge, Govt. General Degree College, Kharagur-II, W.B.
14. Pampi Ghosh                Assistant Professor, Department of Botany, Seva Bharati Mahavidyalaya , W.B.

### **EDITORIAL BOARD:**

1. Asin Md. Ansari                Assistant Professor, Department of History, Gorubathan Govt. College, Kalimpong, W.B.
2. Arpana Kalden                 Assistant Professor, Department of History, Gorubathan Govt. College, Kalimpong, W.B.
3. Varun Kumar Roy              Assistant Professor, Department of History, University of North Bengal, Darjeeing, W.B.
4. Pratit Tamang                 Assistant Professor, Department of Political Science, Gorubathan Govt. College, Kalimpong, W.B.
5. Ujjal Das                        Assistant Professor, Department of English, Gorubathan Govt. College, Kalimpong, W.B.
6. Sumana Bandyopadhyay      CWTT (Govt. Approved), Deptt. Of Commerce, Bhairab Ganguly College, W.B.
7. Sandipan Talukdar             Assistant Professor, Department of Zoology, Gorubathan Govt. College, Kalimpong, W.B.
8. Rabin Ghosh                 Assistant Professor, Department of Bengali, Gorubathan Govt. College, Kalimpong, W.B.
9. Subhra Kanti Mandal         Assistant Professor, Department of Chemistry, Gorubathan Govt. College, Kalimpong, W.B.
10. Raju Subba                    Assistant Professor, Department of Chemistry, Gorubathan Govt. College, Kalimpong, W.B.



Volume: 1/Issue: 13/July 2018-ISSN: 2278 8670

- 11. Rajendra Mistri** Assistant Professor, Department of Economics, Gorubathan Govt. College, Kalimpong, W.B.
- 12. Sangeeta Yonzon** Assistant Professor, Department of Economics, Govt. General Degree College at Mominpur, Kolkata, W.B.
- 10. Dipa Goswami** Assistant Professor, Department of Philosophy, Chandernagore Govt. College, Chandernagore, Hooghly, W.B.
- 11. Madhumita Chatterjee** Assistant Professor, Department of Philosophy, Barasat Govt. College, 24 Parganas (North), W.B.



## PREFACE

With this issue we have entered into the glorious seventh year of the publication of our journal. I specially thank to all the members of the journal society and especially to Dr. Sibsankar Pal our former editor-in-chief for their hard working, also the toil and trouble they have taken for uplifting the quality of our journal.

Our motto from the very beginning was to publish high quality research papers and articles and we are successfully trying our level best to achieve our goal. Our journal has been appreciated and recognized all over the world which is a great achievement to us. Apart from research papers and articles we also try to recognize paintings of different renowned artists from India and abroad by placing their painting on the front cover page of our journal. In this issue we have placed the painting of Anna Rosa Pelayo of Amaitée entitled 'Mistral'.

Anna Rosa Pelao is a renowned artist. She was born in Guadalajara Jalisco on the 30th of March of 1960. Graduated from the School of Architecture of the Autonomus University of Guadalajara (UAG) (1978-1982). She holds a diploma on Visual Arts Appreciation endorsed by the INBA. She has taken specialised courses to contribute to her formation and learn new pictorial and sculptural techniques. She is an architect by formation and a plastic artist by passion. Restless and curious, rather than a seeker she finds answers that guide her through diverse paths, adding complementary topics that give sense to her life and lead her to the path of self knowledge and internal life. She studies what can be felt rather than seen, she transits since years ago through the path of meditation and different disciplines to connect and interpret the internal world. To translate the symbols and her dreamlike word in shapes and colors. She imparted classes in the school of architecture for 5 years. Besides teaching, her work experience was in construction companies where she developed design projects.

"The painting of Anna Rosa Pelayo - Amatee - depicts soul immersion and vital force, her compositions impregnated with primitive sap evoke a pictorial ontology. With her, you are in front of an artist of nomadic existence open to multiple drifts. In her proposal, poetry and painting converge in their quality of language conveyors of an aesthetic and emotional experience, whose nature situates the landscape of life and the soul given over to the exploration of the last substrate that links both artistic manifestations: the most recondite depths of being."

She has participated, both nationally and internationally, in diverse individual and collective expositions, in cities such as Guadalajara, Mexico City, Puebla, Veracruz, Guaymas, New York, Milan, Madrid, Cordoba and Malaga. She has also participated in numerous charitable auctions.

Her work has been chosen for the first international biennial of San Luis Potosi and the biennial of Milan. She holds the International prize tribute to Tiziano in Venice. Italy and the International prize Raffaello in Bologna, Italy.

Our special thanks goes to Dr. Sibsankar Pal for arranging this painting from the artist. We also thank the artist Anna Rosa Pelayo for her contribution.



Unless and until there is good research work it is hard to get good paper for publication. For good research work good research environment is required. For that reason good research instigate is essential. Our focus is also to get a research institute of our own in future where we can provide better research environment for the scholars. We have already initiated our motivation towards our target and I am sure that our journal will do much better in future.

Thank you.

**Dr. Barin Kumar Pramanik,  
Editor-in-Chief.**





## EDITORIAL-1

It is obviously very great honour to me that I have been given the responsibility of editor-in-chief of this journal from this issue i.e. July, 2018. I thank all the members of the journal society for this and assure that I will try my level best to shoulder the responsibility that you have given to me. I am the third editor-in-chief of this journal. First editor-in-chief was Dr. Ram Pratap Sinha from the year 2012 to 2014 and then the second editor-in-chief was Dr. Sibsankar Pal from 2014 to December, 2017. I have been attached with this journal from the very beginning as managing editor. I welcome our new managing editor Dr. Biswajit Maiti, Associate Professor and H.O.D, Department of Physics, Govt. General Degree College at Kharagpur-II. From the very day of its starting we all have worked jointly to uplift the quality of this journal. The journal has become national to international and now it is UGC recommended.

Recently we had attended a seminar on biodiversity conservation at Seva Bharati Mahavidyalaya at Jhargram, West Bengal funded by bio-diversity board of West Bengal. It was a memorable day we had many fruitful discussions on that day. In this context I would like to add some of my views regarding bio-diversity and its conservation.

In the year 1992 the UN Convention on Biological Diversity (CBD) which was the first international environmental agreement negotiated in Nairobi, Kenya. In the same year the Global Environment Facility (GEF) for funding biodiversity conservation in developing countries was launched. Yet after 26 years biological population and diversity continue to decline both on land and in the oceans. The main reasons are chronic underfunding of global biodiversity conservation; and the failure to control habitat conservation, resource over exploitation, species invasion and other drivers of biodiversity loss. Recently in the year 2015 Paris Climate Change Agreement took place where it has been targeted for conserving half of the terrestrial realm for biodiversity by 2050. In other words to conserve at least 50% of the terrestrial, inland water, coastal and marine habitats by 2050. Now the question is how such a deal might be implemented to overcome the funding problem in biodiversity protection.

As with any public good, biodiversity conservation suffers from a free-riding problem, in which governments have an incentive to provide less than the optimal level of funding in the hope that the others (private players) will cover the costs. This is especially pertinent when the benefits of such payments accrue to other countries. In particular, global funding to support conservation effort in developing countries, which host most biodiversity, is woefully inadequate to prevent habitat loss and overexploitation. The global benefits of biodiversity conservation are much greater than the benefits accruing to developing countries. Left on their own, the latter countries will preserve insufficient biodiversity. Existing international institutions and funding mechanisms, including the CBD and GEF, have boosted conservation efforts but failed to deliver enough funding to where it is most needed. As a result, global conservation falls short of what is required to attain safe biodiversity levels. As in Paris agreement, all countries should declare their own national targets, policies and timelines, subject to 5-year review, for attaining the overall target. For wealthier countries, these targets and timelines should also include financial and technological commitments to assist conservation in developing countries through the GEF,



other international bodies, or bilateral pledges.

A global agreement for biodiversity would engage government and industry, and hopefully other non-state actors in a manner unparalleled in the history of conservation. In addition, the current global biodiversity crisis is in large part due to the lack of international commitment and funding over the past 25 years. A global agreement for biodiversity would also overcome these shortcomings. Ensuring safe levels of global biodiversity will require the corporations that can benefit financially from conservation to joint efforts in order to avoid continued irreversible loss of biodiversity.

**Dr. Barin Kumar Pramanik,  
Editor-in-Chief.**



## EDITORIAL-2

In the present society, our family structures are incredibly different from the one what we found a decade or two ago. There is no dominant family structure – joint family is the thing of past and even nuclear family is dissolving to individuality. Individuals have much more freedom of choice of life in regard to lifestyle, social and cultural settlement, sexual preferences and personal relationship. It has its reflection on the society at large which is fragmented into small groups mainly based on race, religion, occupation, income level and some other common interests. The gap between concerned groups is widening day by day mainly due to economical inequalities, political, educational and occupational differences. Added to this, technological advances of internet, email and electronic communication have been changing the pattern of work and leisure and one's life becomes less predictable. It breaks the barrier of time and space and has its effect on psychological or behavioural pattern of an individual. Individuality dominates over society and man becomes more self contended.

Though people are telling about global village or global society one can clearly see that unpredictability, uncertainty, risk consciousness and loss of rationality looms large on our life. It has "multitude of interconnected fatal consequences–social disintegration, breakdown of democracy, more rapid and extensive deterioration of the environment, spread of new diseases, increasing poverty and alienation": the civil war in a number of Afro-Asean countries along with wide spread migration to the European countries and the plight of humanity is the concern of the day.

Higher educational institutions, non-governmental and philanthropic organizations and civic societies should play a greater role in influencing public policy making with a view towards humanitarian and developmental efforts across boundaries for all race and religion. Then only present day social and economic instability may be addressed for the good of humanity. Intercultural communication or cultural diffusion of ideas, religions, science, technologies and languages through the writings of the scholars, thinkers and the readers might pave the way for social equality, environmental protection, economic stabilization and restoration of civilization in true sense. We through IJIRD are publishing articles in all spheres of life and study to dream of a world where humanity is above all and everybody lives in harmony with peace and pride.

**Dr. Biswajit Maiti,  
Managing Editor.**



## INDEX

1. A Critical Analysis on the Disparities in Health Care Infrastructures in Birbhum District of West Bengal  
Biswajit Roy Chowdhury & Dr.Uttam Mukhopadhyay 1 – 08
2. f'jq;k' J flhaÑkã-N AeãhaÑe  
09 – 12  
AdÉjL øhj-mn -hlj
3. Performance Analysis of Five Selected Commercial Banks in India  
Surajit Sengupta & Sumana Bandyopadhyay Chatterjee 13 – 34
4. Relevance of plant ecology as reflected in *MANUSAMHITĀ*  
Dr. Bhaskar Jha 35 – 38
5. a;l-LnĀl paÉjNĒq B-¼c;me J h%œu Lw-NĒp  
39 – 42  
Evfm Ljφ"
6. Three-Fold Typology towards Religious Harmony: A Critical Analysis  
Iti Chattopadhyay 43 – 48
7. haÑjje pj;-Sl °eçal p-Qae;u djÑ  
49 – 54  
pjjpãã-æp; Mjaæe
8. 'Who Am I'? -Some Reflections from Sri Aurobindo's Philosophy  
Dr. Aditi Patra Nee Ray 55 – 64
9. Terrorism – Its Different Dimensions and an Alternative Approach for Survival  
Madhumita Chatterjee 65 – 72
10. Fight of Imagination  
Suparna Sen Gupta 73 – 80
11. Conservation of an Atavistic and Unorthodox Feeding Behaviour in a Cosmopolitan Polytopic Genus *Drosophila*  
Dipita Bhattacharyya & Debasis Mutsuddi 81 – 100
12. Mind-Brain Identity Theory—A Critical Review  
Dipa Goswami 101 – 108
13. Estimating the Impact Analysis of India ASEAN FTA



Volume: 1/Issue: 13/July 2018-ISSN: 2278 8670

- on Indian Chemical Industry: A Gravity Model Approach Dr. Avijit Mandal 109 – 118
14. Emerging Scenario in Global Learning System Jhuma Bandyopadhyay 119 – 126
15. The World of Homosexuals (1977): An Attempt at Appraisal Sayantan Mitra 127 – 136
16. শম্ভুজানন্দরে গল্প : নম্বিবর্গরে ভব্বিন স্ববর □□□□□□□□□□  
□□□□□ 137 – 144
17. Status of Self-Financing Courses in West Bengal Dr. Sanjit Kr. Das 145 – 170
18. □□□□□□ □□□□□□□□□□□□ □□□□□□□ □□□□□□ □□□□□□ □□□□ □□□□  
□□□□□□□□□□ Arun Mahata 171 – 174
19. Portrayal of Ursula as a New Woman by D.H. Lawrence Priyanka Mukhopadhyay Basu 175 – 184















সব  
।

সকল  
ও  
ই  
যত  
ততই  
।

উপর  
এই  
উপর  
সবই  
আরও  
জড়  
মত  
। ২

সব  
যত  
এইসব  
আ  
হয়

এই  
হয়

এর  
এই





করণ; এই  
 ,  
 |  
 ;  
 ।  
 এই জগত  
 -  
 -  
 ।  
 ।  
 ।  
 সব  
 ;  
 ,  
 , সবই  
 উপর  
 । এখন  
 ?  
 ।

ক , জগ  
 ।  
 ও  
 কর এই  
 পথ; চরম  
 ।  
 ই-ই একই  
 ,  
 ও  
 - এই  
 ও  
 cæCϕV  
 ,  
 ,  
 ও  
 ,  
 এই







০০০০০০ ০০০০০০০০০০০ ০০০ ০০০০, ০০০০০ ০০০০০০০  
 ০০০০০০০০০ ০০০০০০০ ০০০০০০০ ০০০০০০০০ ০০০০০০০০০  
 ০০০০০ ০০০০। ০০০০০০ ০০০০০ ০০ ০০০০০০ ০০০০০০  
 ০০০০০০০০, ০০০ ০০০০ ০০০০০। ০০০০, ০০০০০০ ০০০০০ ০০০  
 ০০০, ০০০০ ০০০, ০০০০০০ ০০০০০০০০০ ০০০০ ০০০। ০০০০০০  
 ০০০০০০০০০০০ ০০০ ০০০০। ০০০০০০০০০র ০০০০০ ০০০  
 ০০০০০০। ০০০০০০০০০ ০০০০০ ০০০ ০০০০। ০০০০০০০  
 ০০০০০০০ ০০০০০০০০০ ০০০০০০০০০ ০০০০০০ ০০০০। ০০০০ তখন  
 ০০০০০০, ০০০০০০০ ০০০০০০০০০ ০০০০০০০০ ০০০০০০০০০ ০০০।  
 ০০০০ ০০০০০০০০ ০০০০০০ ০০০০- ০০০ ও ০০০০০০০০০০০  
 ০০০, ০০০০ ০০০০০ ০০০০ ০০০০০ ০০০০০০ ০০০০, ০০০ ও বvসর  
 ০০০০ তন ০০০০০০০ ০০০০০০০০০; ০০০০ ০০০, ০০০০ ০০০০০০০  
 ০০০০, ০০০০০০০ ০০০০০০ ০০০০০০০ ০০০। '০০০০ ০০০, ০০০  
 ০০০'- এই একই ০০০ ০০০০০০০০০ ও ০০০০০০০০০০০০। ০০০০০০০  
 ০০০০০০ ০০০০০০০ ০০০০০০০০ ০০০০ সব ০০০০০। ০০০০০০০  
 ০০০০০, ০০০০০০০ ০০০০০০০০ ০০০০ সব ০০০০০। ০০০০০০০  
 ০০০০০০ ০০০০ সব ০০০০০ ০০০০০০ ০০০, ০০০০০০ ০০০  
 , ০০০০০০০০ ০০০০; ০০০০০০০ ০০০০০ ও ০০০০০০০ ০০০০০০০০  
 ০০০০০০০ ০০০০০০০০০। আর ০ ০০০ ০০ ০০০ ০০০০০০০ ০০০০  
 ০০০০০ ০০০, ০০০০০০০০০ ০০০ ০০০০০০০ ০০০০, ০০০০ ০০০০  
 ০০০০ ০০০ ০০০, ০০০০০ ০০০০০০০০০ ০০০; ০০০০০০০০০০০, ০০০০০০০০০০  
 '০০০০', ০০০০০০ ০০০০০০ '০০০০'। ০০০০ '০০০০ ০০০০'-  
 HC ০০০ ০০০০০০র ০০০০০০০ ০০০০, ০০০০০০ ০০০০০০০ ০০০০  
 ০০০০০; ০০০০ ০০০০০০০ ০০, ০০০০০০০০০০ ০০০০০০০ ০০০০; নরও  
 ০০০০, ০০০০০ ও ০০০০০০০০০০ ০০০০০০০ ০০০০০০ ০০০০০ এই  
 ০০০ এক ০০০০০০০০০০ ০০০০০০০ ০০০০ ০০০০০০০০০০ ০০০০০০০০  
 ০০০০০০০০০০০০০০ ০০০০০০০০ ০০০০ ০০০  
 ০০০০০০০০। ০০০ ০০০০০০০ ০০০০০০ ০০০০০০০০০, '০০০০০  
 ০০০০- ০০০০০ - ০০০০jú'। ০০০০০০০ ০০০০০০০০০০০০ এই ০০০০০  
 যখন ০০০০০০০ ০০০০০০০০ ০০০০, ০০০০ ০০০০০০০ ০০০০০  
 ০০০০, তখন ০০০০০ ০০০০০ ০০০০০০০০ ০০০০০০০ ০০০০০ ০০০০০  
 ০০০০০০০০, ০০০০০০ ০০০০০০০০ ০০০০০০০ ০০০০ ০০০০০০০০  
 ০০০০০ ০০০০০০ ০০০০০০০। ০০০০০০০০ আর ০০০০০ ০০০০  
 ০০০০০০০ ০০। ০০০০০ ০০০০০০ ০০০০০০ ০০০ ম ০০০০০০০০  
 ০০০০০০০০ রত, ০০ ০০০০০০০০ ০০০০০০০ ০০০০০০০০০০ সব



ପ୍ରକାଶକ ଶ୍ରୀମତୀ ସୁମତୀ ପ୍ରଧାନ, ପ୍ରକାଶନ ପ୍ରାଇଭେଟ ଲିମିଟେଡ୍, ପ୍ରକାଶନ ପ୍ରାଣେଶ୍ୱରୀ, ବ୍ରହ୍ମପୁର, ଓଡ଼ିଶା  
ପ୍ରକାଶକ ଶ୍ରୀମତୀ ସୁମତୀ ପ୍ରଧାନ, ପ୍ରକାଶନ ପ୍ରାଇଭେଟ ଲିମିଟେଡ୍ ହାଇ। ୧୧

ପ୍ରକାଶକ ଶ୍ରୀମତୀ ସୁମତୀ ପ୍ରଧାନ

- ୧. ପ୍ରକାଶକ ଶ୍ରୀମତୀ ସୁମତୀ ପ୍ରଧାନ, ପ୍ରକାଶନ ପ୍ରାଇଭେଟ ଲିମିଟେଡ୍, ପ୍ରକାଶନ ପ୍ରାଣେଶ୍ୱରୀ, ବ୍ରହ୍ମପୁର, ଓଡ଼ିଶା, ପ୍ରକାଶକ ଶ୍ରୀମତୀ ସୁମତୀ ପ୍ରଧାନ, ପ୍ରକାଶନ ପ୍ରାଇଭେଟ ଲିମିଟେଡ୍, ପ୍ରକାଶନ ପ୍ରାଣେଶ୍ୱରୀ, ବ୍ରହ୍ମପୁର, ଓଡ଼ିଶା - 700003 ପ୍ରକାଶନ ପ୍ରାଣେଶ୍ୱରୀ, ପ୍ରକାଶନ ପ୍ରାଇଭେଟ ଲିମିଟେଡ୍ 1973, ପ୍ରକାଶକ ଶ୍ରୀମତୀ ସୁମତୀ ପ୍ରଧାନ, ପ୍ରକାଶନ ପ୍ରାଇଭେଟ ଲିମିଟେଡ୍ -1421
- ୨. ପ୍ରକାଶକ, ପ୍ର. ୨୮
- ୩. ପ୍ରକାଶକ, ପ୍ର. ୩୦
- ୪. ପ୍ରକାଶକ, ପ୍ର. ୩୩
- ୫. ପ୍ରକାଶକ, ପ୍ର. ୩୬
- ୬. ପ୍ରକାଶକ, ପ୍ର. ୩୮
- ୭. ପ୍ରକାଶକ, ପ୍ର. ୪୧
- ୮. ପ୍ରକାଶକ, ପ୍ର. ୪୨
- ୯. ପ୍ରକାଶକ, ପ୍ର. ୪୨
- ୧୦. ପ୍ରକାଶକ, ପ୍ର. ୪୪

୧୧. ଏହି ପ୍ରକାଶନ ପ୍ରାଇଭେଟ ଲିମିଟେଡ୍ ପ୍ରକାଶନ ପ୍ରାଣେଶ୍ୱରୀ ବ୍ରହ୍ମପୁର, ଓଡ଼ିଶା ଓ ପ୍ରକାଶକ ଶ୍ରୀମତୀ ସୁମତୀ ପ୍ରଧାନ, ପ୍ରକାଶନ ପ୍ରାଇଭେଟ ଲିମିଟେଡ୍, ପ୍ରକାଶନ ପ୍ରାଣେଶ୍ୱରୀ, ବ୍ରହ୍ମପୁର, ଓଡ଼ିଶା

ଏହି ପ୍ରକାଶନ ପ୍ରାଇଭେଟ ଲିମିଟେଡ୍ v International Journal of Integrated Research and development , Editor- in- Chief , Barin kumar Pramanik , Issue -13, July 2018, 7th year, volume- ଏ ପ୍ରକାଶନ ପ୍ରାଇଭେଟ ଲିମିଟେଡ୍ | ପ୍ରକାଶନ ପ୍ରାଣେଶ୍ୱରୀ ବ୍ରହ୍ମପୁର, ଓଡ଼ିଶା ପ୍ରକାଶକ ଶ୍ରୀମତୀ ସୁମତୀ ପ୍ରଧାନ, ପ୍ରକାଶନ ପ୍ରାଇଭେଟ ଲିମିଟେଡ୍, ପ୍ରକାଶନ ପ୍ରାଣେଶ୍ୱରୀ, ବ୍ରହ୍ମପୁର, ଓଡ଼ିଶା



## **Quest for Social Justice for the Minorities of India and Pakistan with Special Reference to Nehru-Liaquat Ali Pact**

**Babulal Bala, Assistant Professor  
Department of History, Raiganj University,  
babulalbala@gmail.com**

### **Abstract**

As an outcome of the severe communal violence India was partitioned at the cost of gaining independence. It is a fact that the partition of India as well as Bengal became a great shock to many particularly to the minorities of both the countries in terms of sense of security and honour. The feelings of the minorities were reflected in the post-independence communal ferocities in both the Pakistan and India. Among the many of such communal barbarities the February riots of 1950 started a chain reaction in both East Pakistan and West Bengal. In that time not only the Hindus came from East Pakistan to West Bengal but also a large section of panicky Muslims left West Bengal and took shelter in East Pakistan as well as other side of the border. In that context, the entire administrative machinery of the state of West Bengal was virtually cracked down and the top leaders of both the countries felt the necessity for taking appropriate measures to minimize the burning problems with utmost priority - which led to the signing of the 'Nehru-Liaquat Ali Pact' on 8<sup>th</sup> April, 1950 regarding the solving of the minority problems of India and Pakistan with special reference to the situation in East Pakistan, West Bengal, Tripura and Assam

**Keywords:** refugee, bifurcation, holocaust, chain reaction, antagonistic, breach of trust, Minority Commission, Minority Affairs Ministers, lackadaisical, sense of security

### **Refugees and the Government of West Bengal during the Regime of B.C. Roy**

As a result of the partition of India particularly Bengal at the cost of gaining independence, West Bengal started suffering from the acute refugee problem as a matter of fact. With the bifurcation of Bengal and creation of new state in the union of India i.e. West Bengal started its journey with the unlimited liability of the refugees from East Pakistan. Actually aftermath the events of the great Calcutta Killing, Noakhali and Bihar holocaust just

before the partition of the country, the communal situation became so embittered that a large section of the Hindus from East Pakistan and a section of Muslims from West Bengal started leaving their ancestral property and were forced to become refugees for the sake of their life, security and honour in both the countries.<sup>1</sup> It was found that as consequence of Noakhali riots of 1946, the Hindus started coming to West Bengal and that processes increased in many more after partition. The inflow of the Hindu refugees to West Bengal was accelerated at the event of the police action in Hyderabad in September 1949. It was estimated that as much as a million of Hindus migrated from East Pakistan to West Bengal by March 1948.<sup>2</sup> By June 1948 the number of refugees reached up to 1.1 million. Of these number of refugees – 350,000 belonged to the urban middle classes, 550,000 to the rural middle classes, something more than 100,000 were agriculturists and something less than 100,000 artisans. The number of refugees varied from district to district.<sup>3</sup>

The second phase of the influx of the refugees began with the anti-Hindu riots in the month of February 1950 in East Pakistan which is considered as the biggest communal riots in this subcontinent after partition. This time the refugees started coming to West Bengal as like as glacier and the city of Calcutta as if converted into a refugee city.<sup>4</sup> Dr. Prafulla Chandra Ghosh, the first Chief Minister of West Bengal in his *Jiban-Smiritir Bhumika* mentioned that as a result of the severe communal atrocities on the Hindus of some places in Eastern Bengal like Dhaka, Barishal, Chatga etc. the lakhs of Hindus were forced to migrate to West Bengal. As a counter reaction of the attacks on Hindus in East Bengal, the Muslims of West Bengal were tortured by the Hindus.<sup>5</sup> Actually, this second phase of the migration started with the organized killing and looting of the Hindus and their property at Bagerhat in East Bengal and subsequently it was spread out to others areas. The February riots of 1950 started a chain reaction of organized communal violence in both East Pakistan and West Bengal and instead of one way traffic it assumed the character of two-way traffic. During the communal disturbances of 1950 not only the Hindus came from East Pakistan to West Bengal but also a large section of panicky Muslims left West Bengal and took shelter in East Pakistan as well as other side of the border. The entire administrative machinery of the state of West Bengal was virtually cracked down under the tremendous stress and strains of the huge influx from East Pakistan. It is noteworthy that the refugees who took shelter in the Government camps represented only a small fraction of the total influx. However, the Census report of 1951 shows that there were at least 3.5 million refugees came into the state of West Bengal after independence.<sup>6</sup>

It is needless to say that since the beginning of the independence the influx of refugees was a constant problem for the state of West Bengal. In order to tackle the extensive



refugee problem initially relief and rehabilitation were provided by the Government of West Bengal for giving minimum support to the huge displaced as well as destitute persons. They were given shelter in the various camps namely *Cuparse camp, relief camp of Dhubulia, Kashipur camp* and others. Some children and girls those who had lost their guardians during communal violence and at the time of coming to West Bengal were also temporarily rehabilitated at the suburban areas of Calcutta namely *Belur, Baburghat and Bansberia relief camps*. Some relief camps for providing shelter of the refugees were set up even outside of West Bengal and measures were adopted to send the refugees there. Moreover, shelter less as well as homeless large number of refugees jointly started setting up colonies for their accommodation in Calcutta and outskirts of Calcutta. In that time an organization named '*Nikhil Banga Bastuhara Karma Parishad*' (NBBKP) was established under the influence of some leaders of the Congress party in order to protect the interest of the refugees. Some more colonies for them were also set up under the efforts of '*Nikhil Banga Bastuhara Karma Parishad*'. The left parties also did not lag behind for asserting their influence on the refugees. Some colonies were established for the tireless efforts of the left parties namely CPI, RSP, RCPI, Forward Block etc. In the meantime another organization named '*South Calcutta Shahartali (suburb) Bastuhara Samhati*' was also established. Many more refugee colonies came into existence between Kanchara Para to Jadavpur within the month of August in 1950. These refugee colonies sprang up in the virgin land of state Government and in some cases the lands were owned by individual personalities.<sup>7</sup>

### **Administrative steps**

In the midst of hue and cry of the influx of refugees from East Bengal as an alternative measures in some cases Government facilities in the form of loans were provided to the refugees so that they could purchase land, build houses, start business as well as any other profession for their livelihood. On behalf of the Government of West Bengal some steps were taken for continuing education of the children of the refugee families in schools or colleges or to take any other activities to start their life anew.<sup>8</sup> However, in the wake of huge refugee influx and communal violence, some measures were taken on the administrative level to minimize the refugee problem in both East and West Bengal. In that context, the two Chief Secretaries of West and East Bengal namely Sukumar Sen and Aziz Ahmed used to meet frequently with a view to implementing of the decisions regarding the refugee problem of the Inter- Dominion Conferences at administrative level. On 9<sup>th</sup> April, 1949, at the conclusion of one such conference which was known as the Chief Secretaries' Conference an optimistic

note was sounded for the first time regarding the relationship between East and West Bengal.<sup>9</sup>

### **B.C. Roy's Worried about Central Assistance**

The Government of West Bengal headed by Bidhan Chandra Roy desperately tried to boost up the depleted financial situation in terms of the relief and rehabilitation of 16 lakhs uprooted people from East Pakistan. Bidhan Chandra Roy was worried about the collection of financial assistance from the Central Government as well as from the Prime Minister to every concerned ministry about relief and rehabilitation as and when he found that the state of West Bengal was not getting the similar treatment like the other States having refugees from West Pakistan.<sup>10</sup> Under the circumstances, *on 1<sup>st</sup> December, 1949*, Bidhan Chandra Roy wrote a letter to Jawaharlal Nehru. In that letter accusing Jawaharlal Nehru for taking his step motherly attitude, Bidhan Chandra Roy categorically mentioned that “You are under the impression that your government gave us a ‘large grant’ for the purpose of relief and rehabilitation. Do you realize that the total grant received for this purpose from your government in the two years, 1948-49 and 1949-50, was a little over 3 crores, the rest about 5 crores was given in the form of loan? Do you realize that this sum is “insignificant” compared to what has been spent for refugees from West Pakistan?”<sup>11</sup> In the same letter B.C. Roy also stated that “For months, the Government of India would not recognize the existence of refugee problems from East Pakistan, and therefore, would not accept the liability on their account. The provincial Government had to carry on as best as they could. And for these refugees, a magnificent sum of Rs. 20/-per capita has been granted by the Centre in two years.”<sup>12</sup>

In the meantime, the large scale exodus of Hindus from East Pakistan started pouring in West Bengal that surpassing all the previous records from the 1<sup>st</sup> week of February in 1950 due to widespread violence on the Hindus especially on the Namasudra Community in the Khulna district. With the spread out of the news of horrors and atrocities carried out on Hindus Minority like wild fire and as a reaction of that counter of communal violence started in different districts of West Bengal which was about to crack the law and order as well as the administrative machinery of the state government. At that moment of disturbances, B.C. Roy urged the leaders of the Government of India to take some measures regarding the communication with the Pakistan Government in order to take up appropriate security measures in disturbed areas and nab the guilty persons who were responsible for occurring violence and also visit the leaders of the Pakistan Government in the riot affected areas. As a responsible administrator, B.C. Roy then convened a meeting of leaders of the

political parties and appealed them to maintain law and order as well as communal harmony.<sup>13</sup>

### **Question of Exchange of population**

The Government of India was fully aware about the gravity of the situation. The Prime Minister Jawaharlal Nehru in one of his statements before parliament on 23<sup>rd</sup> February, 1950, referred to the tragedies in the district of Khulna, Rajshahi and Barishal of East Bengal which was followed by the incidents in the district of Murshidabad and Calcutta of West Bengal and then subsequently in Dhaka. It is mention-worthy that the question of exchange of Hindu-Muslim population between West Bengal and East Pakistan was raised by Dr. Shyama Prasad Mukherjee during the debate session of the parliament on 27<sup>th</sup> February 1950. Prime Minister Jawaharlal Nehru ruled out the proposal of the exchange of Hindu-Muslim population on the ground of totally unrealistic and the vague conception. Moreover, he said that “The proposal for an exchange of population was completely antagonistic to India’s political, economic, social and spiritual principles. It was a question of breach of trust.” In response to the statement of Prime Minister Nehru, Shyama Prasad Mookherjee in his reply said, “When Pandit Nehru himself had arranged the exchange of population in Punjab, he had kept this question of breach of trust in cold storage. At the present moment it would be proper for him to keep the question of breach of trust in cold storage again and face the reality like an experienced politician.”<sup>14</sup>

### **Nehru-Liaquat Ali Pact (8<sup>th</sup> April, 1950)**

Under the pressure of above circumstances, the leaders of both the countries started thinking that if the ongoing atrocities on Hindus were not checked immediately then there were only two alternatives i.e. Exchange of population or War. After realizing the seriousness of the situation these leaders felt the necessity for dealing with the burning problem on the highest political level with utmost priority. As a follow up of the ongoing incidents, Liaquat Ali Khan, the then Prime Minister of Pakistan was invited in Delhi by the Government of India for a discussion over minorities problems of both the countries particularly the refugee problem. However, giving response to the invitation of the Government of India, Liaquat Ali Khan arrived in Delhi on 2<sup>nd</sup> April, 1950. Bidhan Chandra Roy, the chief minister of West Bengal was communicated earlier to arrive in Delhi for consultation. It is interesting to note that in spite of becoming the main sufferer as a head of the administrator of the state, B.C. Roy did not take part in the negotiations between India

and Pakistan regarding refugee problem. However, the much talked agreement, known as 'Nehru-Liaquat Ali Pact' or 'Delhi Pact' was signed at the end of four days long discussion on 8<sup>th</sup> April, 1950 regarding the minority problems of India and Pakistan with special reference to the situation in East Bengal, West Bengal, Tripura and Assam.<sup>15</sup>

### **Main provisions of the Nehru-Liaquat Ali Pact:**

The 'Nehru-Liaquat Ali Pact' or 'Delhi Pact' incorporated provisions regarding the equality of citizenship irrespective of religion, provide equal opportunity to serve in the country's civil service and military forces, adequate facilities for migrants from the two Bengals, Tripura and Assam and resorting appropriate steps to safeguard the interests of minorities by the Government of both the countries. It was also decided in the 'Nehru-Liaquat Ali Pact' that a Minority Commission would be appointed in order to look after the conditions of the minorities of East Bengal, West Bengal and third for Assam with a Minister as Chairman. According to the pact further decision was taken regarding the appointment of two Central Ministers of each Government with the designation as Minority Affairs Ministers to visit the riot-prone areas at the aim of protecting the victims as well as restoring confidence into the minds of the minorities.<sup>16</sup>

### **Reaction: Resignation of Shyama Prasad Mookherjee from Central Ministry**

It is a fact the 'Nehru-Liaquat Ali Pact' was hailed by many from different corner and peoples started thinking that there would be an end of diminishing of human misery in the name of communal violence in both the countries. Although, there were some intellectuals and political personalities in India particularly in West Bengal who straightly expressed their unwillingness to accept the agreement as an appropriate method for the solution of the Hindu-Muslim Problem. The most important among them were Dr. Shyama Prasad Mookherjee, the then Industry and Supply Minister, Government of India<sup>17</sup> and Kshitish Chandra Neogy, Commerce Secretary, Government of India. Both of them resigned from their respective position as a mark of protest against the weak, puzzled and disproportionate policies adopted by the Government of India towards Pakistan. Moreover, they did not agree with the Nehru-Liaquat Ali Pact by which Government of India wanted to solve the Hindu-Muslim problem of both the countries especially in two Bengals.<sup>18</sup> In one his speeches in Parliament on 19<sup>th</sup> April, 1950, Shyama Prasad Mookherjee emphatically declared that "As and when we have no power to force the Government of Pakistan to follow the provisions of the Nehru-Liaquat Ali Pact, naturally no problems will be solved by it. Therefore, this Pact will be failed to give adequate security to the Hindus of the Pakistan and they will be compelled to come over India in a large scale."<sup>19</sup> As a member of the Indian

Central Government, at that time Shyama Prasad Mookherjee felt that firmer action should have taken against Pakistan and it was supposition of some contemporary political thinkers that probably inside the Cabinet he was backed by the proposal of Sardar Ballavbhai Patel for a hard line with Pakistan and an exchange of populations.<sup>20</sup>

Prime Minister Nehru and his Government was severely criticized by Shyama Prasad Mookherjee both on the floor of the Parliament and outside on refugee problems. In one of his hard-hitting speeches in Delhi on 30<sup>th</sup> July in 1950, Shyama Prasad Mookherjee warned the Government for its failure to handle the refugee problem. As millions of Hindus were migrated to West Bengal and the exodus was still continuing even after the signing of the 'Nehru-Liaquat Ali Pact', so, in order to solve the refugee problem permanently, Shyama Prasad Mookherjee prescribed some items which were as under: “ (i). Unification of the two countries; (ii). Planned exchange of population and (iii). Sufficient territories yielded by Pakistan to accommodate the displaced minorities of East Bengal.”<sup>21</sup> Referring to the three suggestions given by Dr. Shyama Prasad Mookherjee, Jawaharlal Nehru, the then Prime Minister of India in one of his speeches in the Parliament on 9<sup>th</sup> August, 1950, ruled out straightly on the ground of embarrassing international relations, a violation of the constitution and the high ideals of the congress party, nursing since long back. Referring the Compulsory exchange of population, Jawaharlal Nehru considered that it would be as like as ‘uncivilized, brutal and barbarous’.<sup>22</sup>

### **Efforts to implement the Nehru-Liaquat Ali Pact:**

Charu Chandra Biswas, former Vice-Chancellor of Calcutta University as well as a leading lawyer of Calcutta Bar, and Dr. A. M. Malek were inducted as ministers by the Government of India and Pakistan respectively following the 'Nehru-Liaquat Ali Pact'. Both the Ministers had undertaken an extensive tour in both West and East Bengal on peace and goodwill mission for checking communal riots.<sup>23</sup> Charu Chandra Biswas in his extensive tours went into the places of communal violence at the rural areas of Barishal district and other parts in East Bengal while his counterpart Dr. A. M. Malek visited in the riot affected areas of Hooghly, Burdwan and other places in West Bengal. The West Bengal camps were full of refugees. Sealdh station was presented a distressing picture as a result of the presence of thousands of crowd refugees. West Bengal Government was looking round new camps for halting places of the refugees. In one of his public speeches Jawaharlal Nehru confessed-“All that we wanted has not yet been done”.<sup>24</sup> In that situation, Sardar Ballavbhai Patel, the then Deputy Prime Minister along with Home Portfolio once threatened Pakistan saying that

“India would be forced to ask Pakistan to surrender land to accommodate Hindu refugees squeezed out of that country.”<sup>25</sup> However, as a part of the implementation of the Pact, Bidhan Chandra Roy appointed Dr. R. Ahmed, one of his trusted colleagues of the Medical Profession, as the Minister from minority community and he had taken all the procedural and preliminary steps to implement the pact. According to the provisions as laid down in the ‘Nehru-Liaquat Ali Pact’ Mr. Justice P. B. Mukherjee of the Calcutta High Court was appointed by Bidhan Chandra Roy as Chairman of a commission to enquire into the recent communal disturbances in West Bengal.<sup>26</sup>

The Governor address in the Legislative Assembly House revealed that out of 35 lakh refugees who had come into West Bengal about 12 lakhs had gone back to their ancestral home i.e. in East Bengal. Similarly, out of 11 lakh Muslims who had migrated from West Bengal, it was estimated that almost 7.5 lakhs had returned to their homes. Government claimed that 12 lakhs of refugees were fully rehabilitated among the vast masses of un-rehabilitated refugees. Naturally, the uncountable refugees under the leadership of various political parties began to occupy unauthorized lands for their settlement and thereby a large number of refugee colonies were sprang-up in many places which were later on known as squatters colonies.<sup>27</sup>

However, Bidhan Chandra Roy tried his best and he worked tirelessly for planned settlement of refugees both within and outside of West Bengal during the entire period of his Chief Ministership. But, somehow in this field, he did not get whole hearted support to the desired extend from some of his party colleagues who were the West Bengalee.<sup>28</sup>

In spite of taking the above said measures, the condition of the refugees almost remained gloomy. As per the survey report which was conducted by the State Statistical Bureau, it was revealed that less than 50 percent of the total refugees were ‘properly’ rehabilitated, that means more than 50 percent refugees were not given the proper rehabilitation.<sup>29</sup>

In the light of the above discussion it may be noted here that the much-talked Nehru-Liaquat Ali Pact was able to check the influx temporarily, but it did not stop the flow of migrants permanently. Though, as an outcome of the pact the Muslims who had left West Bengal and Assam in the wake of the February riots of 1950 re-entered their states. In that context, it is mention worthy that the pact somehow boost up the feeling of ‘no sense of insecurity’ among the Indian Muslims and as a result of that there is no as such evidence of the migration of the Muslims from India particularly in West Bengal. On the other hand, it is

crude reality that the exodus of the Hindu minorities of East Bengal did not stop. Due to the implementation of the pact in a lackadaisical manner by the Government of Pakistan it failed to give the East Bengal Hindus what they wanted – a sense of security which forced them to migrate in the subsequent years.

## Notes and References

1. “*Bidhan Chandra KarnadharTabu Khaaaandita Banglar Nabhishvas*” A Bengali Article by Amalendu Dey in *Saat Dashak Samokal O Ananda Bazar*, Ananda Publishers, Kolkata, 2013, p. 92.
2. Statement of the Central Rehabilitation Minister on 11 March, 1948; see *Amrita Bazar Patrika*, 12<sup>th</sup> March, 1948.
3. Information supplied by the Relief and Rehabilitation Commissioner of West Bengal on 5<sup>th</sup> June 1948; see *Amrita Bazar Patrika*, 6<sup>th</sup> June, 1948.
4. Sukharanjan Sengupta, *Bhanga Pather Ranga Dhulay* (in Bengali), Ruminations of bygonaries, Punasha, Kolkata, 2010, p.63; Also see Lalit Chandra Barman, *Coochbiharer Smaraniyo Byaktitta Khan Choudhury Amanatulla Ahamad*, Upjanbhui Publishers, Mathabhanga, Coochbiher, 2017, p. 43.
5. Dr. Prafullachandra Ghosh, *Jiban-Smiritir Bhumika* (in Bengali), Titas, Kolkata, 2014, p. 113.
6. Prafulla Kumar Chakrabarty, *The Marginal Men*, Naya Udyog, 1999, pp. 2-3.
7. “*Bidhan Chandra KarnadharTabu Khaaaandita Banglar Nabhishvas*” A Bengali Article by Amalendu Dey in *Saat Dashak Samokal O Ananda Bazar*, Ananda Publishers, Kolkata, 2013, p. 93.
8. K.P. Thomas, *Dr. B.C. Roy*, West Bengal Pradesh Congress Committee, 1955, pp. 241-242.
9. Saroj Chakrabarty, *My Years With Dr. B.C. Roy* (A Record up to 1962. A Documentary In-Depth Study of Post-Independence Period), A Centenary Volume, Sree Saraswaty

- Press Limited, Calcutta, 1962, p. 39; also see, Dinesh Chandra Singha, 1950: *Raktaranjito Dhaka- Barishal Abang* (in Bengali), Kodex, Kolkata, 2012, p.22.
10. Saroj Chakrabarty, *op.cit*, p. 56.
  11. *Ibid*, pp. 57-58.
  12. Saroj Chakrabarty, *op.cit*, p. 58.
  13. *Ibid*, pp. 71-72.
  14. Debate in Lok Sabha, 27<sup>th</sup> February, 1950. See Prafulla Kumar Chakrabarty, *op.cit*. pp. 30-31; also see “*Bidhan Chandra KarnadharTabu Khaaaandita Banglar Nabhishvas*” A Bengali Article by Amalendu Dey in *Saat Dashak Samokal O Ananda Bazar*, Ananda Publishers, Kolkata, 2013, p. 94.
  15. Saroj Chakrabarty, *op.cit*, p.78. Also see “*Bidhan Chandra Karnadhar Tabu Khaaaandita Banglar Nabhishvas*” A Bengali Article by Amalendu Dey in *Saat Dashak Samokal O Ananda Bazar*, Ananda Publishers, Kolkata, 2013, pp. 93-94.
  16. Saroj Chakrabarty, *op.cit*, p.78.
  17. Rita Basu, *Dr. Shyamaprasad Mookherjee and an Alternate Politics in Bengal*, Progressive, Kolkata, 2002, p.95.
  18. Saroj Chakrabarty, *op.cit*, p. 79.
  19. “*Bidhan Chandra KarnadharTabu Khaaaandita Banglar Nabhishvas*” A Bengali Article by Amalendu Dey in *Saat Dashak Samokal O Ananda Bazar*, Ananda Publishers, Kolkata, 2013, p. 94.
  20. Balraj Madhok, *Portrait of a Martyr: Biography of Dr. Shyama Prasad Mookherjee*, Bombay, 1969, p.28.
  21. Saroj Chakrabarty, *op.cit*, p.84.
  22. *Ibide*.
  23. *Ibide*, p. 80
  24. *Ibide*, p.82.
  25. *Ibide*, p. 81.
  26. *Ibide*.
  27. “*Bidhan Chandra KarnadharTabu Khaaaandita Banglar Nabhishvas*” A Bengali Article by Amalendu Dey in *Saat Dashak Samokal O Ananda Bazar*, Ananda Publishers, Kolkata, 2013, p. 102. Also see Saroj Chakrabarty, *op.cit*, p. 90.
  28. Saroj Chakrabarty, *op.cit*, p. 90.
  29. *The Statesman*, 11<sup>th</sup> June, 1958.



# **A Brief Overview ON GaN BASED IMPATT DIODES: The CRUCIAL TRENDS IN MICROWAVE SEMICONDUCTOR DEVICES.**

**Barun Kumar Roy.**

M.SC(Physics,Spl. Electronics) M.PHIL(Physics),  
From Department of Physics,  
Sambalpur University,Orissa.

M.B.A From VGSOM, **I.I.T KHARAGPUR.**

Ex Asst.Professor of Physics,JBMJ College,Sundergarh,Orissa.  
Ex. Research Scientist,M/s Tata Refractories Limited,Belpahar,Orissa.

## **Abstract**

*Developments of several solid state devices in recent years have helped to realize efficient communication systems involving a wide range of frequency of operation. The solid state devices provide stable, cheap and reliable RF power even at very high frequencies of operation i.e. at microwaves and mm-waves. The microwave transistors, Gunn diodes, MESFETs, BARITT, TRAPATT and IMPATT diodes are commonly used now as microwave generators. Each device has its own identity regarding the principle of operation, frequency coverage, output power and efficiency. Since microwave and mm wave ranges of frequency provide low attenuation and high penetration through cloud, fog etc, the IMPATT (Impact Ionization Avalanche Transit Time) devices cover generation of microwaves and mm-waves have become very much useful in different system applications. This paper aims to enlighten the various aspects of most crucial and emerging trends in Microwave Semiconductor Devices viz. GaN based IMPATT Diodes. The paper also depicts and explore the mm-wave range of frequency has the special advantages like broader band width, increased resolution and necessity of low voltage power supplies. The device performance at frequencies centered around 16, 35, 94, 140 and 220GHz is very much suitable as these frequencies correspond to atmospheric window frequencies.*

**Keywords:** solid state, frequency, microwave, devices, power, diode etc.

## **1. Introduction**

Microwave Devices overcome the vacuum tube devices to operate at high frequency. Now-a-days, all high frequency signal generator are using microwave devices. Microwave devices are categorized as two and three terminal Devices. Two terminal devices have dominated over the three terminal devices till recent times. Further, two terminal devices are categorized in terms of transit time effect and bulk negative resistance effects. Two terminal transit time effect devices are dominated by IMPATT diode in their category. The devices such as *Read* diode, *TRAPATT*, *DOVATT* etc are categorized in IMPATT family. However, these devices are good at low frequency compare to the operating frequency of IMPATT. The IMPATT diodes are regarded as the premier solid state devices among their family. Thus the last decade has witnessed intense research activities both theoretical and experimental in the development of IMPATT Devices and associated systems for stable and reliable rf communication in the mm-wave range. Further, the materials used to fabricate such devices have also plays a major role for high frequency operation. The materials used for this purpose in the last decade include mainly *Si*, *GaAs*, and *InP*. However, recently high band gap semiconductors such as *GaN* is playing the major role for high frequency high power generation. With increasing maturity in epitaxial growth and improvement in crystal growth, III-V nitrides offer a high potential for high power microwave applications such as amplification and signal generation. High power *GaN FETs* and *MODFETs* have, for example, been reported with excellent electrical characteristics [6-9]. Thus, the author feel to explore material namely *GaN* to use for two terminal devices namely IMPATT diodes to see the potential of the material as well as devices. The detailed mechanism of operation like

transit time effect, negative resistance effect etc. has taken care obtained from ion implantation technique is not uniform and the characteristics of *IMPATTs* depend on these impurity profiles.

## **2.Modern Trend**

In the modern trend, research activities are focused on the search of the best suited base semiconductor material, which would give high efficiency, high microwave power and low noise. Apart from low band gap semiconductor materials such as *Si* (IVth group elements) *GaAs* (III-Vth compound semiconductors) and its compound/alloy heterostructure material, wide band gap semiconductors like *GaN* and compounds based on it have recently been established as technologically important materials for both electronic and optoelectronic devices [10-14]. However, as such, fabrication using *GaN* base semiconductor (or *III-Vth* compound base semiconductor) is not that easy as that of silicon because silicon has matured technology [15,16]. Hence, silicon or compound based on it having high band gap is expected to be better semiconductor materials for *IMPATTs*. In spite of the cumbersome *GaN* fabrication technology, the material has exhibited exciting properties as *IMPATT* [17,18] diode. Thus the potentials of *GaN* for *IMPATT* are explored in this paper.

## **3.Microwave Devices**

There are two types of Microwave Devices, which are made up of Vacuum Tube and Semiconductor Devices. Vacuum Tube devices such as Klystron, Magnetron etc are good and generates high power upto 10GHz [20]. However, it is too bulky and is very difficult to use such bulky devices in today's world, particularly in IC areas. The other kind is solid state devices made up of semiconductor materials. These are classified as two terminal and three terminal devices. FET, HEMT, BJT etc are considered as three terminal microwave devices[1-6]. The limiting frequencies of these devices are again only upto X-band (10GHz) [20]. *IMPATT* diodes are considered as two terminal devices and these devices operates as oscillator at high frequencies such as 94GHz (W-band), 140GHz (D-band) window frequency and can operate upto 340GHz [19]. Further, there are two kinds of two terminal devices which generates high frequency due to (i) Avalanche Transit Time effect (ii) Transfer Electron effect. A brief review of such kind of devices are presented in this paper.

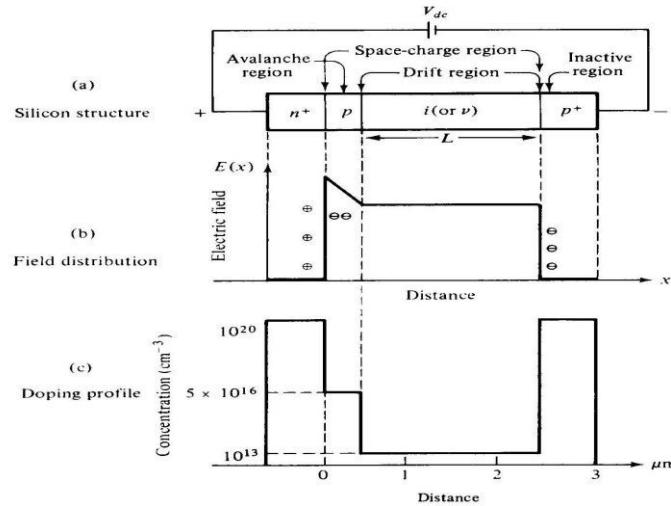
### **3.(i) Avalanche Transit Time Device**

The basic physical process involved in the two terminal transit time effect devices are the transit of charge carriers within the drift zone and multiplication of charge carriers in the avalanche zone. The transit time delay and avalanche phase delay together produce the appropriate condition for realization of negative resistance at microwave frequencies which make it possible for the p-n junction to produce microwave oscillation. Avalanche transit time diode oscillators rely on the effect of voltage breakdown across a reverse biased p-n junction to produce a supply of holes and electrons. The avalanche diode oscillator uses carrier impact ionization and drift in the high field region of a semiconductor junction to produce a negative resistance at microwave frequencies. Two distinct modes of avalanche oscillators have been observed. One is the *IMPATT* (Impact Ionization Avalanche Transit Time) mode. In this mode the typical dc to RF conversion efficiency is 5 to 10%, and frequencies are as high as 340GHz [19].

#### **3.i(a) Read diode**

The basic operating principle of *IMPATT* diodes can be most easily understood by reference to the first proposed avalanche diode, the *Read* diode. The *Read* diode with a doping profile and dc

electric field distribution that exists when a large reverse bias is applied across the diode is shown in *figure 1*.



**Fig.1**

(a) Read structure (b) Electric field distribution with distance, (c) Doping profile with distance [20].

The Read diode is an  $n^+-p-i-p^+$  structure, where the superscript + denotes very doping and the  $i$  refers to intrinsic material. In the thin  $p$  region avalanche multiplication occurs (this region is also called the high-field region or avalanche region). In the  $i$  region the generated holes must drift in moving to the  $p^+$  contact (this region is also called the intrinsic region or the drift region). The space between  $n^+-p$  junction and the  $i-p^+$  junction is called the space charge region. Similar device can be built in the  $p^+-n-i-n^+$  structure, in which electrons generated from avalanche multiplication drift through the  $i$  region.

The Read diode oscillator consists of an  $n^+-p-i-p^+$  diode biased in reverse and mounted in a microwave cavity. The impedance of the cavity is mainly inductive and is matched to the mainly capacitive impedance of the diode to form a resonant circuit. The device can produce a negative ac resistance that in turn, delivers power from the dc bias to the oscillation.

When the reversed biased voltage is well above the punch through or breakdown voltage, the space -charge region always extends from the  $n^+-p$  junction through the  $p$  and  $i$  regions to the  $i-p^+$  region. The fixed charges in the various regions are shown in *figure 1(b)*. A positive charge gives a rising field in moving from left to right. The maximum field, which occurs at the  $n^+-p$  junction is several hundred  $KV/cm$ . Carriers (holes) moving in the high-field near the  $n^+-p$  junction acquire energy to knock valence electrons into the conduction band, thus producing hole-electron pairs. The rate of pair production, or avalanche multiplication, is a sensitive nonlinear function of the field. By proper doping, the field can be given a relatively sharp peak so that avalanche multiplication is confined to a very narrow region at the  $n^+-p$  junction. The electrons move into the  $n^+$  region and the holes drift through the space charge region to the  $p^+$  region with a constant velocity  $v_d$  of about  $107 \text{ cm/s}$  for the silicon. The field throughout the space-charge region is above about  $5KV/cm$ . The transit time of a hole across the drift  $i$ -region is given by [20]

$$\tau = \frac{l}{v_d} \quad (1)$$

The avalanche multiplication factor is

$$M = \frac{l}{1 - \left(\frac{v}{v_b}\right)^n} \quad (2)$$

where,  $V$  = applied voltage and  $V_b$  = avalanche breakdown voltage,  $n = 3-6$  (for silicon is a numerical factor depending on the doping of p+-n or n+p junction) The breakdown voltage for a silicon p+-n junction is

$$V_b = \frac{\rho_n \mu_n \epsilon_s [E_{max}]^2}{2} \quad (3)$$

where,  $\rho_n$  = resistivity,  $\mu_n$  = electron mobility,  $\epsilon_s$  = semiconductor permittivity,

$E_{max}$  = maximum breakdown of the electric field

For producing oscillation the *Read* diode is mounted in a microwave resonant circuit. An ac voltage can be maintained at a given frequency in the circuit. The total field across the diode is the sum of the ac and dc field. During positive half of the ac the total field at n+-p junction is maximum and if exceeds the breakdown voltage, and the carrier current (hole current in this case)  $I_o(t)$  generated at the junction by the avalanche multiplication grows exponentially with time then the breakdown occurs. During negative half of ac, when the field is below the breakdown voltage, the carrier current  $I_o(t)$  decays exponentially to a small steady-state value.  $I_o(t)$  is a current at the junction only and is in the form of a pulse of very short duration only. Under the influence of the electric field the generated holes are injected into the space-charge region towards the negative terminal. As the injected holes traverse the drift space, they induce a current  $I_e(t)$  in the external circuit. *Figure2*.

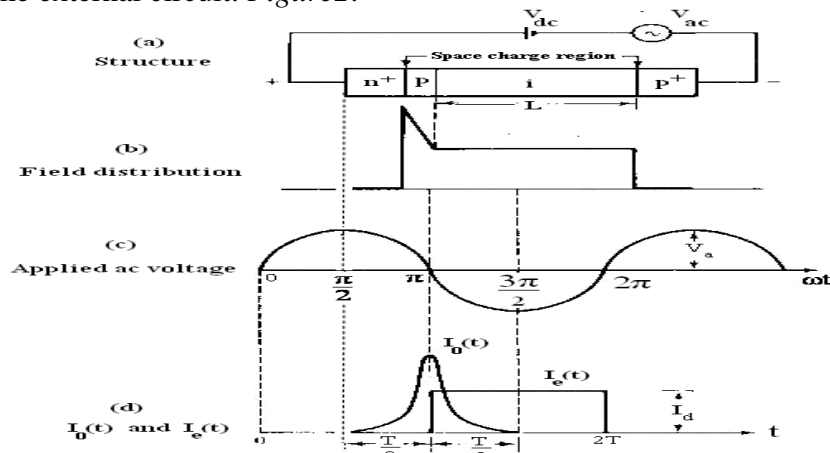


Fig.2 Field, voltage and current in Read diode [20]

The induced current is given by [20]

$$I_o(t) = \frac{Q}{\tau} = \frac{Q}{V/v_d} = \frac{v_d Q}{L} \quad (4)$$

Here,  $Q$  = total charge of the moving hole,  $V_d$  = hole drift velocity,  $L$  = length of the drift  $i$  region.

It can be seen that the induced current  $I_e(t)$  in the external circuit is equal to the average current in the space charge region. When the pulse of hole current  $I_0(t)$  is suddenly generated at the n+-p junction, a constant current  $I_e(t)$  starts flowing in the external circuit and continues to flow during the time  $\tau$  in which the holes are moving across the space charge region. Thus, on the average, the external current  $I_e(t)$  because of the moving holes is delayed by  $\tau/2$  or 90° relative to the pulsed carrier current  $I_0(t)$  generated at the n+-p junction. Since the carrier  $I_0(t)$  is delayed by one quarter of a cycle or 90° relative to the ac voltage, the external current  $I_e(t)$  is then delayed by 180° relative to the voltage as shown in the *figure2(d)*. Therefore the cavity should be tuned to give a resonant frequency as

$$2\pi f = \frac{\pi}{\tau}$$

Then,

$$f = \frac{1}{2\tau} = \frac{v_d}{2L} \quad (1.5)$$

Since the applied ac voltage and the external current  $I_e(t)$  are out of phase by 180°, negative conductance occurs and the *Read* diode can be used for microwave oscillation and amplification. Further, the *Read* diode supplies ac energy. It has negative Q (quality factor) in contrast to the positive Q of the cavity. If the amplitude of the ac voltage increases, the stored energy, or energy of oscillation, increases faster than the energy delivered per cycle. This is the condition required in order for stable oscillation to be possible. The *Read* diode is the basic of *IMPATT* devices and the same principle is used for *IMPATT*'s operation which will be shown in this chapter.

### 3.i(b) Specialty of *IMPATT* Diode

The *IMPATT* diodes are regarded as premier solid state devices for generation of microwaves and mm-waves covering a very wide frequency range *i.e.* 8 to 340GHz [4] and generating high RF power at high efficiency. *IMPATT* devices excel other devices in their family of microwave sources as regards their frequency coverage and output power. The reported frequency of operation as well as the output power obtained from *IMPATT* devices has shown steady improvement from the date of first experimental report [25] showing microwave oscillation. A pulsed power of 42W at 96GHz [2] and 520mW at 217GHz [3] and a CW power of 980mW near 100GHz and 50mW at 220GHz [15] may be regarded as significant reports on *IMPATT* oscillator performance. Further, a realization of a variety of diode structures [16] which can be fabricated from any base semiconductor is an added advantage for this device. The last decade has witnessed intense research activities both theoretical and experimental in the development of *IMPATT* devices and associated systems for stable and reliable operation in the mm-wave range. The author has undertaken the review work on the methods of analysis, associated computer algorithms, possible diode structures and experimental reports of oscillator performance heavily before the work starts and decided to study its characteristics more deeply. The basic physical processes involved in the *IMPATT* action are the transit of charge carriers within the drift zone and multiplication of charge carriers in the avalanche zone. The transit time delay and avalanche phase delay together produce the appropriate condition for realization of negative resistance at microwave frequencies which make it possible for the p-n junction to produce microwave oscillation [16].

### 3.(ii) Transfer Electron Effect

The special properties of a semiconductor such as ability to control the density of holes and/or electrons at the surface used in electron transfer. The common characteristic of all active two-terminal solid state devices is their negative resistance. The real part of their impedance is negative over a range of frequencies. In a negative resistance, the current and voltage are out of phase by 180°. The voltage drop across a negative resistance is negative, and a power of  $(-I^2R)$  is generated by the power supply associated with the negative resistance. In other words, negative resistances generate power (active). In this section *Transfer Electron Devices* (TEDs) are analyzed. The mechanism for producing the negative conductance was proposed by Ridley and Watkins [21] in 1961 and by Hisum [22] in 1962. It is based on electron transfer from a low energy, high mobility conduction band valley to a high energy, low mobility valley. *GaN* shows this transfer electron mechanism. So this material is suitable for application as *IMPATT* diodes are known for high power. Since *GaN* is only material which can be considered for these devices.

### 4. Recent Development on *IMPATT*

The present status of *IMPATT* diode as regards RF power, efficiency and frequency of operation has been achieved through intense research activities in three decades since its inception. However, research on *GaN* based *IMPATT*s have started recently. Panda et al were the first to report on *GaN*-based *IMPATT*s showing the possibility of obtaining high power at high frequency [17,18]. They determined the noise characteristics also for such diode [17] following the technique used by Mishra et al [23,24]. Similarly, the *IMPATT* diode fabricated using implantation technique has more important than any other. Hence, a brief and recent development of *IMPATT*s using *GaN* and fabrication process using ion implantation are discussed in this paper. Recently Ganguly *et al* [25] showed that substrate thinning is a necessary step for the fabrication of *IMPATT* diode. They have done it by both chemical etching and mechanical etching and the results are presented for 8-26GHz frequency range. In the same year, Curow [26] have proposed an *IMPATT* device structure for D-band applications by using hydrodynamic transport model. Some more experimental results of *IMPATT* fabrication using ion implantation technique are seen in the literature [3,27-28]. However, a theoretical study suggesting ion implantation parameters for optimized *IMPATT* devices to obtain high power and high frequency are not seen in the literature. The authors group [29,30] had tried for such kind of study using third moment approach to obtain ion implantation profiles. However, it is not a generalized one and hence author developed a generalized ion implantation model to use for *IMPATT* devices. Semiconductors, namely *GaN* becomes the important material for the *IMPATT* devices. The *GaN*-based *IMPATT* devices were seen in the literature for the first time in 1999 [31]. In the mean time, III-Vth compound semiconductor based heterostructure *IMPATT*s also played the major role as the signal generators.

### 5. Fabrication of *IMPATT*s using Ion Implantation Technique

Ion Implantation is an important and effective technology for the fabrication of modern advanced electronic and optical devices. A highly energetic beam of the desired ion is made to strike and penetrate into the target (*silicon*) wafer to cast a well-defined *p-n* junction, having an appropriate doping profile. Many experimental reports are available on the fabrication of ion-implanted *silicon p-n* junction [15,28] as well as *MOS* devices. Despite the rapid advancement of *p-n* junction (mainly *IMPATT*) modeling in the recent years, some fundamental problems, viz., profile studies are not adequately undertaken, though they appear important in fabrication of semiconductor devices. Many authors assume it as an exponential at the junction, which does not match exactly with the experimental profiles [32-33]. The exponential profile is close to the

profile obtained from diffusion technology [34]. However, the profile obtained from ion implantation technology deviates much more from the generally assumed exponential profile. characteristics vary a lot. The implantation profile can be approximated as *Pearson's* distribution with *fourth-moment* approach, which exactly fits with experimental data . Thus, the objective of this chapter is to generate and optimize ion-implanted double drift *p-n* junction profiles to realize optimum *RF* power and efficiency at high frequency for use in *VLSI* Circuits. It is also well known that diodes with ion implantation profiles generate more noise [15]. In addition impact ionization itself is the main source of noise in *IMPATT* diodes [24]. Noise generation and its impact on *IMPATT* diode performance is therefore one of the vital area of study for ion implanted *p-n* junctions to determine its full device potential as signal generator. The main focus of this study will therefore be the optimization of ion implantation profile which will not only provide maximum power and efficiency but will generate less noise. However, it is difficult to achieve both at the same time. Thus a noise-power trade-off is needed for different ion implantation profiles. The results of such study along with optimized ion implantation parameters for different frequency bands are presented in this chapter.

### **6. GaN-based Avalanche Transit Time Devices**

The materials used for this purpose include mainly *Si*, *GaAs*, and *InP*. With increasing maturity in epitaxial growth and improvement in crystal growth, *III-V* nitrides offer a high potential for high power microwave applications such as amplification and signal generation. High power *GaN FETs* and *MODFETs* have, for example, been reported with excellent electrical characteristics [6-7]. To the best of our knowledge, the feasibility of using *GaN* in *IMPATT* (*IMPACT* Avalanche Transit Time) diodes has not yet been reported experimentally. Based on the fundamental properties of *GaN* semiconductors, it is expected that *IMPATT* devices using this material would manifest much higher output power capability in the millimeter-wave range than *Si*, *GaAs*, *InP*-based diodes explored so far. Because of the high thermal conductivity of *GaN*, larger amounts of heat can also be dissipated successfully from devices made up of this material, provided a suitable substrate is available for effective removal of the heat from *GaN*. In addition to the above properties, other characteristics, such as low carrier mobility of *GaN* and low carrier ionization integral (when compared to *GaAs*-based designs) need also to be taken into consideration. Though manufacturing of *GaN* based devices is cumbersome than that of *Si*-based devices yet because for high superior material parameters, high power *GaN FET* are seen commercially in recent years. Therefore a complete theoretical study of *GaN IMPATT* devices is necessary to account for all features offered by *GaN*-based designs. A study of this type would help to explore the benefits of this technology before appreciable resources are dedicated to material growth, device fabrication and characterization. A preliminary comparison between *GaN*-based devices and existing device technologies can also be made using figures of merit. However, a more complete and accurate understanding can be obtained by simulating and analyzing various device designs and finding the impact of material parameter and device parameters on their performance, as reported in this thesis. From all the facts it is expected that high bandgap materials like *GaN* will replace the traditional *Si*-based *IMPATTs* in recent years, particularly at high frequency (D-band and above).

### **7. Model and Design Considerations for GaN-based Avalanche Transit Time Devices**

This section describes the details of design considerations to obtain *DC*, smallsignal and noise results based on *GaN IMPATTs*. The devices were designed following an *IMPATT* mode *DC* simulation scheme. In addition to the prediction of general *DC* and high-frequency generation characteristics, studies were also performed to evaluate the noise properties of the devices. It is

well known that the impact ionization process, which is mainly responsible for a major portion of power generation in *IMPATT* diodes, is an intrinsically noisy process. The noise originates from the random nature of the impact ionization process. This gives rise to fluctuations in the *DC* current and *DC* electric field; these fluctuations appear as small-signal components to *DC* values even when no small-signal high-frequency voltage is applied to the diode. Noise generation and its impact on *IMPATT* diode performance is therefore of importance in determining the device characteristics. Experimental results reported on *GaN*-based *p-n* junctions and considerations of practical limits in doping were used as basis of the choice of initial values of the diode doping concentrations. These were then varied over wide range and simulated using the *DC* scheme to ensure operation under maximum efficiency and satisfaction of the punch-through condition as necessary for operation at *140GHz*. This study also showed that the simulated structures present a negative resistance in a wide range of current densities and that the optimum operating current density (*J<sub>0</sub>*) for *140GHz* operation is of the order of *60KA/cm<sup>2</sup>*. The optimum designs obtained from this method for a current density of *J<sub>0</sub>=60KA/cm<sup>2</sup>* and at optimum frequency of *f<sub>p</sub>=140GHz* for all the device structures (*SDRs* and *DDRs*) considered in this study.

### 8.Conclusion.

Simulation studies based on the newly emerging wide bandgap material, *GaN* based *IMPATT* diodes are presented. All possible type of structural variations of the diodes is considered to explore possibility of improving the performance. A 2 to 10 times higher power output for *GaN*-based *IMPATTs* is noteworthy. Wide band gap semiconductors like *GaN* and compounds based on it have recently been established as technologically important materials for both electronic and optoelectronic devices to obtain high power. Many research groups are busy now to fabricate *GaN*-based *IMPATT* diodes. The solid state devices like microwave transistors, *Gunn* diodes, *MESFETS*, *BARITT*, *TRAPATT* and *IMPATT* diodes which are commonly used as microwave generators provide stable, cheap and reliable RF power even at very high frequencies of operation. Out of these, it is seen that *IMPATTs* is mostly used as high frequency generator. Studies on ion implanted doping profile based *IMPATTs* are presented. It is seen that with variation in ion dose the doping profile on *p*-side shows a considerable change whereas the same on *n*-side records a marginal variation. A flat doping profile is seen to provide better result. Therefore the author has tried to determine the optimized profile whose average value will approximate to that of a flat profile. This indicates that *GaN – IMPATT* diode based can be operated at high temperature. Thus it can be concluded *GaN*-based *IMPATT* diode is expected to generate high power at high frequency.

### References

1. Lin-An Yang, Yue Hao, Q.Yao and J.Zhang, —Improved Negative Differential Mobility Model of *GaN* and *AlGaN* for a Terahertz *Gunn* Diode, *IEEE Transaction on Electronic Devices*, vol. 58, No. 4, pp 1076 – 1083, 2011.
2. W.Behr and J.F.Luy, —High power operation mode of pulsed *IMPATT* diodes", *IEEE Electron Device Letters*, vol. ED-11, pp.206-208, 1990.
3. T.T.Fong and H.J.Kuno, —MM-wave pulsed *IMPATT* sources“, *IEEE Trans. on Microwave Theory and Technique*, vol. MTT-27, pp.492, 1979.
4. H.Eisele and G.I.Haddad, —Active Microwave Devices, in *Modern Semiconductor Device Physics*, editor S. M. Sze, John Wiley & Sons, pp.343-407, 1998.
5. G.N.Dash, J.K.Mishra, and A.K.Panda, —Noise in mixed Tunneling Avalanche Transit Time (MITATT) diodes, *Solid State Electron*, vol. 39, No. 10, pp.



1473-1479, 1996.

6. A comparative study on the high band gap material (*GaN* and *SiC*)-based *IMPATTs*, *IET Microwave, Antenna and Propagation*, vol 2, No. 8, pp. 789-793, 2008, A.K.Panda, R. K.Parida, N.C.Agrawala and G.N.Dash.
7. N.Dyakonova, A.Dickens, M.S.Shur, R.Gaska and J.W.Yang, —Temperature dependence of impact ionization in *AlGaN-GaN* heterostructure field effect transistors, *Applied Phys. Letters.*, vol. 72(20), pp.2562-2564, 1998.
8. E.R.Heller, R.Ventury and D.S.Green — Development of a versatile physicsbased Finite-Element Model of an *AlGaN/GaN* HEMT capable of Accommodating Process and Epitaxy Variations and a librated Using Multiple DC Parameter, *IEEE transactions on Electron Devices*, vol.58, No. 4, pp-1091-1095, 2011.
9. T.R.Lenka and A.K.Panda, —Characteristics study of 2DEG Transistor Properties of *AlGaN/GaN* and *AlGaAs/GaAs* based HEMT, *Semiconductors*, vol. 45, No, 5, pp 650-656, 2010.
10. E.Alekseev and D.Pavlidis, —Large-signal microwave performance of *GaN* based NDR diode oscillators, *Solid-State Electronics*, vol.44, pp. 941-947, 2000.
11. O.Yilmazoglu, K.Mutamba, D.Pavlidis and T.Karaduman, —First observation of bias oscillation in *GaN Gunn* diodes on *GaN* substratel, *IEEE Transaction on Electron Devices*, vol. 55, No. 6, pp. 1563-1567, 2008.
12. M.Mukherjee et al, Hexagonal *GaN* based Phot`o – Irradiated *IMPATT* devices for application in mm-wave Communication systems, *International Conference on emerging trends in electronic and photonic devices and systems*, 2009.
13. M.Mukherjee et al, Effect of Punch through on THz frequency characteristics of 4H-*SiC* based P++Pnn++ *IMPATT* devices, *International Conference on Computer and devices for Communications*, 2009.
14. G.W.Ludwig, and M.Aven, — *Gunn* Effect in *ZnSe*, *Journal of Applied Physics*, vol. 38, No.13, pp.5326-5331, 1967.
15. T.A.Midford and R.L.Bernik, —MM-wave CW *IMPATT* diodes and oscillations, *IEEE Transaction on Microwave Theory and Technique*, vol. MTT-27, pp.483-491 (1979).
16. S.M.Sze, *Physics of Semiconductor Devices*, Wiley Eastern Limited: New Delhi, 1981.
17. A.K.Panda, D.Pavlidis and E.Alekseev, —Noise characteristics of *GaN*-based *IMPATTs*, *IEEE Trans on Electron Devices*, vol. 48, No.7, pp.1473-1475, 2001.
18. A.K.Panda, D.Pavlidis and E.Alekseev, —DC and High-Frequency characteristics of *GaN*-based *IMPATTs*, *IEEE Trans on Electron Devices*, vol. 48, No.4, pp.820-823, 2001.
19. H.Eisle and G.Haddad, —Two- terminal millimeter-wave sources, *IEEE Transactions on microwave theory and techniques*, vol. 46 (6), 1998.
20. S.Y.Liao, *Microwave Devices and Circuits*, TMH, New Delhi, 2002.
21. B.K.Ridley, and T.B.Watkins, —The Possibility of Negative Resistance Effects in Semiconductors, *Proc. Physics Society ( London)*, vol. 78, No. 8, pp.293-304, 1961.
22. C.Hilsum, — Transferred Electron Amplifier33s and Oscillators, *Proc. IRE*, vol. 50, No. 2, pp. 185-189, 1962.

23. Optimised Implantation profiles for the p-n junction using fourth moment approach for application in high frequency VLSI circuits, *Transaction in Electronics, Electrical and Communication engineering*, vol 6, No. 2, pp. 44-49, 2008, N.C.Agrawala, R.K.Parida, G.N.Dash and A.K.Panda.
24. J.K.Mishra, A.K.Panda and G.N.Dash, —An extremely low noise heterojunction IMPATT, *IEEE Transaction on Electron Devices*, vol. ED-44, No.12, pp. 2143-2149, 1997.
25. A.Ganguly, S. K.Roy and J. P.Banerjee, —Substrate thinning for fabrication of IMPATT diodes", *Journal of IETE*, Vol. 40, No.1, pp. 53-54, 1994.
26. M.Curow, —Proposed GaAs IMPATT device structure for D-band applications", *Electron Letters*, vol. 30, No. 19, pp. 1629-1630, 1994.
27. C.A. Lee, R.L. Batdraf, W.Weigmann and G.Kaminsky, —The Read diode -an avalanching transit time negative resistance oscillator", *Applied Physics Letters*, vol. 6, pp.89, 1965.
28. T.E.Seidel, R.E.Davis and D.E.Iglesias, —DDR ion-implanted p+pnn+ mmwave IMPATT diodes", *International Electron Devices Meeting*, Washington DC., USA; 28-30 Oct pp.52, 1970.
29. A.K.Panda, G.N.Dash and S.P.Pati, —Computer aided optimization of ion implantation impurity profiles for n+npp+ double drift IMPATT diodes with three moment approach, *Solid State Electronics*, vol. 39, pp 759-762, 1996.
30. S.M.Sze, VLSI Technology, Tata McGraw Hill, Second Edition Chapter 8 (Ion implantation by M D Giles), 2003.
31. C.C.Meng, G.R.Liao and J.W.Chen, —Theoretical Analysis of Wurtzite and Zincblende phase GaN Avalanche Transit Time Device in Millimeter-wave Frequencies, *Proceedings of MTT-S Conference*, 1999.
32. S.P.Pati, J.P.Banerjee and S.K.Roy, —Effect of impurity charge bump on the dc and microwave properties of high efficiency silicon double drift IMPATT diodes, *Journal of IETE*, vol. 31, No 1, pp. 22-27, 1985.
33. D.N.Datta, S.P. Pati, J.P.Banerjee, B.B.Pal and S.K.Roy, —Computer analysis of dc field and current density profiles of DAR IMPATT diodes, *IEEE Transactions on Electron Devices*, vol. ED-29, pp. 1813-16, 1982.
34. A.K.Panda, G.N.Dash and S.P.Pati, —Effect of diffusion impurity profile on microwave properties of Silicon p+nn+ IMPATT diodes, *Semiconductor Science and Technology*, Vol 9, pp. 241-248, 1994.

# HOME-STAY TOURISM IN FOREST FRINGE VILLAGES FOR SUSTAINABLE DEVELOPMENT

**BISWAJYOTI ROY,**

Assistant Professor, Department of Economics,  
A.P.C.Roy Government College, Himachal Vihar, Matigara, Siliguri, Darjeeling.

*Website: [www.apcrgc.org](http://www.apcrgc.org), Email: [biswajyoti.roy@gmail.com](mailto:biswajyoti.roy@gmail.com) /  
[roy\\_biswajyoti@rediffmail.com](mailto:roy_biswajyoti@rediffmail.com)*

## ABSTRACT:

Irreversible Changes in our natural forest eco-system and environment through the onslaught of civilization in the name of development have cause global warming and climate change which are threatening to our society. In the context of these issues it is needed to reduce dependence of the forest fringe population on the natural forest resources through development of sustainable and alternative livelihood in the forest fringe villages. Now a day's popular trend called "Home-stay Tourism" has emerged in Darjeeling, Sikkim and almost all over India and also all over the World, in which tourists choose to stay in small, family-owned houses instead of hotels or resorts. Home-stay tourism may be the one of the alternatives in case of small forest fringe villages of Terai Region (West River-bank of Tista) of Darjeeling and Jalpaiguri district. People are less interested in agriculture science wildlife are damaging their crops several times and the soil quality is not up to the mark for agriculture in the foot hills of Terai Region in Darjeeling and Jalpaiguri district. Active participation of the forest fringe population in the forest management for development of the forest clearly resulted into increase in forest and tree cover, both on forest land and as well as outside. The total tree over area of the state comes to more than 27% of the geographical area of West Bengal according to the State-Forest-Report 2006-2007. Forest Corporation have developed adventure eco-tourism centres at Lava, Lulegaon and Kalimpong under Kalimpong sub-division, Lepchajagat, Lamahatta and Chatakpur (Darjeeling), so many unexplored forest fringe village can also be promote Home-stay tourism for their socio-economic development.

**Keywords:** Home-stay, fringe, eco-system, Terai, Laltung Village, Central Forest Village.

# HOME-STAY TOURISM IN FOREST FRINGE VILLAGES FOR SUSTAINABLE DEVELOPMENT

**Introduction:** Tourism has been a major social phenomenon of the societies all along. Tourism is one of the most important economic activities and smokeless industry in the world today, because it directly generates services, products, foreign currency, employment and investments. It is motivated by the natural urge of every human being for new experience, adventure, education and entertainment. Irreversible Changes in our natural forest eco-system and environment through the onslaught of civilization in the name of development, have cause global warming and climate change which is threatening our society. In the context of these issues, need to reducing dependence of the forest fringe population on the natural forests resources through development of sustainable and alternative livelihood in the forest fringe villages. Home-stay tourism may be the one of the alternatives in case of small forest fringe villages of Terai Region (West River-bank of Tista) of Darjeeling and Jalpaiguri district. Home-stay tourism for its multi-face potentialities can be an economic role model for development. Home-Stay seeks to draw tourists away from posh and crowded urban areas to the rural locality full of natural surroundings, by providing them with clean, comfortable and budget-friendly accommodation and food. In Home-stay tourism visitors get a chance to spend time with the family observing their customs, values and culture, which gives them the opportunity to feel the taste of rural life (Devkota, 2010).

Tourism's importance, as an instrument for economic development and employment generation, particularly in remote and backward areas, has been well recognized all over the world. It is the largest service industry globally in terms of gross revenue as well as foreign exchange earnings. In home-stay tourism, both the environment and culture are commoditized; market value is created with the demand of visitors. This provides financial reward to the local community for conservation of the environment and their culture. Home-stay tourism is a major player when it comes to the reduction of rural poverty. It may also provide new markets for local people to sell their products, such as agricultural products, livestock and others. The villagers and other concerns were given trainings in hospitality and basic guiding skills to the local residents to provide them the opportunity to learn about hygiene, tourism and conservation techniques. There are also other negative impacts of tourism in society such as increase in crime, increase in the sex trade among women, increase

in consumption of alcohol, negative impacts on the lifestyles of local people, exploitation of local resources, impacts on religion and practices of local people. All these provide grounds for a negative attitude towards tourism.

It is also important to note that tourism has become an instrument for sustainable human development including poverty elimination, environmental regeneration, job creation and advancement of women and other disadvantaged groups. Through sustainable development of Home-stay tourism villagers must always preserve culture and promote it so as to use local resources and manpower to boost economy of a place. Home-stay tourism will serve as a momentous tool to the development of rural areas in every sphere including the economic, cultural, social and environmental.

### **HOMESTAY TOURISM IN FOOT HILLS OF DARJEELING AND ADJACENT JALPAIGURI**

Home-stay is one of the best ways to explore the region and specially the Darjeeling Himalayan home-stay. This includes home-stay in Kurseong Home-stay, Kalimpong home-stay at Lava & Lulegaon, Lepchajagat, Lamahatta and Chatakpur etc. There are several examples from around Darjeeling where home-stays have been successfully developed. Darjeeling has both cultural and natural resources and can provide potential structure in case of home-stay. Darjeeling is one of those destinations found on every traveler's list. This is mostly because of its vast sprawling natural beauty, seasonal diversities, cultural richness & hospitality of its communities. When the Chief Minister of the state Ms. Mamata Banerjee was passing by Lamahatta in March 2012, she stopped by for a while and took some pictures of this roadside mountain village, its vast stretching forests of dhupi & pines, and the magnificent views of the peaks and rivers around. Soon with support from the state government, the villagers and forest protection teams worked together to create a lovely tourist place. Chatakpur is a paradise for nature lovers as one can get a spectacular view of the imposing mountain range of Kanchenjunga and at the same time experience the green forest in a quiet village setting with a population of only around 90 people and 18 village houses. Chatakpur is one such small eco friendly village within the Senchal Wildlife Sanctuary in Darjeeling District, West Bengal.

There are so many forest-fringe villages which are still unexplored by the tourist. In these forest-fringe villages there are ample opportunity to promote home-stay tourism as alternative source livelihood. Out of this Central Forest Basty (village) and Latung Forest

Basty (village) have opportunity to promote home-stay tourism due to its geographical location. Tourist can get the test of village stay as well as stay in forest and wildlife. Central forest village is a quiet and beautiful forest village of Bagdogra area of Naxalbari block with a population of 254 living in 54 households (data source villager Ramesh Rai). The villagers were of mostly Nepalese and Tribal origin with low socio-economic status living in wooden and semi concrete houses in several clusters. Their economy is mostly dependent on cultivation, cattle and forest related activities. In Lantung forest village one can get the test of nature situated near recently inaugurated Bengal Safari Park by the Chief Minister of the state Ms. Mamata Banerjee at Salugara. Lantung forest village is also a quiet village in the west river-bank of Tista with 35 village houses with a population 150 (data source villager Jiten Saiba). The villagers of Laltung forest village mostly dependent of Cattle and forest related activities. Villagers are interested in home-stay tourism as it will be the alternative source of income. Tourists can spent a calm and quiet vacation within an environment of exquisite ecological beauty if they opts these home-stay experiences.

## **OBJECTIVES OF THE STUDY**

1. To reduce dependence of the forest fringe population on the natural forests resources.
2. To explore the status and study home-stay tourism in Darjeeling District.
3. To emphasize the major opportunities available for home-stay tourism in Darjeeling District.
4. To identify the challenges faced in the development of home-stay tourism in Darjeeling District.
5. To explore the reasons for which the foreign and domestic tourists visit the destination for recreational and leisure purposes and also to gain experience from art, culture, lifestyle etc, which in turn create a tremendous impact on local economy.
6. To offer valuable recommendations to the forest fringe villagers, so as to make the home-stay tourism more viable and conservation of the forest and wildlife.

## **OPPORTUNITIES FOR HOME-STAY IN FOREST FRINGE VILLAGES**

There is tremendous pressure on forests, coupled with socio-economic problems of poverty, underemployment and unemployment in the forest fringe areas, the major threat to forest comes from illicit collection of fuel-wood, fodder and small timber from the forests by the villagers to sustain their livelihood. This problem has, however, been tackled by formation of Forest Protection Committees and through the process of consolidation of Joint Forest Management to some extent. Therefore home-stay may be the alternative livelihood for the forest fringe villagers. Opportunities of home-stay are manifold. These are as stated below.

### **Economic Opportunities of Home-stay**

1. Creation of employment opportunities to the forest fringe villagers for alleviating poverty.
2. Encouraging local and foreign investment in home-stay tourism.
3. Encouraging micro entrepreneurship in tourism and its many other related sectors.
4. Direct economic benefits-consumption of food, accommodation and purchase of village made product.

### **Social Opportunities of Home-stay**

1. It is an ideal platform for cross-cultural and food habit exchanges (guest-host interactions).
2. Reducing conflicts among different races especially in Darjeeling district.
3. Retention of youth (human capital) by involving them in home-stay tourism.
4. Learning new languages and skills for tourism.

### **Environmental Opportunities of Home-stay**

- Increasing awareness on environmental conservation and conservation of the forest among host areas.
- Reducing common sanitation related problems through sanitation programme and training.
- Persuading the locals to keep the premises, kitchens and toilets etc. neat & clean.

- Assembling funds through Department of Forest Govt. of West Bengal for conservation of physical environment

### **Tourism related Opportunities**

1. Tourists get a chance to witness natural & cultural diversity of the forest fringe villages.
2. Increase in accommodation supply capability of Darjeeling district.
3. Removing the problem of seasonality by promoting Darjeeling district all the year.
4. Increase tourism awareness among local, interstate and foreign tourists by the constant intervention by key role players.

### **Infrastructural Opportunities**

1. Increasing accessibility to forest fringe villages by linking them with easily accessible roads with local towns.
2. Increasing the number of education & training centres for capacity building regarding home-stay and other skills related to tourism.
3. Improving healthcare & public utilities at the remote destinations.
4. Increasing safety & security of locals as well tourists.

### **Opportunities for the Tourist**

1. Tourist can get the test of village stay.
2. Budget friendly tour.
3. Can get the test of pollution free forest environment.
4. Opportunities to see the different types of birds and wild animals.
5. Can get the test of local culture and customs etc.



## **PROSPECT OF HOME-STAY TOURISM IN FOREST FRINGE VILLAGES**

Tourism has emerged as an important socio-economic activity of the people of Darjeeling District having its unique geographical advantage with beautiful forest villages and is a leading tourist destination in West Bengal. It has created the opportunity for local people to overcome their problem of high unemployment. The major conclusion that has emerged from the present study is that it is particularly important to promote tourism as an instrument for human resource development in the region. Forest fringe villages may be a tourist attraction spot and the ample natural landscapes attract tourists of all age groups. Laltung on west side Tista River is an ideal place for bird watchers. The Laltung is surrounded by dense forests of Baikunthapur only 15 km from Siliguri.. Central forest village is also 15 km from Siliguri. Tourist may see wildlife in these areas. Nature tourism in Darjeeling district provides a much-desired break from the chaotic urban life.

## **CHALLENGES OF HOME-STAY IN FOREST FRINGE VILLAGES**

Beside the opportunities and prospect of home-stay tourism there are so many challenges in case of forest fringe villages. The tourism industry faced with various challenges in the field of human resources, one of the crucial issues in this regard is the quality of manpower. The industry is vitally faced with the demand for qualified quality personnel. The role of HR manager is very crucial in selecting and recruiting the right kind of people who can be an asset for the tourism sector. The Development of Tourism can have both positive and negative impacts on destinations. The major challenges are-

1. First and foremost challenge for the forest fringe villages is permission for the tourist from department of forest Govt. of West Bengal. Since the wild animals are frequently entered in the villages.
2. Due to poor infrastructural facilities specially lack of good roads, electricity, healthcare, communication and other residential facilities and without these facilities it is difficult to establish and promote better service to existing as well as potential home-stay visitors. In case of Central forest village there is electricity but for Lantung forest village there are no such facilities.
3. Lack of coordination among Forest Department, West Bengal Tourism Department, the private tour operators and the forest fringe villagers.

4. In the forest fringe villages there is lack of skilled human resources such as guides, entrepreneurs, hospitality professionals and this is due to lack of availability of education.
5. Marketing and promotion of home-stay tourism is also lacking in this area. There is no proper arrangement for extension of marketing and network in Darjeeling district.
6. Since the forest village is in forest land therefore without prior permission for forest home-stay could not be possible.
7. Less awareness regarding conservation of natural as well as cultural resources among locals. Lack of ecotourism practices is also a major challenge in successful development of home-stay in forest fringe villages.
8. Improper management of resources at the destination is also a big challenge in extension of home-stay viability.
9. Lack of security and safety measure for the tourist.
10. Lack of protection in case of illegal activities in tourism such as sex tourism, Alcohols addiction or drug addiction etc.

## **RECOMMENDATIONS**

After diving deep into the home-stay tourism there must be some recommendations and by applying these home-stays achieve a greater height. In a nutshell, the following recommendations were made:

1. There is a need of preparation of home-stay planning and development for the local people. Hence, the local people of the proposed home-stay tourism destination should be technically assisted to prepare home-stay planning and development.
2. The locals of the home-stay tourism destination should be given training on leadership, hospitality along with food and beverage (by using local menu) so that the tourists can get quality service.
3. Loan subsidy and other fiscal incentives should be provided to the local people for upgrading their existing facilities i.e. bed, rooms, bathrooms, tap, cleanliness etc.
4. Home-stay tourism destination should be connected with other tourism stakeholders of country, and promotion should also be done by tourism entrepreneurs.
5. In most of the home-stay tourism destinations, there is a problem of benefit sharing among all the community members. Therefore while planning for home-stay tourism

development of the area; every member of the community should be taken care of for the benefit sharing mechanism.

6. Establish community tourism fund in the home-stay tourism destinations so as to invest in capacity building and infrastructure.
7. Home-stay tourism operation practice in both community and privately, should be differentiated and treated accordingly by the government during providing assistance and other facilities.
8. There is a need of development of home-stay tourism database so that tourists can easily explore, choose, and book their stay.
9. Forest Department together with Tourism Department should take initiatives for introducing home-stay tourism.
10. Forest Department should permit the tourist to stay in the villages.
11. Forest fringe villagers should take part in beautification of their village so that one who can get the test of quiet and pleasant stays in the village.
12. Forest must be protected as the tourist to enjoy the natural beauty.

## **CONCLUSION**

Tourism is widely recognized as the world's largest industry which plays an important role for human resource development. Yet tourism is also highly dynamic and is strongly influenced by economic, political, social, environmental and technological change. The success of an organization depends on its ability to affect continuous improvement and provide quality products and services to its customer. This will require every personnel in the organization to possess the requisite knowledge, skill and attitude.

The success of tourism in Darjeeling District has several factors like its location, climate, accessibility and a perfect gateway for those seeking to be in harmony with nature. Local people are engaged in home-stay, shop, transportation, guide and escort service and other tourist facilities and services.

It has been observed that over the years, there has been a change in the demand and supply pattern of human resources for the travel industry, with the demand in favour of more educated and specialized personnel. However, the development of human resources in tourism is subject to a number of obstacles, and is severely lagging in terms of professionalism in Darjeeling District. Thus, HRD has a major role to play for the development of this sector. HRD should be taken on a priority basis and adequate planning

measures should be done accordingly because efficient human resources can increase customer satisfaction, and create a competitive edge in this globalize world.

The home-stay tourism market is huge and it has limitless offerings and products. The concerned stakeholders have to exploit and reap the benefits. However, most of the products have yet to be explored. Home-Stay is a micro tourism entrepreneurship. It is a new concept adopted in India. However, lot of enthusiastic groups (communities) and individuals are eager to run this business sans much idea and knowledge. Government lacks a concerted vision, plan, policy, strategy and program and this is a crucial aspect that must be addressed. It has to do a lot of homework because it can be an instrument of poverty mitigation a very valuable strategy.

Diverting international tourists to the forest fringe village destinations of Darjeeling District can be one of the tourism policies of the West Bengal government. It is advantageous to create a village tourism environment and facilitate both the communities as well as private sectors to carry out the business to the benefit of all stakeholders. There are few innumerable temporary challenges which can be resolved with appropriate strategies and careful planning.

## **Reference Type:**

### **Book**

1. Government of India, Indian Tourism Statistics at a Glance (2012), Department of Tourism, New Delhi, India.
2. Interim Report, Identification of Tourism Circuits across India: West Bengal, April – 2012, IL&FS Infrastructure Development Corporation Ltd (IL&FS IDC), National Level Consultant, Under Ministry of Tourism, Govt. of India.
3. IITTM- ICC Report, Travel and Tourism Industry in India: Looking East, Travel India 2011, Indian Institute of Tourism and Travel Management (An Organisation of Ministry of Tourism), Gwalior, India.

### **Journals**

1. African Journal of Hospitality, Tourism and Leisure Vol. 3 (2) - (2014) ISSN: 2223-814X Copyright: © 2014 AJHTL.
2. Devkota .T (2010). Gorkhaparta-“The Rising Nepal” February 2011.
3. Kreishan, F. M. M (2010): Tourism and Economic Growth: The Case of Jordan”, European Journal of Social Sciences, Vol.15, No.2, pp. 63-68.

4. Liu, Z. (2003): Sustainable tourism development: a critique, *Journal of Sustainable Tourism* 11(3), pp. 459-475.
5. Berno, T. and Bricker, K. (2001): Sustainable tourism development: the long road from theory to practice, *International Journal of Economic Development* 3(3), pp.1-18
6. Hubrecht, J. & Teare, R. (1993): A strategy for partnership in total quality service. *International Journal of Contemporary Hospitality Management*, 5(3), pp. 1-5.
7. Anand A, Chandan P and Singh R (2012); “ Homestays at Korzok: Supplementing Rural Livelihood and Supporting Green Tourism in the Indian Himalayas”. In *Mountain Research Development* 32(2): 126-136

**Online Articles:**

1. Banglar Mukh, the official portal of the West Bengal State Government, from <http://wb.gov.in/portal/banglarMukh>, retrieved on 10th January, 2015.
2. The official portal of Government of West Bengal, Department of Tourism, from <http://www.wbtourism.gov.in>, retrieved on 10th January, 2015.
3. Official website of West Bengal State Government forest Department, from <http://www.westbengalforest.gov.in>, retrieved on 10th January, 2015.
4. The official portal of Government of India, Department of Tourism, from <http://www.tourism.gov.in>, retrieved on 10th January, 2015.

# Transnational Identities in Jhumpa Lahiri's *Unaccustomed Earth*: A Re-reading

Jhuma Bandyopadhyay (Asst. Professor)  
Deptt. of Education, Chandernagore College, Hooghly

## Abstract

As our globe becomes increasingly shrunken as a result of incessant travelling, and immigration, the visitors' culture is always on a collision course wherever the visitor tries to settle down either for employment or for trade and for the purpose of permanent immigration. This gives rise to a new thrust in fruitful research of immigrant identity and cultural diversity. Jhumpa Lahiri's collection of stories, *Unaccustomed Earth* tries to map the identity politics of a bunch of Indian immigrants in the US and tell us how their cultures clash with the settler country, the US. American multiculturalism has to take note of this. The paper analyzes how Jhumpa Lahiri's Diasporic characters struggle hard to occupy the *transnational space* they find in the land of their choice and also their Identity crises. Most of Lahiri's stories in the text in reference stress "the dichotomy of growing up in two cultures." In almost all the stories of the collection, *Unaccustomed Earth*, the transnational identity of the individuals, irrespective of sexes, get jumbled up with their national identities. It appears as though a *glocal [global+local]* identity is taking birth gradually. The present paper offers a re-reading of Jhumpa Lahiri's *Unaccustomed Earth* beyond post-colonial stage. Stemming from a profound consciousness where life, living and death, joy, indifference and sorrow, generation, de/re-generation, and transformation are intricately intertwined, Lahiri's fictional multi-verse is peopled by a new generation of characters who speak to the soul of the reader. This paper begins from the aspiration that contemporary literature of migration presents new patterns of transnational mobility that influence family structures across national and international borders. The analysis focuses on how to re-configure the family structures in the context of transnational migration. The characters under observations are Kaushik and Amit, from well-off Bengali transmigrants from Jhumpa Lahiri's collection of short stories, *Unaccustomed Earth*. These characters are affected by their parents' decisions to repeatedly change their countries of residence. The paper signals the fact that intensified relocation does not always generate a beneficial state of fluidity and increased adaptability. Therefore, the inner-engineering of these characters illustrates their peculiar structures of attachment that can be maintained in the context of accelerated family resettlement.

**Keywords:** Transnational Space, Identity Crisis, Post-colonial Literature, Diaspora, Cultural Diversity

Transnational Communities function as a form of integration of sectors which for essentially economic reasons have decided to migrate and once in the destination country, have developed mechanisms to secure their ties with the country of origin and even to improve their social standing there, while at the same time planting their roots in the receiving country. This ability of migrants to conquer their spaces in both the receiving country and the country of origin enables

the transnational community to play a decisive part in defining their lifestyle. Jhumpa Lahiri is an eminent Indian-American author whose works consistently deal with the themes like diaspora, dislocation and belonging. She explores the trauma of diaspora in her book, *Unaccustomed Earth* in which the characters suffer from the loss of a traditional culture, death of a family member, the sense of rootlessness, double consciousness and generation conflicts. The present discussion argues that only by renegotiating the relationship between the past and present, keeping the balance between memories and forgetting, can characters in the novel gradually work through their trauma and reconstruct a new identity.

Lahiri is an American author of Indian descent whose work focuses on challenges faced by Indian immigrants living in the US. She explores how Indian-Americans struggle to assimilate to American culture while trying to reconcile their strong Indian traditions and heritage. Lahiri's writing easily transcends Indian-American setting as she explores themes of human conditions like loneliness, alienation, love and self-realization. *Unaccustomed Earth* is Jhumpa Lahiri's second short story collection. Her first collection of short stories, *Interpreter of Maladies* (2000), won her the Pulitzer Prize and her novel, *The Namesake* (2003), was made into a film by Mira Nair in 2007 and achieved a big commercial success. Many of the stories in *Unaccustomed Earth* first appear in *The New Yorker*. The title of the book is borrowed from a line in Nathaniel Hawthorne's *The Custom-House*, ("My children have had other birthplaces, and, so far as their fortunes may be within my control, shall strike their roots into *Unaccustomed Earth*"). By mentioning the epigraph, Lahiri seems to hint that the characters in the novel are transplanted people who have to adapt themselves in the unaccustomed earth in order to survive and prosper. *Unaccustomed Earth* is quietly devastating as it "contains some of the best, most beautiful fiction written this decade—the kind that will be read 50 years from now". The eight stories in

this collection is divided into two parts—five individual short stories followed by three interlinked stories about two childhood friends grouped under the heading “Hema and Kaushik”. The eight stories in this book turn a penetrating eye on the second generation Indian-American children to explore their suffering and trauma in an exile life in transcultural world. The very seeds of human diaspora are germinated in the traumatic exile of Adam and Eve from Heaven to an alien earth. From then on, exile has the connotation of deep pain, loneliness and alienation. It is strange to think that Exile is terrible. The unhealable rift which forced between a human being and a native place, between the self and its true home; its essential sadness can never be surmounted... The trauma of exile is derived from a real sense of loss, the loss of a homeland, a national culture and an identity. Sigmund Freud in his “Mourning and Melancholy” mentioned that both ‘mourning’ and ‘melancholy’ can be caused by a loss of loved ones, such as a person, or a more abstract object. It intends to analyze how loss has caused trauma for second generation Indian-Americans in *Unaccustomed Earth*.

Mourning and trauma are integrally linked. Sigmund Freud said, “Mourning is regularly the reaction to the loss of a loved person, or the loss of some abstraction which has taken place such as one’s country, liberty, and ideal and so on. As an effect of the same influences, melancholy instead of a state of grief develops in some people, whom we consequently suspect of a morbid pathological disposition. It is also well-worth noticed that, although grief involves grave departures from the normal attitude of life, it never occurs to us to regard it as a morbid condition and hand the mourning over to medical treatment.” Freud thinks that ‘mourning’ involves departure from the normal attitude to life but it is never a pathological condition. It doesn’t need any treatment. It can overcome after a certain lapse of time. Melancholy is also the reaction to the loss of a loved object. But it is a kind of “morbid, pathological disposition”, causing the



dysfunction of mind and body. In mourning it is the world which becomes poor and empty; in melancholy it is the ego itself that becomes empty. Both Kaushik and Hema suffer from trauma because of their rootlessness. But for Hema, the suffering is only mourning because she can have a negotiation with her past; but for Kaushik he can't work through his loss in the past so he becomes a person who always lives in the melancholy situation and dies at last. The story recounts their initiation from young children to mature people, the association between two families and the tragic love story between them. The two families of Hema and Kaushik get to know each other when they are living as Bengali-Americans in an Indian community in Boston. As kids, Hema and Kaushik have a puppy love for each other. When they grow up, they meet in Rome and resume their affair. As a young woman, Hema always feels very lonely because she is a second generation Indian-American who suffers from an identity crisis. She doesn't want to think herself as an Indian so she wants to marry an American husband. But after getting tangled with a married white man Julian for ten years, she sees no result from such an affair. So she has to admit her Indian side and accept the Indian husband her parents have arranged for her. But she knows that the marriage has died before it begins. She is a retrospective person living in the past. She is a scholar who studies Etruscans, a dead people in Rome. She loves Kaushik because of their shared past. But their last romance in Rome makes Hema get an epiphany. She knows that they will never return to the past. The bangle she forgets to carry at the Customs after the security check in Rome before her flight back signifies that she has determined to sever her unhappy past and look forward to a new life. She has realized the importance to keep a balance between her past and present, tradition and future. But Kaushik is different. His mother dies of breast cancer when he is a child. His father remarries a traditional Indian woman when he is in college. He can't come to terms with his personal tragedy. He can't accept his father's re-

marriage and two step-sisters. When he finds that his two step-sisters are watching his mother's photos and make comments, he is furious. He deserts his family and becomes a nomad, living a rootless life. His occupation as a newspaper photographer also forces him to live a mobile life in order to capture the eventful moment in the world. Kaushik is what Freud called the melancholy person who can't negotiate from his past and the death of his mother. He can't keep the balance between memory and forgetting and finally dies in a tsunami in other land. It is really clear in the conclusion that Hema was shaken by shock to learn that the victim of Tsunami was Kaushik, a frustrated, deprived soul who craved for a haven of love and expressed so candidly to Hema!

In a story of this collection, *A Choice of Accommodations*, there is already a wedding of cultures when Amit an India-born transnational individual marries an American bride, Megan. But as he goes to attend an old friend, Pam Borden's wedding, an unusually nostalgic fling gets the better of Amit. However, he also suspects Megan of falling in love in an instant with Ted Schultz and even at one point he keeps thinking, "Could it be that Megan was flirting with Ted? Instead of being jealous Amit felt oddly liberated, relieved of his responsibility to Megan, to show her a good time." Amit comes from an upper-class family in India but his wife, Megan, a white American, who is five years older than he, comes from a working family in America. Megan's ordinary background, plain-looking and their age difference has displeased his parents, so after he gets married with her, his relationship with his parents has deteriorated. "His parents had not even met her. He was aware of what an insult it was to them. For all their liberal Western ways he knew they wanted her to marry a Bengali girl, raised and educated as he had been". Because of his marriage, his parents have severed the relationship with him. Therefore, he feels depressed both towards his family and his wife. At the wedding reception, when he gets drunk, he even tells a strange woman Felicia how disappointed he feels towards his marriage. But on the last

night they spend together at a school dorm before they leave, the couple begin to reveal their secrets and true feeling to each other. Amit reveals to Megan that when he was young, he had a crush on Pam, the girl who was getting married. The secrets they reveal to each other help them to rehabilitate their emotion. The story ends with their enjoyment in harmonious sexuality with each other which shows that Amit has determined to fix the relationship both with his parents and his wife Megan. Compared with their parents, the second generation of Indian-Americans suffers more from their exile and displacement because they have no choice for their life. If their Indian parents can claim India as their homeland, they have nowhere to claim as belonging. All the characters in *Unaccustomed Earth* are victims of forced dislocation. They suffer from a sadness of deep loss. As a daughter of an Indian diaspora family, Jhumpa Lahiri shares her characters' pining for a homeland and belonging in a press conference, "No country is my motherland. I always find myself in exile whichever country I travel to, that's why I was tempted to write something about those living their lives in exile". This idea of exile runs consistently throughout her first two books *Interpreter of Maladies* (1999) and *The Namesake* (2003). The characters in *Unaccustomed Earth* experience pain because they live in a marginal position between two cultures. They straddle two cultures, two traditions and ideologies which cause their identity crisis, rootlessness and double consciousness. The way how they look at their past and their own native culture will determine their future. Too much remembering past like Kaushik will cause people to get stuck in the past and lose the ability to move forward. Forgetting one's native culture is also the most tragedy for people in exile. Only when they can negotiate the past with the present, keep the balance between memory and forgetting, can they reinscribe a new self and reconstruct a better future.

*Unaccustomed Earth*, the character Ruma, a thirty-eight year old Indian-American woman, has just moved to Seattle with her husband. She has a three-year-old son, Akash to take care of meanwhile waiting for the birth of her second child. The sudden death of her mother makes Ruma feel traumatic. Ruma and her mother have very close relationship with each other so she is often nostalgic and recalls her childhood. With her mother's death, she feels that she has no way to return to traditional culture. She also feels very worried as her father offers to visit her because she is afraid that her father will move in to live with her—"Ruma feared that her father would become a responsibility, an added demand, continuously present in a way she was no longer used to". According to Bengali culture, people enjoy an extended family where parents and children live together to care for each other. Children should take the responsibility to take care of their parents when they grow up. But many years of independent life in America has deprived her of the traditional Bengali culture. She feels that she has lost her Indian culture. She has married a white man against her parents' will. She chooses to wear western clothes instead of Indian dress like *saris*.

In the Part I of the collection *Unaccustomed Earth*, there are stories in which we find the transnationalism of the expatriate Indians who can hardly do away with their own national culture and again become part of the other culture. But in Part II, Lahiri delves into the cultural identity as well as the nooks of individual psyche. Lahiri, among recent Indian diasporic authors, successfully assimilates various strands of existence of 'Bengal, Boston and Beyond'. The geographical dislocation of the writer results in the culture dislocation which is portrayed in the work. Lahiri's stories do document the characters' trauma of displacement and the feeling of cultural nostalgia. But there is no ill, will and malice against the host country and no clash between Indianness and Americanness unlike her fellow literateurs.

## WORKS CITED

- Lahiri, Jhumpa. *Interpreter of Maladies*. New Delhi: Harper Collins Publishers India, 1999.
- Lahiri, Jhumpa. *The Namesake*. New Delhi: Harper Collins Publishers India, 2004.
- Lahiri, Jhumpa. *Unaccustomed Earth*. New Delhi: Harper Collins Publishers India, 2008.
- Spivak, Gayatri Chakravorty. *The Postcolonial Critics: Interviews, Strategies, Dialogues*. Routledge: London, 1990.
- Dallmayr, Fred. "Social Identity and Creative Praxis". *Identities: Local and Glocal*. Ed. Kailash C Baral and Prafulla C. Kar. Delhi: Pencraft International, 2003, pp 13-30.
- Jain, Jasbir. *Writers of the Indian Diaspora*, Jaipur: Rawat, 2003.
- Freud, Sigmund. *Beyond the Pleasure Principle*. *The Standard Edition of the Complete Psychological Works of Sigmund Freud*. Trans. James Strachey. London: Hogarth, 1953–74. Vol. 18.Ch. 3.
- Banerjee, Bidisha. "Diaspora's 'Dark Room': Photography and the Vision of Loss in Jhumpa Lahiri's 'Hema and Kaushik'." *The Journal of Commonwealth Literature* 45.3 (2010): 443–456.
- Misra, Vijay. *The Literature of the Indian Diaspora: Theorizing the Diasporic Imaginary*. London and New York: Routledge, 2007.
- Vertovec, Stephen. *Transnationalism. Key Ideas*. London and New York: Routledge, 2009.

## The Case of Mr. Shamnath's Mother in Sahni's 'The Boss Came to Dinner'

Manjistha Basu  
Assistant Professor  
Mahishadal Girls' College  
[manjsthabasu@yahoo.com](mailto:manjsthabasu@yahoo.com)

### Abstract

Words like 'marginalised' and 'marginalisation' have a very broad spectrum of application. These words have the capacity to cover the idea of the entire scope of those human beings who have been pushed to the periphery. Pathbreaking philosophers like Michel Foucault, GayatriChakravortySpivak have made voluminous contribution to create awareness and empower those who have been socio-economically deprived. They have focused their attention on the various communities who have been neglected, ostracised, deprived and oppressed by society. These stalwarts have generated an enormous body of work, entering discourses (often polemical) in an attempt to raise the common man's awareness about the various ways in which the marginalised communities have suffered over time. It must be noted here that mostly their discourses are concerned with particular communities such as the ones declared clinically mad or the ones who opt for an alternate sexuality, to name a few in the case of Foucault. Spivak has concentrated on women and the subaltern amongst other communities. These theories on marginalisation usually foreground the oppression or deprivation of a certain community. The communities, in their turn, are benefited by these exertions and enjoy empowerment and emancipation. There are however, certain individual cases which are often hard to locate under any such community. Unlike the groups which are eager to enforce their rights, these individuals are neither keen nor actively involved in stating their demands. Among such individual cases one such instance is the domestic position and ensuing ill treatment of the aging, infirm parents by their children. As a parent they often deter from taking any strong, assertive step to uproot the problem and quietly suffer in the hands of their children. In many cases they do not even desire rescue and unconsciously participate in their own marginalisation. This article attempts to tease out the nuances and in the process perform a coherent study of one such situation as portrayed in BhishamSahni's short story 'The Boss Came to Dinner.'

*Keywords: marginalisation, family, parents, children, domestic, Foucault, capitalism*

'Now they turned their attention to the bric-a-brac in the room, either shifting them behind the almirahs or shoving them under the bedsteads. Suddenly a problem reared up before Mr. Shamnath. What about mother?... The wife, interrupting her work, did some hard thinking.... We'll ask her to close the door and I'll lock it from outside.'(Sahni 94)

Sahni's protagonist, Mr. Shamnath, is a portrayal of an upwardly mobile, fiercely ambitious Indian middle-class executive who is a spoke in the Capitalist wheel – the kind who is quick to feel 'irritation' when he has to accommodate his mother on an evening he

intends to organise a party to entertain his American Boss. 'The Boss Came to Dinner' was published in 1972. The story narrates the events of a single day. Sahni uses an urban backdrop to explore the issue of a rustic mother and her ambitious son in his short story 'The Boss Came to Dinner.' The crisis in the story arises in a postcolonial India, which is 'impossible to return to an idealized pure pre-colonial cultural condition' for it suffers 'the syncretic reality of a post-colonial society(Ashcroft et al 109-110).' The problem at hand is both complex and serious. There is the threat of an eroding value system that the postcolonial nation is grappling to come to terms with. In *The Empire Writes Back* this issue is located in R. K. Narayan's work and the combined authors say, 'The reconstruction of a 'pure' cultural value is always conducted within a radically altered dynamic of power relations(Ashcroft et al 109-110).'

One cannot suppress a feeling of irrepressible sympathy which surges towards the helpless plight of the frail, old widow whom Mr. Shamnath addresses as 'mother.' She occupies a curious position among the 'marginalised'category in India. Marginalisation, in its broad spectrum, can be defined as:

...the social process of becoming or being made marginal (to relegate or confine to a lower social standing or outer limit or edge, as of social standing); "the marginalisation of the underclass"; "marginalisation of literature" and many other are some examples. In its most extreme form, marginalisation can exterminate groups (Mullaly, 2007). (Websource 8.11.2010)

The process by which Mr. Shamnath's mother eventually qualifies as marginalised is quite interesting and reflects the way in which Capitalism adapts itself in the Indian context. In many ways, Sahni's short story is a critique of Capitalism in India. Discourses in sociology inform us that the family is a microcosm of society. The case of Mr. Shamnath's mother is not unique. She represents a common phenomenon in the urban middle-class society. She does not quite fit in. Her offspring, Mr. Shamnath, is embarrassed in her presence, even irritated, as the narrative informs us. She is a problem that – according to her family – can neither be shoved away under the 'bedsteads,' nor conveniently and temporarily moved inside an 'almirah.' Yet the immediate family members of these people cannot send them elsewhere for prestige issues and in an effort to preserve their own social impression. Mr. Shamnath cares enough to keep his mother with himself (rather around his household), but cares too little to be able to show real concern for her. The predicament of Mr. Shamnath's mother is the result of two severe interventions, embodied by the American Boss and her son. The former is the face of the bourgeoisie, while the latter stands to represent the middle-class. These two classes, in a synchronised manner, create the scope for the marginalisation of the mother.

The reason for not sending the mother away is simple; Mr. Shamnath and his wife want to 'keep up appearances' by making the frail woman stay with them. The exchange of dialogues between the husband and wife, in private, makes this very clear:

Shamnath threw up his hands in irritation. 'She was going to visit her brother and you stuck your nose in. Wanted to keep up appearances before your friends. Now what do we do?'

'Tchah! Why should I earn a bad name by coming between mother and son? I wash my hands of this affair. Do as you please.'(Sahni 94)

Indian culture is deeply concerned with a profound sense of duty towards the parent – which, in turn –strengthens the bond between the parent and his/her responsible, mature offspring, who takes care of the aging and gradually debilitating parent, thereby expressing gratitude for the parental care without which he or she would not have been able to survive or find his or her place in this harsh, opportunistic world. This is a positive reflection of Indian sensitivity. However, in a postcolonial India, which is tottering to make adjustments to keep up with Western Capitalism, such simple equations turn twisted and the relationship becomes an onerous chore. The relationship is thus reduced to sheer decorum while its intrinsic potential ebbs away. It is an extremely disturbing dilemma of a nation which attempts to live in the eighteenth and the twentieth century at the same time. The likes of Mr. Shamnath's mother, therefore, precariously hang at society's fringes, severed from the centre – often helpless and ignored. That the family often has a role to play in the isolation of certain of its members is discussed by David Cooper:

These social measures, hinted at by Foucault, are mediated to certain individuals by their families – themselves selected by processes that are intelligible – through various mystifying and confusing manoeuvres. (See David Cooper's 'Introduction,' p viii in Foucault's *Madness and Civilisation*, London: Routledge, 2001)

Mr. Shamnath and his wife do not exclude the mother from the family, or banish her– but it is for reasons other than strong emotional attachment. Although they do not treat her as a clinically mad person, on whom Foucault puts the thrust of his discourse in *Madness and Civilization: A History of Madness in the Age of Reason*, but their attitude towards her shares some semblance. Her presence has the ability to cause embarrassment, and Mr. Shamnath fears it can reduce him to ridicule before the sophisticated company he wishes to entertain. He is scared her rustic presence may ruin his chance of being included within the haloed society of bourgeois sophisticates – the kind he craves to be. He desires acceptance and approval from his extremely urban American Boss. Mr. Shamnath loathes his rustic roots and tries hard to dissemble them. The mother is a constant reminder of this reality. He initially thinks of locking her up in a room when there is company in the house. Foucault, while discussing confinement, says:

Confinement, on the contrary, betrays a form of conscience to which the inhuman can suggest only shame. There are aspects of evil that have such a power of contagion, such a force of scandal, that any publicity multiplies them infinitely. Only oblivion can suppress them. (Foucault 63)

## I

### **Mr. Shamnath: The aspiring , middle-class executive**

Though Mr. Shamnath addresses her as 'mother' but in a dramatic reversal of authority the mother-son relationship dynamics is inverted. The son, as the sole provider of the family, is also its decision maker. The authorial insight into Mr. Shamnath's predisposition is sufficient to understand the way in which the protagonist functions:



....Mr. Shamnath inspected his mother with half-closed eyes, trying to decide what his mother should be made to wear for the occasion. He was a stickler for discipline in the house, he had the final say in everything. Where the pegs should be fixed in the walls, in what corner the bedsteads should be placed, what should be the colour of the curtains, which sari his wife should put on, what should be the design of the tables – .... He looked at mother from head to foot, and said, ‘Better wear white *kameez* and *salwar*.... (Sahni 96)

Mr. Shamnath needs to assert himself on the domestic front. This feeds and satisfies his masculine self-worth which is severely compromised at the work place. There his concern is to satisfy his Boss, by compliance etcetera, for fear of worse. But at home, he is the sole master. The feeling of emasculation and subjugation that he experiences at the work place is thus momentarily overcome by the confirmation of his dominant position at home. The mother’s position of authority has been usurped, perhaps also partly by the laws of time which render the elderly powerless and reinstate the successive generation, in its turn, in the authoritative position. Mr. Shamnath explicitly addresses his mother as ‘a problem’ (Sahni 96) before his wife. However, the case of Mr. Shamnath’s mother does have another extended angle which adds to the urgency of her situation. Her son, Mr. Shamnath, is an aspiring executive and will not stop at anything to secure a promotion by pandering to his American Boss. However, it would be harsh to judge Mr. Shamnath’s position from a ‘pure’ Indian moral and cultural viewpoint. The action of the narrative is set in a postcolonial India, on her way to make a global position economically by seeking refuge in certain Capitalist ideologies. The narrative therefore concerns a nation which has been initiated into the system of Capitalism. It deals with the effect of the emergence of America as an economic super power. Stephen Morton’s reading of G. C. Spivak’s views about the emergence of America as a super-power and its integrated effect as he relates her viewpoint underlines this issue:

Spivak suggests that the emergence of the United States of America as a global economic super-power in the later half of the twentieth century has redrawn the old colonial maps in the interests of multinational corporate finance and on the backs of ‘Third World’ women. (Morton 2)

The potential thinkers of our times have thus clearly detected the reason behind the suffering of Mr. Shamnath’s mother. This suffering is a kind of casualty ushered in by the Capitalist economy. We must remember in Sahni’s narrative we have an American Boss.

## II

### **The Boss: bourgeois prototype**

With the advent of Capitalism one cannot ignore the age of continuous material production which often compromises humanity. This slow strangling of humanity in a Capitalist world was a source of much concern for the French philosopher, Michel Foucault. The American Boss and Mr. Shamnath fit into the Capitalist scheme and embody a Capitalist sensibility. There is a broad rift between the perceptions of Mr. Shamnath’s mother and Mr. Shamnath. At the very apex of the Capitalist system is the type represented by the American Boss – well read, articulate and knowledgeable – the kind who has the power to dictate terms to the lesser ones who serve and support the

system. He buys their labour. He is the bourgeoisie. He can make or break peoples' lives and can terminate their employment. A hard task master, he also knows to understand his employees he must give them time and know them closely. It is perhaps, because of this that the party at Mr. Shamnath's place occasions. Mr. Shamnath is a poor mimicry of his Boss within the confines of his home. It seems like a simulation of the Boss' power, on a contracted scale, reduced to satiate the ego of a middle-class executive. Not only does he control his mother, he also decides what his wife will wear. By imposing his decisions on them he enforces his masculine, bread-earning supremacy at home. He mimics the Alpha male stereotype (at home) which he sees his Boss play to a perfection at the office. Mr. Shamnath's unlettered mother, ignorant about this new system, is pushed to the absolute periphery. It is the kind of periphery which excludes emotional and mental attachment between mother and son. Alienated and helpless, she is the kind who is chosen by Mr. Shamnath and his wife to treat as the 'Other' for they fail to accommodate her in their Capitalist scheme. The Foucauldian critique of Capitalism penetrates the glossy sheen of the bourgeoisie and reveals how they use knowledge to dominate the subordinate classes.

The Boss' imposing personality invokes fear in the hearts of his employees. Foucauldian discourses explore the inherent and intimate relationship between knowledge and power. He encourages the feeling of awe which his personality inspires amongst his employees – this is exemplified by Mr. Shamnath's willing urgency to constantly please him. At Shamnath's house he makes it explicitly clear that he wants handmade *phulkaris*. His demand for her home made *phulkaris* and not the 'bazaar things' is moment of great irony, for with this demand he dismisses the factory-made, mass-manufactured products which the system caters to the mass for quick and sustained profit, and instead opts for the more exquisite, hand made goods for his self satisfaction. Shamnath is quick to oblige. It is not that the Boss is oblivious to the plight of the mother who will make the *phulkaris* for him, yet it does not prompt him to retract his demand. He has the social skill to put forward his demand as a pleasant, polite request. This apparent politeness is a marked feature of the bourgeois sensibility. When Shamnath volunteers his mother's name to appease his Boss' request, the Boss does not dissuade Shamnath from extracting such tedious work from the worn out woman. He remains nonchalant and impervious. Both the Boss and Shamnath make it abundantly clear to the mother that she will have to make the *phulkaris*. The ruling class is empowered by such accurate estimation of situations and tactful measures which enable them to successfully dominate the subordinate classes. The effects of such subordination run deep. Its tentacles reach the very core of man's existence. It affects the accepted norms of family. In India, it has severe consequences.

### III

#### **The Mother and Marginalisation**

The aftermath of advent of this new system is bleakly portrayed in the case of Mr. Shamnath's mother. The ramifications permeate deep into the pre-existing social and cultural system. The story's milieu is India in the 1970's and it is involved in narrating the dehumanising ability of this system. It creates a rift between mother and son. In a nation which is being gradually overpowered by such fundamentals of economy, it

becomes increasingly difficult to decide between the generations in a moral way, for one cannot ignore the context which leads to these complex situations. Stephen Morton, as a Spivak critic, revisits her ideas on the subject:

As Spivak points out, however, this shift from feudalism to capitalism in India may offer an account of how middle-class colonised subjects became national subjects after colonialism, but it does not account for the lives and struggles of other disempowered groups, including peasants, women and indigenous groups. (Morton 52)

This narrative is born where ‘A bar was improvised in the drawing room.’ (Sahni 94) The word ‘improvised’ is of some importance here. The bar is not a regular feature in the house. It has been ‘improvised’ to suit the needs of that evening when the American Boss and his wife, among other Indian guests will be entertained and this is a temporary arrangement which can be dismantled once the occasion is over. Mr. Shammath’s actions show a desperate attempt to qualify as capable and accommodating by the standards acceptable by his American Boss. This conveys a transcultural attempt by the protagonist to try his hand at socialisation, albeit with an ulterior motive to benefit from this party. Michel Foucault, in his various discourses, methodically traces the attitude of the ruling class towards its subordinates. He reveals how this particular age reasons. His understanding teases out the intricacies of the Capitalist system and how it celebrates the monopoly of the bourgeoisie. The bourgeoisie use knowledge as a tool to establish their ideology as dominant. They construct various discourses to control and subordinate the lower classes. It is the kind of system which breeds apathy and distances a feeble, old parent and his or her offspring. It directs the offspring to identify such a parent as redundant and think and execute along the lines of Mr. Shammath and this is evident in their dialogue:

‘Mother, finish your meal early this evening. The guests will be here at seven-thirty.’

Mother slowly uncovered her face and looked at her son. ‘Son, I won’t take my meal today. You know very well I don’t eat when flesh is cooked in the house.’

‘Anyway, anyway, retire to your room early.’

‘All right, son.’

‘And, mother, I will receive the guests in the drawing room, till then you stay in the verandah. When we move into the verandah, you will quietly slip into the drawing room through the bathroom.’

For an instant mother looked at her son; then she said faintly, ‘all right, son.’ (Sahni 95)

This verbal exchange is quick to capture the essence of the mother-son relationship in Sahni’s story. Mr. Shammath perceives his mother as a stigma who can potentially make him seem ridiculous before his elite guests. The complexities that result from the intermingling of cultures create the opportunity for an old woman, living with her son, to be denied of her nightly victuals. The son remains unperturbed about it. The son applies Western standards of socio-cultural etiquette and refinement to evaluate his mother, and when she falls short of meeting his expectations she is derogated to the position of the ‘Other’ by the standards of her immediate family which is striving to exalt itself to more acceptable position as perceived by Mr. Shammath’s version of acceptable. The cultural practices in a land such as India, which has a very different set of socio-cultural norms and value system, offer resistance to survival techniques which are all ushered in by a

Western Capitalist sensibility. This kind of 'hybridization' of cultures, as pointed out by Bill Ashcroft, Gareth Griffiths and Helen Tiffin where 'imperialist importations are superimposed on indigenous traditions' (Abrams and Harpham 238) results in ignoring the peripheral elements who are left to perish if they cannot accept the terms of change. As the new culture infiltrates, the existing culture undergoes a huge shift in its priorities. The old culture, in an attempt to accommodate the new culture, suffers a setback as it gets involved in a tussle with the new culture while paving the way for unaccustomed norms, expressions, duties and responsibilities. From this vantage, Mr. Shamnath seems encumbered by a mother who can lead to a compromise in his official capacity. He asks her to sneak around in his house, to avoid drawing attention to her person. He treats her like a taboo, a dirty secret that cannot be revealed to preserve his prestige. To gain acceptance in the eyes of his Boss, Mr. Shamnath considers his unlettered, rustic mother as a setback. His hypocritical standards urge him to hide or lock his mother in an effort to deny and obliterate what might seem shameful as he attempts to portray a suave self-impression for the evening company.

As Spivak narrows down to the issue of exploitation of the female body in Mahasweta Devi's short story 'Breast Giver,' where the protagonist Jashoda, a wet nurse, suffers physical decay and disease 'challenging the bourgeois nationalist myth of Mother India from the standpoint of a subaltern woman,' (Morton 47) there are certain similar reference points in the case of Shamnath's mother. The semblances can be perceived as far as physical investment and exploitation of the woman is concerned. She has given birth to her son, has invested herself physically (while giving birth to him) and materially (by selling all her jewellery) to ensure his future in the world while she is recompensed by ingratitude. She suffers passively. Her body is now broken and infirm. Weak and ineffective she says, 'I have no bangles, son, you know that. I had to sell all my jewellery for your education (Sahni 96).' To this, her son dismissively retorts by taking a haughty tone, flaunting the fact that the money was well spent and he is quite a worthy son, not a 'loafer.' He continues in the same vein by saying that he can pay back double the amount spent on him. The mother merely and meekly replies to this outburst that may her tongue be reduced to ashes should she ever ask for a pay back. She is quick to clarify, again very meekly, that she would have worn the bangles if she had them. The negligence meted out to this frail widow is quite accurately captured by Sahni's narrative. As time draws near the mother is terrified as she ruminates fervently about the events that will soon ensue:

As time passed, mother's heart started pounding heavily. If the boss came to her and asked her some questions what would she say? She was scared of English Sahibs even from a distance, and this one, they said, was an American. God only knew what sort of questions American Sahibs asked. She felt like going away to the widow-friend, but she lacked the courage to defy her son's orders. She kept sitting here, dangling her legs from the chair. (Sahni 97)

She exists within a penumbra of fear. She fears her son, the American sahib and a system she fails to understand, but still must exist within its shadows. She embodies all the natural fears that women like her nurture. Shamnath tries to prepare her for the encounter with his Boss to avoid any embarrassment due to the awkwardness of the situation. She says, 'I am illiterate, son. I can neither read nor write. You can tell them that your mother is ignorant, if that helps (Sahni 97).' She accurately estimates her

shortcomings and her admission reinstates her knowledge of her own powerlessness. She is extremely aware of her limitations and her ability to accept this truth gives her closure. But it does not relieve her from her eternal anxieties and fears. She understands that her unlettered identity renders her awkward and excludes her from the sophisticated company her son wishes to entertain for the evening. She also understands her son is concerned with impressing this company and it is a very serious matter. This makes her apprehensive. As the evening wears on the guests arrive. Terrified, anxious, nervous, tired and worn out; the mother finally dozes off when the guests arrive. As Mr. Shamnath arranges for a guided tour of his house, the company witnesses a dozing old woman, snoring loudly. Mr. Shamnath's worst fear comes true. She wakes with a jolt, and sways from side to side, her *dopatta* has 'slipped from her head and her thin hair lay in confusion over the bald portion of her head (Sahni 97).' The ravages of time and life are revealed, etching a pathetic picture. Neither has been kind to her.

Shamnath's reaction to this scene is predictable. He seethes with anger. He feels like shaking his mother and pushing her into a room. But he must refrain himself from doing so to maintain social decorum before his guests. They must not know how he treats his mother. The charade continues. The offspring has forgotten the fact that this was the maternal body which had gifted him with life. The process of motherhood is albeit a strenuous and risky endeavour, often capable of endangering while engendering. The onset of motherhood signals a tremendous physical and emotional investment which continues for the rest of the mother's life. Her body is subject to strange transformations which are absolutely beyond her control. Her body may never completely recuperate after childbirth, and in an impoverished country like India, where a major part of the populace lie below the poverty line the lack of proper nourishment often results to serious complications and gradual degeneration of the body post-partum and onwards. The mother's body – even her existence – is enormously altered and biologically she is different from her maiden self. The task of birthing makes the mother's contribution in the child's life irreplaceable. This is the contribution of the mother, which is perhaps greater than the cumulative contribution of the father, inclusive of the paternal name which endows a person with his identity and social position. But Shamnath, on his route to realise his aspirations, is furious when he sees his worn out mother dozing before his guests. He wishes to push her into her room. Again the desire to confine his mother surges in him. By providing the protagonist with a mother, instead of a father, the author succeeds in revealing the depth of ingratitude which can be fostered by an offspring for a parent. The bitterness of the mother's woe heightens the feeling of disgust. When Mr. Shamnath's company witnesses his mother in such a state of dishevel he feels exposed.

The mother is confused and unnerved in the midst of such attention from the company. She wakes up flustered. Awkwardly, she tries to cover her head. Mr. Shamnath intervenes, and asks her to retire for the night. Why did she stay up so late? – he sternly questions her before his boss. He feels ashamed and belittled before the sophisticated evening company. But this sense of shame does not stem from the realisation of his earlier insensitivity that has compelled his mother to stay up so late. He feels ashamed as his mother's actions do not compliment his role-playing (as an aspiring elite, desperate for inclusion). He is eternally concerned with creating impressions. He embodies the typical Indian middle-class concern, tending towards obsession, in his attempt to preserve the impression of a well-to-do executive who is in touch with the cultural values. The

Boss, however, saves the situation by extending a *namaste*. The mother, with her prayer beads in the right hand, concealed beneath her *dopatta*, awkwardly returns the gesture. In a patronising tone Shamnath asks mother to shake hands. She puts forward her left hand. In a characteristic gesture, Shamnath is annoyed. The mother, though, does not part with the customs, rituals and conventions she is accustomed to. We see her refusing dinner when flesh is cooked at home and extending her left hand to hold hands with the Boss. We shall soon see her crying copious tears before the deity of Krishna as her son's ill treatment leaves her broken. She will also request a release from this confinement to enter the life of a recluse at Hardwar. Hardwar is the accepted recluse of these marginalised people in India who become obligations to their families. Famous as a pilgrimage, Hardwar offers an alternate lifestyle to those whom the society considers redundant. As Foucault identifies the mad houses came up 'as an economic measure and social precaution,' (Foucault 59) similarly, Hardwar offers a parallel provision for the kind of social rejects the mother continuously aligns herself with. As she requests for release her son retorts angrily: 'So you want to discredit me before others so that they will say that the son cannot give shelter even to his own mother (Sahni 100)!' The author ultimately tells the reader what he had been showing for so long. Naked and brutal, Shamnath's intention for keeping his mother in his house is revealed in the words of the protagonist.

In a eucatastrophic moment, the mother is appreciated by the Boss and the rest of the company. She sings a rural, traditional wedding song to entertain the evening company by the demands of her son. Her son, in a confessional moment, tells the Boss that she hails from the village to explain her awkward gestures and actions. The Boss gives credit to her rural talent of making *phulkari*. Her indigenous value is reinstated by the same system that has neglected her for so long. She is redeemed and exalted. She can still contribute to the system. Though it may only be in an effort to meet the fancy of the Boss. It is on this premise that her plea to leave for Hardwar is negated by her son. He relentlessly pressurises her to make the *phulkaris*, expecting a raise. He will not settle for someone else making the *phulkaris*. When the mother hears the possibility of a raise she is keen to make the artifacts.

In a way her marginalisation is passively anticipated and extended by her own inability to assert herself with a certain amount of firmness. She meekly tells the Boss and her son that her eyesight is feeble and suffering. But they do not acknowledge it. Like the protagonist in Mahasweta Devi's 'Breast Giver' her body turns against her and burdens her existence. Her exploitation is now direct and manifest with grievous physical repercussions. Mr. Shamnath's mother and Jashoda try their utmost best to secure the future of their children within their abilities and circumstances. But this is only as far the similarity with the 'Breast Giver' can be sustained. With her unfaltering love for her son, she is weakened enough to be unable to vocalise a demand or plead for recompense. Her life charts a regular graph of self-abnegation to be of assistance to her son. In a way, she unconsciously confirms her marginalisation. With the rejection of her plea to lead the reclusive life of a pilgrim, she is ultimately and irrevocably drawn into the vortex of the vicious Capitalist cycle she attempts to escape. Her release and relief will come only with death. She lacks the power to reinstate her needs, thus they are ignored and she is thrust to the periphery. She resigns herself and does not indicate in any way, through word or action, a desire for emancipation. At the very end she does mention her repeated plea to leave for Hardwar, mostly because she understands she is an onus and wants to

disencumber the family from their impediment, but when that petition is predictably rejected she settles for the duty meted out to her. She merely exists to suit and fuel the needs of the great Capitalist system. Does she desire rescue? Mr. Shamnath's mother is not only unaware of her rights; she is not even remotely eager to enforce any kind of right to ameliorate her position. In the denouement, the drama unfolds when the American Boss comes to dinner and her terrible plight is laid bare. The dinner party is the climax of the story, and the author uses it dexterously to resolve the tension which had been building up along the course of the narrative. In an age of vigorous discourses regarding the position and empowerment of the subaltern and the marginalised, the likes of Shamnath's mother are difficult to categorise. They are even ignored in discussions concerning the plight of peasants, women, tribals and various other categories who are included under the wide umbrella of the marginalia. The case of Shamnath's mother shatters the 'Mother India' myth one more time, leaving the reader with an uncomfortable feeling of sterile anger and helplessness which lasts long after the story ends.

### Select Bibliography

#### Primary Source:

Bhisham Sahni's 'The Boss Came to Dinner' in *University English Selections*. Kolkata: Calcutta University Press, 1999. pp. 94-101.

#### Secondary Sources:

Abrams, M. H. and Geoffrey Harpham. *A Handbook of Literary Terms*. New Delhi: Cengage Learning, 2009.

Ashcroft, Bill, Gareth Griffiths, Helen Tiffin. *The Empire Writes Back: Theory and Practice in Post-colonial Studies*. London: Routledge, 1989.

Foucault, Michel. *Madness and Civilization: A History of Madness in the Age of Reason*. London: Routledge, 2001.

Mills, Sara. *Michel Foucault*. London: Routledge, 2003.

Morton, Stephen. *Gayatri Chakravorty Spivak*. London: Routledge, 2003.

[/wikipedia.org/wiki/Marginalization](http://wikipedia.org/wiki/Marginalization).

## অদ্বৈতে দৃষ্টিতে জীবের নতিষত্ব --- একটি সমীক্ষা

মবোর হোসেন (এম. ফিলি), যাদবপুর বিশ্ববিদ্যালয়

### সারসংক্ষেপে

অদ্বৈতবদোন্তমতে, একমাত্র নতিষ পদার্থ হল আত্মা, যা উপত্যতি ও বনিশরহতি। আত্মাই ব্রহ্ম এবং অখলি-প্রপঞ্চ সমস্ত কিছু ব্রহ্মে অধ্যস্ত হলও তা স্বরূপত ব্রহ্মই। কনিতু প্রশ্ন হল আত্মা ভনিন যাব উপদার্থ অনতিষ হল। জগত-প্রপঞ্চে জীবাত্মার নতিষতা কি ভাবে সদিধ হব? কারণ, লোকো জীবের জন্ম-মৃত্যু অহরহ ঘটলে চলছে। বর্তমান প্রবন্ধে এই প্রশ্নের উত্তর প্রদানপূর্বক বিভিন্ন যুক্তি ও শ্রুতবিলে এটাই সদিধ করা হয়েছে যে, জীবাত্মা নতিষ। জীবের জন্ম-মৃত্যু হয় না, লোকো যলে জন্ম-মৃত্যু দৃষ্ট হয় তা ঔপাধিকি অর্থাৎ স্থাবরজঙ্গম-শরীরাদরিই উপত্যতি-বনিশ হয়।

### মূলশব্দ

১। প্রত্যগাত্মা, ২। বসিফুলঙ্গি, ৩। অজর, ৪। অমর, ৫। বজ্জ্ঞান, ৬। সোপাধিকি, ৭। প্রতবিম্ব

অদ্বৈতবদোন্ত মতে, একমাত্র নতিষ পদার্থ হল আত্মা। নতিষ-শুদ্ধ-বুদ্ধ-মুক্ত-সভাবসম্পন্ন আত্মাই ব্রহ্ম এবং অখলি-প্রপঞ্চ সমস্ত কিছু ব্রহ্মে অধ্যস্ত হলও তা স্বরূপতঃ ব্রহ্মই। এই আত্ম পদার্থের দারশনিকি আলোচনায় জীবাত্মা ও পরমাত্মার বিভাগ দেখতে পাই। পরমাত্মা নতিষ হলও জীবাত্মা অর্থাৎ প্রত্যগাত্মার ক্ষেত্রে নতিষ অথবা অনতিষ – এরূপ বপ্রতিপিত্তি বাক্ষ লক্ষ্য করা যায়। অদ্বৈত মতে, জীব(জীবাত্মা) নতিষ; কনিতু জীবকে নতিষ বললে অদ্বৈতিকে এটা দেখতে হব। যলে, জীব উপত্যতি-বনিশরহতি এবং জীব চতৈন্যস্বরূপ। কারণ জীব যদি দহেন্দ্রিয়াদরি



সঙ্গে অভিনি অর্থাৎ দহেন্দ্রয়াদি স্বরূপ হয় তাহলে দহেন্দ্রয়াদির উৎপত্তি-  
 বিনাশেরে ন্যায় জীবেরেও উৎপত্তি-বিনাশ স্বীকার করতে হবে। কার্যতঃ জীবেরে  
 নতিযত্ব প্রতিপাদন সম্ভব হবনো। কনিত বর্তমান প্রবন্ধে আমার মূল বিষয় হল  
 জীবেরে নতিযত্ব প্রতিপাদন করা। অদ্বৈতী বদোন্তদর্শনম্ গ্রন্থেরে  
 চরাচরব্যপাশ্রয়াধিকিরণ ও আত্মাধিকিরণে কভাবে জীবেরে নতিযত্ব প্রতিপাদন  
 করছেন তা সহজভাবে উপস্থাপন করার চেষ্টা করছি।

পূর্বপক্ষী বিভিন্ন প্রকার শ্রুতির মধ্যে বিরোধ প্রদর্শন করে বলেন জীব  
 অনতিযা “যথা অগ্নেঃ ক্షুদ্রাঃ বসিফুলঙিগাঃ ব্যুচ্চরন্তি, এবম এব এতস্মাৎ আত্মনঃ  
 সর্বং প্রাণাঃ, সর্বং লোকাঃ, সর্বং বদোঃ, সর্বাণি ভূতানি, সর্বং এতৎ আত্মানঃ  
 ব্যুচ্চরন্তি”<sup>৬</sup>—যমেন অগ্নি থেকে ক্షুদ্র বসিফুলঙিগসকল নানাদিকে নরিগত হয়,  
 একইভাবে এই আত্মা থেকে প্রাণসকল, লোকসকল, বদেসকল, ভূতসকল এবং এই  
 আত্মাসকল নানাদিকে নরিগত হয়—ইত্যাদি শ্রুতিতে ব্রহ্ম থেকে জীবাৎমার উৎপত্তি  
 বিষয়ে অবগত হওয়া যায়। আবার “তৎ সৃষ্টি তদবোনুপ্রাবশি”<sup>৭</sup>—তাকে সৃষ্টি করে  
 তাতেই অনুপ্রবেশে করলেন; “সঃ এবঃ ইহ প্রবষ্টিত আনথাগ্রভেষঃ”<sup>৮</sup>—সেই নতিয-শুদ্ধ-  
 বুদ্ধ-মুক্ত স্বভাব ব্রহ্মই নথরে অগ্রভাগ পরষন্ত সমগ্র শরীরে প্রবষ্টিত হয়ে আছে;  
 “অজঃ আত্মা”<sup>৯</sup>—আত্মা জন্মরহিত—ইত্যাদি শ্রুতিতে অবকিত পরব্রহ্মেরেই জীব-ভাব  
 অবগত হওয়া যায়। কাজেই উক্ত শ্রুতিগুলির মধ্যে পরস্পর বিরোধবশতঃ সংশয় হয় জীব  
 নতিয অথবা অনতিয। পূর্বপক্ষী স্বভাবতই বলেন জীব অনতিয।

পূর্বপক্ষীর উক্ত সংশয় নিরাকরণেরে নিমিত্ত বদোন্তদর্শন গ্রন্থেরে দ্বিতীয়  
 অধ্যায়েরে তৃতীয় পাদে সিদ্ধান্ত বলনে “নাত্মাশ্রুতে অনতিযত্বাৎ চ তাভ্যঃ”<sup>১০</sup>—আত্মার  
 উৎপত্তি হয়না, আর শ্রুতিতেও আত্মার উৎপত্তির কথা শ্রুত হয়না; বরং “সঃ বৈ এষঃ  
 মহান অজঃ আত্মা”<sup>১১</sup>, “অজঃ নতিয”<sup>১২</sup>, “ন জীবঃ ম্রয়িত”<sup>১৩</sup> ইত্যাদি শ্রুতিতে জীবেরে  
 নতিযত্বেরে কথাই শ্রুত হয়।

কনিত পূর্বপক্ষী বলেন, অবকিত পরব্রহ্মেরে জীবেরে মধ্যে প্রবেশেরে দ্বারাই  
 জীবেরে জন্ম বিষয়ক জ্ঞান হছে। ফলে পূর্বোক্ত শ্রুতিসকলেরে মধ্যে পরস্পর বিরোধ  
 থাকায় শ্রুতির প্রামাণ্য সিদ্ধ হয়না এবং সহেতে সিদ্ধান্তকি জীবেরে অনতিযত্ব স্বীকার  
 করতে হবে।

একদশী বলেন, ব্রহ্ম থেকে জীবেরে উৎপত্তি হয়। তিনি ব্রহ্মকে কারণ এবং জীবকে কার্যরূপে গ্রহন করছে আলোচনায় প্রবৃত্ত হচ্ছনো। “একস্মনি বদিত্তি সর্বম ইদং বদিত্তিম”<sup>৯০</sup>—একটি বজ্রিগ্রহণ হলে এই সকলই বজ্রিগ্রহণ হয়। এরূপ শ্রুতির জন্য তিনি ‘একবজ্রিগ্রহণে সর্ববজ্রিগ্রহণ’ ও অনুকূল তর্কপুষ্ট অনুমান অনুগ্রহীত আগম প্রমাণ বলে জীবেরে উৎপত্তি প্রতাপাদন করেন। তিনি বলেন, কারণকে জানলে কার্যকে জানা যায়, যমেন- মৃত্তিকাকে জানলে ঘটকে জানা যায়। সুতরাং কারণ ব্রহ্মকে জানলে কার্য জীবকে জানা যাবে; কিন্তু জীব যদি ব্রহ্মেরে কার্য না হয়। ভিন্ন কিছু হয় তাহলে ব্রহ্মকে জানে জীবকে জানা যাবনো। এদিকে অদ্বিতী বলেন যে, অবিকৃত ব্রহ্মই জীবরূপে প্রবষ্টিত হয়েছেন, ফলতঃ জীব ব্রহ্ম থেকে ভিন্ন নয়। একদশী বলেন, অবিকৃত পরমাত্মাই যে জীব তা জানা যায়না, যেহেতু তাদের লক্ষণ ভিন্ন ভিন্ন। ব্রহ্ম পাপাদদিত্তিঃষরহতি কিন্তু জীব তার বপিরীত অর্থাৎ পাপাদদিত্তিঃষরহতি।

এপ্রসঙ্গে একদশী অনুমান প্রদর্শন করেন—“জীবঃ ব্রহ্মণঃ ভিন্ণঃ বরিদ্বধ-ধর্মবত্বাৎ, সম্মতবৎ”<sup>৯০</sup>—জীব ও ব্রহ্ম ধর্মভেদে পরস্পর ভিন্ন তা উভয়সম্মত। এই অনুমানের অনন্তর একদশী জীবেরে কার্যত্ব বিষয়ে একটি অনুমান প্রদর্শন করেন—“জীবঃ কার্য-পদার্থঃ ব্রহ্মণঃ বভিক্তত্বাৎ, ঘটাদবিৎ”<sup>৯১</sup>—জীব কার্য-পদার্থ যেহেতু জীব ব্রহ্ম থেকে ভিন্ন, যমেন- ঘটাদি পদার্থ। এই অনুমানদ্বয়েরে অনুকূল তর্ক হল – আত্মা ভিন্ন জীব যদি আত্মার কার্য না হয় তাহলে ‘একবজ্রিগ্রহণে সর্ববজ্রিগ্রহণ’ এই প্রতজ্রিগ্রহণও সিদ্ধ হবনো। দ্বিতীয় অনুমানেরে ব্যাপ্তি হল- আকাশাদি প্রভৃতি যা কিছু ব্রহ্ম থেকে ভিন্নতা সবই কার্য পদার্থ। জীবাত্মাও পুণ্য ও অপুণ্য কর্মযুক্ত এবং সজেন্য সুখ-দুঃখ যুক্ত, এবং প্রত্যকে শরীরে ভিন্ন ভিন্ন এইহেতু জগৎ-প্রপঞ্চে উৎপত্তিকালে জীবেরেও উৎপত্তি হওয়া উচিত। এক্ষণে একদশী আগম প্রমাণ তথা শ্রুতি প্রদর্শন করে বলেন—“যথা অগ্নেঃ ক্షুদ্রাঃ বসিফুলিঙিগাঃ ব্যুচ্চরন্তি, এবম এব এতস্মাৎ আত্মনঃ সর্বে প্রাণাঃ, সর্বে লোকাঃ, সর্বে বদোঃ, সর্বাণি ভূতানি, সর্বে এতে আত্মানঃ ব্যুচ্চরন্তি”<sup>৯২</sup>—অগ্নি ক্షুদ্র বসিফুলিঙিগসকল যমেন নানাদিকে নরিগত হয় এই আত্মা(পরমাত্মা) থেকে প্রাণসকল নরিগত হয়—এইভাবে ভোক্তা আত্মাসকলেরে সৃষ্টির উপদশে করছনো।

এছাড়াও একদশী জীবেরে জন্ম ও মরণ প্রতাপাদনকারিণী শ্রুতির উল্লেখ করেন—“যথা সুদীপ্তাৎ পাবকাৎ বসিফুলিঙিগাঃ সহস্রশঃ প্রভন্তে সরূপাঃ। তথা অক্ষরাৎ দ্ববিধিাঃ সোম্যভাবাঃ প্রজায়ন্তে তত্র চবোপযিন্তি”<sup>৯২</sup>—যমেন সুদীপ্ত বহ্নি থেকে

সমান নাম-রূপযুক্ত সহস্র বসিফুলঙিগ নরিগত হয়, এইরূপে অক্ষর পরব্রহ্ম থেকে নানাপ্রকার ভাবসকল উৎপন্ন হয় এবং তাতেই প্রলীন হয়। কিন্তু উক্ত শ্রুততি ভাবসকলে কথা বলা হলেও সমানরূপযুক্ততাবোধক শ্রুতবিক্য থাকায় ‘ভাবশব্দটি’ জীববাচকও হয়ে থাকে। কেননা প্রসদিধ জীবাৎমাসকল চতৈন্যরে যোগবশতঃ পরমাত্মার সঙ্গে সমানরূপযুক্ত হয়ে থাকে। যদিও “আত্মনঃ আকাশঃ সম্ভূতঃ”<sup>১৩</sup>—ইত্যাদি ভূতৌপত্ৰি প্রকরণে জীবরে উৎপত্ৰি শ্রুত হয়নি তথাপি তা নিষিধে করা যায়না। কেননা কোন স্থলে শ্রুত না হওয়া অন্যত্ৰ শ্রুতকে বারণ করা সঙ্গত নয়। বরং শ্রুত শ্রুতরি তাৎপর্যেই সেই বিষয়ে অন্যান্য শ্রুতসিকলকে ব্যাখ্যা করতে হবে।

এখন প্রশ্ন হল, ‘অবিকৃত ব্রহ্মই জীবরূপে প্রবষ্টিট হয়েছেন’<sup>১৪</sup>—শ্রুতরি গতি কি হবে? এর উত্তরে একদশৌ বলনে, জীব ব্রহ্মরে কার্য হওয়ায় প্রবশেবোধক শ্রুতকিও বকারভাব প্রাপ্ত্রি দ্বারাই ব্যাখ্যা করতে হবে। জীবরে উৎপত্ৰিবিোধক শ্রুতবিক্যসকল –“ যথা অগ্নেঃ ক্ষুদ্রাঃ বসিফুলঙিগাঃ.....”, “যথা সুদীপ্তা.....”— বলবান হওয়ায় অবিকৃত ব্রহ্মরে জীবরূপে প্রবশেবোধক শ্রুতসিকলকে “তৎ সৃষ্টা তদবোনুপ্রাবশিৎ”<sup>১৫</sup>, “সঃ এবঃ ইহ প্রবষ্টিট আনথাগ্রভেয়ঃ”<sup>১৬</sup> – জীব আত্মার বকাররূপে প্রবষ্টিট এই প্রকারে ব্যাখ্যা করতে হবে।

সদিধান্ত মতে, জীবরে উৎপত্ৰি বিষয়ে শ্রুতরি অভাব থাকায় জীব উৎপন্ন হননা। প্রকৃতপক্ষে অদ্বৈতে মতে, জীবরে উৎপত্ৰি সম্ভব নয়; কেননা, শ্রুতবিক্যসকল থেকে জীবরে নতিযত্বরেই অবগত হওয়া যায়। ‘নতিযত্বাৎ চ তাভ্যঃ’ সূত্রে ‘চ’ শব্দটি থেকে জীবরে জন্মরাহতিয ও নতিযতা সূচতি হয়। কাজেই জন্মরাহতিয, বকাররাহতিয অবিকৃত ব্রহ্মরেই জীবরূপে এবং ব্রহ্মরূপে ইত্যাদি শ্রুতবিক্য সকল থেকে একই ব্রহ্মরে জীবরূপে প্রকাশরে জ্ঞান হয়। এছাড়াও সদিধান্তী জীবরে উৎপত্ৰি নিষিধেকারিণী শ্রুত্ৰি প্রদর্শন করে—“ন জীবঃ ম্ৰয়িতঃ”<sup>১৭</sup>—জীবরে মৃত্যু হয়না, “সঃ বৈ এষঃ মহানজঃ আত্মা অজরঃ অমরঃ অভয় ব্রহ্ম”<sup>১৮</sup>— সেই এই মহান ও জন্মরাহতি আত্মা জরাহীন, মৃত্যুহীন, অমৃতস্বরূপ, ভয়বর্জতি; “ন জায়তে ম্ৰয়িতঃ বা বপির্চাৎ”<sup>১৯</sup> -- অবলিপ্ত চতৈন্যস্বরূপ ব্রহ্ম জাত হননা, বনিষ্ট হননা; “অজঃ নতিযঃ শাশ্বতঃ অয়ং পুরাণঃ”<sup>২০</sup>—ইনি জন্মরাহতি নতিয ক্ষয়শূন্য এবং বৃদ্ধবিবির্জতি, পুরাতন হয়েও নূতন, “তৎ সৃষ্টা তদবোনুপ্রাবশিৎ”<sup>২১</sup>— তাকে সৃষ্টি করে তাতেই অনুপ্রবশে করলনে; “অননে

জীবনে আত্মনা অনুপ্রবশিষ্য নামরূপে ব্যাকরবানি<sup>২২</sup>--এই জীবাত্মারূপে অনুপ্রবশে করে নাম ও রূপকে অভিব্যক্ত করব; “সঃ এবঃ ইহ প্রবষ্টিট আনথাগ্রভেষঃ”<sup>২৩</sup>--সহেই নতিষ-শুদ্ধ-বুদ্ধ-মুক্ত স্বভাব ব্রহ্মই নথরে অগ্রভাগ পর্যন্ত সমগ্র শরীরে প্রবষ্টিট হয়ে আছেন; “তত্ত্বমসি”<sup>২৪</sup>, “অহং ব্রহ্মাস্মি”<sup>২৫</sup>, “অয়ম আত্মা ব্রহ্ম সর্বানুভূতঃ”<sup>২৬</sup>--সর্বাত্মকরূপে সকলেরে অনুভবকর্তা এই আত্মাই ব্রহ্ম--- ইত্যাদি শ্রুতি জীবেরে নতিষতাবাদিনী হয়ে জীবেরে উপপত্তিতে বাধাদান বা প্রতবিন্দন করছেন। জীব ব্রহ্ম থেকে ভিন্ন নয় এবং সহেতে জীব ব্রহ্মেরে কার্যও নয়। কেননা, “এক দবে সর্বভূতষে গুচঃ সর্বব্যাপী সর্বভূতান্তরাত্মা”<sup>২৭</sup>-- অদ্বিতীয় দবে যনি জ্যোতিঃস্বরূপ পরমাত্মা তনিই সর্বপ্রানতি। প্রছন্নভাবে অবস্থতি আছেন; তনি সর্বব্যাপী ও সকল প্রাণীর অন্তরাত্মা—এই প্রকার শ্রুতি আছে। কাজেই পূর্বপক্ষীর “জীবঃ কার্য-পদার্থঃ” অনুমানে স্বরূপাসিদ্ধি দোষ হয়। ব্রহ্ম সর্বব্যাপী হওয়ায় তনি অবিক্তই হন, বিক্ত হননা। সহেতে পক্ষ জীব ব্রহ্ম বিক্তত্বরূপ হতে থাকেনা। তাছাড়া উক্ত অনুমানে দৃষ্টান্তাসিদ্ধি দোষও হয়, কারণ দৃষ্টান্ত ঘটও সর্বব্যাপী ব্রহ্ম থেকে ভিন্ন নয়। অতএব জীব কার্য পদার্থ না হওয়ায় জীবেরে উপপত্তিসিদ্ধি হল। এবষিয়ে অনুকূল তর্ক হল—জীব যদি উপপন্ন হয়ে স হয় তাহলে “সঃ বৈ এষঃ মহানজঃ আত্মা অজরঃ অমরঃ অভয় ব্রহ্ম”<sup>২৮</sup> ইত্যাদি শ্রুতিবিক্য অনর্থক হয়ে পড়বে এবং জীবেরে উপপত্তি হওয়ায় তার নাশও অবসম্ভব হওয়ায় ক্তনাশাদি দোষেরে উদ্ভব হবে। কাজেই অদ্বৈতে মতে জীবেরে উপপত্তি সম্ভব নয়।

পূর্বপক্ষী আপত্তি করে বলতে পারনে য়ে, ‘বয়িদধিকরণে’<sup>২৯</sup> সিদ্ধান্তি ‘বিক্তত্ব’ হতে দ্বারা আকাশাদরি কার্যত্ব নরিপণ করছেন। আলোচ্য স্থলেও উক্ত হতুর দ্বারা জীবেরে কার্যত্ব নরিপণ করতে অসুবিধা কী ?

এর উত্তরে সিদ্ধান্তি বলনে, আকাশাদরি উপপত্তি স্থলে কোন বাধা না থাকায় আকাশাদরি কার্যত্ব সিদ্ধি হয়, কনিতু আলোচ্য স্থলে বুদ্ধ্যাদি বাধক থাকায় জীবেরে কার্যত্ব সিদ্ধি হয়না। বুদ্ধি প্রভৃতি উপাধরি জন্ম জীব ও ব্রহ্মেরে বিভাগ প্রতভিত হয় ; যমেন একই আকাশ উপাধি সহযোগে ঘটাকাশ, পটাকাশরূপে প্রতভিত হয়। একইভাবে ব্রহ্ম ও জীব স্বরূপতঃ অভিন্ন হলেও বুদ্ধ্যাদি উপাধরি দ্বারা ব্রহ্ম ও জীবেরে বিভাগ প্রতভিত হয়। এবষিয়ে সিদ্ধান্তি শ্রুতি প্রদর্শন করনে—“সঃ বৈ অয়ম আত্মা বজ্জ্ঞানময়ঃ মনোময়ঃ প্রাণময়ঃ চক্ষুন্ময়ঃ শোত্রময়ঃ”<sup>৩০</sup>—এই জন্মমরনাধীন সংসারী আত্মা ব্রহ্ম-স্বরূপই, ইনহি বজ্জ্ঞানময়, মনোময়, প্রাণময়,

চক্ষুন্ময়(দ্রষ্টা),শোত্রময় ইত্যাদি এই সকল শাস্ত্র ব্রহ্ম এক ও অবিকৃত হলেও তার বুদ্ধ্যাদমিয়তা অনেকেত্ব প্রদর্শন করছেন। কাজেই পূর্বপক্ষী জীবেরে উপত্যক্তি বিষয়ে যসেকল শ্রুতবিক্ষ উল্লেখ করছেন তা উপাধি সঙ্গে সম্বন্ধবশতঃই হয়ে থাকে। অর্থাৎ অন্তঃকরণরূপ দ্বারা এর উপত্যক্তিও প্রলয় হয় এইরূপে ব্যাখ্যা করতে হবে। আর জীবেরে জন্ম-মৃত্যু সোপাধিকি সবেষিয়েও সিদ্ধান্তি শ্রুতি প্রদর্শন করনে – প্রজ্ঞানঘনঃ এব এতভেষঃ ভূতভেষঃ সমুত্থায় তানি এব অনুবিশিষ্যতি, ন প্রতেষ সংজ্ঞা অস্তি”<sup>৩১</sup>—এই আত্মাই সর্বোতভাবে প্রজ্ঞানঘন অর্থাৎ জ্ঞানস্বরূপ; ইনিই এই ভূতসকলেরে থেকে উত্থতি তাদে নাশেরে অনন্তর নাশ প্রাপ্ত হন, মৃত্যুর পর এর আর সংজ্ঞা থাকনো। ‘ভূতসকল থেকে উত্থান’—কথার অর্থ হল – ক্షতিয়াদি ভূতসকলেরে দহে অন্তঃকরণাদি উপাধিরূপে পরিণাম হলে, জলে সূর্যেরে প্রতবিম্বি উপত্যক্তি ন্যায় সেই অন্তঃকরণে প্রতবিম্বিতি প্রজ্ঞানঘন চৈতন্যেরে যনে উপত্যক্তি(জন্ম) হয়। অর্থাৎ আত্মার(জীবেরে) জন্ম হল। ‘তাদেরে নাশেরে অনন্তর নাশপ্রাপ্ত হন’—কথার অর্থ হল – তাদৃশ দহেরে নাশ হলে মনে হয় আমার নাশ হল। ‘মৃত্যুর পর সংজ্ঞা থাকনো’ কথার অর্থ হল – সেই দহেন্দ্রিয়াদি উপাধিরি নাশ হলে আমি কর্তা , ভোক্তা এরূপ বৃত্ত্যাত্মক বিশিষে জ্ঞান হয়না। বস্তুতঃপক্ষ্যে উপাধিরিই উপত্যক্তি-প্রলয় হয়, আত্মার বলিয় বা নাশ হয়না। একদশৌ জীব ও ব্রহ্মেরে যে লক্ষণ ভদেরে কথা বলছেন তাও ঠিকি নয়, কেননা সেই লক্ষণভদেও বিম্বি-প্রতবিম্বিরে ন্যায় উপাধিষিতঃই হয়ে থাকে। কাজেই একদশৌ ‘ব্রিদ্ধধর্মত্ব’ হতের দ্বারা জীব ও ব্রহ্মেরে যে ভিন্ণিতা প্রতপিাদনকারী অনুমান প্রদর্শন করছিলেন তা যুক্তযুক্ত নয়। কেননা, ব্রিদ্ধধর্মবত্বা উপাধিমাত্র , পারমার্থিকি নয়। সুতরাং পক্ষ্য জীবেরে ব্রিদ্ধধর্মবত্বরূপ হতৌ পরমার্থতঃ না থাকায় ‘জীবঃ ব্রহ্মণঃ ভিন্ণিঃ ব্রিদ্ধধর্মবত্বা’ –অনুমানে স্বরূপাসিদ্ধি দোষ হয়। ফলতঃ একদশীর অনুমানদ্বয় নরিকৃত হওয়ায় তৎকর্তৃক পুষ্ট শ্রুতবিক্ষসকলেরে বঃ মাঃ ২।১।২০, মুঃ ২।১।১ প্রাবল্যও নরিকৃত হয় এবং জীবেরে উপত্যক্তি সোপাধিকি হওয়ায় উক্ত শ্রুতবিক্ষসকলকে অবিকৃত পরব্রহ্মই জীবরূপে প্রকাশ হয়ছেন এই প্রকারে ব্যাখ্যা করতে হবে।

কাজেই পূর্বপক্ষীর যুক্তসিকল নরিকৃত হওয়ায় সিদ্ধি হল য়ে, আত্মা বা জীব নতিয়া।

# তীকা

1. বৃহদারণ্যক মাধ্যন্দনি শাখা ২।১।২০
2. তৈত্তিরীয়োপনিষিদ ২।৬
3. বৃহদারণ্যকোপনিষিদ ১।৪।৭
4. ঐ ৪।৪।২৫
5. ২।৩।১৭
6. বৃহদারণ্যকোপনিষিদ ৪।৪।২৫
7. কঠোপনিষিদ ১।২।১৮
8. ছান্দোগ্যোপনিষিদ ৬।১১।৩
9. ঐ ৬।১।৩, মুণ্ডকোপনিষিদ ১।১।৩
10. “অপহপাপ্নত্বাদধিৰ্মকঃ হই পরমাত্মা, তদ্বপিৰীতঃ হই জীবঃ।”  
বদোন্তদর্শনম্ ২য় অধ্যায় পৃঃ ৫৯৪।
11. বৃহদারণ্যক মাধ্যন্দনি শাখা ২।১।২০
12. মুণ্ডকোপনিষিদ ২।১।১
13. তৈত্তিরীয়োপনিষিদ ২।১
14. ঐ ২।৬
15. ঐ
16. বৃহদারণ্যকোপনিষিদ ১।৪।৭
17. ছান্দোগ্যোপনিষিদ ৬।১১।৩
18. বৃহদারণ্যকোপনিষিদ ৪।৪।২৫
19. কঠোপনিষিদ ১।২।১৮
20. ঐ
21. তৈত্তিরীয়োপনিষিদ ২।৬
22. ছান্দোগ্যোপনিষিদ ৬।৩।২
23. বৃহদারণ্যকোপনিষিদ ১।৪।৭
24. ছান্দোগ্যোপনিষিদ ৬।৮।৭
25. বৃহদারণ্যকোপনিষিদ ১।৪।১০
26. বৃহদারণ্যকোপনিষিদ ২।৫।১৯
27. শ্বতোশ্বতরোপনিষিদ ৬।১১
28. বৃহদারণ্যকোপনিষিদ ৪।৪।২৫

29. “नहि आत्मा आगन्तकः कस्यर्चा, स्वयंसिद्धिर्त्वा, नहि आत्मा आत्मनः  
प्रमाणम् अपक्वसिद्धिर्त्वा तस्य हि प्रत्यक्षादीनि प्रमाणानि अप्रसिद्धि  
प्रमये सिद्धये उपादीयन्ते।” बदान्तदर्शनम् २१ अध्याय २।७।१, पृः ५७७।
30. बृहदारण्यकोपनिषद् ४।४।५
31. बृहदारण्यकोपनिषद् ४।५।१७

## ग्रन्थपत्रञ्जी

1. बादरायण ब्रह्मसूत्र, शङ्कराचार्य शारीरकमीमांसाशास्त्र, स्वामी  
बश्वरूपानन्द(सम्पादक) बदान्तदर्शनम् २१ खण्ड, उद्बोधन कार्यालय,  
कलकता, २०१४ खः।
2. महामोहपाध्याय सौतानाथ गोस्वामी, ब्रह्मसूत्ररे अध्यासशास्त्र , संस्कृत  
पुस्तक भण्डार, कलकता, २०१२ खः।

3. বৃপা বন্দ্যোপাধ্যায়, *ববিরণপ্রস্থানে অজ্ঞানসন্ধিঃ সুসুপ্তি, অর্থাপত্তি ও শ্রুতিবিচার*, মিত্রম্, কলকাতা, ২০০৮ খৃঃ।
4. শ্রী বাসুদেবে শর্মা(সম্পাদক), *ঈশাদ্যষ্টোত্তরশতোপনিষদঃ* , চৌখাম্বা বদিয়াভবন, বারাণসী, ২০১০ খৃঃ।



# **GROWTH AND DEVELOPMENT OF COMMUNICATION SYSTEM IN SILIGURI: A CASE STUDY OF ROADWAYS**

**MINAKSHEE KUMARI  
P.H.D. SCHOLAR  
CENTRE FOR HIMALAYAN STUDIES  
UNIVERSITY OF NORTH BENGAL  
minakshee4@gmail.com**

## **ABSTRACT:**

C. A. Bayly has remarked “the study of information, knowledge and communication is an interesting project which might help close the deplorable gap between studies of economic structures on one hand and of orientalism in another hand.”<sup>1</sup> Before 1835 A.D. means of communication was in a very rudimentary stage and the pioneers who visited Darjeeling after an arduous journey from Calcutta, had to pass a stretch of rich woody and marshy land infested with wild animals and deadly insects like the most fearful female anopheles mosquitoes, formed the present heart-land of Siliguri. This article looks not only the growth and development of roadways in Siliguri but also the reasons behind the evolution of roadways in the region.

Keywords: *terai-doars*, *Palki*, *Hill-Cart Road*, *Highways*, *metallic road*

## **INTRODUCTION**

Siliguri is the gateway to North-East India and strategically the most important town in India. Famous for Tea, Timber and Tourism, Siliguri stands unique as its hinterland is washed by the borders of Sikkim Bhutan Nepal and Assam. Assigned to be one of the most rapidly developing towns of India, owes very much to its geographical location. It is nestled between latitude 26 degree 20 minutes to 26 degree 57 minutes North and longitude of 88 degree 10 minutes and 88 degree 46 minutes East, derives its uniqueness from its geographical as well as ecological characteristics.

The world famous Darjeeling tea grows within the vicinity of a hundred kilometers radius around Siliguri. It acts as a major trading centre because it is only transportation gateway to Darjeeling, Duars, Sikkim Bhutan, Nepal and North-East. Siliguri spreads over two districts -Darjeeling and Jalpaiguri. It is the headquarter of the plains subdivision of the Darjeeling district of West Bengal situated 392 feet above mean sea level in the lap of “terai-doars” region of the Himalaya on the bank of the river Mahananda.

Majority of urban bursts in the history is witnessed along the banks of rivers due to communication accessibility. Major towns in India with ancient lineage found to flourish near the bank of rivers. Siliguri, too, is situated on the bank of river Mahanada though the town found its existence in the maps in the late 19th century as before it was only a patch of marshy land.

## **ADMINISTRATIVE SETTINGS**

Siliguri municipality was established in the year 1949 and initially it was housed in a wooden construction on Hill Cart Road. The first Chairman of the municipality was the then Sub-divisional officer Sri Sachindra Mohun Guha. The founding stone of Gour Bhawan was laid by the then governor of Bengal Sri Harendra Kumar Mukhopadhyay on 18<sup>th</sup> October 1952. The building was inaugurated on 26 January 1960 by Sri Breshwashar Majumdar.

Siliguri municipality had 30 wards till 1994 but after its declaration as Siliguri Municipal Corporation in 1994 more 17 wards were added under its jurisdiction. At present the total area is 41 square kilometer and the city is looked after Siliguri Jalpaiguri Development Authority (SJDA). The land area under the jurisdiction of SJDA is 1266.66 square km after inclusion of Phansidewa. The 6 police stations includes Siliguri, Matigara, Nakshalbari, Jalpaiguri, Bhaktinagar, Rajganj; comes under Siliguri Jalpaiguri Development Authority. The area is divided into 5 community development blocks: Matigara, Naxalbari and Phansidewa in Darjeeling district and Jalpaiguri and Rajganj falls under Jalpaiguri District.

Thus, the Siliguri agglomeration area comprised of Siliguri Municipal Corporation and four census towns: Kalkut, Dabgram, Dinnaguri and Chakiabhita.

## **THE COLONIAL ROADWAYS**

Roads are product of human necessity to linking different places. The necessity rose out of commercial demands and military obligations. It forms the basis for urban transportation system. However, in Ancient period, usually, waterways were preferred as the best method of transportation but with the passage of time roadways became more important and demanding for transportation purpose.

Before 1835 A.D. means of communication was in a very rudimentary stage and the pioneers who visited Darjeeling after an arduous journey from Calcutta, had to pass a stretch of woodland infested with wild animals and deadly insects formed the present heart-land of Siliguri. "Guide to Darjeeling" published in 1838 points out 98 hours of journey from Calcutta. This arduous journey is described by Hooker, who in 1848 traveled from Karagola Ghat on the Ganges to the foothills

Hooker wrote-" I woke up at 4 a.m and found my palkee on the ground and the bearers coolly smoking their hookas under a tree.(it was raining hard ). They had carried me the length of your stage 12 Mile and there were no others to take on me. I had paid £24 for my dawk from Karagola to the hills to which I had been obliged to add a handsome douceur; so I lost all patients after waiting and entreating during several hours and I found the headman of a neighbouring village and by a further disbursement induced 6 out of 12 bearers to carry the empty Palki while I walked to next stageor till we should meet some other. They agreed and cutting the thick and sponge sheets of Banana used them for shoulder pads, they also wrapped them around the Palki poles to ease their aching clavicles."<sup>2</sup>

Hooker describe journey from Pankhabari (which is 20 km from North Bengal University) to Darjeeling in the following manner " on the following morning my package arrived and leaving my Palki, I mounted on a pony sent for me by Mr Hudson and commenced a very steep ascent hill of about 3000 feet winding along the face of a Steep, richly wooden valley. The road zigzags extraordinarily in and out of the Jungle..... Not only are the roadside rich in plants but native paths, cutting of all the zigzag run in straight lines up the steepest hill faces...."<sup>3</sup>.

## **THE MAKING OF CART ROAD AND OTHER ROADS**

The British wanted to establish communication between Darjeeling and plains. This endeavour took shape between 1839 and 1842 when Lord Napier of Magdala, a Lieutenant in the engineers, was deputed to construct road from Siliguri to Darjeeling.<sup>4</sup>

O'Malley says that this road was laid in the midst of very thick forests and also along steep ridges of 40 miles. The project was built at an expenditure of eight hundred thousand rupees.<sup>5</sup> Heavy cost of transporting the military stores finally led to the construction of 'Cart Road'. The work began in 1860 and the whole road was completed by 1869.<sup>6</sup> This Siliguri-Darjeeling Road approximately 25 feet in width was completed at the cost of £6,000 per mile.<sup>7</sup> O'Malley points that the most important road in the district was the 'Cart Road' from Siliguri to Darjeeling. The road was approximately 49 mile and also a running ruling gradient of 1 in 31. It was believed by O' Malley as one of the best mountain roads in India. Among many reasons behind the construction of this Cart road, one of it was to replace the old military road built by Lord Napier of Magdala. The road was opened to Traffic in the year 1869. Many hindrances came while constructing this road and the most obnoxious impediment was the fearful female anopheles mosquitoes, the carrier of plasmodium parasites.

## OTHER ROADS

Other than Hill Cart Road table were the roads connecting Siliguri . the most important was Siliguri - Sevoke Road . Siliguri sevoke road was an extension of Teesta Valley Road that connected Sevoke to Teesta bridge and thus it continue to Sikkim via Rango and then to kalingpong and Tibet by Rishi Road. Thus at the southern extremity of this road is the Valley Road where we find an extension leading from sevoke to Siliguri, a distance of 12 miles. O'Malley writes that other important roads within the vicinity of Siliguri were those of Siliguri to Naxalbari (13 miles), Kurseong to Matigara via Pankhabari (22 1/2 miles), Tirihan to Bagdogra (6 miles), Naxalbari to Garidhura (11 miles).

The Siliguri Naxalbari road passed through Matigara after it left the Darjeeling Hill Cart Road which was just over a mile from Siliguri. It is measured to be 13 miles long and Dash remarks that it was fit for heavy traffic approximately 5 tons Laden at all seasons round the Year.<sup>8</sup> The Provincial Government maintained three roads north of Siliguri, these were the Matigara Kurseong Road, the Trihan Naxalbari road and Trihan Bagdogra Road. These roads were 22.5, 8.5 and 5 miles long respectively.<sup>9</sup> The last two carried traffics up to 5 tons Laden weight yearly and were metalled throughout. The Matigara Kurseong road took 5 ton traffic for first 9 miles and was usable for the lighter traffic up to Pankhabari. Another important road maintained by the District Board was the road from Bagdogra to Ghughijhora, which was 8.31 miles and Naxalbari to Khoribari (10.93 miles). These roads were metalled and bridged throughout. Four and a half miles of route from khoribari To Phansidewa of total length 12.5 miles was metalled. The road from Matigara to Phansidawa 8.25 miles and from Naxalbari to Ambari where both unmetalled. Three local District Boards played an important part in the maintainence of the roads. These local boards were: the Sadar Kurseong Local Board, the Siliguri Local Board boards which controlled 116 miles of Terrai roads and the Kalingpong Local Board.

Roads maintained by the Public Work Department.<sup>10</sup>

From	To	Length
Siliguri	Sivoke	12 miles / 19.3 km.
Sukna	Adalpur	3 miles 321 ft. / 4.9 km.
Matigara	Darjling Hill Cart Road	2 miles 355 ft. / 3.3 km.
Station Yard Road, Siliguri		540 ft / 162 meters.
Siliguri Bazar Road		1,464 ft. / 439.2 meters
Siliguri Feeder Road		4000 ft. / 1200 meters.
New Kutchery Road, Siliguri		1792 ft. / 537.6 meters.

Matigara	Naxalbari	11 miles 3090 ft./ 18.6 km.
Ganges-Darjeeling Road (portion)		2miles 331ft. / 3.3 km.
Tirihauna	Naxalbari	8 miles 2710 ft 9 / 13.7 Km.
Tirihauna	Bagdogra	5 miles 4412 ft / 9.4 km.
Panighatta	Kadama	3 Miles 720 ft. / 5 km.
Matigara to Kurseong via Pankhabari (portion)		13 miles 2640 ft / 21.7 km
Panighatta	Dubhijhora	2 miles 2325 ft. / 3.9km.

ROADS MAINTAINED BY THE DISTRICT BOARD, DARJILING.<sup>11</sup>

ROAD NO.	FROM	TO	LENGTH
32	Naksalbari	Debiganj via Kharibari	14 miles
33	Khaprail	Hill Cart Road	2 miles 4 fur (4.0 km.)
34A	Garidhura	Junction of Bagdogra- Tirihauna Road with Naksalbari Tirihauna Road	2 miles 6 fir. 87 yds.
35	Old Siliguri	Rangapani	3 miles 3fur.(5.4 km.)
36	Rangapani	Goaltuli	5 miles (8.1 km.)
37	Matigara	Salbari	2 miles 1 fur. (3.4 km.)
38	Junction with Road no. 32(Kharibari)	Adhikari	2 miles (3.2 km.)
39	Hill Cart Road	Shahpur T.E.	2 miles (3.2 km.)
39A	Madnaguri Jote (Hill Cart Road)	Bhaismari	6 miles 1 fur. (9.9 km)
40	Dumriguri Inspection Bungalow	Phansidewa via Bagdogra hat and Harlia Bridge	8 miles 5 fur. (13.9 km.)
41	Baghdogra	Ghugujhora	7 miles (11.3 km.)
42	Tepu	Junction with Road No. 28	2 miles (3.2 km.)
43	Manjwa	Turibari	3 miles (4.8 km.)
44	Khaprail	Tirihauna	4 miles (6.4 km.)
45	Hansquar	Ghugujhora	3 miles (4.8 km.)

46	Hansquar	Chaupukhuria	4 miles (6.4 km.)
47A	Junction with Road No. 41	Khoribari upto Road No. 29 in Bandarjuhli	4 miles 6 fur. 134yds. (7.8 km.)
48	Matigara-Siliguri Road near Panchanai Bridge	Champasari Forest Depot via Bhaismari	6 miles (9.7 km.)
49	Atal	Cambrian	6 miles (9.7 km.)
50	Matigara-Nakasalbari Road	Bagdogra-Atal Road	1 mile 2 fur. 112 yds. (2.1 km)
51	Tirihana	Panighata via Old Terai	2 miles (3.2 km.)
52	Road No. 41	Road No. 47 via Mudi Bazar Chenga Bridge and Pahargumia	4 miles 2 fur. 112 yds.(6.9 km.)
52A	Panighata Bridge	Longview	2 miles 100 yds. (3.3 km.)
47	Atal	Junction with Road No. 31 (Narijote), Cross Roads, bye roads and ordinary Village roads (Terai)	6 miles 4 fur. 30 yds (10.5 km.)
1	Hill Cart Road	Damragram	2 miles (3.2 km.)
2	Subtiguri	Garidhura via Tarabari	2 miles (3.2 km.)
3	Old Siliguri	Matigara Hat	2 miles 1 fur. (3.4 km.)
4	Mudibazar	Baghdogra Thakurganj	(Merged with road no. 52)

LIST OF ROADS UNDER THE SILIGURI LOCAL BOARD<sup>12</sup>

ROAD NO.	FROM	TO	LENGTH
27	Matigara (Matigara-Naksalbari Road)	Phansidewa	8 miles 4fur. 3 yds. (13.7 km.)
28	Baghdogra	Atal	4 miles 5 fur. 83 yds. (7.5 km.)
29	Kharibari	Phansidewa	12 miles 4 fur. (20.1 km)
30	Garidhura	Panighata	3
30A	Panighata	Mechi	5 8 miles (12.9 km.)
31	Naksalbari	Ambari(Thakurganj)	8 miles 4 fur. (13.7 km.)

Road communication was considered to be very important in this area by government and army and because of this reason various authorities controlled the roads of Siliguri in particular and the Darjeeling district as a whole. The Central Public Work Department controlled a portion of certain major roads and some other important thoroughfares well maintained by the Public Works Department of the State Government. The introduction of automobiles on road of the district after 1980 gives fresh impetus to the building of modern thoroughfares in the area. The final report on the survey and settlement operation in the Darjeeling (1919 to 25) made the following observations

“The Cart Road to Darjeeling, the Siliguri Naxalbari road , the Naxalbari Gayabari road , the Siliguri Sevoke road and the Ganges Darjeeling Road at the best kept metalled road of the Terai.. They are all maintained by the Public Work Department except the one last mentioned which is maintained by the District Board..... Of the kutchha road, the one from Matigara to Phansidewa having probably the largest traffic needs immediate improvement. The metallic road of the Bagdogra Thakurganj road is in a chronic necessity. There are numerous branch and cross roads connecting the important feeder roads. The aim of the District Board should be the gradual metalling of all branch and feeder roads.<sup>13</sup>

## **THE JAYAKA COMMITTEE AND THE KINGS PLAN**

Jogesh Chandra Mitra report gives a detailed account on construction and maintenance cost of roads. He points out that the annual recurring expenditure of Public Work Department for the maintenance and upkeep of 13 roads amounts to about 100000 of rupees.<sup>14</sup> By end of 1920 the bridging techniques in the hills changed considerably. Suspension bridges were taken care of and bamboos were replaced with steel wires for durability. The strategic location of the region increased the importance of roads and it was never regarded as only of local importance. Even after 1854 when we noticed the transfer of authority from the military board to Civil Department of Public Works, the government was very much concerned with strategic importance of arterial and border roads. The maintenance of these roads were very expensive, so expensive that the Provincial Government placed many roads for maintenance under Local Bodies and Forest Departments. In the year 1928, the Road Development Committee under the chairmanship of M. R. Jayaka advised for a change in the road policy of government. In response to appeal made by Jayaka Committee a Central Road Fund was established.

A.J.Kings special officer for Road Development proposed minor improvement in technical road making issues in 1934. The King Plan envisaged the provision of Feeder roads as an integral part of communication system. He found that making some changes to road surfaces like easing of curves and

gradient etc, there was no need of changing the alignment of the major roads or even substituting them with new ones. The report of 1938 stated that there were 109.5 miles of Railways and 3179 miles of metalled and unmetalled roadways in the Darjeeling district.<sup>15</sup>

The mileage of the roads under each administrative authority and the average annual expenditure of them were given as follows.<sup>16</sup>

Authority responsible for upkeep	Metalled Roads			Unmetalled Roads		
	Mileage on 31 March 1937	Annual expenditure per mile (In Rs.)	Average annual expenditure per mile (In Rs.)	Mileage on 31 March 1937	Annual expenditure per mile (In Rs.)	Average annual expenditure per mile (In Rs.)
Government roads maintained by Communications & Works Department	244.30	3,64,611	1,492	108	8,107	76
District roads maintained directly by District Board & Sub-Divisional roads maintained by Local Boards working under the District Board	21.17	8,731	412	344	33,521	98
Urban roads maintained by municipalities	25.20	(Not Available)	..	14	(Not Available)	..
Village roads maintained by Union Boards	..	..	..	2,423	28,880	12
Total	2890.67	3,73,342	..	2,889	70,598	..

As per report of king the width of Hill Road varied from 12th to 25<sup>th</sup> feet and the usual being 16 feet between the parapet and the rain. Mr. King drew a plan of 309 miles improved roads in the district consisting 182 miles of existing metalled and 83 miles of existing un-metalled and 44 miles of new road. This scheme provided a mile of improved road and there was for every 3.92 square miles of a tree or every 1034 has a population serving 1091 square miles or 19.02 percent of total area. Only 118 square



miles were left unreserved. This scheme provided for direct road link between the district and sub-divisional/thana headquarters.

### **THE NAGPUR ROAD PLAN IN DARJEELING**

The exigencies of Second World War demanded a very quick build up of the strategic roads. By the time the hostilities ceased, other than non strategic roads the statistical important ones improved surfaces. Meanwhile in 1940 -42, the Government of India has frozen the Central Road Fund giving way to Nagpur Plan in the year 1943. The Nagpur plan envisaged the construction of three main categories of road National, Provincial and Local. The Nagpur Road Plan was a landmark in the history of the road development and for the first time an attempt was made to prepare coordinated road development plan. The national highway carried uninterrupted road traffic across the states, the Provincial Road served as the main arteries of the trade, commerce and administration and the Local Roads were classified into groups. The District Roads were further grouped into ‘major’ and ‘other’ and the village roads. The District Road branched off from National or State Highways lying within 2 to 5 miles of important villages. The village roads were the outer links connecting all rural settlement.

The Recommendation of Nagpur Road Plan had deep Impact on Kings Plan. Thus, came the provisions for village road and considering the Railways complementary to the Highways was added.

Category of Roads	In Darjeeling	In West Bengal
NATIONAL HIGHWAY	66 KM ( 41 miles)	953KM ( 592 miles)
PROVINCIAL HIGHWAY	171 KM	1718 KM (1067 miles)
MAJOR DISTRICT ROADS	323 KM	4755 KM (2953 miles)
OTHER DISTRICT ROADS	NOT AVAILABLE	4540 KM (2820 miles)
VILLAGE ROADS	NOT AVAILABLE	9417 KM (5849 miles)

FIG: The table reflects the length of the different categories of road scheduled to be built and the revised plan in Darjeeling district in West Bengal.

### **CONCLUSION**

After the partition of the province the most important need of West Bengal Government was an arterial roads to link the northern region comprising the district of Darjeeling Jalpaiguri and coochbehar. Thus the construction of National highway number 31 from Barhi, Bihar border to Siliguri was taken up. The

NH31 assume strategic significance as the Calcutta-Siliguri direct rail link was intercepted by East Pakistan territories. A short term program was also included in the construction of Jalpaiguri Siliguri Provincial Highway and also improvement of Darjeeling-Pedong and Rishi Roads. Immediately after the partition the State government of Bengal prepaid a separate emergency program for border roads and approached the central government for financial assistance. A technical Committee under the Central Board of transport reviewed the plan and submitted the report in June 1949. Owing to the paucity of funds the whole proposal was overlooked until 1951 when the Planning Commission brought new road building specifications.

---

<sup>1</sup> Bayly. C. A., *Empire and Information: Information Gathering and Social Communication in India, 1780-1870*, Cambridge University Press, 1996.

<sup>2</sup> Hooker, J.D., *Himalayan Journal*, London, 1854, p-68, published *Darjeeling District Gazetteer*, 1980.

<sup>3</sup> *Ibid.*, pp 73-74, *Darjeeling District Gazetteer*, 1980, p 288.

<sup>4</sup> O'Malley, L.S.S., *Darjeeling District Gazetteer*, 1907, p 132.

<sup>5</sup> Dozey, E.C., *Darjeeling: Past and Present*, Calcutta, 1922, p 3

<sup>6</sup> Banerji, A.K., and others, *Darjeeling District Gazetteer*, 1980, p 289.

<sup>7</sup> *Ibid.*, p 289.

<sup>8</sup> Dash, A.J., *Darjeeling Gazetteer*, 1947, p 183.

<sup>9</sup> *Ibid.*, p183

<sup>10</sup> Mitra. Jogesh Chandra, *Final Report on the Survey and Settlement operation in the Darjeeling Terai (1919-1925)*, Calcutta, 1927.

<sup>11</sup> Mitra. Jogesh Chandra, *ibid.*, Calcutta, 1927

<sup>12</sup> *Ibid.*,

<sup>13</sup> Mitra. Jogesh Chandra, *Final Report on the Survey and Settlement operation in the Darjeeling Terai (1919-1925)*, Calcutta, 1927, pp 3-4.

<sup>14</sup> *Ibid.*, p 4

<sup>15</sup> King. A.J., *Comprehensive Report on Road Development Projects in Bengal, Vol VI., Rajsahi Division – Darjeeling District*, Calcutta, 1938, p 116.

<sup>16</sup> *Ibid.*,

অনুবাদক বদ্বিযাসাগররে প্রাক দ্ব-শিত জন্মবর্ষে ফরিরে দখো

বতোল পঞ্জ্চবংশিত

রবনি ঘোষ

সহকারী অধ্যাপক , বাংলা বিভাগ, গোরুবাতান গভঃ

কলজে,কালম্পিঙ

চলভাষ- ৭২৭৮৭০৯৩০৪/৭৯৮০৪৯১৩৫৪E-mail-

rabinghosh08@gmail.com

#### Abstract

বদ্বিযাসাগরতাররচনাবলীরমধ্যঅধিকাংশঅন্যভাষারগ্রন্থথকেঅনুবাদকরছেনে। অনূদিতগ্রন্থযে -

কোনোপাঠকপড়লহেবুঝবনেগ্রন্থটিরমৌলিকিত্ব। বদ্বিযাসাগররেজন্মরেদুশতবছরঅতিক্রান্তহবআগামী২০২০সালে, তারপ্রাককালতোরঅনূদিতগ্রন্থরেমৌলিকিত্বযে -

কোনোসহৃদয়রসকিপাঠকইবুঝাতপোরবনে। ইংরাজি,সংস্কৃত

,হিন্দুভাষাথকেবদ্বিযাসাগরযেঅনুবাদকরছেনেতারপ্রাঞ্জলতাওপ্রসাদগুণচমকারতা

বলাইবাহুল্য। প্রাকদ্ব-শিতজন্মবর্ষেবদ্বিযাসাগরঅনূদিত‘বতোলপঞ্জ্চবংশিত’

গ্রন্থটিরমৌলিকিত্বওমূলানুগত্যনিচের্চাকরারচেষ্টাকরলাম। হিন্দুগ্রন্থরেহুবহুঅনুবাদলক্ষকরবনা,

বরংনতুনএকটিমৌলিকগ্রন্থরেস্বাদপাঠকপাবতোবলাইবাহুল্য। হিন্দুওবাংলাদুইভাষার

মধ্যআন্তঃসাংস্কৃতিকপ্রক্షাপটেএকটিনতুনসংযোজনকরারচেষ্টাকরলামমাত্র।

সূচকশব্দ (Key words)- মৌলিকিত্ব, প্রাঞ্জলতা

,প্রসাদগুণ,মূলানুগত্য,আন্তঃসাংস্কৃতিক।

অনুবাদক বদিয়াসাগর হিসেবে পরিচয় মূলত ও মুখ্যত তাঁর হিন্দি গ্রন্থেরে অনুবাদ দিয়েই শুরু হয়। ‘বতোল পচ্চীসী’ হিন্দি গ্রন্থেরে প্রারম্ভিক অনুবাদ করেন। বাংলা ‘বতোল পঞ্চবংশী’র বিজ্ঞাপন অংশে তিনি বলেছেন – “বতোলপচ্চীসী নামক প্রসিদ্ধ হিন্দি পুস্তক অবলম্বন করিয়া, এই গ্রন্থ লিখিয়াছিলাম। ..... বতোল পঞ্চবংশী পূর্ববৎ সর্ব্বত্র পরিগৃহীত হইলে শ্রম সফল বোধ করি।”<sup>১</sup>

বাংলা ‘বতোলপঞ্চবংশী’ গ্রন্থে একটি উপকরণিকা অংশ আছে। সেখানে সামগ্রিক কাহিনির গৌরচন্দ্রিকাটি আছে। উজ্জয়িনী নগরে গনধরবসনে নামক রাজার উল্লেখ আছে। তাঁর চার মহিষী ও তাঁদের গর্ভে ছয় পুত্রের কথা উল্লেখ আছে। জ্যেষ্ঠপুত্র শম্ভু পরবর্তীকালে সিংহাসনে বসেন। কনিষ্ঠ বিক্রমাদিত্যেরে বদিয়ানুরাগ, নীতপিরায়ণতা ও শাস্ত্রানুশীলন ছিল জগদ্বিখ্যাত। অবশেষে সহোদর ভাই ভরত্বহরির হাতে রাজ্যভার অর্পণ করে সন্ন্যাসীর বেশে বিক্রমাদিত্য দশোত্তরে ভ্রমণ করতে লাগল।

উজ্জয়িনীবাসী এক দরদ্র ব্রাহ্মণেরে কঠোর তপস্যা ও তপস্যায় তুষ্ট হয়ে ফললাভের ঘটনা বর্ণনা আছে। কিন্তু এই ফললাভ ব্রাহ্মণীর কাছে অত্যন্ত কষ্টেরে মান হলে। কারণ অমরত্ব মানুষকে যন্ত্রণাভোগ করায়। অমরত্বে সুখেরে থেকে দুঃখ বেশি। এই সহজবাক্যেরে মাধ্যমে যেনে নীতিবাক্য বলা হয়েছে। ব্রাহ্মণেরে বক্তব্য ‘আমার চৈতন্য হইল।’<sup>২</sup> প্রাচুর্য মানুষেরে মনে অসন্তোষ আনে এবং অতিরিক্ত বলাসতি মানবজীবনকে কলুষত্ব করে।

হিন্দি ‘বতোল পচ্চীসী’র সূচনা অংশটি অন্যরকম। প্রারম্ভিক পর্বে মূল পার্থক্য নগরেরে নামকরণে। এখানে ধারা নামক নগরেরে কথা উল্লেখ আছে। ব্রাহ্মণেরে বিশেষণ প্রয়োগে পার্থক্য লক্ষণীয়। হিন্দিতে বলা হয়েছে বদিবান ব্রাহ্মণ, কিন্তু বদিয়াসাগর মহাশয় দরদ্র ব্রাহ্মণ ব্যবহার করেছেন। প্রথমত যেনে সেখানে বদিয়াসাগরেরে ব্যক্তজীবনেরে দরদ্র ও প্রচারবন্ধি অমায়িক বনিয়ী নরিহংকার ব্যক্তিত্বেরে পরিচয় পাওয়া যায়। উপকরণিকায় আমরা লক্ষ্য করব বদিয়াসাগর

মহাশয় হিন্দি 'বতোল পচ্চীসী'র আকস্মিক অনুবাদে ছেদে ঘটছে তার প্রমাণ চাণক্য শ্লোক। তিনি সেখানে প্রায় হুবহু চাণক্য শ্লোকেরে বঙ্গানুবাদ করছেন।

‘অলসস্য কুতো বদিয়া, অবদিস্য কুতো ধনম্।  
অধনস্য কুতো মতির্ম, অমতির্মস্য কুতো সুখম্॥’<sup>৩</sup>

অর্থাৎ বদিয়াসাগর বলছেন অলসদেরে বদিয়া হয় না, অবদিয়াদেরে ধর্ম হয় না, ধনীদেরে মতির্ম হয় না এবং মতির্মহীনদেরে সুখ হয় না।

বাংলা উপকরমণিকা বা হিন্দি ভূমিকার পরেই গ্রন্থটি পঁচশিটি পরবে বভিক্ত। এক্ষেত্রে দুই গ্রন্থেরে মূল তথ্য হল হিন্দি 'বতোল পচ্চীসী' গ্রন্থে শরিনো নামযুক্ত পরবে বভিক্ত, কিন্তু বাংলা 'বতোলপঞ্চবংশতি' শুধুমাত্র সাংখ্যমূলক অধ্যায়ে বভিক্ত। হিন্দি 'বতোল পচ্চীসী' গ্রন্থেরে প্রথম শরিনো নামযুক্ত অধ্যায়টি 'বাস্তব মদোষী কৌন?' শরিনো নামযুক্ত অধ্যায়েরে ক্ষেত্রে পাঠক পুরো গল্পেরে বিষয় সম্বন্ধে কঞ্জির্চি ধারণা করতে পারেন। বদিয়াসাগরেরে গ্রন্থে অধ্যায়েরে পূর্ণপাঠেরে পরই গল্পেরে সম্পূর্ণ রসাস্বাদন সম্ভব। বদিয়াসাগর মহাশয় প্রথম উপাখ্যানেরে বারাগসী নগরেরে কথা উল্লেখ করছেন। আমরা লক্ষ করব অনুবাদে তিনি কাব্যিক অলংকারও ব্যবহার করছেন। এক্ষেত্রে গদ্যশিল্পী বদিয়াসাগর যেনে কবি বদিয়াসাগর হয়ে উঠছেন। এই উপাখ্যানেই রাজকুমার ব্রজমুকুটেরে কথা বলতে গিয়ে বলছেন 'ব্রজমুকুট নামে হৃদয়বান নন্দন ছিলি'<sup>৪</sup> অর্থাৎ নন্দনেরে অনুপ্রাস লক্ষণীয়। বদিয়াসাগর মহাশয় এই উপাখ্যানে যেনে উপমা ব্যবহার করছেন তা হিন্দি 'বতোল পচ্চীসী'র থেকে বিস্তর ফারাক। রাজকুমার ব্রজমুকুটেরে ভ্রমণ বৃত্তান্ত বর্ণনা করছেন কখনো কখনো তা যেনে কালদাসেরে বিবিত কল্পনাকণ্ডে হার মানায়। এক্ষেত্রে হিন্দি 'বতোল পচ্চীসী'র ব্রজমুকুটেরে ভ্রমণ বৃত্তান্ত কল্পনিকি হলও বদিয়াসাগর মহাশয় এই বর্ণনা যেনে পাঠকবর্গেরে চোখে এক অসামান্য সত্য বাস্তবেরে ছবি ঐকছেন। হিন্দি 'বতোল পচ্চীসী'র এই বর্ণনা অনকোংশেই স্বাভাবিক বর্ণনামূলক। হিন্দি 'তালাব' শব্দেরে অর্থ 'পুকুর'। কিন্তু বদিয়াসাগর মহাশয় সরোবর এর অসাধারণ বর্ণনা দিয়েছেন।

‘বাস্তব মদোষী কৌন?’ এই শরিনো নামে হিন্দি 'বতোল পচ্চীসী'র প্রথম উপাখ্যানে বর্ণনা বিবিতটি মূলত ও মুখ্যত কাহনিমূলক। পাঠক উপাখ্যানেরে আগাগোড়া পাঠ করে একটি উপদেশমূলক সিদ্ধান্তে উপনীত হয়।

বদ্বিযাসাগর মহাশয়রে সংখ্যামূলক শরিনোনাংম অরুথান ঞ প্রতটি উপাখ্যান পাঠ করে পাঠকবরুগ উপদশেমূলক সদিধানতে উপনীত হয়। ‘বতোল পচুসী’র ভাষায় দ্বতৈ অরুথ নহৈ, বশেরি ভাগ অংশে লেখকরে বরুগনা হনিদি ভাষুগদ্যে বরুগতি হয়ছে। “রাজকুমার নে পুছা তুমহারে লেত্রি মঠিাই নহী ভজে সকতী?”<sup>৫</sup> এখানে আকু্ষরকি অরুথ মঠিাই শব্দরে অরুথ মষ্টিকিহৈ বোঝায়। কনিতু বদ্বিযাসাগর মহাশয় মঠিাই, শব্দটকিে বাংলা সন্দশে অরুথে ব্যবহার করেছেন। এখানে পাঠক মষ্টি বা খবর অরুথ বুঝবনে তা বলাই বাহুল্য। যা নরিভর করবে পাঠকরে বোধগম্যতায়। ‘বাস্তব মে দেশী কৌন’ প্রথম উপাখ্যানটি ববিতমূলক গল্প আখ্যান। এখানে রাজা রানী মনুত্রপিতুর চরিত্রগুলরি সাবলীলভাবে সংলাপ লকু্ষণীয়। যখনে বতোলরে জজিঞাসা ও উত্তর কৌতুহলেদদীপক। বতোল বকিরমকে জজিঞাসা করে ‘বোলে বকিরম .....বোলে ! বাস্তব মে দেশী কৌন হ্যা?’<sup>৬</sup> এখানে যহেতু শরিনোনাংমযুক্ত উপাখ্যান তাই শরিনোনাংম দয়িহৈ প্রশ্ন জজিঞাসা করা হয়ছে। উপাখ্যানরে সারমর্ম পাঠ করে নীতকিতা পাঠকবরুগ শরিনোনাংম থকেহৈ আন্দাজ করতে পার।

বদ্বিযাসাগর মহাশয়রে ‘বতোলপঞ্জবংশিতি’ প্রথম উপাখ্যানরে শেষরে দকিে পাঠকবরুগ নীতি উপদশে সম্পরুকে কঞ্জিচি ঞ অনুমান করতে পারনে। এই উপাখ্যানরে শেষবাক্যটি এইরুপ “রাজাও, তাহার পশুচা ঞ পশুচা ঞ ধাবমান হইয়া তাহাকে বৃকুষ হইতে অবতারগপূর্বক, স্কন্ধে করিয়া, সন্ধ্যাসীর আশ্রম অভমিখে চললিনো।”<sup>৭</sup> উনবংশি শতাব্দীর মধ্যগগনে ত ঞ সম ভাষার সৌকর্য এবং ‘বতোল পচুসী’র ভাষা শলৌরও বসিতর ফারাক লকু্ষ করা যায়।

‘বতোল পচুসী’র দ্বতীয় উপাখ্যান ‘মধুমালতী কসিকী পতনী?’ শীর্ষক শরিনোনাংমরে সূচনাটি লকু্ষণীয়। “উসী শ্মশান ঘাট পর পঁছুকর বকিরম নে বতোল কো অপনে সাধুকে পাস চল দয়ি।”<sup>৮</sup> এই উপাখ্যানরে প্রারম্ভকি পরবটি সরল হনিদি গদ্যে বরুগনা করা হয়ছে। এখানে মহারাজকে সম্বোধন করে বতোল বলেনি য়ে দ্বতীয় উপাখ্যান আরম্ভ করার কথা। এখানে ধর্মস্থল নামক নগরীর উল্লেখে আছে। এখানে গুণাধীরা নামক রাজার উল্লেখে পাই। ত্রবিকিরম, বামন ও মধুসূদন এই তনিজনরে পতনীলাভরে কাহনি বিবিধিভাবে বরুগতি হয়ছে। এই উপাখ্যানরে অরুথান ঞ হনিদি কাহনিরি শেষাংশে বতোল ও রাজার মধ্যে কথাপকথনটি তরুমূলক তা লকু্ষণীয়। উল্লেখে ‘রাজা নে জো তরুক দয়ি উসকে আধার পর য়হ ফ্যাসলা তো স্বীকার করনা হী থা।’<sup>৯</sup>

হিন্দি দ্বিতীয় উপাখ্যানেরে শরিনো নামটির দখে পাঠকবর্গ উপাখ্যানটি পড়ে অন্য কোনো শরিনো নামেরে কথা ভাবতে পারে না, কারণ শরিনো নামটি উল্লিখিত 'মধুমালতী কসিকী পত্নী?' অর্থাৎ মধুমালতীর পত্নী কে? বা মধুমালতী কার পত্নী হওয়ার যোগ্য? তা যে কোনো পাঠকেরে মনেই এই সঙ্গত প্রশ্নটি উঠবে। বদ্যাসাগর মহাশয়েরে শরিনো নামহীন দ্বিতীয় উপাখ্যানটি বতলেরে সংলাপ দিয়ে শুরু হয়েছে। এখানে জয়স্থল নগরেরে কথা আছে। ত্রিবিক্রম বামন ও মধুসূদন এই তনিজনেরে পত্নীলাভেরে কাহিনীটি বদ্যাসাগর মহাশয় অত্যন্ত সরল ভাষায় বর্ণনা করছেন। কোনো উপমার প্রয়োগ ছাড়াই তনি পাঠকেরে সুবধির জন্য স্বল্প পরসিরে কাহিনীর বর্ণনা করছেন। দ্বিতীয় উপাখ্যানটি পড়ে পাঠক তার নিজ মন মতো কোনো শরিনো নাম ধর্য করতে পারে তা বলাই বাহুল্য। কারণ বদ্যাসাগর মহাশয় নাম সংখ্যক বা সংখ্যামূলক শরিনো নাম কাহিনীর বর্ণনা করছেন।

'কোন বড়া বলদানী' শীর্ষক তৃতীয় উপাখ্যানটি শুরু হওয়ার আগে একটি বাহ্যিক পরিশে তথা স্থানেরে বর্ণনা দেওয়া হয়েছে। শুরু হয়েছে এইভাবে: "শ্মশান ম পছঁচকর বক্রম নে বতল কণ পুনঃ অপনে বশ মে কর লয়ি অউর অপনী পীঠ পর লাটকর সাধুক পাস চল দয়ি।"<sup>১০</sup> এখানে পূর্ববর্তী কাহিনীর সূত্র ধরই পরবর্তী উপাখ্যানেরে শুরু হয়েছে। এখানে 'বলদানী' শব্দটি ব্যবহার করা হয়েছে। বদ্যাসাগর মহাশয় বাংলা করছেন ঔদার্য। বক্রম ও বতলেরে কথোপকথনেরে মধ্যই 'বতল পচঁসী'তে উপাখ্যানটি শুরু হওয়ার আগে অর্থাৎ মূল গল্পটির বর্ণনার আগে কিছু অতিকথন আছে। কিছু উপদেশমূলক ও কিছু সচতেনতামূলক কথাবার্তা লক্ষণীয় "এক বাত অউর ধ্যান রাখনা ক যিদি সহী উত্তর জানতে হুএ ভী তুমনে জবাব নহী দয়ি তণ তুমহারা সরি টুকরে টুকরে হণ জায়গো।"<sup>১১</sup> বর্ধমান নগরেরে রূপসনে রাজার বিশেষণ প্রয়োগ করা হয়েছে। বলা হয়েছে রাজা ছিলনে দয়াবান ও প্রজাপালক। বদ্যাসাগর মহাশয় রাজার বিশেষণগুলি তথা রাজার গুণবততার পরচয় দিয়েছেন আরণ বশে কিছু শব্দ ব্যবহার করে। যমেন অতি বিজ্ঞ, গুণগ্রাহী, দয়াশীল, পরম ধার্মিক। অর্থাৎ কোনো কোনো জায়গায় বা বলা ভালণ উপাখ্যানে বদ্যাসাগর মহাশয় নিজস্ব ভাবনা চিন্তায় তথা অনুবাদকে কিছুটা দূরে রেখেই কাহিনীর বর্ণনা করছেন। রাজা রূপসনে ও দ্বারী তথা প্রজা বীরবল এই দুই চরিত্রকে সংলাপেরে মাধ্যমে একটি রসজ্ঞ জ্ঞাননষিট গল্প তরৈ করছেন। হিন্দি 'বতল পচঁসী'র এই উপাখ্যানে মূল গল্পেরে বিষয়বস্তুর তুলনায় আকারগত পরসির অনেক বেশি হিন্দি শব্দ বলদানী অর্থে বদ্যাসাগর মহাশয় করছেন 'ঔদার্য' উপাখ্যানেরে শেষে হিন্দি গ্রন্থে কে সবচেয়ে বেশি বলদানী এবং

বাংলায় বক্রিমাদতিযে উত্তর রাজার ঔদার্য বশেী বলা বাহুল্য বক্রিমাদতিয নজিে রাজা তাই হয়তেী এই মানসকি বেীধ কাজ করছেে। এবং রাজার গুণ যহেতুে দয়াশীল তাই হয়তেী বদিয়াসাগর মহাশয় ঔদার্য শব্দ ব্য়বহার করছেেনে।

‘বতোল পচ্চীসী’র চতুর্থ উপাখ্যান ‘কৌন সব সে বড়া পাপী?’ শীর্ষক গল্পে পুঙ্খানুপুঙ্খ বিবরণ দেওয়া হয়ছেে। মূল গল্প শুরু হওয়ার আগে বক্রিম ও বতোলের কনিতুে কথোপকথন লক্ষণীয়। বতোল বলছেে “এক বাত অউর ধ্যান রাখনা কি যদি সহী উত্তর জানতে হুে ভী তুমনে জবাব ন দিয়া তেী তুমহারা সরি টুকড়ে টুকড়ে হেী জাগা।”<sup>১২</sup> হিন্দি উপাখ্যানে ভেীগবক্তা নগরে কথা চুড়ামণি নামে বদিয়াসাগর মহাশয় বলছেেনে এক ‘সর্ববগুণাকর শূকপক্ষী’; কনিতুে হিন্দি উপাখ্যানে আছেে চুড়ামণি নামক এক তেীতা।

অনুগসনে নামর রাজার রাজ্য ভেীগবতী এবং মগধদেশেে রাজা বীরসনেেে চন্দ্রাবতী নামক কন্যা হিন্দি গল্পে দুই রাজার নাম উহ্য আছেে। হিন্দি গ্রন্থেে ব্য়ক্তনামেেে বিশেষণগুলি বাংলা গ্রন্থেেে তুলনায় কম। যমেন বীরসনেেে কন্যা চন্দ্রাবতীর বিশেষণ বদিয়াসাগর মহাশয় বলছেেনে ‘সে পরমা সুন্দরী ও সাতশিয় গুণশালিনী’ চন্দ্রাবতীর কাছেে মদনমঞ্জরী নামে এক শারকি থাকত। উল্লেখ্য চন্দ্রাবতীর শারীরকি সৌন্দর্য ও কামদবে মদনেেে নামানুসারে শারকির নামকরণ মদনমঞ্জরী এই দুইয়রে মলিও লক্ষণীয়।

নারীদের জন্ম বদিয়াসাগরেেে মহানুভবতা উপাখ্যানেেে বিভিন্ন জায়গায় বিবিধি বিবরণে আমরা দেখতে পাবেে। শূক ও শারকির একটি কথোপকথন লক্ষণীয়।

“শারকি কহলি, পুরুষজাতি অতশিয় শঠ, অধর্মমী, স্বার্থপর ও স্ত্রীহত্যাকারী; এজন্য পুরুষসহবাসে আমার রুচি হয় না!”<sup>১৪</sup>

“শূক কহলি, নারীও অতশিয় চপলা, কুটিলি, মথিযাবাসিনী ও পুরুষঘাতিনী।”<sup>১৫</sup>

হিন্দি ‘বতোল পচ্চীসী’র চতুর্থ উপাখ্যানেেে মহাধন নামক শ্রেষ্ঠীর কথা আছেে, কনিতুে তার ঐশ্বর্যশালীর বিষয় বা তাঁর সন্তান প্রসবরে বিষয়েে কিছু বলা নেই। কনিতুে বদিয়াসাগর মহাশয় মহাধনেেে ঐশ্বর্যশালীর কথা বলছেেনে এবং তাঁর সহধর্মিনীর সন্তান প্রসবরে মনোকষ্টরেে কথা উল্লেখ আছেে। আমরা লক্ষ করব বদিয়াসাগর মহাশয় অধিকাংশ গল্পে নারী বিষয়ক ভাবনা চিন্তা স্বকপেীলকল্পতি। যগেুলি মূল হিন্দি গ্রন্থেে নেই অর্থাৎ নারী হৃদয়রেে যন্ত্রণা এবং নারীর সুক্ষ অনুভূতগিুলি সেথানেে নেই। কনিতুে বদিয়াসাগর মহাশয় নারীদের সুক্ষ উপলব্ধি ও অনুভূতগিুলি একাত্ম হয়েে নজিে অনুভব করতনে যগেুলি তার উপাখ্যান বর্ণনায় আমরা লক্ষ করি।



‘যম জামাই ভাগনে তনি না হয় আপনে’ এই প্রবাদ আমরা জানি, এই প্রবাদে প্রত্যাফলন আমরা চতুর্থ উপাখ্যানে লক্ষ্য করব। শ্রেষ্টিনী যখন স্বামীর সঙ্গে কথা বলে তখন বলে “তুমি কি জান না, জন, জামাই ভাগনিয় এ তনি কনো কাল আপন হয় না ও তাহাদরে ওপর বলপ্রকাশ চলে না। জামাতা যাহাত সন্তুষ্ট থাকনে, তাহাই সর্ব্বাংশে কর্তব্য।” কিন্তু হিন্দি ‘বতোল পচচীসী’ গ্রন্থে এই প্রসঙ্গ নহে। এগুলা বদিয়াসাগর মহাশয়রে নজিস্ব সংযোজন।

উপাখ্যানরে প্রায় শষোংশে জয়শ্রীর বক্তব্য লক্ষণীয়। নারী ধরৈয়শীলা, সহলশীলা, পাতবিরত্ব প্রভৃতি গুণরে কথা বদিয়াসাগর মহাশয় বলেছেন। এটি সংযোজন, কিন্তু হিন্দি উপাখ্যানরে হুবহু অনুবাদ য়ে অংশটি বদিয়াসাগর মহাশয় করছেন সর্টে হল এইরূপ “.....মনুষ্যরে কথা দূরে থাক, দেবতারাও স্ত্রীলোকরে চরিত্র ও পুরুষরে ভাগ্যরে কথা বুঝতি পারনে না।”<sup>১৬</sup> লক্ষণীয় হিন্দি উপাখ্যানে পুরুষরে ভাগ্যরে কথা বলা নহে, বদিয়াসাগর মহাশয় নারীদরে নঞ্রথক দকিরে হুবহু অনুবাদ করছেন সই সঙ্গে পুরুষরে ভাগ্যরে কথাও বলেছেন। বলা বাহুল্য এখানে আমরা বদিয়াসাগর মহাশয়রে নারীদরে প্রতিসহানুভূতশীলতার পরিচয় পাই।

‘কোন বনা পতি?’ হিন্দি ‘বতোল পচচীসী’র পঞ্চম উপাখ্যানে প্রারম্ভিক কিছু অতি বর্ণন আছে য়েগুলা বাংলা পঞ্চম উপাখ্যানে নহে। মূল কাহিনিতে প্রবশেরে আগে একটি প্রাককথন আছে। বদিয়াসাগর মহাশয় বতোলরে বক্তব্য দয়ি়ে পঞ্চম উপাখ্যান শুরু করছেন।

হিন্দি উপাখ্যানে উজ্জয়িনী নগররে কথা বলা আছে। হরদাস নামক বদিবান ব্রাহ্মণ ও মহাবলী রাজার উল্লেখ পাই। উপাখ্যানটিতে এই বর্ণনা একটি নাতদীয় অনুচ্ছেদে দয়ি়ে করা হয়ছে। কিন্তু বদিয়াসাগর এই বর্ণনা উপাখ্যানরে প্রারম্ভিক একটি পংক্তিতে করে দয়ি়েছেন। উল্লেখ্য “ধারা নগরে মহাবল নামে, প্রাক্রান্ত নরপতি ছিলেন। তাঁহার দূতরে নাম হরদাস।”<sup>১৭</sup> লক্ষণীয় এখানে ধারা নগরীর কথা বলা হয়ছে। প্রসঙ্গত উল্লেখ্য উজ্জয়িনী একট প্রাচীন শহর এবং ধারা নামক একট অন্য শহর যটি ধারানগর নামে প্রসদিধ। দুই গ্রন্থরে দুটি শহরই বর্তমানে মধ্যপ্রদেশে অবস্থতি। রাজা হরশিচন্দররে সভায় হরদাস যখন কলযুগরে পরিস্থতি তথা কলযুগ সম্পর্কে তাঁর ধারণা বর্ণনা করছেন তখন বদিয়াসাগর মহাশয় সংস্কৃত গ্রন্থ চাণক্য শ্লোকরে উদ্ধৃতি প্রায় হুবহু অনুবাদ করছেন। হরদাস বলেছেন ‘লোক মুখে মষিট বাক্য ব্যবহার করে, কিন্তু অন্তরে সম্পূর্ণ কপটতা।’ চাণক্য শ্লোকরে উল্লেখিত –

“দুর্জন প্রয়িবাদী নৈত্য় □ বশ্বাসকারণম্।

মধু তষ্ঠিতী জহিবাগরে হৃদয়ে তু হলহলম্॥”১৮

হরাদাস কন্যা মহাদবৌর জন্য তনির্টা পাত্ৰ পাত্ৰরে সন্থান করনে। তনিজনরে গুণবত্তার পরচিয় হিন্দি ও বাংলা গ্রন্থে বশে কছিতা ফারাক লক্ষণীয়। পরশিষে দেখে বক্রিমাতিযরে পছন্দনানুযায়ী রাক্ষস সংহারকই মহাদবৌর যোগ্য পতি হবে কারণ সে সর্বগুণে অলংকৃত। এই পতি দ্বিতীয় জন কিন্তু হিন্দি গ্রন্থে প্রথম জন সেই পতিকে চহ্নিতি করা হয়েছে।

‘রাজকুমারী কী দুবধি’ নামক ‘বতোল পচচীসী’র ষষ্ঠ উপাখ্যানে ধর্মপুর নগরে ধর্মশীল নামক এক রাজার উল্লেখ আছে। এখানে মন্ত্রীর নাম বলা হয়নি। বদিয়াসাগর মহাশয় মন্ত্রীর নাম বলেছেন অন্ধক। এখানে দুর্টা গল্প একত্র করা হয়েছে। কাত্যায়নী মন্দিরে ভক্তরে আকুল আর্তরি ফলে রাজা ধর্মশীল ও দীনদাস নামক তন্তুবায়রে নজি নজি মনোঃস্কামনার কথা বলা হয়েছে। রাজা ধর্মশীলের কাহনি, এখানে বন্ধু্যা পত্নীর পুত্রলাভ ও তন্তুবায় দীনদাসরে গল্প অর্থাৎ স্ত্রীলাভ করে প্রাণদান ও পুনরায় স্ত্রীলাভ যা সত্যই চমকপ্রদ। কিন্তু হিন্দি গ্রন্থে ষষ্ঠ উপাখ্যানরে শরিনোঃনামটি লক্ষণীয়। ‘রাজকুমারী কী দুবধি’ হিন্দি শরিনোঃনামে যনে মনে হয় গল্পটির বা সামগ্রিক উপাখ্যানরে খন্ড নাম দেওয়া হয়েছে। অর্থাৎ প্রথম গল্পটি যটি রাজা ধর্মশীলের পুত্রলাভ প্রসঙ্গ সটি অন্য একটি শরিনোঃনাম বা সম্পূর্ণ অন্য একটি গল্প হতে পারতো। পরবর্তী তন্তুবায় দীনদাসরে গল্পটি অন্য একটি উপাখ্যান হতে পারতো।

বদিয়াসাগর মহাশয় যমেন সাংখ্যমূলক উপাখ্যান বতোল পঞ্চবিংশতিকে বিভক্ত করছেন। কোনো নির্দিষ্ট শরিনোঃনাম দিয়ে উপাখ্যানগুলি রচনা করেননি। আমরা লক্ষ্য করব বদিয়াসাগর মহাশয় সংস্কৃত চাণক্য একটি শ্লোকরে বঙ্গানুবাদ করে যুক্তি দিয়ে বুঝিয়েছেন রূপরে পছিনে নয়, বরং গুণই আসল।

“রূপযোঃবনাসম্পন্না বিশালকুলসম্ভবা।

বদিয়াহীনা ন শোভন্তে নরিগন্ধা ইব কংশুকা॥”১৯

অর্থাৎ বদিয়াহীন ব্যক্তি পলাশফুলরে ন্যায় বাহ্যিকভাবে সুন্দর কিন্তু গুণহীন। আমরা উপাখ্যানটির শষোংশে লক্ষ্য করব বতোল বক্রিমকে জিজ্ঞাসা করলে বক্রিম উত্তর দিয়ে তন্তুবায় দীনদাসই কন্যার স্বামী হবার উপযুক্ত। এটি বদিয়াসাগর মহাশয় মনে করছেন। কিন্তু মূল হিন্দি গ্রন্থে দীনদাসরে বন্ধুককেই কন্যাটির যোগ্য স্বামী বিচেনা করা হয়েছে।

‘কোন সবসে অধিক গুণবান’ হিন্দি ‘বতোল পচচীসী’র সপ্তম উপাখ্যানে চম্পা নগরে চম্পকেশ্বর রাজা ও ত্রিভুবন নামক কন্যার কথা উল্লেখ আছে। গল্পে প্রারম্ভিক বর্ণনায় নামের ক্ষেত্রে আমরা কিছু পার্থক্য দেখে বদিয়াসাগর মহাশয় সপ্তম উপাখ্যানে সঙ্গী। রাজার নামকরণ ও রাজার কন্যার নামকরণে পার্থক্যটা লক্ষণীয়। চম্পকেশ্বর রাজা ও ত্রিভুবন নামক কন্যার কথা উল্লেখ আছে। কিন্তু বদিয়াসাগর মহাশয় এই দুই চরিত্রের নামকরণে বদল ঘটিয়েছেন। চন্দ্রাপীড় রাজা ও ত্রিভুবনসুন্দরী কন্যা বদিয়াসাগর মহাশয় চরিত্রদুটিকে অন্যনামে পরিশেষে করছেন। এখানে বদিয়াসাগর মহাশয় চঞ্চল চিত্ত, জীবন যৌবনে প্রসঙ্গ এনেছেন। এখানে তিনি সংস্কৃত শ্লোকের প্রায় অনুসরণে বলেছেন “..... রূপলাবণ্যেরে মাধুরী দর্শনে, মুনজিনেরেও মন মোহিত হয়।”<sup>২০</sup> শ্লোকটি এইরূপ –

“চলচিত্তং চলদ্বিত্তং চলজীবনযৌবনম।  
চলাচলমদিং সর্বং কীর্তিসিস্য সঃ জীবতি।।”<sup>২১</sup>

হিন্দি ‘বতোল পচচীসী’র গ্রন্থে এই রূপলাবণ্যের কোনও প্রসঙ্গ নেই। বদিয়াসাগর মহাশয় পাঠকের প্রয়োজনে উপদেশমূলক শ্লোকের ব্যাখ্যার ত্রিভুবন ইচ্ছানুযায়ী যথার্থ পতি শুধুমাত্র বুদ্ধি ও বক্রিমকে বুঝিয়েছেন। কিন্তু বদিয়াসাগর মহাশয় বদিয়া, বুদ্ধি ও বক্রিম এই তিন অসাধারণ গুণ সম্পন্ন ব্যক্তির ত্রিভুবনসুন্দরী পতি হিসেবে গ্রহণ করবেন। চারজন পাত্রের সন্ধান পাওয়ার পর বদিয়াচর্চামুখী বদিবান পন্ডিত শাস্ত্রবাদী একজন সুপুরুষ পাওয়া গেল। এখানেও বদিয়াসাগর মহাশয় ঐ ব্যক্তির শাস্ত্র ও শাস্ত্রবদিয়া বিষয়ে এক সংস্কৃত শ্লোকের ব্যাখ্যা করেন -

“শাস্ত্র শাস্ত্রশ্চ দ্বে বদিযে প্রতপিত্তয়ে।  
আদ্যা হাস্যতে দ্বিতীয়াদ্রয়ে সদা।।”<sup>২২</sup>

অর্থাৎ শাস্ত্র অর্থাৎ অস্ত্রশাস্ত্র এবং শাস্ত্র অর্থাৎ শাস্ত্রবদিয়া জানা। এখানে প্রথমটি বয়সকালে হাসরি পাত্র হয় কিন্তু শাস্ত্রবদিয়া সবসময় আদরণীয়।

‘রাজা অউর সবেক’ নামক ‘বতোল পচচীসী’র অষ্টম উপাখ্যানে প্রথমে বতোলের বক্তব্য ও কাহিনির পূর্বভাগ দেওয়া হয়েছে। পাঠককে কিছু বর্ণনা দেওয়ার পর মূল কাহিনিতে প্রবেশ করা হয়েছে। উল্লেখ্য হিন্দি গ্রন্থে মথিলি নগরে রাজা ও এক যুবকের নামের সঙ্গী বদিয়াসাগর মহাশয়ের গ্রন্থের চরিত্র নামের পরিবর্তন লক্ষণীয়। হিন্দি গ্রন্থে গুণধীশ নামক রাজার ও চরিমদের নামক এক যুবকের উল্লেখ পাই। গুণধীশ শব্দটি গুণ + অধীশ অর্থে এবং বদিয়াসাগর মহাশয় গুণ + অধি অর্থে

গুণাধপি নামক রাজার উল্লেখ করছেন। এবং দক্ষিণদিশে রাজপুত্র চরিত্রজীবরে নামটি পাই।

কাহনি বর্ণনায় বদ্যাসাগর মহাশয় অতিরিক্ত সংযোজন করছেন। তাঁর ব্যক্তজীবনে দারিদ্র্য যেন কাহনির মধ্যে প্রাসঙ্গিকভাবে চলে এসেছে। যমেন “ভিক্ষাবৃত্তি মৃত্যুযন্ত্রণা অপেক্ষাও সমধিক ক্লেশদায়িনী.... আশার দাসত্বস্বীকার করলিই নঃসন্দেহে দুঃসহ ক্লেশে ভোগ করতি হয়।”<sup>২৩</sup> চরিত্রজীবরে এ ব্যক্তব্য হিন্দি গ্রন্থে পাই না, বদ্যাসাগর মহাশয়ের এই উপাখ্যান বেশিরভাগ অংশই নিজস্ব ভাবনা চিন্তা। মূল গ্রন্থ থেকে কম অংশই নেওয়া হয়েছে।

বদ্যাসাগর মহাশয় বাক্য গঠনে ধ্বন্যুক্তি ব্যবহার করছেন। রাজা গুণাধপি ও চরিত্রজীবরে কথাপকথনে আমরা লক্ষ্য করব। ‘সতত সাতশিয় সদয় ব্যবহার করতি লাগলিনো’<sup>২৪</sup> পরশিষে বতোল ও বক্রমাদতিয়রে সংলাপে বুঝতে পারি বদ্যাসাগর মহাশয়ের মানসিকতার তফাৎ তথা তাঁর ব্যক্তজীবনে প্রভাব হয়তো বা। দয়ার সাগর যনি তিনি দান ও দয়াকেই অগ্রাধিকার দেনে তা বলাই বাহুল্য। রাজা এবং সবেক কার ঔদার্য বশে সথেনে সবেক চরিত্রজীবরে ঔদার্য বশে বলা হয়েছে, কারণ চরিত্রজীব ফল, জল ও আশ্রয়দানে মাধ্যমে রাজার উপকার করছিল। আমরা লক্ষ্য করব বদ্যাসাগর মহাশয় এখানে মূল হিন্দি গ্রন্থ থেকে কছুটা সরে গিয়েছেন এবং যুক্তি দিয়ে চরিত্রজীবরে সৌজন্য ও ঔদার্যকে বড় করছেন।

‘কোন সবসে বড়া ত্যাগী?’ নামক ‘বতোল পচীসী’র নবম উপন্যাসটি বাংলা উপাখ্যানের সঙ্গে মূল তফাৎ আয়তন বা আকারে বিষয়বস্তুতে বাহ্যিক দুইয়ের মিল লক্ষণীয়। হিন্দি উপাখ্যানে মদনপুর নগর ও দীব্যদত্ত নামক বণিকের কথা আছে। কাহনির বর্ণনা হিন্দি গ্রন্থে অতিরিক্ত তা যে কোনও পাঠকই মনে করবেন। বাংলা উপাখ্যান বদ্যাসাগর মহাশয় মূল কাহনিটি হিন্দি গল্প থেকে নিয়ে কছু চরিত্রের নাম বদল করছেন। এমনকি স্থানের নামও পরিবর্তন করছেন। হিন্দির মদনপুর বাংলায় হয়েছে মগধপুর এবং দীব্যদত্ত বণিকের নাম হয়েছে হরিণ্যদত্ত। হিন্দি গ্রন্থের এই মূল কাহনিটি চরিত্রগুলি গুণাবলী তথা পারিপার্শ্বিক কছু দিক নিয়ে অতিরিক্ত বরিত করা হয়েছে।

উপাখ্যানে ত্যাগী বিষয়ক নীতিকথায় উপনীত হয়েছেন বদ্যাসাগর মহাশয়। হিন্দি উপাখ্যান রাজার নাম নেই, শুধু নগরের নাম মদনপুর আছে। বাংলায় মগধপুর নগরের বীরবর নামক রাজার উল্লেখ আছে। রাজা বীরবর, বণিক হরিণ্যদত্ত, বণিকের কন্যা মদনসনো, ধর্মদত্তের পুত্র সোমদত্ত ও একজন চোর এই পাঁচজনের জীবনে ঘটে

যাওয়া ক্షুদ্র ঘটনা থেকে পাঠক বুঝতে পারবে কে সর্ববৃহৎ ত্যাগী ? উপাখ্যানের শেষে বতোল ও বক্রিমের কথোপকথনে হিন্দি ও বাংলা গ্রন্থের মধ্যে পার্থক্য লক্ষণীয়। লালাসা মানুষের মনকে কলুষিত করে এবং সংযম মানুষের মনকে উর্ধ্বগতি দান করে তা বদিয়াসাগর মহাশয়ের এই গল্প ব্যাখ্যা ও তাঁর নিজস্ব অভিমত দখলেই বোঝা যায়। এখানে বদিয়াসাগর মহাশয় চাক্ষুশ লোকেরে হুবহু একটি অনুবাদ চোরেরে মুখে বসিয়েছেন অলংকারে ভূষিতা সোমদত্ত ও চোরেরে কথোপকথনে তা স্পষ্ট।

“মাতৃবৎ পরদারষু পরদ্রব্যসু লোষ্ট্রবৎ।

আত্মবৎ সর্বভূতষু যঃ পশ্যতি সঃ পন্ডতিঃ॥”<sup>২৫</sup>

অর্থাৎ এখানে চোর সোমদত্তকে পরসত্রীকো নজি মাতৃসুলভ মনে করছে। এই সংযোজনই বদিয়াসাগর মহাশয়ের অনুবাদের নতুনত্ব।

“সবসে লাজুক কৌন” হিন্দি উপাখ্যানে এই গল্পেরে চরিত্রগুলি বাংলা উপাখ্যানের থেকে সংখ্যায় কম। এক্ষেত্রে বাংলা কাহিনির বর্ণনা বেশি। বাংলা গ্রন্থে গৌড়দেশে বর্ধমান নগরেরে কথা আছে এবং নগরেরে বিবরণ দেওয়া আছে। গুণশেখর রাজার কথা এবং বৌদ্ধধর্মাবলম্বী অভয়চন্দরেরে (প্রধান অমাত্য) কথা উল্লেখ আছে। রাজ্যেরে মধ্যে রাজার মনোপুত্র না হওয়া কিছু বিষয় নিয়ে ক্ষোভ প্রকাশ করলেন। রাজার বৌদ্ধধর্ম গ্রহণ এবং শবৈ-বৈষ্ণব ধর্ম বর্জন এই বিষয়টি লক্ষণীয়। হিন্দি গ্রন্থে শুধুমাত্র শবিপূজা বর্জনেরে কথা বলা হয়েছে। হিন্দি গ্রন্থে কিছু বদল লক্ষণীয়। রাজার নাম ধর্মরাজ, গৌড়দেশেরে বসিত্ত উল্লেখ নাই। শুধুমাত্র বর্ধমান নগরেরে কথা আছে। আমরা লক্ষ্য করব বাংলা উপাখ্যানেরে আকার বা বসিত্তি হিন্দি উপাখ্যানেরে তুলনায় বেশি।

হিন্দি উপাখ্যানে পন্ডতি জগতরাম নামক এক পূজারী ব্রাহ্মণেরে উল্লেখ আছে। বদিয়াসাগর মহাশয় নামটিকে পদবীমহ আলাদা করলেন। জগৎ রাম নামক পূজারীর উল্লেখ পাই। লক্ষণীয় রাম পদবীটি তপশিলী জাতভিক্ত। বদিয়াসাগর মহাশয় অস্পৃশ্যতা ও দারদির্য দূরকরণেরেও পথকি ছিলিনে তাই ব্রাহ্মণ অথচ নামটি রূপকার্থে ব্যবহার করলেন। এখানে তাঁর শব্দ ব্যবহারেরে অভিনিবত্ব। উপাখ্যানেরে শেষে বতোল ও বক্রিম কথোপকথনেরে মাধ্যমে যে সিদ্ধান্ত উপনীত হয়েছে সেখানেও বদিয়াসাগর মহাশয় হুবহু অনুবাদ না করে নতুনত্ব দেখিয়েছেন। বতোলেরে প্রশ্নে বক্রিম বলেন কে বা কোন রমণী সর্ববৃহৎ সুকুমার প্রবৃত্তমিনা ? এর উত্তর হিন্দি গ্রন্থেরে সঙ্গে বাংলা গ্রন্থেরে তফাৎ লক্ষণীয়। “রাজা কহলিনে, সুধাকরকরস্পর্শে যে রাজমহষীরে দহে দগ্ধ হইল, আমার মতে সেই সর্বাপেক্ষা সুকুমারী”<sup>২৬</sup> অর্থাৎ এই

মানসিকতা বদ্বিযাসাগর মহাশয় তৎকালীন সমাজচিত্র থেকে তথা তৎকালীন নারী হৃদয়রে না বলা কথাকে অনুভব করেই রাজমুখে এই সদিধান্ত বসয়িচ্ছেনো।

‘কসি বাত কা দুখ অধকি?’ হিন্দি উপাখ্যানে এই কাহনিটি তনিটি বচিছনি গল্পরে মাধ্যমে বর্ণনা করা হয়ছেো। বাংলায় মূলত দুটি গল্পরে মাধ্যমেই বদ্বিযাসাগর মহাশয় একাদশতম উপাখ্যানটি রচনা করেছেনো। শুরুতেই রাজ্য ও রাজার নাম দুই দুই ভাষার উপাখ্যানে পরবির্ততি। হিন্দি উপাখ্যানে অবধ রাজ্য ও শ্রীবল্লভ নামক রাজার উল্লেখে পাই। বাংলায় পুণ্যপুর রাজ্য ও বল্লভ নামক রাজার উল্লেখে পাই। রাজার বরৌগ্যদশা বা বল্লাসতিহীন মনোভাব বদ্বিযাসাগর মহাশয় একটি বাক্যে প্রকাশ করেছেনো। “যে ব্যক্তি রাজ্যেশ্বর হইয়া অভলিষানুরূপ বিষয়ভোগ না করে তাহার রাজ্য কলশেপ্রপঞ্চ মাত্রা”<sup>২৭</sup>

বদ্বিযাসাগর মহাশয় বলছেনো সুখ দুঃখরে চক্রাকার পরবির্তনের কথা। যা আমাদরে চাগক্য শ্লোককে মনে করয়িে দেয় –

“দুঃখমাপততিং সবেযং সুখমাপততিযং তথা।  
চক্রবৎ পরবির্তন্তে দুঃখানি চ সুখানি।”<sup>২৮</sup>

হিন্দি উপাখ্যান থেকে বদ্বিযাসাগর মহাশয় শুধুমাত্র মূল কাহনিটি নয়িচ্ছেনো। বাকি বর্ণনা তৎকালীন সময়োপযোগী তথা পাঠকরে কথা মাথায় রেখে তনি কাহনিরি বর্ণনা করেছেনো। রাজা বল্লভ ও তাঁর অমাত্য সত্যপ্রকাশরে কথাপকথনে রাজা বয়ৈয়কি সম্পত্তি, বাহ্যকি সুখ থেকে নিষ্কর্তি পতে চেয়েছেনো। কনিতু হিন্দি উপাখ্যানে এই ত্যাগরে কথা বলা হয়নি। রাজার স্বচেছায় সত্যপ্রকাশকে রাজ্যভার অর্পণ করার কথা বলা হয়ছেো। সত্যপ্রকাশরে অলৌকিক ঘটনা বর্ণনা এবং সেই বর্ণনা শুনরে রাজা বল্লভরে মনে রত্নমঞ্জরী নামে গন্ধর্বরাজরে কন্যাকে মহধর্মিনী হিসেবে লাভ করার ইচ্ছা জন্মায়। এই দুটি কাহনি ভিনি অনুচ্ছদে বদ্বিযাসাগর মহাশয় বর্ণনা করেছেনো।

উপাখ্যানরে উপসংহারে দুইভাষী গ্রন্থরে মধ্যে পার্থক্য লক্ষণীয়। অনূদতি উপাখ্যানে বদ্বিযাসাগর মহাশয় প্রজার একাকীর ও অনাথ হবার বিষয়টিকে প্রাধান্য দয়িচ্ছেনো। হিন্দি উপাখ্যানে শুধু মনরে বদেনা বা বাহ্যকি মনোকষ্টকেই প্রাধান্য দেওয়া হয়ছেো। বদ্বিযাসাগর মহাশয়রে অভনিবত্ব এই মৌলিক ভাবনা চনিতায় যা মূল অনুবাদ থেকে অনেকেখানি আলাদা।

‘পাপী কৌন’ হিন্দি উপাখ্যানটি একটি গল্প অবলম্বনে রচিত। কনিতু বাংলা দ্বাদশ উপাখ্যানটি দুটি ভিনি গল্প অবলম্বনে রচিত। যদিও হিন্দি উপাখ্যানটির

ক্সুদ্র অংশ বদ্বাসাগর মহাশয় হয়তো তৎকালীন পাঠকরে প্রয়োজনে বা তৎকালীন সামাজিক অবস্থার প্রয়োজনে ববিত করছেন। স্থান নামটি, ব্রাহ্মণরে নাম ও কছির চরিত্র নাম বাংলা উপাখ্যানানে পরবির্ততি হয়েছে। হিন্দি গল্পে দেবীস্বামী ব্রাহ্মণরে কথা, দেবেগড় নামক নগর, দেবীস্বামীর পুত্র হরস্বামী এবং হরস্বামীর স্ত্রী নাম না করা নবযুবতীর কথা বলা আছে। কনিত্তু বদ্বাসাগর মহাশয় স্থান নাম ও সব চরিত্ররে নামও পরবির্তন করছেন। চুড়াপুর নামক নগর, দেবস্বামী নামক ব্রাহ্মণ উল্লেখ্য এখানে তাঁর পুত্ররে কথা বলা নহে। এখানে দেবস্বামীর বয়ি এবং তার স্ত্রী লাবণ্যবতীর নাম অভনিব।

হিন্দি উপাখ্যানানে গল্পরে ববিরণ এবং বসিত্তি একটমিত্তি গল্পকে কেন্দ্র করহে রচিত। কনিত্তু বাংলা উপাখ্যানটি মূলত দুটি কাহনি অবলম্বনে রচিত। প্রথমটি দেবস্বামী ও লাবণ্যবতীর প্রমে ও দ্বিতীয়টি অজ্ঞানতাবশত বধিপান করয়ি ব্রহ্মহত্যা। ব্রাহ্মণ স্বামীর কয়কেটি বধিষণ বদ্বাসাগর মহাশয় ব্যবহার করছেন। দেবস্বামী ব্রাহ্মণরে ‘রূপে রতপিত্তি, বদ্বিয় বৃহস্পতি, সম্পদে ধনপতি ছিলনো’<sup>২৯</sup>

উপাখ্যানরে শেষে বতোল ও বকিরমরে কথাপকখনে দুই গ্রন্থরে মধ্যে কছির পার্থক্য লক্ষ করা যায়। হিন্দি উপাখ্যানানে ‘পাপী কনন?’ এই প্রশ্নরে উত্তরে বকিরমাদিত্তি ব্যাখ্যা না দয়ি গৃহস্থ ব্রাহ্মণকে পাপী বলছেন। কনিত্তু বাংলা উপাখ্যানানে ‘পাপী’ শব্দরে বদলে দেবী শব্দ ব্যবহার করা হয়েছে। বতোলরে প্রশ্নে বকিরম য়ে উত্তর দয়িছে তা ব্যাখ্যাসহ। গৃহস্থ ব্রাহ্মণ য়ে আনুমানিক ভাবনায় ব্রাহ্মণীকে গৃহছাড়া করলে তা বলে বকিরম দেবী প্রমাণ করছে। বাংলা উপাখ্যানানে বদ্বাসাগর মহাশয় তৎকালীন পাঠকরে কথা ভবে উপাখ্যানরে শেষাংশে ব্যাখ্যা সহ বকিরম বতোলরে প্রশ্নরে উত্তর দয়িছে।

‘পহলে হঁসা, ফরি রোয়া কডি?’ ‘বতোল পচুসী’র ত্রয়োদশ উপাখ্যানরে সঙ্গে বদ্বাসাগর মহাশয়রে ‘বতোল পঞ্চবংশিত্তি’র অনুবাদগত কছির ফারাক লক্ষণীয়। প্রারম্ভিক পরবে নামগত ফারাক দেখে হিন্দি গল্প রাজার নাম নরবীর, কনিত্তু বাংলায় বদ্বাসাগর মহাশয় করছেন রণধীর। যদি চন্দ্রহৃদয় নগররে নাম একই আছে। নগরে চৌর্যবৃত্তির রাড়বাড়ন্তরে কথা বলা আছে। এর ফলে প্রজাদরে দুঃখ কষ্ট এবং রাজার তদারকরি দ্বারা সমাধান সূত্র এই দুধরনরে গল্প দুটি ভাষায় আমরা পাই।

দুইভাষী দুটি গ্রন্থরে মধ্যে মলি ও অমলি দুইই লক্ষণীয়। মূল হিন্দি গ্রন্থ ‘বতোল পচুসী’র পঁচশিটি শরিনো নামসহ উপাখ্যান বদ্বাসাগর বতোল পঞ্চবংশিত্তি গ্রন্থে সংখ্যামূলক পঁচশিটি উপাখ্যানানে বদ্বাসাগর কননোটি উপাখ্যানই হুবহু

আক্ৰ্ষৰকি অনুবাদ কৰেনেৰাি য়ে উপাখ্যানে যতটা পৰমািণ বদিয়াসাগৰ মহাশয় তাঁৰ গ্ৰন্থে পৰবিৰ্তন কৰেেে বা অনুবাদ কৰেেে তাৰ পুঙ্থানুপুঙ্থভাবে বশ্লিষণ কৰাৰ চেষ্টা কৰলাম। সমস্তু সহৃদয় রসকি পাঠক মাত্ৰই বুঝবনে য়ে বদিয়াসাগৰে 'বতোল পঞ্চবংশিতা' গ্ৰন্থটি অনুদতি গ্ৰন্থ হলোে তা মৌলকি গ্ৰন্থ হসিবে পড়া তা বলাই বাহুল্য।

### উ□স পৰচিয় ও অনুযঙ্গ

১. সম্পাদক- গোপাল হালদাৰ ও সত্যনেদ্রনাথ সনে, বদিয়াসাগৰ রচনা সংগ্ৰহ, পশ্চিমবঙ্গ নৰিক্ষৰতা দূৰীকরণ সমতি, কলকাতা, ১৩৭৯, পৃ. ৪
২. তদবে, পৃ. ৫
৩. অনুবাদ – প্ৰদ্যুত ওঝা, সংস্কৃত পুস্তক ভান্ডাৰ, চাণক্য শ্লোক সূত্ৰ, কলকাতা, ১৯৮৯, পৃ. ১৮
৪. সম্পাদক- গোপাল হালদাৰ ও সত্যনেদ্রনাথ সনে, বদিয়াসাগৰ রচনা সংগ্ৰহ, পশ্চিমবঙ্গ নৰিক্ষৰতা দূৰীকরণ সমতি, কলকাতা, ১৩৭৯, পৃ. ১২
৫. গৰীশ মোহন, বতোল পচ্চীসী, মহামায়া পাবলকিশেন, জলন্ধৰ, প্ৰথম প্ৰকাশ, ১৯৯৭, পৃ. ১৯
৬. তদবে, পৃ. ২৩
৭. প্ৰমথনাথ বশী, মতিৰ ও ঘোষ, বদিয়াসাগৰ রচনা সম্ভাৰ, কলকাতা, ১৩৬৮, পৃ. ২০
৮. গৰীশ মোহন, বতোল পচ্চীসী, মহামায়া পাবলকিশেন, জলন্ধৰ, প্ৰথম প্ৰকাশ, ১৯৯৭, পৃ. ২৪
৯. তদবে, পৃ. ২৮
১০. তদবে, পৃ. ২৯
১১. তদবে, পৃ. ৩০



১২. তদবে, পৃ. ৩৪
১৩. সম্পাদক- গোপাল হালদার ও সত্যেন্দ্রনাথ সেনে, বদ্বিযাসাগর রচনা সংগ্রহ, পশ্চিমবঙ্গ নরিক্ষরতা দূরীকরণ সমিতি, কলকাতা, ১৩৭৯, পৃ. ২৪
১৪. তদবে, পৃ. ২৫
১৫. তদবে, পৃ. ২৫
১৬. তদবে, পৃ. ৩২
১৭. তদবে, পৃ. ৩৩
১৮. অনুবাদ – প্রদ্যুত ওঝা, চাণক্য শ্লোক সূত্র, সংস্কৃত পুস্তক ভান্ডার, কলকাতা, ১৯৮৯, পৃ. ২৪
১৯. তদবে, পৃ. ২৬
২০. প্রমথনাথ বশী, মতির ও ঘোষ, বদ্বিযাসাগর রচনা সম্ভার, কলকাতা, ১৩৬৪, পৃ. ২৮
২১. অনুবাদ – প্রদ্যুত ওঝা, চাণক্য শ্লোক সূত্র, সংস্কৃত পুস্তক ভান্ডার, কলকাতা, ১৯৮৯, পৃ. ৩৮
২২. তদবে, পৃ. ৪০
২৩. সম্পাদক- গোপাল হালদার ও সত্যেন্দ্রনাথ সেনে, বদ্বিযাসাগর রচনা সংগ্রহ, পশ্চিমবঙ্গ নরিক্ষরতা দূরীকরণ সমিতি, কলকাতা, ১৩৭৯, পৃ. ৩৯
২৪. তদবে, পৃ. ৪০
২৫. অনুবাদ – প্রদ্যুত ওঝা, চাণক্য শ্লোক সূত্র, সংস্কৃত পুস্তক ভান্ডার, কলকাতা, ১৯৮৯, পৃ. ৪৪
২৬. প্রমথনাথ বশী, মতির ও ঘোষ, বদ্বিযাসাগর রচনা সম্ভার, কলকাতা, ১৩৬৪, পৃ. ৩৮
২৭. তদবে, পৃ. ৪২
২৮. অনুবাদ – প্রদ্যুত ওঝা, চাণক্য শ্লোক সূত্র, সংস্কৃত পুস্তক ভান্ডার, কলকাতা, ১৯৮৯, পৃ. ৬০
২৯. সম্পাদক- গোপাল হালদার ও সত্যেন্দ্রনাথ সেনে, বদ্বিযাসাগর রচনা সংগ্রহ, পশ্চিমবঙ্গ নরিক্ষরতা দূরীকরণ সমিতি, কলকাতা, ১৩৭৯, পৃ. ৪৭

## অনসত্ত্বিবশীল বস্তুসংক্রান্ত সমস্যার সমাধান Meinong-এর বস্তুতত্ত্ব এবং তার পূর্ণমূল্যায়ন

Rinki Adhikary  
Ph. D. Scholar in Philosophy  
Rabindrabharati University  
[rinki.ulb89@gmail.com](mailto:rinki.ulb89@gmail.com)

**সারাংশ**-আমরা আমাদের সাধারণ ভাষায় অনসত্ত্বিবশীল বস্তু নিয়ে প্রায়শই অর্থপূর্ণভাবে কথা বলি এবং এই কথা বলার প্রকৃতিতেই কিছু সমস্যা দেখা দেয়। অনসত্ত্বিবশীল বস্তু যার দশে-কালরে (বাস্তব) জগতে কোন অসত্ত্বি নেই, তা যখন শার্লক হোমস্ বা ব্যোমকশে বক্সরি মতো কাল্পনিক বস্তু হতে পারে, সেইরকম ম□স্বকন্যা, সোনার পাহাড় প্রভৃতি অলীক বস্তু বা সংখ্যা, শ্রগীর মতো বম্বিত বস্তু, এমনকি গোলাকার বর্গকৃষ্ণের মতো স্ববিরোধী, অসম্ভব বস্তুও হতে পারে। এইসব অনসত্ত্বিবশীল বস্তু নিয়ে আমরা যখন কোন অর্থপূর্ণ উক্তি করি যখন, "শার্লক হোমস্ ছিলেন একজন গোয়েন্দা" বা "পগোসাস নেই" ইত্যাদি তখন এসব অর্থপূর্ণ উক্তিগুলির সত্যতা বা মথিযাতবের ব্যাখ্যা দেওয়া যাবে কীভাবে? কারণ, যহেতু অর্থপূর্ণ বিবৃতি মাত্রই সত্য বা মথিযা হয় এবং যার সম্বন্ধে কিছু বলা হয় তা কোনভাবে স□ না হলে তার সম্বন্ধে সত্য বা মথিযা কোন অর্থপূর্ণ উক্তি করা যায় না, তাই এখানে প্রশ্ন হয় এসব অনসত্ত্বিবশীল বস্তুসংক্রান্ত উক্তিগুলির অন্তর্গত বস্তুগুলি (যেমন, ব্যোমকশে বক্সরি, ম□স্ব কন্যা, সোনার পাহাড় ইত্যাদি) স□ না অস□? কেউ যদি বলেন, এগুলি স□ তাহলে প্রশ্ন হবে এদের সত্তাগত অবস্থান কী হবে বা এদের সত্তাগত অবস্থানকে জানাই-বা যাবে কীভাবে? আর যদি কেউ এদের অস□ বলেন, তাহলে তেঁা এদের সম্বন্ধে কোন অর্থপূর্ণ উক্তি করা যাবে না। এই প্রশ্নে দার্শনিক Quine-র ব্যখ্যাত একটি উক্তির উল্লেখ করা যায়-"Nonbeing must in some sense be, otherwise what is it that there is not?"<sup>১</sup>

অনসত্ত্বিবশীল বস্তু সম্পর্কে এইসব বিভিন্ন সমস্যার উদ্ভব হয় যখনই এদের সম্বন্ধে আমরা কোন অর্থপূর্ণ উক্তি করি, এবং এই সমস্যার নানারূপ সমাধানও পাওয়া যায়। আমরা এখানে কেবল Meinong-র সমাধান নিয়ে আলোচনা করবো। কারণ, Meinong-র বস্তুসংক্রান্ত মতবাদ যা এক সময় Russell (B. Russell, 1872-1970) ও Quine (W.V.O. Quine, 1908-2000)-এর দ্বারা সমালোচিত হয়েছিলেঁা বিংশ শতাব্দির শেষে দিকে নব্য-মাইনঙপন্থীদের (Neo-Meinongianism) আবির্ভাবের ফলে এই সমালোচনা নিয়ে ভাবার অবকাশ আছে। আর সেই কারণই এই প্রবন্ধে অনসত্ত্বিবশীল বস্তুসংক্রান্ত উক্তির অর্থপূর্ণতা ব্যাখ্যা করতে গিয়ে Meinong-র মতের পূর্ণমূল্যায়ন ও তাঁর পূর্বপক্ষরূপে Russell-র মত সংক্ষেপে আলোচনা করা হবে।

এই প্রবন্ধের প্রথম অনুচ্ছেদে (section) অনসত্ত্বিবশীল বস্তুদের নিয়ে যসেব সমস্যা হয় তার সম্বন্ধে আলোচনা করা হবে। দ্বিতীয় অনুচ্ছেদে আমরা আলোচনা করবোঁা অনসত্ত্বিবশীল বস্তুর সমস্যার সমাধান সংক্রান্ত Meinong-র বস্তুতত্ত্ব নিয়ে। প্রবন্ধের তৃতীয় অনুচ্ছেদে Meinong-র বস্তুসংক্রান্ত মতবাদে বর্নিত Russell ও Quine-র আপত্তি নিয়ে আলোচনা করবোঁা। চতুর্থ অনুচ্ছেদে Meinong-র সপক্ষে নব্য-মাইনঙ পন্থীদের (Neo-Meinongianism) যুক্তি নিয়ে আলোচনা করবোঁা, এবং এই আলোচনার প্রকৃতিতে নিজ মত উপস্থাপন করবোঁা।

### ১. অনসত্ত্বিবশীল বস্তুসংক্রান্ত বিভিন্ন সমস্যা

আমরা আমাদের ভাষাগত বিবেচনায় বিভিন্ন প্রকার অনসত্ত্বিবশীল বস্তু বিশেষত: কাল্পনিক বস্তু নিয়ে অন্ততপক্ষে চার ধরনের উক্তি করে থাকি, যথা-১. কাহিনীর চরিত্রের মুখে অপর কোন চরিত্রের সম্পর্কে উক্তি (Fictional discourse); যখন, সত্যজগৎ রায়ের গল্পে ফেলুদার মুখে ব্যোমকশে বক্সরি নিয়ে কোন উক্তি। ২. অসত্ত্বি-নিষেধক বাক্য (statement of non-existence); যখন, "শার্লক হোমস্ বাস্তবিক কোন অসত্ত্বিবশীল ব্যক্তি নন"। ৩. কোন কাল্পনিক কাহিনীর পাঠকের দ্বারা কাহিনীগত বা অভ্যন্তরীণ উক্তি (Internal discourse); যখন, "হোমস্ অধিকিংশ রহস্যের সমাধান তাঁর কলেজে জীবনে করছেন; অথবা একাধিক কাহিনীর মধ্যে তুলনাভিত্তিক (Cross fictional) উক্তি; যখন, "ব্যোমকশে বক্সরি প্রদোষ মতিরের তুলনায় বেশী চিন্তাশীল"। ৪. কাহিনীর বাইরে কাল্পনিক চরিত্রের সম্পর্কে উক্তি (External discourse); যখন, পাঠক ও সমালোচকের কাহিনী সম্পর্কে মূল্যায়ন করতে গিয়ে কাহিনীর চরিত্রগুলিকে কাল্পনিক ধরে নিয়ে যসেব উক্তি করনে, সেইগুলি এই ধরণের উক্তি। এর উদাহরণ হলোঁা, "শার্লক হোমস্ চরিত্রটি আরথার কোনান ডেয়েলে গঠন করছিলেন তাঁর পরিচিতি একজন ডাক্তারের আদলে"। এক্ষত্রে তৃতীয় উক্তির সাথে চতুর্থ উক্তির পার্থক্য হলোঁা, তৃতীয় উক্তির সত্যতা পূরোঁপূরি কাহিনী নিরূপণ, কিন্তু চতুর্থ উক্তির সত্যতা নিরূপণ করে ডেয়েলে সত্যই বাস্তবিক কোন ডাক্তারের আদলে শার্লক হোমস্-কে গঠন করনে, তার উপর। তৃতীয় উক্তির ও প্রথম উক্তির সত্যতা কাহিনী সাপেক্ষ, অর্থাৎ, এরা কাহিনীর প্রকৃতিতেই স□।

আমরা এইসব কাল্পনিক (অনসত্ত্বিশীল) চরিত্র সম্পর্কে যখনই কিছু বলতে চাই, উক্ত চার ধরনের উক্তির কোন না কোন প্রকার উক্তি করি এবং তখনই জটিলতার সৃষ্টি হয়। প্রথমত:, এই ধরনের উক্তিগুলির অর্থপূর্ণতা, তদুপর সত্যতাকে ব্যাখ্যা করার জন্য কোনভাবে এইসব কাল্পনিক বস্তু কোন প্রকার সত্তা স্বীকার করতে হবে। কনি, সেই প্রশ্ন ওঠে, অর্থাৎ, যখন কাল্পনিক বা অলীক বস্তুসংক্রান্ত উক্তি, বিশেষত: অসত্ত্বি-নষিধক উক্তিকে অর্থপূর্ণ বলি তখন সেইসব উক্তির সত্যতাকে বা মথ্যাতবকে ব্যাখ্যা করার জন্য ওইসব কাল্পনিক বা অলীক বস্তু কোনরূপ সত্তা স্বীকার করা হবে কনি-সহে সমস্যা হয়, যং সমস্যা "Plato's beard" বা "অনসত্ত্বিরে ধাঁধা" নামপেরচিতি। দ্বিতীয়ত, কাল্পনিক চরিত্র সম্পর্কে বিভিন্ন প্রকার উক্তিগুলির মধ্যে পারস্পরিক বিরোধ দেখা দেয়, "হোমস্ বাস্তবিক কোন অসত্ত্বিশীল ব্যক্তিনি" – উক্তিটি সত্য হল: "হোমস্ অধিকাংশ রহস্যের সমাধান তাঁর কলজে জীবনে করছেন" – উক্তিটি কীভাবে সত্য হবে? এর পরবর্তী অনুচ্ছদে তাই আমরা Meinong-র বস্তু সম্পর্কে মত আলোচনা করবো এবং দেখবো তনিকীভাবে অনসত্ত্বিশীল বস্তুসংক্রান্ত সমস্যার সমাধান করছেন।

## ২. Meinong-র বস্তুতত্ত্ব এবং অনসত্ত্বিশীল বস্তু সম্পর্কে সংক্রান্ত Meinong-র সমাধান

Meinong-র বস্তুতত্ত্ব কাল্পনিক ও অলীক বস্তু সম্পর্কে সংক্রান্ত একটি সমাধান মলে। Meinong তাঁর "Theory of Objects" বা বস্তুতত্ত্ব বিষয়ক প্রবন্ধে (Meinong, A.C., 1960 & Findlay, J.N., 1963) 'বস্তু' সম্পর্কে তাঁর নজিস্ব মত আলোচনা করছেন।

'বস্তু' সম্পর্কে প্রচলিত মতে বস্তু হলো তাই যার অসত্ত্বি আছে। Meinong এই প্রচলিত মত থেকে ভিন্ন মত পোষন করে বলেন যং, 'বস্তু' বলতে বোঝায় চিন্তা বা অন্য কোন চতেন করিয়া যার প্রতিধাবতি হয়। এই অর্থে বস্তু অসত্ত্বিশীল নাও হতে পারে। Meinong আমাদের সাধারণ ভাষার কথা পকখনরে বস্তু এবং দশে-কালরে জগতে স্থতি বস্তুকে আলাদা করছেন, কারণ, অতীরে বিষয় বা ভাবী বিষয় বা কাল্পনিক বিষয় নিয়ে আমরা কথা বলি, যার কোন না কোন সত্তা থাকে বলহে আমরা এদের নিয়ে কথা বলতে পারি। Meinong তাই এদের কালাতীত সত্তা (বদ্যমানতা) স্বীকার করছেন। অর্থাৎ, তনি অসত্ত্বি ও বদ্যমানরে (subsistence) মধ্যে পার্থক্য করে বলেন, কোন কিছু সময়সাপেক্ষভাবে বাস্তবে অসত্ত্বিশীল না হলোও সময়নিপেক্ষভাবে তার বদ্যমানতা থাকতে পারে।

Meinong-র বস্তুতত্ত্বেরে ভিত্তি হলো মানস দশা সম্পর্কে Brentano-র (Franz Brentano, 1838-1917) অভিমুখিতাতত্ত্ব (Theory of intentionality)। Meinong, তাঁর বস্তুতত্ত্ব Twardowski (Kazimierz Twardowski, 1866-1938), Husserl (Edmund Husserl, 1859-1938), এবং তাঁর নজিরে দ্বারা সমর্থিত চতেনা বা জ্ঞানের বিষয় (Content) এবং বস্তু (Object)-এর মধ্যে পার্থক্যকে প্রয়োগ করছেন।

Brentano-র একটি গুরুত্বপূর্ণ লক্ষ্য ছিলো বজ্ঞানসম্মত মনোবদ্যার ভিত্তি স্থাপন করা, যাকে তনি "the science of mental phenomena" বলেছেন। Brentano মানস দশার (psychical phenomena) এমন কিছু বশেষ্ট্রসূচক ধর্মরে উল্লেখ করেছেন যা কনি মানস দশাকে অন্যান্য দশা যমেন, ভৌত দশা (physical phenomena) থেকে আলাদা করবে। তনি মানস দশাকে ভৌত দশা থেকে পৃথক করার জন্য ছয়টি সূচকে কথা বলেছেন, যার মধ্যে উল্লেখযোগ্য হলো: (১) কবেল মানস দশাগুলি অন্তরদর্শনের বিষয় হয়; (২) মানস দশাগুলি এক একটা একক সত্তা (unity) রূপে আসে; এবং মানস দশার সর্বাপেক্ষা গুরুত্বপূর্ণ বশেষ্ট্রসূচকে মধ্যযুগীয় পরভাষায় মানস দশার অভিমুখিতা ধর্ম (intentional property) বলা হয়। চতেনার যং ধর্ম স্ব-অতির্তী (self-transcendent), নজিরে অতিরিক্ত কোন বিষয়ের প্রতিধাবতি হয়, তাকে চতেনার অভিমুখিতা ধর্ম বলা হয়। মানস দশার এই অভিমুখিতা ধর্ম থেকেই Brentano, Twardowski, Husserl, Meinong তাঁদের রচনায় চতেনা বা জ্ঞানের বিষয় (Inhalt/Content) এবং বস্তু (Gegenstand/Object) মধ্যে পার্থক্য করেছেন। এদের মতে চতেনার বিষয় বা উপাদান (Content) হলো এমন কিছু যা সর্বদা চতেনায় থাকে। পোলান্ডরে যুক্তবিদ Twardowski-র মতে, বাস্তব বস্তু যহেতু সরাসরি আমাদের মনে আসতে পারে না সহেতু যার মাধ্যমে আমরা বস্তু সম্পর্কে ভাবতে পারি, তাই হলো চতেনার 'উপাদান' বা 'Content'। যখন আমরা কোন কিছু নিয়ে ভাবি বা চিন্তা করি, তখন সটে, অর্থাৎ ওই মানস দশার বা করিয়ার বস্তুটি বাস্তবে অসত্ত্বিশীল নাও হতে পারে, যমেন, যখন আমরা সোনার পাহাড়রে মতো বস্তুকে নিয়ে ভাবি, কম্বা রবীন্দ্রনাথ ঠাকুররে 'নয়টনীড়' গল্পরে চারুলতাকে নিয়ে ভাবি তখন সেই বস্তুটি আমাদের চতেনায় উপস্থাপতি হয়, কনিত্ত, আমাদের ভাবনার বস্তু (Object) সোনার পাহাড় কম্বা চারুলতা বাস্তবে কোথাও নহে, যদিও তা চতেনার 'উপাদান' বা 'Content'-এর মাধ্যমে আমাদের চতেনায় আছে। চতেনার উপাদান সর্বদাই কোন না কোন ঘটমান চতেন দশা বা করিয়া সাপেক্ষ ফলে, তা শূন্য যং মানসিক তা-ই নয়, তা স-ও বটেকনিত্ত, চতেনার বস্তু বাস্তবে অসত্ত্বিশীল হতেও পারে। আবার নাও হতে পারে। এই প্রসঙ্গে Meinong-এর বক্তব্য উদ্ধৃত করা যতে পারে -

"Whether I have an idea of a church-steeple or a mountain-peak, a feeling or a desire, a relation of diversity or causality or any other thing whatsoever, I am in every case having an idea. In spite, therefore, of the unlimited variety of their objects, all these mental process manifest a common feature, which makes them ideas, and this is

the act of having an idea. On the other hand ideas, in so far as they are ideas of distinct objects, cannot be altogether alike; however we may conceive the relation of the idea of its object, diversity of object must in some way go back to diversity of idea. That element, therefore, in which ideas of distinct object differ, in spite of their agreement in the fact, may be properly called the content of the idea. This exists, is therefore real and present, and is of course mental, even when the object presented by its aid does not exist, is not present, and is not mental".<sup>৩</sup>

Meinong-র মতে তাই, আমার বা অন্যের ভাবনার বা চতেনার উপাদানগুণি ভিন্ন হতে পারে কিন্তু, যার দিকে আমার এবং অন্যের চতেনা ধাবতি হয় সেই চতেনার বস্তু একই থাকে। চতেনার বিষয়ের (content) বিপরীতে যে চতেনা-অতিবিত্তী বস্তু (object) আছে তাকেই Meinong, তাঁর বস্তুতত্ত্বে 'বস্তু' বলছেন এবং Meinong এই ধরনের বাস্তব অস্তিত্বহীন, কনিতু স□ বস্তুকে 'আদর্শ বস্তু' (ideal object) বলেছেন। 'ideal object' ছাড়াও কাল্পনিক বস্তু যামেন, সোনার পাহাড়, পক্ষীরাজ ঘোড়া ইত্যাদিরও সত্তা আছে। শূণ্য গোলোকের চতুরভুজ-এর মতো অসম্ভব বস্তুর কোন সত্তা স্বীকার করা হয় না। Meinong তাঁর বস্তুতত্ত্বে বস্তুকে দুই ভাগে বিভক্ত করেছেন, যথা সম্ভবপর বস্তু (possible object) এবং অসম্ভবপর বস্তু (impossible object)। সম্ভবপর বস্তুর দৃষ্টান্ত হলো, টেবিল, চায়ের বই ইত্যাদি যা অস্তিত্বশীল (বাস্তব), আবার সমতা, সাদৃশ্য ইত্যাদি যা বাস্তব অস্তিত্বশীল না হলেও স□ বা বিদ্যমান। অপরপক্ষে অসম্ভব বস্তুর দৃষ্টান্ত হলো, গোলোকের বর্গাকৃতির। Meinong সম্ভবপর বস্তুকে আবার দুই ভাগে বিভক্ত করেছেন যথা, সম্ভবপর মূর্ত (possible concrete) এবং সম্ভবপর অ-মূর্ত (possible non-concrete)। যা দশে-কালরে বাস্তব জগতে অস্তিত্বশীল, ফলত: সম্ভব; তা হলো সম্ভবপর মূর্ত বস্তু, যামেন, টেবিল, চায়ের প্রভৃতি। যে বস্তু দশে-কালরে বাস্তব জগতে অস্তিত্বশীল হতে পারতো, তা হলো সম্ভবপর অ-মূর্ত বস্তু, যামেন, সোনার পাহাড়, ম□ স্যকন্যা ইত্যাদি। 'ideal object' গুলিও সম্ভবপর অমূর্ত বা বলা যায় বন্মিরূত বস্তু। Meinong-এর অনন্যতা এখানই যে তিনি সম্ভবপর অথচ অমূর্ত বস্তু স্বীকার করেছেন এবং এদের অস্তিত্বশীল না বলা বিদ্যমান বলেছেন। এমনকি তিনি অসম্ভব বস্তুকেও তাঁর বস্তুতত্ত্বে স্থান দিয়েছেন। তিনি বলেন এইসব অসম্ভব বস্তু না অস্তিত্বশীল, না বিদ্যমান; তবুও Meinong এদের 'বস্তু'-ত্ব স্বীকার করেছেন। Meinong-এর 'বস্তু'-র সঙগে অস্তিত্বের এমনকি ব্যাপক অর্থ সত্তারও কোন অনবির্ঘ্য সম্পর্ক নেই। বস্তুর 'বস্তু'-ত্ব কে ব্যাখ্যা করার জন্য Meinong তাঁর বস্তুতত্ত্বে দুটি মূল নীতির প্রবর্তন করেন, যথা, নরিপক্ষেতার নীতি (Principle of Indifference) এবং স্বাতন্ত্র্যের নীতি (Principle of Independence)।

Meinong প্রদত্ত নরিপক্ষেতার নীতি অনুসারে সত্তা (being) বা অসত্তা (non-being) বস্তুর স্বরূপে অন্তর্গত নয়। এর মান এই নয় যে, এমন বস্তু থাকতে পারে যা স□-ও নয়, আবার অস□-ও নয়, এও বলা যাচ্ছে না যে বস্তু স□ বা অস□, এই প্রশ্নটা যেকোন বস্তুর জন্যই আকস্মিক ব্যাপার, কারণ, 'গোলোকের বর্গাকৃতির'—র মতো অসম্ভব বস্তুর স্বরূপই তার অসত্তাকে নিশ্চিত করে। সাদৃশ্য বা বচৈত্রির মতো 'ideal' বস্তু নিজের বাস্তব অনসত্তিবকে প্রতিপাদন করে। অসত্তা বা অনসত্তি এইসব বস্তুর স্বরূপে অন্তর্গত নয়। নরিপক্ষেতার নীতির বক্তব্য হলো এই যে, 'বস্তু' প্রকৃতিগতভাবে সত্তার প্রশ্নের প্রতি নরিপক্ষে। Findlay-র (Findlay, J.N., 1963) ভাষায় বলা যায় যে বস্তুর থাকা বা না থাকা, বস্তুর স্বরূপকে কোনভাবে প্রভাবিত করেনা।

Meinong-র স্বাতন্ত্র্যের নীতি অনুযায়ী, বস্তুর সত্তা এবং বস্তুর চরিত্র বা ধর্ম স্বাতন্ত্র্য। বস্তুর চরিত্রকে বা ধর্মকে (So-sein) তিনি বস্তুর সত্তা (Sein) থেকে পৃথক করেছেন। Meinong-র মতে প্রত্যেক বস্তুর কোন না কোন চরিত্র থাকবে, কনিতু, তা বাস্তব অস্তিত্বশীল নাও হতে পারে, এমনকি তাদের বিদ্যমানতাও না থাকতে পারে। ম□ স্যকন্যা, সোনার পাহাড় প্রভৃতি বস্তু অস্তিত্বশীল না হলেও তারা বিদ্যমান, কারণ, এদের আমার কোন না কোন ধর্মের দ্বারা বিশ্লেষণ করতে পারি। আবার, গোলোকের বর্গাকৃতির মতো অসম্ভব বস্তু যা না অস্তিত্বশীল আর না বিদ্যমান তাদেরও, তাদের চরিত্র দ্বারা বিশ্লেষণ করা যায়। গোলোকের বর্গাকৃতির নিশ্চিতভাবে গোলোকের এবং বর্গাকার। Meinong-র মতে যাহেতে এদের চরিত্র আছে সেহেতে এইসব অসম্ভব বস্তুকেও 'বস্তু' বলে স্বীকার করতে হবে। Meinong বলেন সব সত্তাবান বস্তুর চরিত্র থাকবে, কনিতু সব বস্তু যাদের কোন না কোন ধর্ম দিয়ে বিশ্লেষণ করা যায় তারা অস্তিত্বশীল হবে, এমন নয়, এমনকি তারা যে বিদ্যমানও হবে এমন নয়। এখানই প্রথাগত ভাবনা থেকে Meinong-র ভাবনা ভিন্ন। প্রথাগতভাবে অস্তিত্ব আছে, বা অন্তত: পক্ষে বিদ্যমান বস্তু প্রসঙগেই ধর্ম বা ধর্মের অভাবের কথা আলোচনা করা হয়।

এখান প্রশ্ন হতে পারে এই দুটি নিয়মের পার্থক্য করা যাবে কীভাবে? যদিও এই দুটি নিয়ম একে অপরের পরিপূরক, তথাপি এদের মধ্যে পার্থক্য আছে। নরিপক্ষেতার নীতি 'বস্তু'-র প্রকৃতি বা গঠন (make up) সম্বন্ধে বলে; কনিতু, স্বাতন্ত্র্যের নীতি তা বলে না। স্বাতন্ত্র্যের নীতি কেবল এটা ঘোষণা করে যে, বস্তুর সত্তা তার চরিত্র থেকে ভিন্ন। নরিপক্ষেতার নীতি এটা ঘোষণা করে যে, বস্তুর সত্তা এবং অসত্তা উভয়ই বস্তুর চরিত্র থেকে নরিপক্ষে। এর মান হলো এই যে বস্তুর সত্তা ও চরিত্রকে পৃথক করা যায় স্বাতন্ত্র্যের নীতির সাহায্যে; আর, নরিপক্ষেতার নীতির সাহায্যে বস্তুর সত্তা ও অসত্তা উভয়কেই বস্তুর চরিত্র থেকে বাদ দেওয়া হয়। 'বস্তু'-র প্রকৃতি বা 'বস্তু'-ত্ব কোনভাবেই সত্তা বা অসত্তার দ্বারা প্রভাবিত হয় না, এটা নরিপক্ষেতার নীতির বক্তব্য। তাই, Meinong প্রদত্ত স্বাতন্ত্র্যের নীতি এবং নরিপক্ষেতার নীতির

মধ্যে স্বাতন্ত্র্য নীতি বশী গুরুত্ব পায়, কারণ, স্বাতন্ত্র্যের নীতির সাহায্যেই সোনার পাহাড়, মণ্ডকসংকল্প ইত্যাদি অলীক বস্তু বা শারলক হোমস, ব্যোমকেশ বকসি ইত্যাদি কাল্পনিক বস্তুর এমনকি, গোলাকার বর্গক্ষেত্রের মতো অসম্ভব বস্তুকেও ব্যাখ্যা দিতে কোন সমস্যা হয় না।

### 3. Meinong-এর বস্তুসংক্রান্ত মতের বিরুদ্ধে Russell ও Quine-এর আপত্তি

Meinong-এর বস্তুতত্ত্বের দ্বারা কাল্পনিক বা অলীক বস্তুসংক্রান্ত সমস্যার একটা সমাধান পাওয়া গেলেও, Meinong-র 'বস্তু' সংক্রান্ত মতবাদ নানাভাবে সমালোচিত হয়েছে, বিশেষত: Russell ও Quine-র দ্বারা।

Russell নিজেকে একসময় (Russell, 1903) Meinong-র মতোই যা কিছু উদ্দেশ্য-বধি আকারে বচনের উদ্দেশ্য হতে পারে, তারই সত্তা স্বীকার করতেন। আবার, তিনি সাক্ষ্য নব্বিশোনা তত্ত্বের সমর্থক হওয়ায় মনে করেন যে, কোন উদ্দেশ্য-বধি আকারে বচনের উদ্দেশ্য স্থানে প্রযুক্ত নামপদ কোন না কোন বস্তুকে নির্দেশ করবে কিন্ত, পরবর্তীকালে "On Denoting" প্রবন্ধে বর্ণনাতত্ত্ব উপস্থাপন করার পর Russell এই মত আর সমর্থন করেন না। তিনি Meinong-র মতের সমালোচনা করে বলেন, Meinong-র বস্তুতত্ত্ব Aristotle-র বিরোধবোধক নিয়মকে (The law of Contradiction) লঙ্ঘন করেছে। পদ তাকেই নির্দেশ করে যা আছে, তাই অভাবত্মক সত্তাবৈষয়িক পদ, যেন, 'পগেসোস নাই', 'গোলাকার বর্গক্ষেত্র নাই' প্রভৃতি বাক্যে যা বলা হচ্ছে তা হলো 'স পগেসোস নাই', 'স গোলাকার বর্গক্ষেত্র নাই' ইত্যাদি। সুতরাং, একটি বস্তু আছে, যা একইসঙ্গে গোলাকার এবং বর্গাকার বিশিষ্ট এবং যা নাই, স্পষ্টতই, এটি স্ববিরোধী কথা।

দার্শনিক Quine, Meinong-এর বিরুদ্ধে সরাসরি আপত্তি করে কিছু না বললেও তিনি, তাঁর প্রবন্ধ "On What There Is" – তে Wyman নামক একজন ব্যক্তির কল্পনা করেন, যিনি Meinong-র মতোই বস্তুকে ব্যাখ্যা দিয়েছেন। Quine, Wyman-কে সমালোচনা করে বলেন, যদি অবাস্তব ও সম্ভবপর বস্তু স্বীকার করা হয় তাহলে একই প্রকারের দুটি সম্ভবপর বস্তুর মধ্যে কীভাবে পার্থক্য করা হবে? অর্থাৎ, সম্ভবপর বস্তুদের মধ্যে তাদাত্ম্য নীতি (Law of Identity) প্রয়োগ করা হবে কীভাবে? কারণ, Quine-র কাছে 'সত্তা' ও 'অসত্তি' –এর অর্থ একটাই, মূর্ত বা বিমূর্ত যেকোন প্রকার বস্তুই একটা অর্থই স বা অসত্তিবশীল হতে পারে।

Quine-ও Russell-এর বর্ণনাতত্ত্বের সাহায্যে এইসব নগ্নরূপক সাততকি বচনের ব্যাখ্যায় দিয়েছেন। Russell-এর মতে অসত্তি হলো বাচনিক অপেক্ষক (Propositional functions) ধর্ম। Russell-র মতে বাচনিক অপেক্ষক হলো: "A propositional function is simply any expression containing an undetermined constituent, or several undermined constituents, and becoming a proposition as soon as the undermined constituents are determined"। তিনি বলেন যখন আমরা বলি "কিছু মানুষ হয় গরীক" তখন প্রকৃতপক্ষে যা বলা হয় তা হলো, 'x হয় একজন মানুষ' এবং 'x হয় গরীক' –এই বাচনিক অপেক্ষক দুটি x-এর অন্তত: একটি মানের (value) জন্য সত্য হবে। এখানে দুটি বাচনিক অপেক্ষক সম্পৃক্ত আছে। কিন্ত, যখন বলা হয় 'কিছু মানুষ হয় অসত্তিবশীল' তখন তার অর্থ 'x হয় একজন মানুষ' –এই বাচনিক অপেক্ষকটি x-এর অন্তত: একটি মানের জন্য সত্য হবে। একইভাবে, 'গোলাকার বর্গক্ষেত্র নাই' বলায় অর্থ 'x হয় গোলাকার' এবং 'x হয় বর্গাকার' –এই বাচনিক অপেক্ষক দুটি একইসঙ্গে x-এর কোন মানের জন্য সত্য হবে না। এর অতিরিক্ত এইসব অনসত্তিবশীল বস্তুর অসত্তির আর কোন স্বতন্ত্র অর্থ নাই।

### 8. Meinong-র সপক্ষে নব্য-মাইনঙ পন্থীদের যুক্তি

Russell ও Quine, Meinong-এর বিরুদ্ধে আপত্তি করলেও বিংশ শতাব্দীর শেষে দিকি নব্য-মাইনঙ পন্থীদের (Neo-Meinongianism) আর্বাভাবের ফলে সেই আপত্তি আর টেকে না। নব্য-মাইনঙ পন্থীদের মধ্যে উল্লেখযোগ্য হলেন Parsons (Terence Parsons, 1939) ও Zalta (Edward Zalta, 1952)।

Parsons দুটি ধর্ম যথা-কেন্দ্রীয় ধর্ম (Nuclear property) এবং অতিরিক্ত কেন্দ্রীয় ধর্ম (Extra-nuclear property)-এর মধ্যে পার্থক্যের সাহায্যে Meinong-এর বস্তুতত্ত্বের স্ববিরোধিতা এড়ানোর চেষ্টা করেন। Parsons-এর মতে কেন্দ্রীয় ধর্মের নির্দেশ্য বস্তুই (যেন, মানব সত্তা, গায়নোদা ইত্যাদি) বাস্তবে আছে, কিন্ত অতিরিক্ত কেন্দ্রীয় ধর্মের নির্দেশ্য বস্তু (যেন, সম্ভাব্য, অসত্তি ইত্যাদি) বাস্তবে নাই। তাঁর মতে, যাদের দার্শনিক Meinong-র মতকে আপত্তি করছেন তাঁরা এই দুই ধর্মের মধ্যে পার্থক্য বুঝতে পারেন না। বলাই তা করছেন।

Parsons, Quine-র আপত্তির উত্তরে বলেন, কোন দুটি বস্তুর মধ্যে তাদাত্ম্য সম্বন্ধ আছে তখনই বলা যাবে যখন দুটি বস্তু একই কেন্দ্রীয় ধর্মকে দৃষ্টান্তকৃত (exemplifying) করবে, এবং সেক্ষেত্রে তারা যে কেবল একই ধর্মকে প্রকাশ করছে তাই নয়, তারা একটাই বস্তু 'হয় অসত্তিবশীল' অতিরিক্ত কেন্দ্রীয় ধর্ম হওয়ায় তা বস্তুর চরিত্রের অন্তর্গত, এবং তাই, কোন বস্তু চরিত্র দ্বারা বিশ্লিষিত হলে তার সত্তাকে স্বীকার করলে (তার চরিত্রের মধ্যে) কোন অসুবিধা হয় না এবং

সক্বেতেরে তারা একটা বস্তু না দুটো বস্তু তা বুঝতেও সমস্যা হয় না, কারণ কোন দুটি ভিন্ন বস্তু একই ধর্মকে প্রকাশ করতে পারে না।

Parsons, Russell-র আপত্তির উত্তরে বলেন, Russell-এর বর্ণনাতত্ত্বের দ্বারা কেবল কনেন্দ্রীয় ধর্মেরে নরিদশেষ বস্তুকেই ব্যাখ্যা করা যায়, কনিতু অতিরিক্ত কনেন্দ্রীয় ধর্মেরে নরিদশেষ বস্তুকে বর্ণনার দ্বারা ব্যাখ্যা দেওয়া যায় না। আর কোন কছিকে বর্ণনার দ্বারা ব্যাখ্যা দেওয়া না গলে সেই বস্তুর সম্বন্ধে প্রদত্ত উক্তি (যেমন, 'সোনার পাহাড় আছে') অর্থহীন হবে – এমন নয়। আবার, কোন কছিকে বর্ণনার দ্বারা ব্যাখ্যা করা গলেই যে সেই পদেরে নরিদশেষি বস্তু অসত্তিবশীল (বাস্তব) হবে – এটাও বলা যায় না। বর্ণনার দ্বারা নরিদশেষি বস্তুর বাস্তব অসত্তিব থাকলে বর্ণনাটি সত্য হবে আর বস্তুর বাস্তব অসত্তিব না থাকলে মিথ্যা হবে কনিতু তা অর্থহীন হবে না, অর্থপূর্ণ হবে।

নব্য-মাইনঙ পন্থী Zalta আবার বধিয়েকরণের (predication) দুটি দিকেরে মধ্যে পার্থক্যেরে সাহায্যে Meinong-এর বস্তুতত্ত্বেরে বরিনোধিতা এড়ানোর চেষ্টা করেন, যথা, সাংকতৌকরণ (encoding) এবং উদাহরণীকরণ বা দৃষ্টান্তীকরণ (exemplifying)। Zalta-এর মতে, মূর্ত বস্তু (যা দেশ-কালে স্থতি) তাদের ধর্মকে কেবল উদাহরণীকৃত করতে পারে, কনিতু অনসত্তিবশীল বস্তু তাদের ধর্মকে সাংকতৌকরণ করতে পারে। আবার উদাহরণীকৃতও করে, অর্থাৎ, কাল্পনিক, অলীক বা বম্বিত বস্তু (এমনকি গোলাকার বর্গকষেরেরে মতো অসম্ভব বস্তু) তাদের অসত্তিবকে সাংকতৌকরণ করে। কনিতু তাদের অনসত্তিবকে উদাহরণীকৃত করলে কোন বাক্যে কাল্পনিক সত্তার যে ধর্মেরে উল্লেখ করা হয় যেমন, 'গোয়ান্দা সত্তা' (being detective), বা 'যনি ২২১ বাকার স্ট্রীটে থাকেন' ইত্যাদি কাল্পনিক সত্তা সেই ধর্মগুলিকে সাংকতৌকরণ করে কনিতু উদাহরণীকৃত করে না। অনসত্তিবশীল বস্তুর যে ধর্ম তাদের চরিত্রকে বোঝায় তাকে তারা সাংকতৌকরণ করে যেমন, গোলাকার বর্গকষেরেরে মতো বস্তু সাংকতৌকরণ করে গোলাকার ও বর্গাকার রূপ পরস্পর অসঙগতপূর্ণবা বমোনান রূপ ধর্মকে কনিতু এই ধর্মগুলিকে একইসাথে উদাহরণীকৃত করতে পারে না তারা উদাহরণীকৃত করে তাদের অনসত্তিবশীলতাকে।

Zalta তাই বলেন, Russell প্রমুখ যখন বলেন, Meinong একই বস্তুকে একইসাথে স□ এবং অস□ বলে বরিদধ মত দিয়েছেন সে আপত্তি আর টেকে না। কারণ, যখন বলা হয় কাল্পনিক, অলীক প্রভৃতি অনসত্তিবশীল বস্তু স□ তখন তার দ্বারা এটা বোঝানো হয় যে ঔসব বস্তু তাদের চরিত্রেরে মধ্যে স□, যগুলিকে সে সাংকতেতি করতে পারে কনিতু তারা অস□ অন্যান্য সব জায়গাতে যাকে তারা দৃষ্টান্তেরে সাহায্যে দেখায় যে তারা নই ঔসব জায়গাতে। এইভাবে নব্য-মাইনঙ পন্থী Parsons ও Zalta, Meinong-র বস্তুতত্ত্বেরে বরিনোধিতা এড়ানোর চেষ্টা করেন।

অনসত্তিবশীল বস্তু স্বীকার্য কর স্বীকার্য নয় সেই সিদ্ধান্ত নেওয়া সহজ নয়। কনিতু, পূর্ববোক্ত আলোচনা থেকে এটা বলা যায় যে Meinong-র মতো দার্শনিক যাঁরা অনসত্তিবশীল বস্তুসংক্রান্ত উক্তির অর্থপূর্ণতা ব্যাখ্যা করার জন্য ঔসব অনসত্তিবশীল বস্তুকে কোন একভাবে স□ বলছেন, তাঁরা 'সত্তা' কথাটিকে অনেক ব্যপক গ্রহণ করেছেন এবং সত্তাকে, অসত্তিব থেকে আলাদা করেছেন, আর তাই ঔসব অনসত্তিবশীল বস্তু কোন একভাবে সত্তাবানহওয়ায় অনসত্তিবশীল বস্তুসংক্রান্ত উক্তিগুলিকেও আর অর্থহীন বলা যায় না। কাজেই, অনসত্তিবশীল বস্তুর সমস্যা সম্পর্কিত Meinong-র সমাধানকে পুরোপুরি অগ্রাহ্য করা যায় না।

## তথ্যসূচি:

১. Quine, (W.V., Quine)-এর "On What There Is" (1948), *Review of Metaphysics* (2:21-38) এ প্রথম প্রকাশিত, এবং পরে তাঁরই *From a Logical Point of View* (1953, Harvard University press) পুনর্মুদ্রিত প্রবন্ধ। পৃ. ১

২. ঐ পৃ. ১

৩. Findlay, (J.N., Findlay)-এর, *Meinong's Theory of Objects and Values*, (1963, Oxford: Oxford University press)। পৃ. ২২

৪. Russell, (Bertrand Russell)-এর "The Philosophy of Logical Atomism" (1918) প্রবন্ধ, R.C. Marsh সম্পাদিত *Logic and Knowledge* (1950, Capricorn Books, New York) প্রবন্ধ সংকলনের অন্তর্ভুক্ত। পৃ. ২৩০

## গ্রন্থপঞ্জি:

- Quine, W.V.O., 1948, "On What There Is", *Review of Metaphysics*, 2:21-38. Reprinted in his *From a Logical point of View*, Cambridge, M.A: Harvard University Press, 1953.

- Meinong, A., 1960, "The Theory of Objects" in Roderick M. Chisholm (ed.), *Realism and the background of Phenomenology*, Free Press pp.76-117.
- Findlay, J.N., 1963, *Theory of Objects and Values*. Oxford: Oxford University Press.
- Russell, B., 1918, "The Philosophy of Logical Atomism" in R.C.Marsh (ed.), *Logic and Knowledge*, Capricorn Books, New York, 1950.
- Russell, B., 1905, "On Denoting", *Mind* vol. 14, reprinted in R.C.Marsh(ed.), *Russell's Logic and Knowledge*, London, Allen & Unwin, 1956.
- Russell, B., 1973, *Essay In Analysis*, Douglas Lackey(ed.), London, George Allen & Unwind Ltd., Ruskin house, Museum street.
- Williams, S.G., 1995, "Existence", in Jaegwon, K, K. & Sosa, E.(eds.), *A Companion of Metaphysics*, Oxford: Blackwell, 145-150.

# THE INFLUENCE OF RAAG MUSIC IN OUR MIND

SaswatiPradhan  
Scholar ofVisvaBharati University  
SangitBhavan  
[saswatipradhan764@gmail.com](mailto:saswatipradhan764@gmail.com)

## Abstract:

Indian music's raag is an amazing contribution to the world of fame. The raag we call psychophysical substances. The person is the other person's visual sensation or feeling.

The feeling of perfect that curly things we voice in the voice with express so raag. The raag is in the sound wave myths of sweetness and the rasa.

Swara bonding see and use and mind with his expression and expression feel as apsihologists of language called psycho- physical substance.

The reason for saying raag to the material is its usefulness in the practical world and by that we need it. The real thing is that the form and the content of the 'rage' material are created first, his first development in the world of mind, then the tone of raag is published in the practical world.

The form of raga was created in four, five, or six level assemblies. Although a two or three swaras assembly cannot express a rage as a result, they may create partial shadow, if their durability is long. If the stability is long, then these swaras creates a lot of passion and appeal.

**Key words:**Swara, Raag-ragini, feeling & expression, Dhvani or sound, Raag-music, conscious – subconscious mind, psychology.



**Introduction:** The life of Indian music is raag. Raag is made in the material of the voice, but it is always free from the tone of the voice.

The touch of the energy of the heart creates raga with joy & joy. The spontaneity gives people the motivation and the untimely world. Just Indian why, the world of the art of eyes to the music, so the best fine arts.

Raagrup can be analyzed in roughly three ways.

- i. The gathering of rage sandharva and the rally and the formation of the climbing of the return of the rasadhara. That brings sensation and feeling in the heart.
- ii. Poets and artists from 16th to 17th century writers composed meditative mantras and paintings. These knowledge and painting creates a feeling of awakening and beauty of feeling.
- iii. In raag with the help of the swaras in the form of melodies form and the resonance of each swar, the variety of Rasa & Rasas are released. Artists and audience mind who the influence and glowing.

In general, the benefits of that Rasa and feeling are acknowledged the benefits of accept is, psychologist from the perspective of the rage rasa is the main form of dense nature and the mainstream music.

**Sur can change our mind:** Music is the key medicine of the people. I went to the fair very far, from the city to find the peace of mind. I could not find it in the wake of the fair of the modern day. We are coming back to the railway station by the country roads, Bashi's tune came in ear. How to feel grief, playing a boring game. I was frustrated by the fame of not getting the fair. I was then a dreadful traveler by the tune of the flute.

Every time I have planned many things for puja holidays. I will spend time with friends and relatives to spend time seven days on the beat. But all of them are random and irrelevant. Because puja used the sound of mike/ loud speaker. Loud speaker's voice is going on in the voice of the ears, the very favorite songs seem to be unbearable. Puja vacation is carried out to cope with the unrest in mind.

None of the above events are planned. Suddenly the tune of the tune or the sound of sudden harmony with the union. Feeling molded the feeling is like scattered out of pain.

Then?.....yes. If you use this tune and sound in a planned manner, it will be able to stop the upheaval of the mind.

**Different Level of Mind:** The mysterious place in the depths of living being is called the subconscious mind of the mind. In Indian texts, it is divided into five differently annamoy, monomoy, pranmay, Bigyanamoy, &anandamoy.

However western psychologists have divided the mind into three main sections, conscious, subconscious, & super conscious. Past day, the level number of accumulated reforms hidden in the countless ages of the of unconscious mind is hidden in the depths of the mind. This level of mind is so unrivaled. Nobody can easily penetrate this level of mysteries. According to the famous doctor Froid, there are many unreasonable reasons behind the many reasons we may find in our innumerable works by creating personality and talents of some of the special quality reforms which are stored in this falling down of mind.

May be we cannot get some knowledge about them, there are many reasons other than unacceptable reasons that are more unpublished and more unpublished and more unrecognized. Besides, the goals and purposes of each day are laid in the concealment and they go beyond our eyes.

Indian Satyagandhitsu found the subconscious level of the mind in ancient times. Tantrakamkala or kundolini established in the subconscious mind or say kamkale is unconscious mind. Kundolini inside the core of the human being is associated with unconsciousness and always is the wisdom and the light hearted.

**The idea of Psychologist about Different Levels of mind:** This is the first mystery found in the western philosophers G.W. idea Leibniz, 1646 – 1716 christ. During this time the doctors also carried out the examination work with this information.

Professor mayors of the subconscious level said – 'larger subliminal' or supraliminal. The main ingredient is funded, karanrup depth level, people are just personality & individuality. The doctor Froied says that released evolutionary level is 'boundless dark ocean'. Swami Vivekanda says – 'great boundless ocean'. According to Swami about Avedananda, it is a vast field. Subsequently Dr. Jung said that the subconscious level of mind that the consciousness of the day that we are aware of is the dream state of the absolute nirala.

Maharshi Patanjali 'Joga' philosophy the best way to add to Indian Psychology, is by writing the strategy of integrating the mind with all scholarships.

**Levels of Mind:** The 'Brahma' glands forms, mahapranor life energy is evolved in the subconscious mind. Dhvani or sound his form voice & consonance, these two characters are synonymous with music as shiva and shakti. The music of the swaras, music is vowel with vowel, so, much sweet & hearty. Matanga Muni has said in his compilation of the book 'Brihaddeshi'. This dhvani two things in the thought and expression. The unmistakable sound is expressed in the form of a swaras in the form of a person's voice in the form of the desire of the artist.

The idea of psychology and philosophy is particularly effective in the creation of music in the west. However, western methods of understanding and efforts are a little different. According to psychologist Dr. Young, the emotion of people and the creation of speech or language is the result of the emotional attachment of love, love, anger etc. Music and soon are the publications of strong feelings.

If the person is feeling emotional in his mind, he drives his limbs and arms and starts to express his feelings from his desire. Melodic pattern or raag is the human emotion, feeling only. Raag, people recognize the love affair and beauty and the human mind. Of course, these decisions are of western psychologists but the views of Indian psychologists are a little different.

Emotional emotion can never create the form of art and sculpture in the form of art or eloquence; it requires the beauty of nature and the beauty and dignity of the person.

Indian poet's talent has composed the mind blowing statue of poetry by imaging quality and characteristic, characteristics of swara.

In the minds of seven swaras create different forms of human mind. Saraj-vir rasa, Rishav-(Re)wonder rasa, Gandhar (Ga) shanta rasa, madhyam (Ma)-Hasya rasa, Pancham(Pa) madhur rasa, Dhaibat-(Dha)- Bivatsa rasa, Nishad(Ni)-karunrasa.

In the 'SangitRatnakar' grantha by Sarangadeva, the subconscious mind is prepared at the stages of mind and to understand naad&naadtatwa, it is advisable to follow the Guru.

The singer is a very caring artist. He is the master of music, who will not be entitled to only collect music & his exact mathematical knowledge, he will be the key to awakening vital power in music.

Through the pursuit of music, whoever is above all the contradictions of all the worldly things incomplete, he is the true guru. He is a master of scriptural music, and with spiritual vision and knowledge, and he does not insist on writing and scholarship. It is only with the touch stone that the music of the music and the identity of the singer is found.

The exterior reflection of his genius can only be different from the characteristic and expression of music. Music artists should therefore be able to enrich the development of raga songs and immerse themselves in the majestic form of raga. The only source of creativity in humans is the subconscious mind that can be gained from this process. Therefore, music must be identified with the true nature of the mysterious subconscious mind of music.

**Time effect of human mind:** The effect of time on human mind is not low and situation or environment of this period creates a prominent reform and attitude within the mind. The musicians share the development of raga with the psychological perspective, so each time it is divided according to specific moments of day and night.

Morning singing is so different from evening and night vocals. Separate rasa and environment and they create. The ragas are divided into 24 hours according to their nature. However, despite the fact that the ragaswarasajja is implemented, the image of the chief is the main. In modern times, music scholars and especially pandit Vishnu Narayan Bhatkhandeji shares the ragas in roughly purbango&uttarango. Generally day 12 p.m. to night 12 a.m. UttorangoPradhan& 12 a.m. to day 12 p.m. is purbangopradhan. Since the midnight, the use of the Sa, Ma, Pa Swara, it is seen to be very strong. Similarly early morning's use of the swarasudhaMadhyam (Ma) & evening is seen tivramadhyam. Moreover, from morning (4 a.m. to 7 p.m.) to (4 p.m. to 7 a.m.) night fourth afternoon, by his time, it is important to note the diversified use and development of seven swaras. This distinguished development creates a mindset in the minds of the environment of the specified time. It is possible to differentiate between the sounds of voice or voice formation.

The purpose of sharing the ragas according to time is to use specific tone of raga in accordance with the environment or temporal time, and this usage has long been in India since it seems to be a natural reconstruction of idea and ideas.

The nature of each raga and ragini is shaped by the waves of their leaked voice. From evening to morning & morning to evening, - this 24 hours, there are variations in nature at this level. Indian Sangeet's eye-witnesses will not be able to distinguish between lingering in 24 hours, according to which the ragas and ragini arrange the swarasamabesh. Each voice vibration aggregates the feeling of the human being, causing the wave of diversion to the centre of the brain. This wave of thoughts is controlled by the nature and richness of the Indian raga.

**How music affects the human mind:** Music has the power to influence our mind, thoughts, emotions and behavior subconsciously. This music operates on a vibrational

level. To understand the vibrational level of the music. You must understand the state it operates through. Energy, Frequency and Vibration when an artist creates a sur from raag, he channels his emotional state into the recording. This influences the vibration in the music. It then effects the listener when he listens to the sur, because he is exposed to the vibration.

Repeated exposure to the some or any vibration has a significant effect on the subconscious mind.

When you are unconsciously unaware of a vibration your mind is greatly impacted far more than normal because it is vulnerable to outside vibration. There are two kinds of emotions. When music affects us; perceived and felt emotions. When we perceive music we can listen to a song without actually feeling the emotion, instead we can understand and control how it affects us. We have the power to channel the vibration of music as energy for our own purposes and desires, whether it's for motivation confidence, happiness, fun, work or pleasure. Forms of consciousness you presently live or operate on depend on the level of our energy, Frequency & vibration.

**Imagine imagery of Indian music:** Feeling and the love of music. Feeling & rasa is music life. Tune artist when voice format and voice Rasa according to the wrath of own image wrote, then he remembers the image of the raag – ragini. The concept of the form is subconscious to the inner and of the mind. With the expansion and discussion of the swara, the imagery of the human being is realized directly in the form of consciousness. According to the swara, the rasa and the sensation are energized. According to the idea the speed of tune is created.

PanditSomnath (1605 christ) tried to show philosophical and scientific reasoning about the creation of raag&ragini. According to his thinking it can be said- only the assembly of the highest gatherings cannot create an environment of joy in human life. In addition to the structure of the body the spirit of the heart of raag and ragini is the likelihood of this feeling or the taste of people who always crave. This desire establishes man's inanimate happiness through the meditative meditation of the heart.

Meditation images are the intricacies of the artist's heart. Therefore, raag-ragini received the introduction of living expression and sensation in the pursuit of meditation and devoted artists. For example,the form of raag.Bhairav is described.

**Imaginethe imageof Bhairabraag:** RaagBhairav's meditative idol is derived from its voice and ascendant motion and rhythm. In the morning. Before the sunrise, the alap of Bhairab was made raag. The invitation on to the sun by nava Prasad and thearati

know that the wrath of raag, in order to implore respect. Usha's tranquil gourmet environment cleanses and purifies the mind by eliminating all the fatigue and exhaustion of the people. The minds of the people become energized with the power of unclean and power. 'Arunalokshuvaravas' is looking forward to spreading the luster line in the eastern gagan. Then the silence of the silent cold earth was still silent and calm. In the twilight of night and day with the release of sunrise in udayachal, Bhairab rage spreads his swara against komaldhaibat & komalrishav.

Santa rasa in the saraj, Risav, pancham, karun rasa in the swarakomalRisav & komaldhaibat, As a result of the vibrations and movement of seven swaras releases terrible rhesus. He is steadfast slow and self-conscious in his heart. So, artist saint in the time of time or time, when the image of shivaBhairab imagines his mindset. Then all the tension of his mind stops and concentrates and becomes intensely feeling the feeling of life. RaagBhairava was published as shivamaheswar.

The excitement of creation is not in Bhairab, there is peace in the sense of peace and wisdom. The development of the inner spirit of the raag-ragini is only in the development of art. They are the expression of the expression. The musician chose the path of his liberation to the greatness of this expression, and it is filled with the life and the fertility of his life.

**CONCLUSION:** Best pursuit of music pursuit and learning "navidyasangit-tatpara' Therefore, the artist of music should feel the excellence of sur music, with the help of melodious music, it is necessary to interview god or Bramha in the form of sublime family. To gain the feeling of the supreme achievement of the mind, this is the story of musical pursuit. Music means the way to meditation and the goal of liberation of siddhi and absolute calmness. Through the pursuit of many freedom folk music songs of India, life has got eternal peace and history and its testimony. For example the musicians like Meerabai, surdas, Ramdas, Baijubaora can be named. Those who achieved free life by applying the action technique of musical pursuit.

The feeling creates the rasa. The feeling of rasa gives the taste of taste. Feeling or tastes give people the opportunity to look for ambrosia.

This finding helps people and artists to discover the desired eternal peace of birth and birth. Music is better than all the teachings. Music is undoubtedly the best way to make a life – giving, when you pursue it with passion & care.

Therefore, it is necessary to maintain the goal in the right ideology. Only then can the sad result be transformed into a theoretical point of view and release the eternal peace of music to the musician. Otherwise, the pursuit of music is the result of failure.

## **Bibliography**

Ranade, G.H: Hindustani Music, Out line of its physics and Aesthetics. First Print 1951.  
Revised – 1980

S.lal& Co, Delhi (India)1931

1/36A. Vijay Nagar,

Double story, Delhi – 110009.

Das, ManasPratim :RoogsarateRaag, PrachhadRachana.  
– Sa-Re-Ga.

Magaxine

Bharat :NatyaShastra, Kashi Sanskrit series, 1929.

Jeans, sir James, science & music, 1968. Dover publications, INC New Yourk, originally published in 1937, Reprinted by the Cambridge university press.

Prajanananda, swami :Raag o Rup, vol – 1, Published – Aug 1951, Re 6<sup>th</sup> edition June – 1996 Swami Ashesananda, Sri Ramkrishna Vedanta Math, 19 A & B Raja Rajkrishana street, Kol – 700006.

Prajanananda, swami, Raag o Rup, vol – 2, Aug 1961, Re Jul – 1999 Swami Ashesananda, Sri Ramkrishna Vedanta Math, 19 A & B Raja Rajkrishana street, Kol – 700006.

Impact of Music on the Human body & Mind – Published on 23<sup>rd</sup> Feb, 2015.Down loaded by net.openupyourmind – 101.

# UNMASKING GENDER-STEREOTYPED VIOLENCE AGAINST INDIAN SCHOOL-GIRLS: EDUCATION, A MYTHICAL PANACEA

Sanghacheta Ghosh

Research Scholar, Department of Education, University of Kalyani, Kalyani – 741235, West Bengal

*E-mail:* sanghachetag@gmail.com

## **Abstract**

Chronological imperceptive emulation of industrialisation, westernisation, modernisation and sanskritisation has drifted India to such a terminus that nearly 40% female suicidal deaths worldwide are being committed by Indians (The Lancet, 2018). Among that Indian share, the majority are school-goers and young adults, married and urban citizens. That disturbing statistics blames early marriage, male violence and mainly the poor educational status of Indian patriarchal society and its stakeholders, that is, males and their families too. Besides, multifaceted school-based gender-stereotyped violence against girls is playing its gut-wrenching roles, namely, forceful denial of and withdrawal from girls' educational rights resulting unenrolment, non-retention and drop-outs, eve-teasing, inadequate arrangements of sanitation and drinking water, gender-based discriminations by teachers and authorities, rape, acid-attack, honour-killing, domestic violence, using women as domestic and womb-labourers and numerously more. It is not surprising but yet shocking at the same time that the members of the planned machinery of male chauvinism, such as, political personnel, educational practitioners, commoners and even girls' own families including their mothers maintain a cold aloofness. Here to reassess the efficiency of contemporary formal education, as people's attitude, temperament and values are somehow affiliated to education system. But as formal education is broadly formulated and enterprised by nation to which so called patriarchy is just another weapon for its own survival, here a question arises – whether overused, institutional, formal education alone is enough to procreate social gender equity or rather individualised, collaborative informal education and other healthy, good practices are to be revamped. This research paper humbly intends to seek possible way-outs regarding these issues.

**Keywords:** School-related violence against girls, Educational status of Indian patriarchal society, Re-scrutinizing education as panacea.

**Introduction**—*No one is more arrogant toward women, more aggressive or scornful than the man who is anxious about his virility.* – Simone de Beauvoir.

Every then and now, in between our daily hustles and bustles, social media, whether print or audio-visual or electronic, takes us to the dark, parallel world of violence against women, majority of which is executed by men. With the degeneration of primitive matriarchal community and introduction of the family and private property, females got socially archetyped as women but not humans. They successfully started to become objectified and dissimilarities between familial and social roles of men and women took place gradually. Women somehow metamorphosed to a neglected species which got conceptualised as if inferior to men. To perpetuate this purposefully, deliberately framed pseudo-situation and to satisfy male ego, violence has always had a tendency to be gender-stereotyped, mostly attacking women and also children, a made prototype of “weak” females. In contingency with French feminist existentialist philosopher and social theorist Simone de Beauvoir's opinion,



this research paper is introduced with, it can be rightly claimed that women are most susceptible to violence conducted by any agent of patriarchy, be it men or even often women, the puppets cast by patriarchy, which is shocking but true. Though there is a more vulnerable subsection among the female victims of male chauvinism, that is, the girl children and the girl adolescents, being physically, emotionally, socio-economically more helpless and “bare”. Ascending consumerism with chronological industrialisation, westernisation, modernisation and sanskritisation has worsened that circumstance. This fact seems empirically contrary to the popular belief system that is age-old, formal, institutional education alone is a magic elixir to cure any social wound. Then what can be the alternative useful solutions? Through this research paper, a search is attempted to find out effective substitutive measures that, besides education, can be meaningfully utilised to save the neediest target group, here girls belonging to school-going age, from male violence.

**Objectives**—The key objectives of planning this research paper are demonstrated below.

- To present the current picture of school-related gender-stereotyped violence against female school-goers.
- To unmask the malevolent faces of violence.
- To address the general social apathy for girls.
- To dissect the dimensions of violence.
- To hypothesise the significant positive correlation between social collective indifference toward girls and poor educational status of Indian patriarchal society.
- To interpret the consequences perpetuated by violence.
- To assess the myth of education as panacea.
- To fashion some meaningful alternates besides education itself.

**Methodology** – The research methodology utilised for penning down this paper has been document-based logical analysis of qualitative, primary and secondary data derived from various international, national, governmental and non-governmental reports, books, newspaper articles and authentic internet sources.

**Delimitation**—Let us delimit and make clear the meanings of some terms and phrases used throughout this research paper.

By “**Indian school-girls**”, females of age groups from 0 to 18 years of India have been denoted.

Here, “**education**” from the title of this research paper is a deterministic umbrella-term used in the sense to mean popular, formal, institutional education system encompassing mainstream early childhood care and education (ECCD), pre-primary education, secondary education and higher-secondary education.

The temporal time span kept in mind whilst composing this research paper is the years of ongoing twenty-first century, that is, from 2001 to 2018.

**A brief statistical glimpse of the disturbing scenario** –To portray the regurgitating sketch of how girls, especially school-goers, are suffering and discriminated every second, we can use statistics as a tool. But we have to remember that statistical data are only representational and are inadequate to stand for the holistic picture.

To begin with, some facts, reported by **Smile Foundation India** in **2017**, can be provided here.

Every 6<sup>th</sup> girl child’s death is due to gender discrimination.

1 million of 12 million girls die before their first birthday.

1/3<sup>rd</sup> of these deaths take place at birth.

1 out of 6 girls dies before her 15<sup>th</sup> birthday.

Females are victimised through childhood abuse more than males.

3 lakh more girls than boys die every year.

Female mortality exceeds male mortality 224 out of 402 districts in India.

Death rate among girls below age of 4 years is higher than that of boys.

Even after escaping foeticide or infanticide, girls are less likely to receive immunisation, nutrition or medical assistance as compared to boys.

**2011 census** revealed that -

There are 82.14% male and 65.46% female literacy, more girl drop-outs in secondary level than boy counterpart and 11% schools without any toilet.

Only 1 out of 100 girls of rural India reaches class 12.

Nearly 40% of girl enrolment drops out even before reaching class 5.

**News 18** went air in **2018** calculating that around 2.5 crore children, especially adolescent girls, are not involved in any of government schemes running.

**India Today** in **2018** summed up that only Rajiv Gandhi Scheme for empowerment of Adolescent Girls and more recent Beti Bachao, Beti Padhao Scheme of 2015 are exceptional to provide vocational as well as skill development training to out of school adolescent girls.

**National Commission for Protection of child Rights (2018)** feared that that 39.4% of 15-18 age group out-of-school girls are “either engaged in household activities, are dependents or are engaged in begging etc.” and “adolescent girls are especially disadvantaged given their low enrolment rate and educational attainment levels. They are among the most economically vulnerable groups who typically lack access to financial capital and have more limited opportunities to gain education, knowledge and skills that can lead to economic advancement.”

**The Asian Centre for Human Rights** documented that child rapes had increased by 337% over 10years increasing from 2113 incidences in 2001 to 7112 in 2011.

**UNICEF** jointly with **Ministry of Women and Child Development** in **2007** observed that children in institutional care reported the highest incidences of sexual abuse and assaults.

**United Nations Population Funds** in **2018** estimated that 1/3<sup>rd</sup> of 10 million child brides in world are Indians.

And all those hardships ultimately led some of the survivors to retreat from living as **Lancet** in **2018** studied that nearly 40% of female suicides worldwide are being committed by Indians, a good number of which are school-goers.

**Malevolent faces of violence** – Some of the well-defined, common faces of violence can be re-unmasked herein.

- **Forceful denial of and withdrawal from girls’ educational rights** - Disappointingly, there is still a fraction of Indian society that carries stigma against girls’ educational enrolment as they take that “shameful to their family honour” that their daughters would move freely outdoors, think rationally, have personal opinions and try options for making money and a career. That would further shrink the possibilities of finding suitable matrimonial alliances for girls within their community and that would ruin the patriarchal primary partnership formula. To stop that the protests come mostly from close male relatives.
- **Domestic violence** – To restrict daughters from acquiring education and “life”, domestic violence is one of the most common strategies instrumentalised by men.

Educational stationeries get burnt, girls get confined within four walls and of course physically and mentally assaulted and very less honour killed too.

- **Early marriage** – One of the patriarchal cons to solve the puzzle of dominating over women has been marriage and more precisely and powerfully early marriage. The probability of having scope to gain education gets significantly depressed for a girl after marriage. United Nations Population Funds made an approximation that 2/3<sup>rd</sup> of married women between 15 to 49 years have been beaten and forced to provide sex. Pre-puberty marriage binds a minor girl, in all way, to some strangers where she has no voice of her own. Is not that another definition of rape?
- **Exploitation of girls as household and womb labourers** – Both in pre and post-marriage periods, almost all girls are used as unskilled household helping-hands according to the norm of patriarchal gender-wisely differentiated labour roles. Even if a girl is allowed to enjoy educational rights, those duties, without remuneration, reduces the time a student ought to spend on study. After marriage, that pressure gets elevated manifold as a new, sometimes fatal, responsibility is thrust upon the premature person that is procreation, chief hidden agenda of marriage.
- **Eye-teasing** – If fortunately the indoor atmosphere is favourable, once they come out of their cosy nests, a new struggle is waiting to welcome girls on the way to educational concerns and on the way to return home, that is eve-teasing. An instance circulated by The Guardian Reports of 2018 can be recounted here. That rural 16 years old had been harassed and eve-teased each and every day on her way by senior boys but could not tell that to her family fearing that they would ban her from achieving education. Once her parents found out that trouble she had been experiencing as a daily-dose, in spite of helping her, they withdrew her from getting outside to keep their “honour” intact that would get stained if she was sexually assaulted. And then they started to plan her wedding.
- **Gender-based discrimination by teachers and authorities** – Dodging out all the adversities, indoor and outdoor, when girls reach school, there also they do not feel safe and secured in educational environment that can be partly attributed to gender-based discriminating behaviours exhibited by teachers, authorities, non-teaching staffs, curriculum, syllabus, text-book contents and illustrations and so on. Schools that could serve as educational sanctuaries for freedom of the endangered species, that is, girls, furthermore traumatise their psyche.

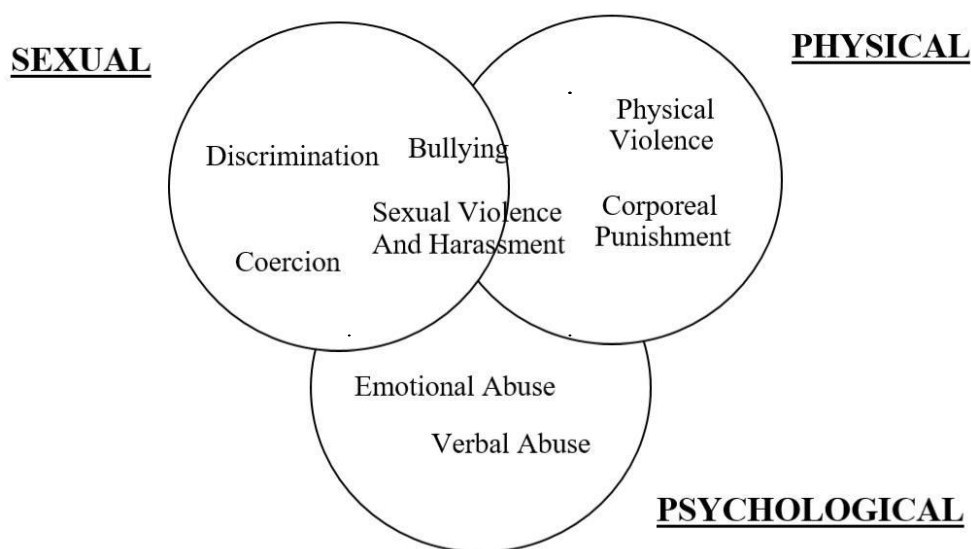
Some of the “avatars” of violence have been discussed but the list could be more elaborated as violence has innumerable faces.

**Social apathy for girls** – The tumultuous hazards, fatally affecting about the half of the population, blame male violence. But are the social stakeholders attempting to counter the problem? The answer is probably “not adequately” that can be supported by some testimonial evidences from recent past. On 17<sup>th</sup> of July, 2014, in Bengaluru, a 6 years old girl student was raped inside an upmarket privet school. Upon being asked about that, then Karnataka Chief Minister slammed the reporters by saying, “Is there no other news?” Same year, two teen girls were raped and murdered by hanging in Uttar Pradesh. The then UP CM stated, “Boys

will make mistakes” regarding that mishap “insignificant” and indirectly lulling the criminals!

The irony is that, not only policy makers, social leaders, educational practitioners, religious spokespersons, political personnel and commoners, girls’ own families including mothers too maintain a cold aloofness to the really alarming facts. This helplessly indifferent collective unconsciousness can be affiliated to the poor educational status of Indian men, men’s families, their parents and Indian patriarchal society as a whole.

**Dimensions of school-related gender-stereotyped violence against girls** –The 3 domains of school-related gender-stereotyped violence, namely psychological, physical and sexual, girls have to live with anyhow are depicted here diagrammatically with the help of a pie-chart.



**Figure – Dimensions of school-related gender-stereotyped violence against girls**

**Perpetuated consequences**–As about a half of the total human resources continuously get deprived of flourishing in life and of human rights, the negative consequences consist of malignancies for the nation herself.

- **Gender inequality** – Naturally, yet after 70 years from getting freedom, India strives to climb up the list of Gender Inequality Index among 189 countries to secure only 127<sup>th</sup> rank and a Medium Human Development Category as per UNDP Human Development Reports of 2017.
- **Drop in GDP**–Because Gross Domestic Product (GDP) is positively correlated with human resource development, it is easily guessable that GDP-wise India is not that impressive as it stood 105<sup>th</sup> among 128 countries in Education For All Development Index as data were supplied by UNESCO in 2015.
- **Intergenerational impacts of being victims**–Violence, likewise any other disaster, has trans-generational effects. As humans are reproductive, out-of-laboratory living

samples, the symptoms of violence-attacks can linger on and be transmitted to a affected person's offspring.

- **Threat to future child health and survival** – If girls are considered as potent future mothers and creators of future citizens, survival and health of children are directly proportional to the mothers' well-being. For the very sole sake of next generations, girls' welfare must be secured.

**Assessing the myth of education as panacea** – A popular African proverb goes as, “If you educate a man, you educate an individual but if you educate a woman you educate an entire nation.”

The proverb advises more stress on women's education. But school-related violence hinders girls severely from getting education. This, in turn, reflects the poor educational status of men. Now, is mainstream education alone enough to do the job? Maybe not whereas education has its roots to pre-historic era but it has failed to nip evil patriarchy in bud and to terminate violence and hardships apportioned to be suffered by women. Rather the conditions got worsened day by day. Education being a socio-political institution, formulated and sponsored by society, it is bound to serve the social purposes. If the society is intrinsically patriarchal, education system of that society inevitably be of parallel characteristics. It is impossible for a society to use its own weapon against itself.

**Suggestive appraisal** – Besides education, we have to look for other way-outs and good, healthy practices as ancient Indian oral traditions in Sanskrit (“Udvat Shlokas”) also opined that only a portion of enlightenment process can be carried out by means of education alone. Within the narrow provision of this research paper, just some short suggestions can be given here.

- **Gender responsive knowledge and skills for girls and boys** – The first and foremost is to make girls and boys aware about necessary knowledge, skills and aspects so that they can promptly identify, recognize and respond against such incidents.
- **Safe learning environment and curricula** – The educational atmosphere should become all kinds of threat-free so that no case of assault takes place while under institutional care. The curricula ought to be gender-unbiased.
- **Responses in and around schools** – There should be gender-responsive systems within and outside of schools generate to insulate girls from violence.
- **Active participation of whole community**–A holistic approach should be anyhow taken under to change the apathetic attitude and temperament of whole community towards girls so that each and every community member participates spontaneously and actively in the revolutionary procedure.
- **Laws, policies and guidelines** – Then comes the strict legal steps to be taken opposing violence so that no such things in slightest be tolerated anymore. Some mentionable attempts, already been done, are the Laws for Protecting Children from Sex Abuse enacted in 2012, Criminal Domestic Violence Laws enacted in 2005 etc. There must more efficient ones.

- **Justice institutions and budgets** – To maintain a safe society with zero violence tolerated, adequate monetary resources ought to be invested to situate justice institutions and to keep those running properly.
- **Prevention, reporting and referral services** – To prevent crimes, identification and reporting are necessary preliminary phases. Thus referral services should be strong enough to tackle the matter.
- **Access to justice and legal empowerment for women** – Justice-service must be accessible for the target population, that is, girls and women. They are to be legally empowered to end misuse and exploitation of theirs.
- **Considering crisis-affected contexts** – To uproot the evil from depth of social life, crisis-affected contexts ought to be considered and treated specially with empathy and sensitivities.
- **Evolving concepts and terminologies** – To boost up the awareness programme, ongoing concepts and terminologies must be rethought over, revamped and evolved if positive changes are truly desired for.
- **Formal, informal and non-formal modes of education**–Education should not be confined to only the formal mould but to be disseminated vastly through informal and non-formal mode too. Boys, men, their parents and families should be differently illuminated as they are the prime ones who sustain male racism and its related collateral damages.
- **Continuous monitoring and evaluation** – Finally, for the successful persistence of anti-violence mechanism, incessant monitoring, evaluation and required re-planning are needed just as any other viable set-up.

In reality, to establish anti-violence organisational system, government sectors, non-government agencies, private concerns, international, national, regional and local bodies have to work all balanced in personal, familial, communal and societal levels by heart and by joining hands. This section is dedicated to some suggestive assumptions as solutions. But scope of further extensive researches is surely there to be explored by interested researchers.

**Conclusion** – So far, we have humbly attempted to draw attention once again thought-provoking description of school-related gender-stereotyped male violence against girls and how they are living life, to unmask the domains and faces of violence, to address social apathy for girls and possible poor educational status of Indian patriarchal society, to indicate the consequences, perpetuated by violence, to assess the myth of formal, mainstream, institutional education as panacea and finally to invent some corrective measures briefly. This anti-violence revolution needs a prolonged time to be processed. We have to be ideologically prepared that if we try to alter the social inertia an obvious inhibition is expected coming from male-machinery in the form of more intense violence. People should talk about this issue more and more within families, friend-circles and social groups to eliminate the intrinsic apathetic attitude of men who ought to be respectful to their fellow female counterparts. To raise and rear a boy, without any inflicted, fake male superiority to females

his mother, father and entire family and relatives are the primary liable ones; after all charity starts at home. But that should not be kept in the male-charity way for the reason that, on the contrary to gender equity, even in the grass-root level of society, that is in families, and upwards, patriarchal figures idealised and induced to the young ones by guardians and elders still in this twenty-first century as American feminist, journalist and socio-political activist Gloria Steinem remarked.

***We've begun to raise daughters more like sons....but few have the courage to raise our sons more like our daughters.*** – Gloria Steinem.

## **References**

1. Anonymous. (2019). *The Education For All Development Index*. Paris, France: UNESCO. Retrieved from <https://www.unesco.org> on 15.9.2018.
2. Anonymous. (2016). *Violence Against Women: A Roadblock To Education*. Bozeman, Montana, USA: Central Asia Institute. Retrieved from <https://centralasiainstitute.org/education-stop-violence-against-women/> on 4.9.2018.
3. Anonymous. (2017). *Our Children*. New Delhi, India: Smile Foundation. Retrieved from <https://www.smilefoundationindia.org/ourchildren/html> on 3.9.2018.
4. Anonymous. (2018). *Ending Violence Against Women*. New York, USA: UN Women. Retrieved from <http://www.unwomen.org/en/what-we-do/ending-violence-against-women/prevention> on 3.9.2018.
5. Anonymous. (2018). *Nearly 40% Adolescent Girls In India Lack Access To Education, Majority Forced To Stay At Home: NCPCR Report*. Mumbai, India: Firstpost. Retrieved from <https://www.firstpost.com/india/nearly-40-adolescent-girls-in-india-lack-access-to-education-majority-forced-to-stay-at-home-ncPCR-report-43359903.html> on 3.9.2018.
6. Asadullah. (2018). *India Must Focus On Quality Education As A Solution To Sexual Violence*. New Delhi, India: The Wire. Retrieved from <https://thewire.in/education/india-education-sexual-violence-women> on 4.9.2018.
7. Basanta, M. (2017). *Women Education In India: Current Status, Recent Initiatives and Future Prospects*. Uttar Pradesh, India: International Journal of Education and Management Studies, 7(3). Retrieved from <https://www.questia.com/library/journal/1P4-1964433382/women-education-in-india-current-status-recent-initiatives> on 3.9.2018.
8. Beauvoir, S. (2011). *The Second Sex*. New York, USA: Vintage.
9. Human Development Reports. (2018). *2018 Gender Inequality Index*. New York, USA: UNDP. Retrieved from <https://www.hdr.undp.org> on 19.9.2018.
10. Jyothsna, K. (2016). *Status Of Women Education In India*. Visakhapatnam, India: International Journal of Multidisciplinary Advanced Research Trends, 3(1). Retrieved from <https://www.ijmart.in> on 15.9.2018.
11. Mondal, A. (2016). *The Status Of Women's Education In India*. Mumbai, India: Safecity. Retrieved from <http://safecity.in/the-status-of-womens-education-in-india/> on 3.9.2018.
12. Nair, N. (2010). *Women's Education In India: A Situational Analysis*. Indore, India: The Indore Management Journal, 1(4). Retrieved from <https://iimidr.ac.in> on 19.9.2018.
13. Nestle. (2016). *Breaking The Myths On Girl Child Education In India*. Mumbai, India: Scroll+. Retrieved from <http://scroll.in/bulletins/21/breaking-the-myths-on-status-of-girl-child-education-in-india> on 3.9.2018.

14. Safi, M. (2018). *Nearly 40% Of Female Suicides Occur In India*. London, UK: The Guardian. Retrieved from <https://www.theguardian.com/world/2018/sep/13/nearly-two-out-of-five-women-who-commit-suicide-are-indian> on 19.9.2018.
15. Sahni, U. (2014). *Improving Girls' Education And Status In India With BetiBachao, BetiPadhao (Save Daughters, Educate Daughters)*. Washington, DC, USA: Brookings. Retrieved from <https://www.brookings.edu/blog/education-plus-development/2014/08/25/improving-girls-education-and-status-in-india-with-beti-bachao-beti-padhao-save-daughters-educate-daughters/> on 3.9.2018.
16. Sahoo, S. (2016). *Girls' Education In India: Status And Challenges*. Jagadhri, India: International Journal of Research in Economics and Social Sciences, 6(7). Retrieved from <https://www.indianjournals.com> on 15.9.2018.
17. Steinem, G. (2015). *My Life On The Road*. London, UK: Oneworld.
18. UN Division for Advancement of Women. (2005). *Good Practices In Combating And Eliminating Violence Against Women*. Vienna, Austria: UN Women. Retrieved from <https://www.un.org> on 15.9.2018.
19. UN Women. (2016). *Global Guidance On Addressing School-Related Gender-Based Violence*. New York, USA: UNESCO. Retrieved from <https://www.unwomen.org> on 4.9.2018.
20. Williams, R. (2018). *Why Girls In India Are Still Missing Out On The Education They Need*. London, UK: The Guardian. Retrieved from <https://www.theguardian.com/education/2013/mar/11/indian-children-education-opportunities> on 3.9.2018.















# SITUATING WORK WITHIN THE PRIVATE SPHERE: A DESCRIPTIVE STUDY OF THE MARRIED CORPORATE WOMEN IN URBAN KOLKATA

Ms. Sreyashi Ghosh, Senior Research Fellow, Sociological Research Unit, Indian Statistical Institute, Kolkata. Email id: [sreyashi19@gmail.com](mailto:sreyashi19@gmail.com). Contact no: 8697048766

Dr. Pujan Sen, Professor, Department of Sociology, Kalyani University. Email id: [pujan.k.sen@gmail.com](mailto:pujan.k.sen@gmail.com). Contact no: 9433443220.

## Abstract:

This paper is a descriptive study of the domestic sphere of the married women working at the corporate sector in urban Kolkata. Based on the survey of 155 married women working in various companies in the I.T hub in Kolkata, the study tries to understand the structural and functional organization of the private sphere as these women are moving between spaces, the way work-life balance is struck by the married women and how the maintenance of this balance has shaped the identity and agency of these women. The study is an amalgamation of the quantitative and qualitative methods, thus striving to understand the phenomenon from both objective and subjective perspectives.

Keywords: Public sphere, private sphere, corporate jobs, family, I.T sector, globalization, married women.

## 1. Introduction:

Inclusion of women in the labour force is an imperative to achieve the holistic development of the country. But the sexual differences have always been cited as the reason and justification for the sexual division of labour that women have found difficult to negotiate. As explained by Simone de Beauvoir (1949), menstruation and pregnancy have been responsible for the exclusion of women from military expeditions; since society confers more status to the species that kill and not to the one that give birth this exclusion in turn has relegated women to the domestic domain with little or no access to the public sphere. The societal approval of the link between child bearing and rearing has been further responsible for binding women to the private sphere. Women's entry into the workforce initially has been to supplement the income of the family- a patriarchal need rather than a matter of choice. Due to this inevitability of marriage and expected child birth, women have, from time to time, faced with what has been described as 'mommy tracks', a situation where women put aside some of the most productive years of their lives in order to look after children (Menon, 2012) and 'glass ceiling', an upper ceiling which many women are unable to transcend in their corporate career when it comes to rising up the corporate

ladder and the very rampant ‘leaking talent pipeline’, where women after spending 5 to 8 years in the company decide to take a break to focus on their family. These terms have made an entry into the industrial lexicon to define the specific roadblocks women face to make progress in the corporate field.

India maintained a situation of autarky for a long time. It was the New Economic Policy (NEP) in 1991 with its triple objectives of liberalization, privatization and globalization, opened Indian economy to foreign investments and marked the formal entry of multinational corporations. The major change has been the apparent reduction in gender bias in employment. The metropolis in India witnessed a surge in corporate offices and springing of IT hubs. Changes were also witnessed in Kolkata due to relaxation in FDI that resulted in the modification of the places like Salt lake Sector 5 and Rajarhat as they became synonymous with the IT hubs; directly or indirectly contributing to urban conurbation. According to the recent NASSCOM report, India’s IT-BPM has registered a growth of 7.8% in the financial year (FY) 2016 and is projected to reach 8% in the FY2017 to USD 154 billion<sup>1</sup>. Various factors have worked in favour of development of IT industry in India like availability of skilled labour, reasonable infrastructural expenditure and knowledge of English that help the IT professionals cater to different countries. The coming of the stable government in India in 2014 marked the interest of the foreign companies to invest in India. According to the report by Deloitte India titled “Competitiveness: Catching the Next Wave” (Nov 2014), ‘both China and Japan are eager to invest in infrastructure, a key priority for the Indian government. With respect to United States, India has sought greater cooperation in technology, infrastructure, education, health and sanitation’.<sup>2</sup> Deloitte also reports that India has the strategic advantage of having labour intensive technology consisting of relatively young and growing population where ‘60% of the population belongs to the age group of 15-59 years’.

Along with the meteoric rise of the IT sector in the Indian financial scene, recent reports are also hinting at the upsurge in the employment of women in this sector. Women have always been concentrated in certain jobs like teaching and nursing resulting in the ‘feminisation’ of these jobs (Menon, 2012). The myth of lack of synchronization between women and technology is coming under strain as more and more women are opting for jobs that call for constant upgradation of technical skill. According to the report by McKinsey Global Institute women contribute about 17% of India’s GDP.<sup>3</sup> Employment of the women in the IT has gone up to 34% in 2017 from 28% in the FY2016, if recent report<sup>4</sup> is to be believed. Similarly, the rate of drop out remains equally alarming. The strain of maintaining work-life balance sometimes forces the women to choose family over job. The objective of this paper is to understand how these married women are balancing their family and job, the kind of challenges they face and the solutions they come up with as a part of their lived experience. The paper is divided into three sections that cover the general profile of the respondents, a glimpse of their routinized life, an insight into their family as they experience it every day which includes the way they experience relationships with children, in-laws and others. This paper is an attempt to understand the concept of agency, how



this agency is augmented both in the public as well as private sphere with the financial autonomy of the women and the imperative to connect the well being aspect with agency aspect (Sen 1999).

The analysis is based on the empirical study of 155 married women working at the various IT offices spread across the length and breadth of Urban Kolkata. According to the recent reports, Kolkata has the lowest attrition rate among the other outsourcing destinations like Bangalore, Delhi and Mumbai.<sup>5</sup> WEBEL (West Bengal Electronics Industry Development Corporation) has been set up to support the IT investors to ensure the ease of outsourcing operations in Kolkata which has boosted the investment by the companies in Kolkata.

According to the NASSCOM Diversity and Inclusion Summit, 2017 with its focus on the ‘Nurturing Women Leaders in the Workplace’ steps are being taken by some companies to remedy certain pathological situations women face in their workplace like tapping the above mentioned ‘leaked talent pipeline’ by introducing various leaderships programs that married women can join post their maternity leave. Programs like these not only act as motivation to the women to join in the work force but also ensure the possibility of working women to break the ‘glass ceiling’. Despite the notable efforts by the employers, the rate of dropouts remains high in the corporate sector. To understand the domestic life of the married corporate women, a standard questionnaire has been used for the selected respondents followed by a personal interview to gain in depth idea about their domestic life. The respondents were selected using the non probability purposive and snowball sampling methods. The analysis is based on the data collected over a period of 5 years from the IT hub of urban Kolkata.

## 2. Profile of the Respondents:

For the purpose of understanding the domestic sphere of the married women working at the corporate sector, 155 respondents had been administered questionnaires, followed by a round of personal interviews. The following tables give a clear picture of the profile of the women engaged in corporate work.

Educational Qualification	Age of Respondents		
	21-30	31-40	41-50
Higher Secondary	00	00	00
Graduate	48	31	19
Post Graduate	16	34	07
Doctorate	00	00	00
Total	155		

Table 1: General profile

Income slabs of the Respondents (Per Annum in lakhs)	No. of Respondents
1. 1- 5	62
2. 6- 10	79
3. 11- 20	14
4. Above 20	00
Total	155

Table No.2: Annual Income of the Respondents

The data above is the clear indication of the preponderance of young women in the work force which confirms the study by Deloitte that India has the strategic advantage of having youth labour. Since the study is to understand the domestic sphere of the married women, the call center employees have been kept out of the sampling procedure. There are two main reasons for not considering call center employees - majority of them are college pass outs with no prior job experience and unmarried and many women join call centers as a trial for easy money with no intention to continue working. In the data collected, there is a preponderance of women working as IT analysts (37.4%), followed by senior managers (12.9%), assistant consultants (10.32%). Only 5.81% women are working as team leaders or project heads. While the gender disparity in the earning is not noticeable but some respondents reported subtle discrimination still exists in hiring employees. Intra-family disparity in earning exists as 98.71% women reported that their income is less than their husbands. Religion and caste have been kept out of the analysis as all the respondents are Hindus and belong to the 'general'<sup>6</sup> caste.

### 3. Married Life and Corporate Work: A Juxtaposition:

With the rising cost of living and the decreasing disposable income in the hands of the people, financial engagement of the women or two-job couples (Hochschild and Machung 1989) has become an imperative. Unlike the public sector, where recruitment depends on cracking entrance examinations, on-campus recruitment makes it easier for graduates and post graduates to enter the corporate sector. Ostensibly lower rate of gender disparity in recruitment also explains the reason why women are opting for jobs in the corporate sector despite the job being strenuous, and even more so for married women, thus demanding a successful juggling of both the spheres.

#### 3.1: Marriage, family and Corporate women:

Of 155 women interviewed, majority of them have been married for 1-5 years (52.90%), followed by those who have been married for more than 10 years (28.39%); only 18.71% married for 6-10 years. This trend can be explained if the age of the respondents is taken into consideration. With the lower average age of employment (mean<sup>7</sup> age of the respondents is 32.73, i.e, around 33) and with the growing trend of women marrying late, most of the respondents have been married for 5 years or less. This can be regarded as another feature of the corporate sector that it is inseminated with workers who are relatively young because of the ever

developing technology, it becomes an imperative for the companies to hire people who can deal with the changing nature of work, thus separating corporate sector from the public sector enterprises where seniority is given preeminence.

Another interesting trend which can be highlighted is the lower percentage of women who are married for 6-10 years than percentage of women who are married for more than 10 years. This can be explained with the leaking talent pipeline where women voluntarily dropout or take a long sabbatical during child birth and devote their time to child rearing. Seldom women return to the job, thus creating a void of women who are in the crucial phase of marriage, which can be considered a ‘child bearing’ phase where women slow down and shift their focus from their career to family building, either out of choice or out of compulsion. But once this crucial stage is passed successfully, women workers again start focusing on their career, but the lag remains which slim their chances of getting promoted to higher posts.

When questioned about their family composition 47.09% of the respondents reported staying with their husband, in-laws and children in the same house, 21.29% reported sharing the house with husband and in-laws only with no children (fig 1). The preponderance of the age old set up of living in a patrilocal residence is very evident in the data. On further inquiry, many of the respondents, who reported not living with their in-laws in the same house, revealed that their in-laws live in a different apartment in the same building or residential complex or they live in the same locality. Hence, it can be construed that despite the rise of the corporate work that do not conform to the traditional bureaucratic jobs, the basic structure of the family has undergone minor modifications but the major change has taken place in the way the family functions, explained in greater details in the following sections.

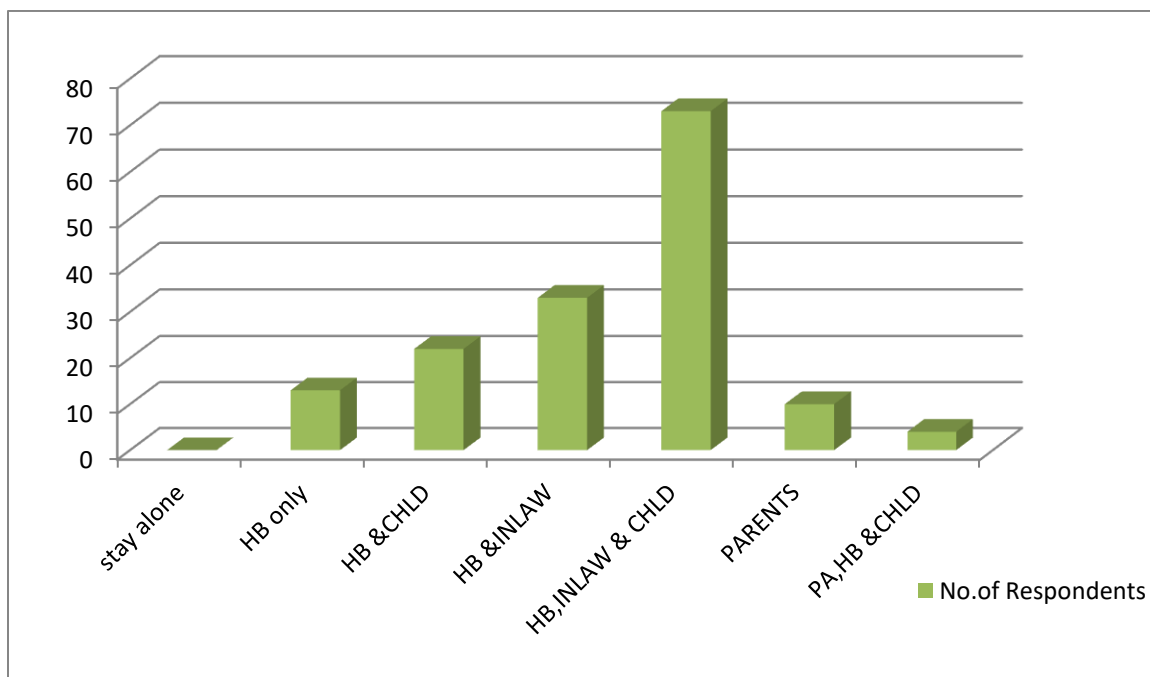


Figure 1: Composition of the Family of the married corporate women

\*Note: HB,CHLD,PA stand for husband, child(ren), own parents respectively.

Matrimonial alliances among workers, working at the same company is not uncommon in this sector. According to the data gathered, 22.58% of the respondents have met their spouse in the same office while 43.22% have met their spouse elsewhere. These alliances have reportedly never created any hindrance to women's work, neither did they assist improving the position of women within the organization; hence the effect of alliance within the same office can be taken as null.

When asked to rate the influence of their husband's working at the same sector on the respondents' job on a scale from 1 to 5 (where 1 signifies very low influence and 5 denotes a strong influence), most of the respondents reported a moderate influence of their husband on their job and this is because majority of the women (82.58%) started their career before marriage. 72.90% of the women reported being engaged in a full time job in the corporate sector before they got married. Hence, the employment of the women is independent of the employment of their husbands. Some of the respondents reported joining jobs post marriage (17.42%) which hints at opening up of the society to the requirement of the women to work even after marriage and the eagerness on the part of the women to make the successful utilization of their degrees.

When it comes to expenditure it is generally seen that the majority of the income of the women is used to finance the education of the kids, but coupled with that the respondents have also reported spending money on online shopping, and sponsoring weekend trips to eateries and shopping malls. Few respondents also reported paying EMIs on bank loans and investing in gold. Income is also pooled in for joint spending with husbands (fig 2). It has been noticed that some of the respondents come from a family where they have been the single child i.e, they don't have siblings to take care of their own parents financially, in such a juncture, few respondents also reported remitting a part of their income to their own parents.

As seen in fig 2, a portion of the respondents also reported not contributing to the household expenditure and when inquired further, the answers became highly individualized. According to some, they don't pool income because they shoulder the whole expenditure themselves with little help from the husband, while the others reported that they are not asked to contribute in the family as it is run by their fathers-in-law and husbands; thus hinting to the fact that employment of the women may help in enhancing status of the women and giving them a taste of being empowered but their income is not considered as making any productive addition to the family (almost treated as an extra money, thus a subtle refusal to add any extra importance to women's work has been noticed). This set up is mostly seen in case of newly married couples, post childbirth joint spending becomes a necessity. A respondent joked: 'I was asked by my in-laws to stop working many times because they always say what extra will I earn, what my husband

earns in enough to take care of my needs. The idea of financial autonomy and the feeling of empowerment are alien to them’.

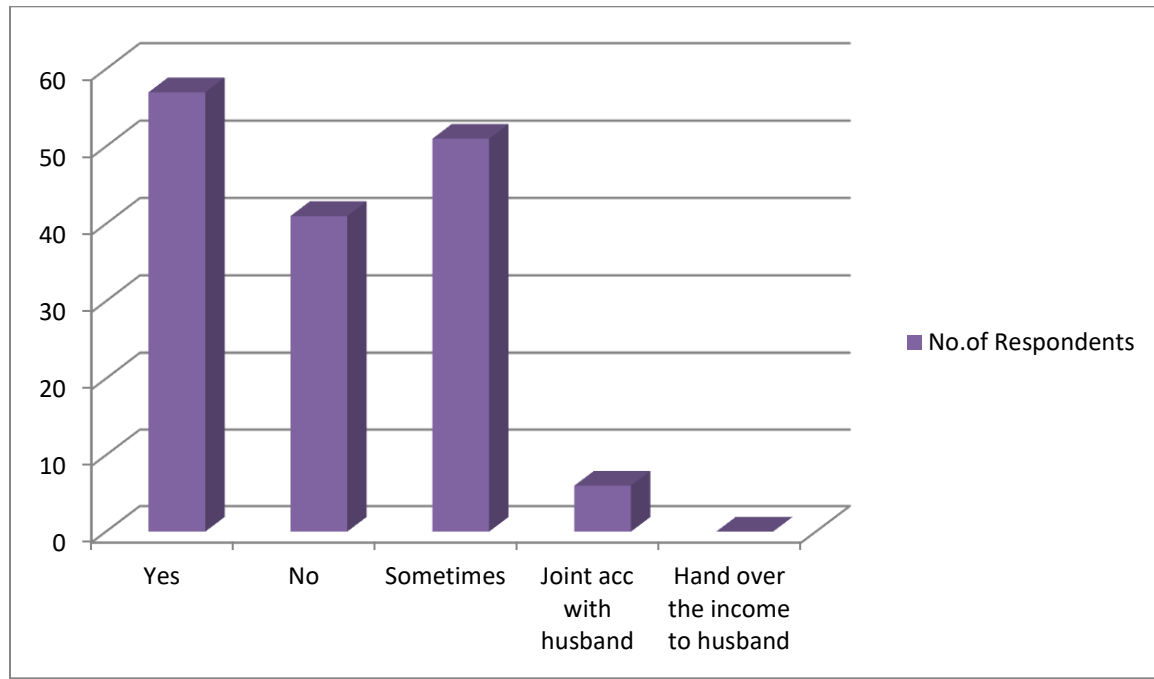


Figure 2: Whether the respondents pool in income with the husbands for joint spending

### 3.2: Work and Home:

The successful juxtaposition of the corporate and married life can be reinforced successfully by the female friendly policies of many corporate offices. The majority of the respondents are allowed to work morning shifts so that they can return home by the evening. Corporate car pools are a very common sight at the IT hubs including transportation provided by the office to the workers who work late. On the basis of the data gathered, 54.19% of the respondents work morning shifts and 42.58% of them reach home within 9.00p.m. Despite this suitable timing that apparently allow the women to strike a work-home balance, 29.03% of the respondents informed having no fixed work schedule and 38.71% failed to provide any specific timing of returning home from the office.

A notable feature of the corporate work is the change in work schedule with the change in projects. Each corporate project has a team consisting of 5-10 members with a leader/manager to supervise the progress of the work. Any project can continue for 2 years or more during which the team members have to perform in group and abide by the schedule laid down by the team leaders; schedules are also susceptible to the timing of the country the project is catering to.

When inquired about the time their husbands come home, 50.32% respondents informed that their husbands reach home within 10.00pm; while 26.45% reported a flexible working schedule or no fixed timing of their husband's return. Therefore, the onus of doing the majority housework still falls on the women - 54.84% of the respondents agreed doing household chores. When juxtaposed with the activities their husbands indulge in after returning from office, the gender dichotomy of labour within the households becomes more clear (Fig 3). Sometimes help is outsourced in the form of full time maids, but supervising these subordinates still remains the job of the women.

Majority of the respondents still cook their domestic meal, some do it out of passion for cooking while others do it under compulsion and yet many reported lack of faith on the outsourced cook when it comes to preparing hygienic meals especially for children. The faint glimpse of the emergence of symmetrical family<sup>8</sup> could be discerned among the newly married couple but the division becomes stark with the birth of the first child. It can be seen (fig 3) that the majority of respondents with children are responsible for taking care of the child(ren) and homework. Men, in many of the cases are reported spending an hour or two with their kids post work. "Taking care of the child is totally my responsibility as he is busy with his office and has no expertise in handling a kid"- lamented a respondent.

Braun et al.,(2008) suggested three approaches to study the household division of chores- time availability (time available to two jobs couple after work), resource dependency (how much the respondents are financially dependent on their husbands) and gender ideology (whether values and beliefs internalized at birth support traditional gender stereotype). Since, in our study, husband's time of return more or less coincided with the respondents', time availability or the lack of it can be ruled out for the husbands not helping with regular household chores. Though the majority of the respondents informed earning less than their spouse, but they are not totally dependent on them financially; thus the factor that still puts the onus of housework on women is the ineluctable grip of the traditional gender stereotype.

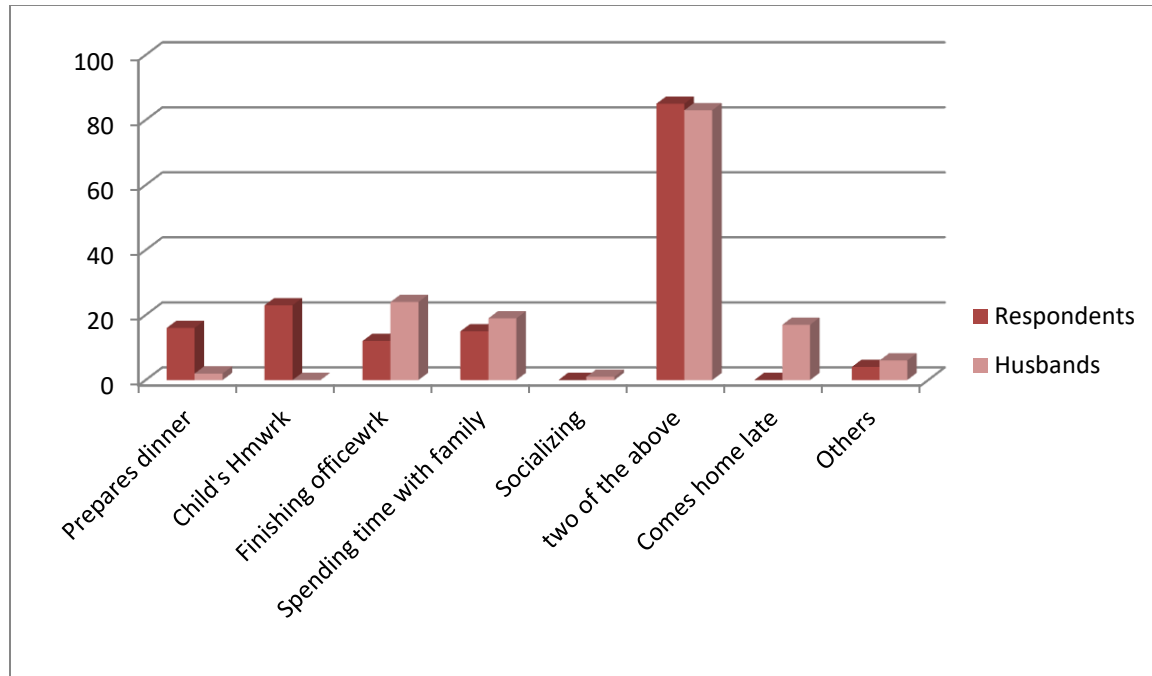


Figure 3: Household activities engaged in by the respondents and their husbands after returning from work

\*Note: The information on what the husband does after returning from office could be collected from 152 respondents as 3 of them reported their husbands being out of station for the time being.

A closer look at the data above gives a picture of two-job couples in urban Kolkata that is caught in transition. There exists a strong traditional hangover juxtaposed with the newer form of family and domestic organization. 54.84% of the respondents reported staying in a family composed of more than 3 members that include their in-laws and children; at the same time the rise of the neolocal residences is also observed with 36.77% staying in a family with only 3 members and 8.39% staying with their husbands only. The influx of the IT culture has made minor modifications within the private sphere, keeping the structure more or less intact; though the rise of the functional joint family<sup>9</sup> cannot be ignored.

### 3.3: Towards Understanding the balancing act:

To strike a perfect work-life balance, the most important extraneous factor is the co-operation from the respective organization and the empathetic attitude of the co-workers coupled with the same attitude of the in-laws and family members. But many researches claim that this transition of women from home to work life is far from smooth as organizations fail to understand the changing demands of the women, that has lead this situation to be termed as a 'stalled revolution' (Hochschild and Machung, 1989). If thread is drawn between the Marxism and feminism (Mary E. John, 2017) then the reason for this stalled revolution can be assigned to the 'false consciousness' made and preserved by men in order to keep women in a permanent state

of subjugation even in the public world of work like in industries and agriculture. This theorization treats women as a class ‘whose interests place them in a conflicted relationship with men as the dominant “class”’ (Mary E. John, 2017).

But a reinterpretation of the existing situation calls for a modification of this theorization. Women working in the corporate world refuse to actively see themselves as being the victim of a system that subjugates them; on the contrary they stress their ‘agency’ in taking decisions both at the work place and home. But this supposed agency of the women can be a result of a ‘stalled revolution’ where men and women are not giving up on marriage but rather finding out ways to make it work by introducing necessary arrangements (Hochschild and Machung 1989).

Husain and Dutta (2014), have called this set up a way of satisficing that women are consciously engaging in- “Satisficing is an alternative to optimization for cases where there are multiple and competitive objectives and in which one gives up the idea of obtaining the ‘best’ solution (Simon 1955). In this approach, the actor sets lower bounds for the various objectives that, if attained, will be satisfactory, or ‘good enough’, and then seeks a solution that will exceed these bounds” (Husain and Dutta 2014). The whole set up has been explained with the help of Nash equilibrium and the Game of Chicken<sup>10</sup> (Hussain and Dutta, 2014), similar to explaining the structural-functional societal set up with instrumental roles (roles for men involving no emotional attachment and to provide for the family) and expressive roles (roles for women that involves emotional orientation and directed towards comforting family) described by Talcott Parsons (Turner 1998). As a concept, ‘agency’ has been defined by Giddens (1979) as ‘a stream of actual or contemplated causal interventions of corporeal beings in the ongoing process of events-in-the world. The dialectic of control between the structure and the agents has been (Giddens 1984; Hays 1994) in the context of ‘duality of structure.

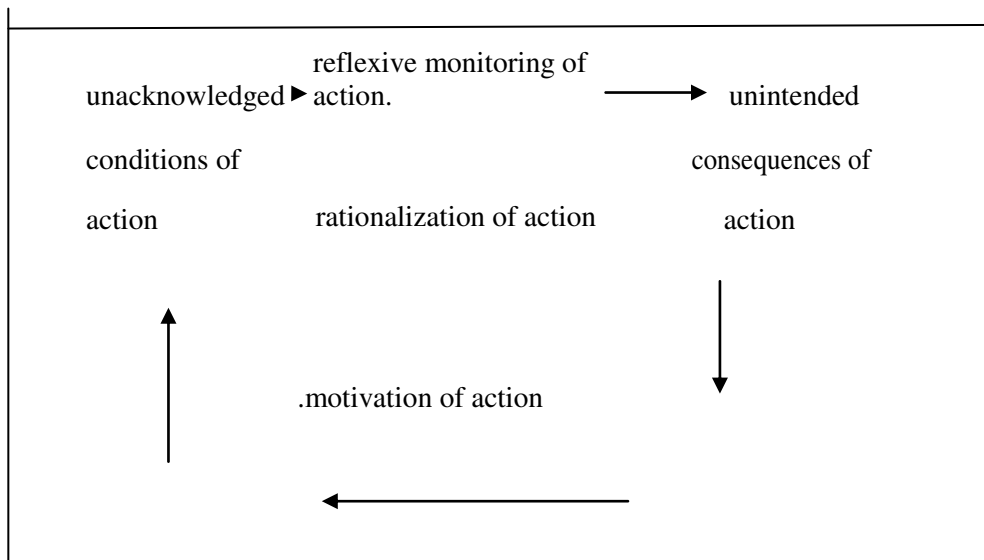


Fig: Anthony Giddens: *The Constitution of Society: Outline of the Theory of Structuration* (1984). The Agent, Agency, p-5



The same model of structuration can be used to explain the interaction between the public and the private worlds of women thus shaping them as individuals. Engagement of women in the public world of works can play an important role in shaping women as agents of change but the exercise of the agency is directly or indirectly influenced by the placing of women in a particular social structure, in this case the family.

‘Agency’ as described by Sen (1999) is the ability to personally choose based on values and this choice may not correlate with personal well being. But Sen (1999) further pointed out, ‘the active agency of the women cannot, in any serious way, ignore the urgency of rectifying many inequalities that blight the well being of women and subject them to unequal treatment; thus the agency role must be concerned with women’s well-being also. Similarly, coming from the other end, any practical attempt at enhancing the well-being of women cannot but draw on the agency of women themselves in bringing about such a change. So the *well-being aspect* and the *agency aspect* of women’s movements inevitably have substantial intersection’ (p-190). The embedding of women in a strictly patriarchal structure, where they are constantly burdened with expectations and sense of duty, the ‘agency’ of women to determine their course of action and to be the active agents of change get influenced by such extraneous factors to a great extent.

The equilibrium gets highly disturbed after the birth of the first child, where women remain the sole care givers, rarely substituted with an outside source of help but seldom with their husbands. The ‘mommy track’ sadly remains a reality among the corporate women in urban Kolkata and that explains why many women are opting to marry late, especially after achieving their desired goal.

From the above data, the involvement, though minor, of the men in sharing household chores cannot be ignored. But the involvement has remained confined to those areas within the private sphere that do not meddle with the notion of masculinity. Some of the respondents reported that their husbands cook but it should be noted that these chores are reserved for the weekends and are treated more as a recreation for men than done with the intention of sharing the burden of day to day household chores.

The composition of the family of the married corporate women gives clear hint to the underlying patriarchal structure of the family. The symmetry in the intra family division of labour can be witnessed among the newly married two-job couples sharing a neo-local residence, but the power dynamics within the family still follows the traditional path when the couple is sharing space in a virilocal residence with children- ‘sometimes the (deprived) women cannot even assess the extent of her relative deprivation’ (Sen 1990). The sense of duty in such residences intersects with the aspirations of the women to rise up the corporate ladder, which in itself is stressful. Therefore, unable to cope up with the stress, majority of the women prefer to work till a certain age and then opt for voluntary retirement to focus full time on the family. As reasoned by one of the respondents, 36, senior manager, Cognizant, Kolkata, living with her daughter and husband in a virilocal residence and expects to retire by 40- “in the corporate, life is stressful as we

encounter a new technology each day and therefore younger generation is bound to take over the older ones in the due course. But this is not the case when a person is a doctor or teacher, as in those fields knowledge increment is constant and grows more with age coupled with wisdom; therefore we always enjoy being taught by a professor Emeritus. But in corporate, older we get, more we are seen as becoming obsolete day by day and finally replaced by newer ones”.

#### 4. Corporate Women, Child Care and Other Domestic Relationships:

If psychological study of the female brain is to be believed then “most mothers, on some level, feel torn between the pleasures, responsibilities, and pressures of children and their own need for financial or emotional resources. We know that the female brain responds to this conflict with increased stress, increased anxiety, and reduced brainpower for mother’s work and her children”(Louann Brizendine, 2007). The way corporate women experience motherhood and other relationships in their day to day life, will give sufficient information about the ways these women navigate the daily pressure of meeting deadlines and fulfilling domestic obligations.

##### 4.1: Corporate Women and Child Care:

Among the 155 respondents, 63.23% of the respondents have children. Given the fact that women are marrying late (33 years is the average age of marriage of the women working at the corporate sector in Urban Kolkata while the national average age of marriage is 22.2 years for the urban women)coupled with the ever rising cost of living in the urban areas, one child family is more common. The average age of the first child of 98 respondents (as 98 out of 155 respondents have children) is 6.11 years, that hints at a greater effort involved on the part of the respondents to balance work and family as 6.11 signifies beginning of school going years.

Most of the corporate office allows maternity leave upto 6 months with pay and up to 1 year without pay. India is the first country to allow longer maternity leaves in comparison to other countries.<sup>11</sup> Paternity leave is unheard off though, while some respondents informed that their husbands did take a week off to assist them during the last trimester. 85.71% of the respondents agreed to have taken maternity leave. When probed about the reason for not taking maternity leave they informed leaving their previous job when they conceived and joining the present job post childbirth.

When questioned about the care takers after the respondents resumed work post sabbatical, major answers were nanny/governess (64.29%) and in-laws (26.53%) and own mother (9.18%). Outsourcing services is one of the hallmarks of the emerging families; surveillance of such services is done with the help of modern technology like home fitted cctv cameras as reported by few respondents. One of the respondents shared the story of being alone on an on-site duty with her 3 months old daughter- “I was in UK for almost a year on a project. I used to go to office exactly at 9.00a.m and on my way I used to drop my child at a crèche. I was thoroughly satisfied

with the kind of surveillance used by the crèche. The crèche was fitted with cctvs everywhere and I was given a password to their website where I could log in and monitor my child anytime I wanted. It was like having her next door. Satisfied, I could concentrate on my work. On my way back I used to pick my daughter up and the administration used to hand me over a cctv recording of the whole day. It was very heartening.” Unfortunately, facilities like these are yet to be introduced in our country.

Some innovative measures on the part of the mothers to juggle kids’ school and their own work have been noticed. Though 55.81% of the mothers reportedly still rely on the pool cars to take the kids to school, 16.28% drops the kids to school themselves, 2 of the respondents can be credited with coming up with an innovate idea of *mommy pool car*, a setup where working mothers take turns to drop all the kids living nearby to school. Reports of the pool car accidents and child molestation by the car drivers forced these mothers to come up with a solution that allows them to situate their work quite successfully within the purview of child care. There cannot be any denial of the fact that proper child care and concentrated effort to excel in job reinforce each other. Child care remains primarily a woman’s job is further proven by the fact that 65.12% of the respondents take active role in helping child with the homework in comparison to 21.29% of the respondents reporting that their husbands help only when he gets time (Fig 4a and 4b).

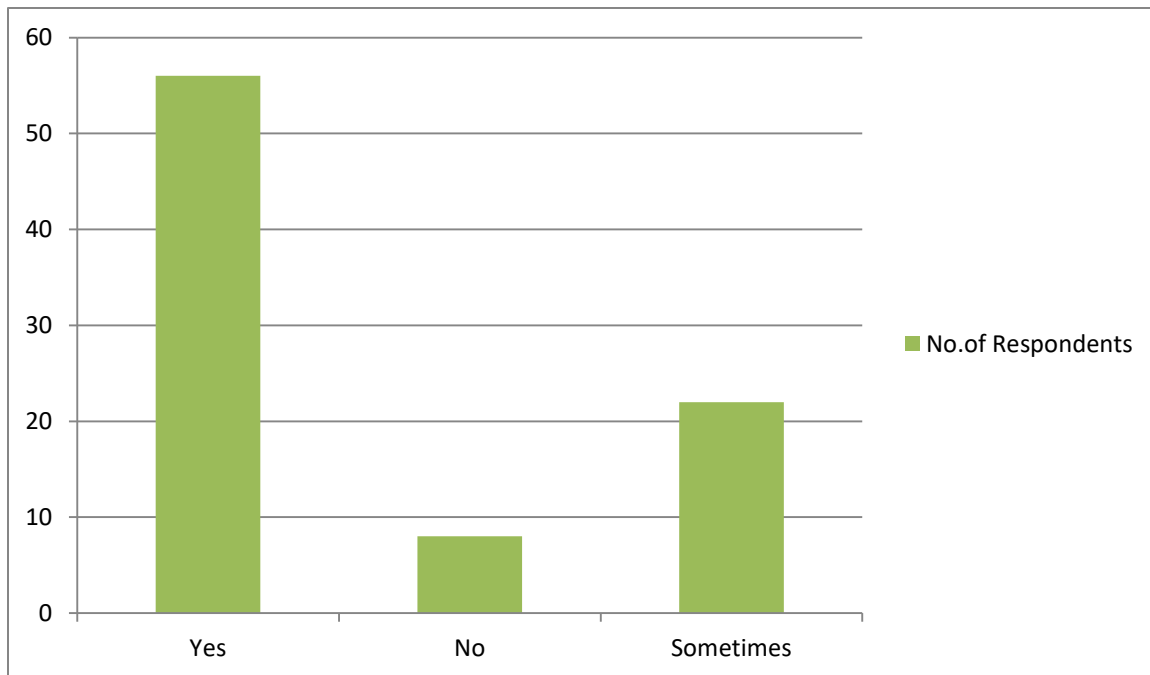


Fig 4(a): Respondents helping with the child’s homework

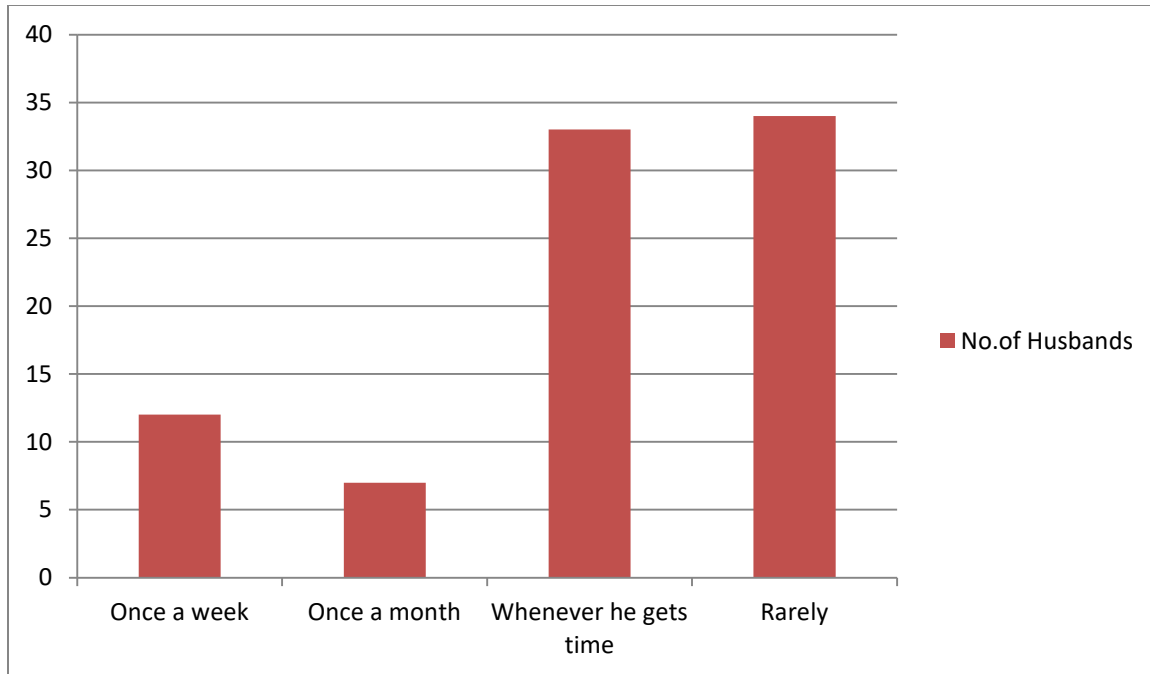


Fig 4(b): Frequency at which husband helps with child's homework

Reliance on private tutors is also noticed when the respondents are unable to coach their kids themselves due to lack of time. Involvement of the husbands have been noticed in attending parents-teachers meeting in school where 44.19% reportedly attend the meetings together; though the percentage of women attending the meeting alone is still higher (48.84%).

#### 4.2: The Reality called Mommy Track:

The overwhelming existence of the 'mommy track' was felt when the respondents were asked to 'agree' or 'disagree' to the statement- having kids affect career advancement (Fig 5).

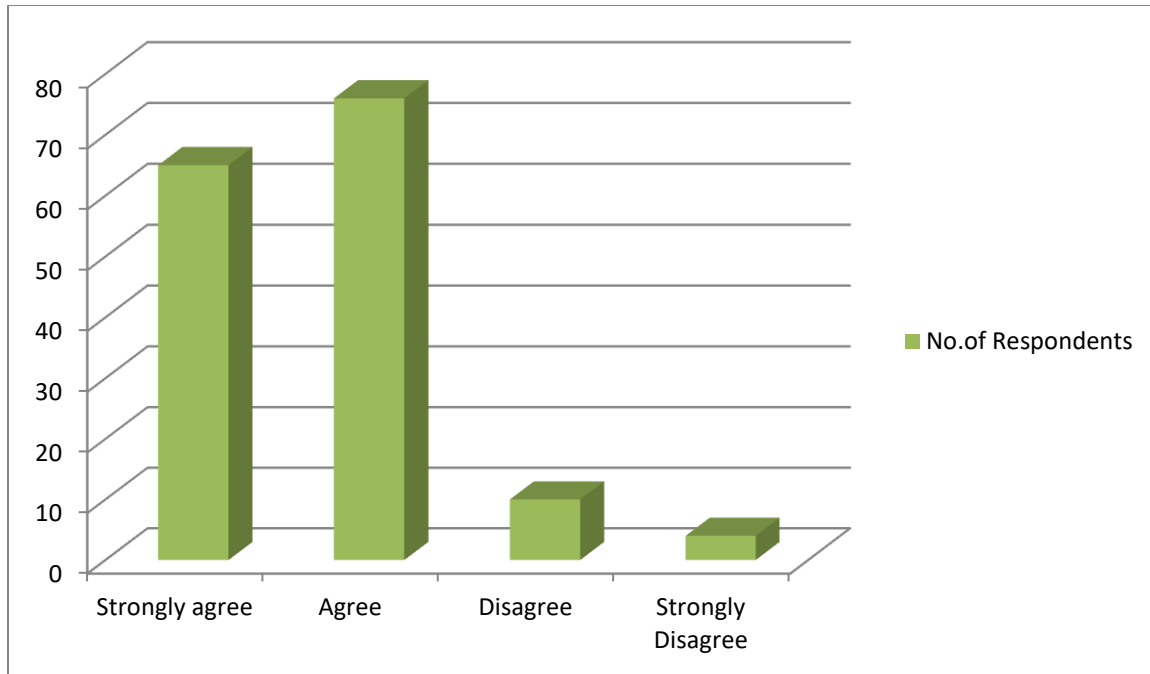


Fig 5: Opinions of the respondents on the statement ‘Having kids affect career advancement’

The staggering 49.03% have strongly agreed and 41.94% have agreed to the statement that career flow is a bit jeopardized after the birth of the kid. The societal thread of connecting child bearing and child rearing has made it difficult for women to transcend the ‘mommy track’ with ease. Mommy track has been introduced by Jennifer A. Kingson (1988) in her article at *The New York Times*, later expanded by Schwartz (1989). In her article Schwartz (1989) claimed that ‘the cost of employing women in management is greater than the cost of employing men’, the reason being the lack of understanding by the employers of the way women experience motherhood. Two categories of women workers have been created by Schwartz- ‘career primary’ and ‘career and family primary’- the first category women focus solely on their career path and the second category women anticipates a balance between their career and family. This dichotomization of the working women into two categories created a ‘furor’<sup>12</sup> amongst a section of the American women who viewed this stand as limiting i.e, women have to *choose* either job or career.

This capability to make informed choice has been described by some researchers (Moser and Clark, 2001; Husain and Dutta, 2014) as exercising ‘agency’. Agency and well being may not intersect (Sen 1999) but former has been defined as the capability of the agents to take informed decision- the decision to either toe the line or become proactive agents of change given an opportunity. According to, Husain and Dutta (2014)-‘women with poor endowments, for instance, may choose to follow a patriarchal norm so as not to disturb her marital life and affect her long run well-being. Nevertheless, such women have at least progressed further on the road to empowerment than women who blindly internalize such norms. The difference between the

two is that, given windows of opportunity, the former may attempt to adopt strategies that help her to be less marginalized and more empowered. One such window is employment'. Norms are dichotomized into those which are 'imposed upon by outside and internalized, or derived (chosen) from within through a conscious process of choice' (p. 10). It is generally seen that the decisions taken or agency exercised by the women (regardless of mode of internalization-imposed or derived) to navigate the patriarchal pitfalls, in turn, sometimes reinforce the same structure that they try to subvert or negotiate with. Even if it is acknowledged that actors are rational and are making informed decisions, but it is difficult to draw the line where societal norms stop dictating from within the individual and where individuals are active agents acting on their own without any external factors and one such cause of this is *gender socialization*, which prepares for the women for such balancing acts.

Bell Hooks (1981) in the context of black women, nevertheless relevant in this regard, emphasized, "when feminists acknowledge in one breath that black women are victimized and in the same breath emphasize their strength, they imply that though black women are oppressed they manage to circumvent the damaging impact of oppression by being strong- and that is simply not the case. They ignore the reality that *to be strong in the face of oppression is not the same as overcoming oppression, that endurance is not to be confused with transformation*". Agency aspect, thus can never be subtracted from the well being aspect for the holistic empowerment of women.

Both men and women follow a gender strategy which refers to the 'plan of action through which a person tries to solve problems at hand, given the cultural notion of gender at play' (Hochschild and Machung 1989) i.e, men draws on the belief about masculinity and women from the norms internalized at birth. The way the women experience and navigate motherhood can be adduced in this regard. Many will probably rejoice at the extended maternity leave that India has introduced, citing it as an example of growing understanding towards women, but when noticed carefully extended maternity leave again puts the onus back on the mothers to rear the child with no subsequent involvement of the fathers. Importance of the paternity leave has been stressed in many cases before as it ensures a healthy relationship and bonding between father and child and at the same time establishes child rearing as a dual responsibility<sup>13</sup>. But none of the organization in Kolkata has introduced the benefit of paternity leave without pay cut which invariably makes it difficult for men to participate in childcare even if they intend to.

Even in our study 68.37% of the respondents have confirmed their husbands not taking any leave or to put it another way the organization has no such paternity benefit scheme. Remaining 18.37% informed that their husbands took few days' leave while the rest 13.27% have never heard of paternity leave. Thus, even when given an opportunity such women, bounded by age old practice, prefer to come to terms with the existing situation rather than negotiating with the organization for more involvement of the husbands in the form of paternity leaves.

Empowerment is not a unilateral concept that entails only financial independence; it involves attitudes, dispositions, values inculcated at birth and social circumstances in which the women are situated. Allen (2009) in an article in the *Forbes*<sup>14</sup> shared an estimate where she claimed that demands for the flexible work arrangements still come from women as they are increasingly worried about balancing work and family. As a solution she doled out ‘tour of duty’ or horizontal mobility of the women within the organization from one department to the another one where the working hours are more flexible and after a certain period of time they can return to the more demanding positions they held before the maternity leave.

If child care is taken out of equation then 36.77% of the respondents reported their husbands helping them in the household chores while 27.74% said they get assistance from their husbands whenever the latter is asked to help or they get time out of their schedule (Fig 6a). When inquired about the kinds of household chores done by the men in the family, the reply varied from cooking (5.16%), cleaning (4.12%), grocery shopping (3.23%) and 34.84% reported doing most of the mentioned chores in moderation (fig 6b).

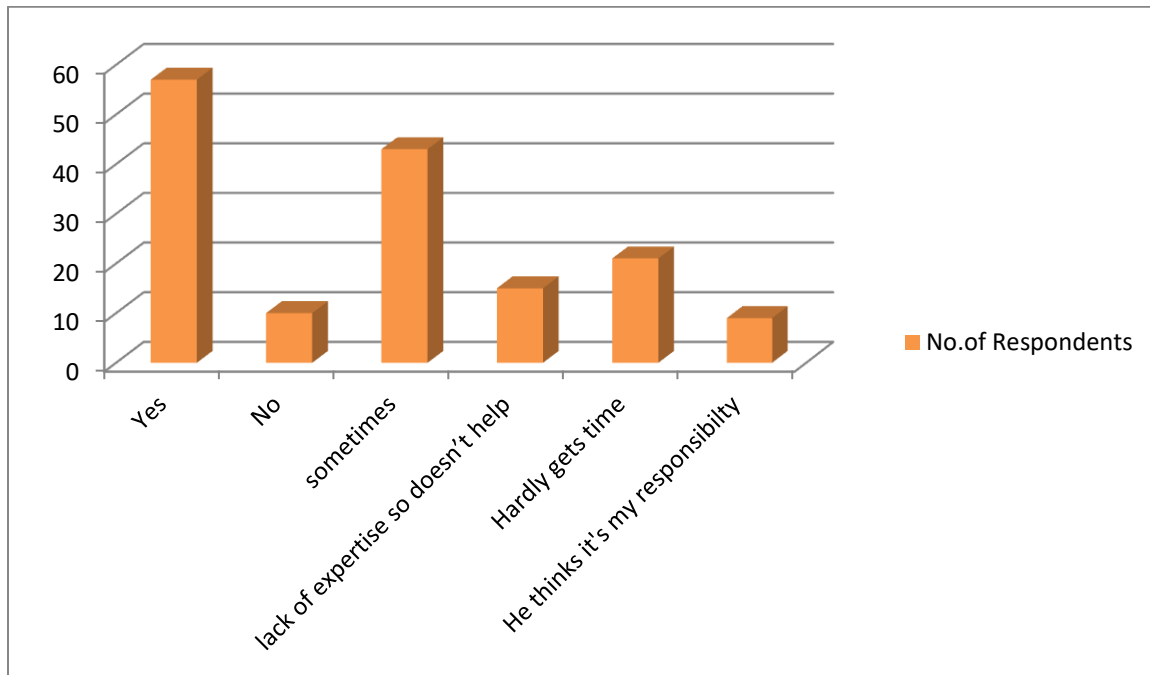


Fig 6a: Husbands and House Husbandry (Frequency of doing Chores)

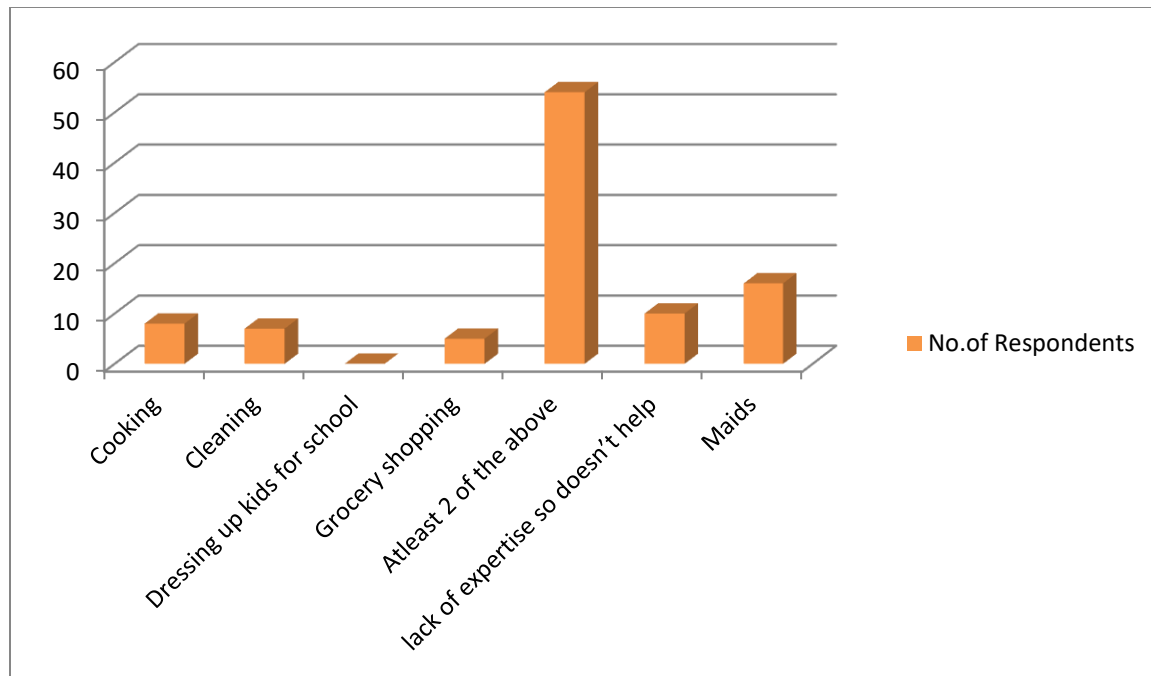


Fig 6b: Husbands and Household chores (Types of Chores)

#### 4.3: Corporate Women and In-laws:

The heartening development in the private sphere of the married women in the recent decade has been the relationship with their in-laws. The ‘patriarchal bargain’ (Kandiyoti 1988, p-275) has been struck with some success when it comes situating work within the relational threshold especially with the in-laws. Kandiyoti (1988) has branded India as a land characterized by ‘classic patriarchy’ where, ‘girls are given away in marriage at a very young age into households headed by their husband’s father. There, they are subordinate not only to all men but also to the more senior women, especially their mother-in-law’. This dual interpretation of patriarchy- older men ruling over younger men and men in general ruling over women has been stressed before (Millet 1970).

Another dimension that can be added to this level of abstraction is the transformation of the older women into the repertoire of patriarchal values, thus turning family into a sphere of power struggle between two women where one takes over from the other in the due course of time (Kandiyoti 1988; Menon 2012). The reason for this regular face off can be explained by the fact that in a private sphere the acceleration in the status of the women is an *achieved status* unlike in men where the status is *ascribed* from birth by the rule of patrimony. Thus it becomes difficult for older women to accept their successors without putting them through the same impediments or stumbling blocks that they had to overcome.



Situating work within this structure calls for effort on the part of the respondents. In many families they are the first generation IT workers, making daily negotiation with the patriarchal structure even more difficult. But the disintegration of the classic patriarchy and the gradual percolation of the globalised culture have been able to change the dynamics within the family, even if the change is nascent. When inquired about the corporate job and the opinion of the in-laws 56.77% of the respondents readily accepted their in-laws being overtly supportive about their job while 23.87% reported that their in-laws were initially against but gradually came around.

Kolkata, as a city has a reputation of being one of the promoters of traditional culture and family structure which in colloquial term known as '*bonedi bari*'<sup>15</sup> and there is an unmistakable preponderance of joint family. Joint family in India can be defined extensively on the basis of composition, number of members, fulfilling obligation towards each other, distribution of property and complexity of relationships within the household (Karve 1968; Desai 1965; Srinivas 1952; Shah 1998).

According to the study majority of the respondents reside in three generation family with their in-laws sharing the same space within the private sphere (62.58%). A relation classified by superordination and subordination is gradually giving way to a more egalitarian one or one based on mutual respect can be seen. But 23.87% of the respondents informed the existence of the well known cold war with the in-laws that prevent them from getting too close to them. Interestingly, the reason for the rise of the relationship based on mutual understanding as well as for the existing 'cold' one remains the same- employment of the women post marriage.

When asked to rate the relationship (on scale of 1-5, where 1 signifies antagonistic relationship and 5 signifies very cordial one) with their in-laws almost 41.94% rated the relationship at 3 (Fig 7). The thawing of the stereotypical image of the in-laws with which a bride used to step into their family of procreation is manifested when 56.77% of the respondents agreed to the statement that 'it is the duty of the married women to take care of the in-laws' (Fig 8). 'Agency' as stated above can be stressed when it comes to analyzing the changing dynamics of the relation of the respondents with in-laws and how successfully they are able to situate work within the family with the growing co-operation from the members. Instead to viewing the preceding generation as an impediment to work, women are choosing to engage in creative dialogue with in-laws; similarly the increasing engagement of the women in public world of work has ensured the percolation of an alternate ideology into the otherwise insulated private sphere that has brought about the change in the mindset.

As analyzed above, the existence of in-laws has proved to be functional for the respondents especially after child birth. In-laws are perceived as a source of security by the working women that has ensured this peaceful coexistence.

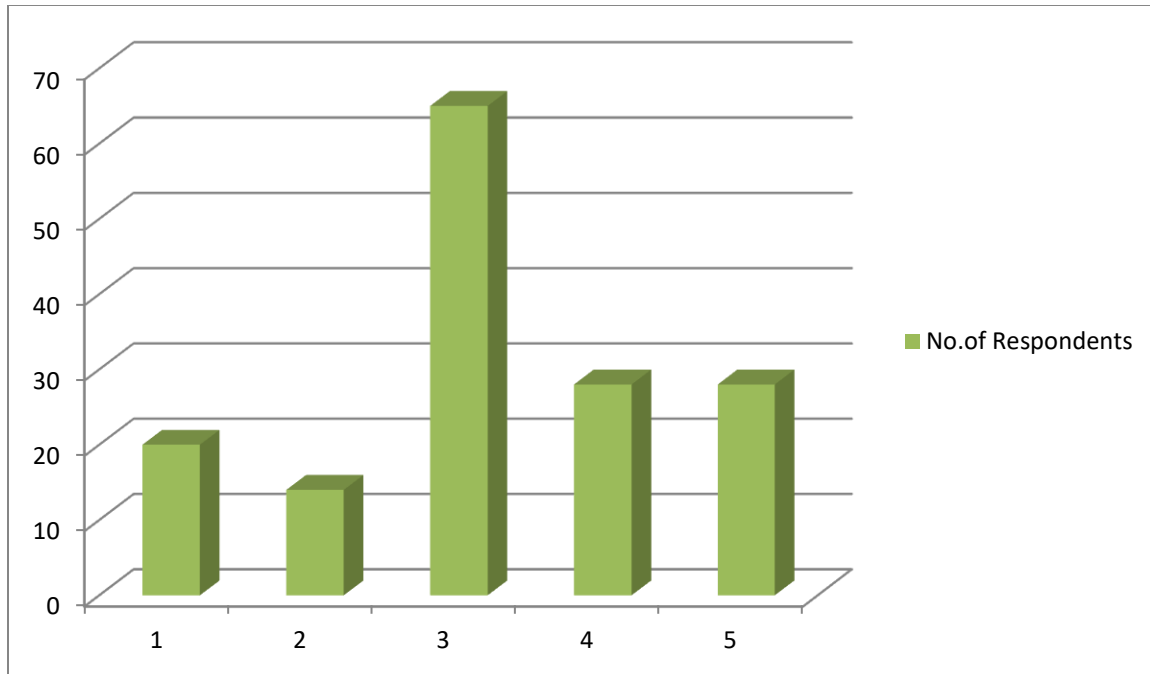


Fig 7: Rating of the relationship with the In-laws

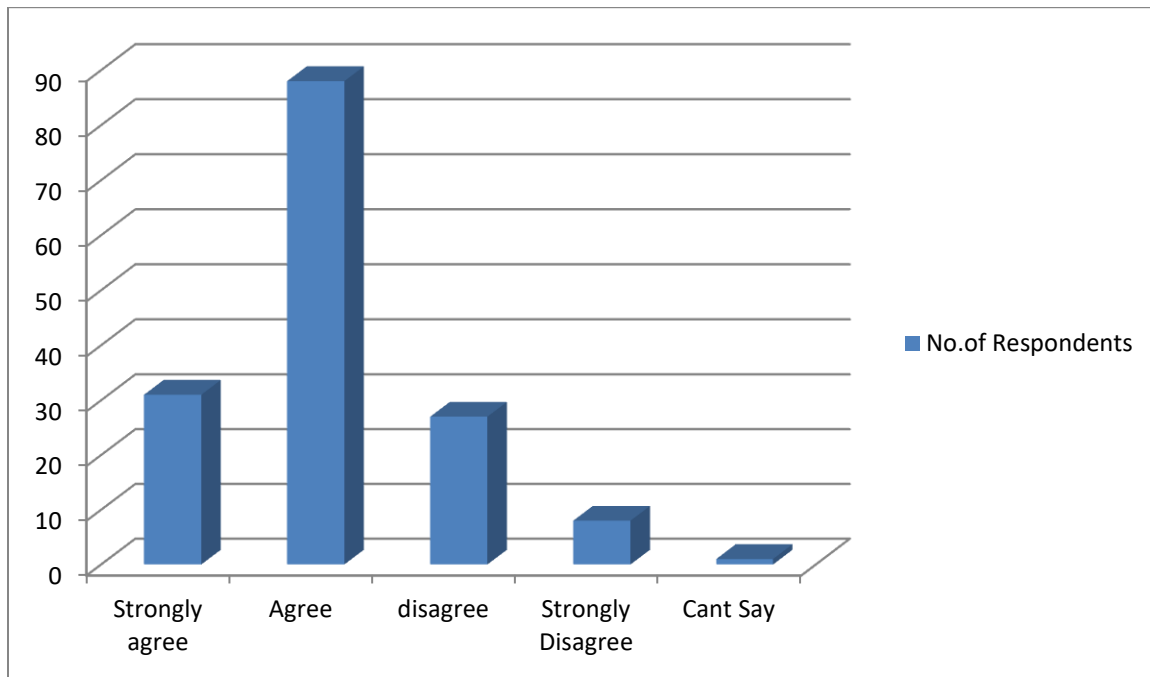


Fig 8: Opinions to the statement 'It is the duty of the married women to take care of the in-laws'

The spatial transcendence of women and situating work within the relationships thus pulls at the fragile string of balance of power within the private sphere. It has been observed many times that women suffer from a 'perceived sense of equality' and forcing the husband to participate in

household chores hampers that ‘certain balance of power that felt culturally right’, that explains why their work within the private sphere remains under reported (Braun et al., 2008; Hochschild, 1989; Klumb, Hoppmann and Staats, 2006; Ruppenner et al., 2017). Braun et al.(2008) has categorically pointed out that in comparison to time availability and resource dependence, ‘gender ideology turns out to be the most important legitimizing principle. These results contribute to the explanation of why perceptions of inequity are relatively infrequent in spite of dramatic inequalities in the household division of labour’.

The success with which women are able to situate work within the relationships can be categorized into two phases- pre- childbirth and post-childbirth. The traditional gender ideology stands in the way of egalitarian distribution of labour, so much so that many of the respondents are convinced that men are incapable of doing chores- One respondent jokingly remarked, ‘I have to redo everything after my husband does, so its better I do the work myself’. Though many couples aspire an equal division of labour at home but that equality is hard to achieve post childbirth (Bittman and Wajcman, 2000; Klumb et al., 2006).

There are certain factors that tilt the balance of power in favour of men in the private sphere in a place like Kolkata. First is the patrilocality of the residences marked by the strong presence of in-laws guarantees that even if there is division of household chores, the husband’s share of chores are basically carried out by the respondent’s mother-in-law. Secondly, the transition to motherhood ensures a certain re-socialization for women so much so that even if they have had championed the cause of equality within the household pre-childbirth, they try to plug off work post childbirth without much complain. Therefore, even if those women not subscribing to the traditional gender ideology, develop a certain ‘mommy brain’ that socializes them to give precedence to housework, especially work related to kids, even they perceive that the existing situation is far from being just. But the experience of motherhood can cease to contradict with career path with the equal participation from the husbands for which paternity leave is an imperative as well as cooperation on the part of the organization in the form of crèches and not considering maternity leave as a negative factor at the time of appraisals.

Self-appraisal of the respondents is an interesting highlight. The respondents were asked to rate themselves as a homemaker and as a corporate executive on a scale of 1 -10 (fig 9). Majority of the respondents marked them higher as a corporate worker than as a home maker, despite the fact that their maternity leave and leaves related to kids are appraised negatively by the organization. When inquired about the reason for this discriminatory self rating, the respondents sometimes came up with individualized answers. But two highly contradictory explanations can be given in this regard. Firstly, it is heartening to see women seeing corporate work as their master status and deriving their sense of identity from such productive involvement. But on the other hand, these women may have used the ‘looking glass self’ method of Cooley (Wallace and Wolf 1999) to see themselves as society sees them. According to them the mounting expectations of the family post childbirth coupled with the demands of the occupation make the women feel that they are falling

short of meeting familial deadlines and expectations even if they are doing everything to balance the two successfully.

Another explanation for this can be the Parsonian value orientation of these women that affect the pattern of their everyday interactions and decision they make (Turner 1974). Since they have been socialized to place more value to the family therefore thwarting the expectation of the members can affect them more deeply than not meeting the deadline at the office. As pointed out by Chodorow (1999) women define themselves in terms of relationships, though the engagement of the women in the corporate world have positively affected this definition of self, but guilt factor that works surreptitiously can hardly be ignored which is manifested in the poor self rating as homemakers. Whether rating is indicative of the level of satisfaction is ambiguous, but higher rating as the corporate worker is indicative of the confidence that work has instilled into them, giving them a chance to arrive at a definition of self which is somewhat subtracted from the relational connotations.

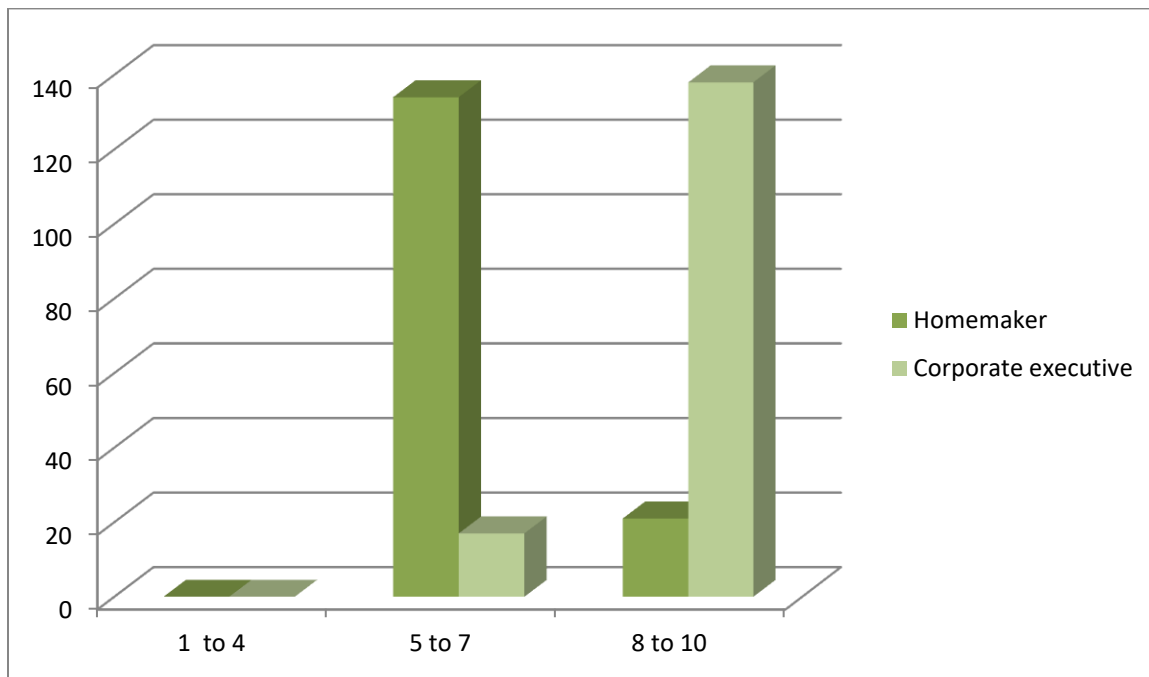


Fig 9: Respondents rating themselves as homemaker and corporate executive

### 5. Concluding Discussion:

The unprecedented entry of the women in the corporate sector has impacted their life like never before- both in the private and the public sphere. Financial independence has definitely given these women a chance to bargain with patriarchy and arrive at a point where they can maximize their satisfaction (Husain and Dutta 2014). The clear dichotomization of the married women and how their capacity to bargain with patriarchy vacillates in the pre-child birth and post-child birth

phases are clear from the data above which calls for a reiteration that child rearing is still treated as a natural corollary of the child bearing. In depth interviews revealed the existence of subtle discrimination within the organization when it comes to appraisals and delegating onsite duties. Some of the respondents also reported being the victim of harassment within the office premises and in some extreme cases they had to report the perpetrators to the human resources which got the latter either expelled or shifted to another project.

Thus the spatial transition of women is not smooth and the road is even bumpier for women with children. But there is no denying the fact that employment gives the women a chance to savour the taste of empowerment and this empowerment can be made more tangible when child birth and maternity leave will cease to be treated as a road blocks in the career on the contrary will be supported with facilities to strike the perfect balance. For that to be achieved balancing work and life should not be treated only as a feminine issue but has to be interpreted within the context of workforce management along with the productive involvement of men, especially in child care.

---

<sup>1</sup> <http://www.nasscom.in/knowledge-center/publications/it-bpm-industry-india-2017-strategic-review>.

<sup>22</sup> Deloitte India: Competitiveness: Catching the Next Wave, November, 2014 , p-4

<sup>3</sup> <https://www.bloomberquint.com/union-budget-india/2017/01/16/budget-2017-indias-missing-women-workers>.

<sup>4</sup> <https://www.thehindubusinessline.com/info-tech/more-women-join-up-it-firms-but-many-drop-out-too/article9562362.ece>.

<sup>5</sup> <https://www.outsource2india.com/india/outsourcing-to-kolkata.asp>.

<sup>6</sup> Wikipedia defines 'general caste' or 'forward caste' as consisting of groups of people who do not qualify for any affirmative action schemes operated by the government of India.

<sup>7</sup> Mean is calculated from the grouped data by using the formula  $\text{mean} = \frac{\sum fx}{N}$ , where  $fx$  is the multiplication of the midpoint of the class interval with the frequency of the class and  $N$  is the no.of cases.

<sup>8</sup> Symmetrical family is a family form identified by Peter Willmott and Michael Young during their research conducted in 1973 to find out the share of the husbands in the domestic chores and they concluded that men do participate in performing domestic duties thus giving rise to a new type of family which is more egalitarian than the traditional ones.

<sup>9</sup> Functional joint family is a concept explained by I.P Desai as a form of family which may not share the same household but they fulfill obligations towards each other.

<sup>10</sup> Game of chicken, as described by Wikipedia is a game theory set up that typically describes two players heading towards each other. If they continue to be on the same path then it will inevitably lead to them crashing into each other and if one 'swerves' and the other doesn't then the former loses and is called a 'chicken'. The solution is called Nash Equilibrium, where 'each agent chooses the strategy that maximizes her pay-off' (Husain and Dutta 2014). With social norm of adhering to the stereotype is added to this equation then Nash equilibrium in a patriarchal society settles at wife balancing the private and public spheres.

<sup>11</sup> Maternity Benefit Amendment Act has increased paid leave time upto 6 months for women working at companies with nearly 10 women. The law also puts an onus on the companies to set-up crèches for the toddlers and to introduce a decent appraisal system with work of home facilities available to women workers.

<https://www.cnbc.com/2017/03/30/india-maternity-leave-increase.html>.

---

<sup>12</sup> Tamar Lewin: 'Mommy Career Track' Sets off a Furor. <https://www.nytimes.com/1989/03/08/us/mommy-career-track-sets-off-a-furor.html>.

<sup>13</sup> The New Maternity Benefit Act Disregards the Women at the Unorganised Sector. <https://thewire.in/law/indias-new-maternity-benefits-act-criticised-as-elitist>.

<sup>14</sup> Reclaiming Mommy Track(s) by Jennifer Allen <https://www.forbes.com/2009/10/14/mommy-track-flex-time-maternity-leave-forbes-woman-leadership-children.html#7fe5aaa516d4>

<sup>15</sup> Bonedi bari is the colloquial term to describe opulent joint families in Kolkata, remnants of the zamindars during the British period. One of the examples of the Bonedi Bari is the house of the Tagores of Jorashanko. <https://www.thehindubusinessline.com/news/variety/Re-visiting-the-rich-legacy-of-Bonedi-Bari/article20512933.ece>.

### References:

1. Bittman, M., & Wajcman, J. (2000). The rush hour: The character of leisure time and gender equity. *Social forces*, 79(1), 165-189. [www.jstor.org/stable/2675568](http://www.jstor.org/stable/2675568).
2. Braun, M., Lewin-Epstein, N., Stier, H., & Baumgärtner, M. K. (2008). Perceived equity in the gendered division of household labor. *Journal of Marriage and Family*, 70(5), 1145-1156. [www.jstor.org/stable/40056333](http://www.jstor.org/stable/40056333).
3. Brizendine, L. (2006). *The female brain*. Broadway Books.
4. Chodorow, N. J. (1999). *The reproduction of mothering: Psychoanalysis and the sociology of gender*. Univ of California Press.
5. Chowdhury, F. D. (2012). *Appropriation of Wives' Income: A New Form of Dowry in Bangladesh*. York University.
6. Crocker, D., & Robeyns, I. (2009). Capability and Agency. In C. Morris (Ed.), *Amartya Sen*(Contemporary Philosophy in Focus, pp. 60-90). Cambridge: Cambridge University Press.
7. De Beauvoir, S., & Parshley, H. M. (1953). *The second sex*.
8. Desai, I. P. (1965). *Some aspects of family in Mahuva: A sociological study of jointness in a small town* (Vol. 4). Asia Pub. House.
9. Eltahawy, M. (2015). *Headscarves and hymens: Why the Middle East needs a sexual revolution*. Farrar, Straus and Giroux.
10. Folbre, N. (1994). *Who Pays for the Kids? Gender and the structures of constraint*. NewYork. Routledge.
11. Folbre,N.(1998). The Neglect of Care-Giving. *Challenge*, Vol. 41, No.5, pp-45-58. [www.jstor.org/stable/40721892](http://www.jstor.org/stable/40721892).
12. Forste, R., & Fox, K. (2012). Household labor, gender roles, and family satisfaction: A cross-national comparison. *Journal of Comparative Family Studies*, 613-631. [www.jstor.org/stable/23267837](http://www.jstor.org/stable/23267837).
13. Giddens, A. (1979). Agency, structure. In *Central problems in social theory* (pp. 49-95). Palgrave, London.

- 
14. Giddens, A. (1984). *The constitution of society: Outline of the theory of structure*. Berkeley.
  15. Hays, S. (1994). Structure and agency and the sticky problem of culture. *Sociological theory*, 57-72. [www.jstor.org/stable/202035](http://www.jstor.org/stable/202035).
  16. Herzog, H., & Yahia-Younis, T. (2007). Men's bargaining with patriarchy: The case of primaries within Hamulas in Palestinian Arab communities in Israel. *Gender & Society*, 21(4), 579-602. [www.jstor.org/stable/27640992](http://www.jstor.org/stable/27640992).
  17. Hill, E. J., Märtinson, V. K., Ferris, M., & Baker, R. Z. (2004). Beyond the mommy track: The influence of new-concept part-time work for professional women on work and family. *Journal of Family and Economic Issues*, 25(1), 121-136.
  18. Hochschild, A., & Machung, A. (2012). *The second shift: Working families and the revolution at home*. Penguin.
  19. Hochschild, A. (1997). The time bind. *WorkingUSA*, 1(2), 21-29.
  20. Hooks, B. (1981). Ain't I a Woman Black Women and Feminism.
  21. Husain, Z., Dutta, M. (2014). *Women in Kolkata's IT Sector: Satisficing between Work and Household*. Springer, New Delhi.
  22. John, Mary E (2017). The Woman Question: Reflections on Feminism and Marxism, *Economics and Political Weekly*, Vol 52, Issue no.50.
  23. Kandiyoti, D. (1988). Bargaining with patriarchy. *Gender & society*, 2(3), 274-290. [www.jstor.org/stable/190357](http://www.jstor.org/stable/190357).
  24. Kandiyoti, D. (2005). Rethinking bargaining with patriarchy. *Feminist vision of development: Gender, analysis and policy*, 135-154
  25. Kannabiran, V., & Kannabiran, K. (1991). Caste and gender: understanding dynamics of power and violence. *Economic and political weekly*, 2130-2133. [www.jstor.org/stable/41626993](http://www.jstor.org/stable/41626993).
  26. Karve, I. K. (1968). *Kinship organization in India*. Asia Publishing House.
  27. Kingson, J. A. (1988). Women in the Law Say Path Is Limited by 'Mommy Track.'. *New York Times*, 8, 1.
  28. Klumb, P., Hoppmann, C., & Staats, M. (2006). Division of labor in German dual-earner families: Testing equity theoretical hypotheses. *Journal of marriage and family*, 68(4), 870-882. [www.jstor.org/stable/4122881](http://www.jstor.org/stable/4122881).
  29. Korzec, R. (1997). Working on the mommy-track: motherhood and women lawyers. *Hastings Women's LJ*, 8, 117.
  30. Menon, N. (2004). *Recovering Subversion: Feminist Politics beyond the law*, University of Illinois Press.
  31. Menon, N. (2012). *Seeing Like a Feminist*, Penguin, UK.
  32. Miletzki, J., & Broten, N. (2017). *Development as freedom*. Macat Library.
  33. Millett, K. (2016). *Sexual politics*. Columbia University Press.
  34. Moser, C. N., & Clark, F. (Eds.). (2001). *Victims, perpetrators or actors?: Gender, armed conflict and political violence*. Palgrave Macmillan.

- 
35. Ruppner, L., Bernhardt, E., & Brandén, M. (2017). Division of housework and his and her view of housework fairness: A typology of Swedish couples. *Demographic Research*, 36, 501-524. [www.jstor.org/stable/26332139](http://www.jstor.org/stable/26332139).
  36. Shah, A. M. (1998). *The family in India: Critical essays*. Orient Blackswan.
  37. Sen, A. (1993). Capability and well-being<sup>73</sup>. *The quality of life*, 30.
  38. Srinivas, M. N. (1952). *Religion and society among the Coorgs of South India*. Asia Publishing House; Bombay; Calcutta; New Delhi; Madras; Lucknow; London; New York.
  39. Turner, J. H., Turner, P.R (1986). *The structure of sociological theory*. Wadsworth.
  40. Upadhya, C. (2007). Employment, exclusion and 'merit' in the Indian IT industry. *Economic and Political Weekly*, Vol.42, No.20, May 19-25, [www.jstor.org/stable/4419609](http://www.jstor.org/stable/4419609).
  41. Upadhya, C. (2011). Software and the 'new' middle class in the 'new India'. *Elite and everyman: The Cultural politics of the Indian middle classes*, 167-192.
  42. Wallace, R. A., & Wolf, A. (1999). *Contemporary sociological theory: Expanding the classical tradition*. Upper Saddle River, NJ: Prentice Hall.



# **IMPACT OF GLOBALISATION, PRODUCTIVITY, HEALTH AND EDUCATION ON GROWTH: AN ANALYSIS OF SELECTED ASIAN COUNTRIES USING PANEL REGRESSION METHOD**

**Surajit Sengupta**

Assistant Professor, Dept. of Commerce, Bhairab Ganguly College

**Sumana Bandyopadhyay Chatterjee**

Contractual Whole time teacher (Govt. Approved), Dept. of Commerce, Bhairab Ganguly College

## **Abstract**

This study is an empirical analysis based on secondary data published in various issues of WDI and Human Development Report of UNDP. The basic objective of this study is to explore the effect of globalization, health status, education, productivity, net capital stock, domestic credit provided by the financial sector and employment not only on GDP but also on per-capita GDP and Growth in per-capita GDP. However, for the purpose of our study we have chosen 12 countries from Asian Continent namely, India, China, Japan, Korea Republic etc. and we for the purpose of our study have chosen 20 years time length starting from 1995 upto 2014 to measure the several explanatory factors on dependent variable. We for the purpose of our econometric analysis have used panel regression method with fixed effect. Our regression result shows that TDOP, LE, DCF and NCF have positively and significantly influenced the GDP. Variables like life expectancy, total factor productivity have positive and significant influence on the Per capita GDP. But, domestic credit provided by the financial sector has negative and significant impact on the per capita GDP and the same variables i.e. life expectancy, total factor productivity have positive and significant impact on growth of per capita GDP while, domestic credit provided by the financial sector has negative and highly significant impact. Further, we have made a five yearly inter-temporal change in the contribution of agricultural, manufacturing, construction and transport sector towards GDP over the period of our study.

**Key Words : GDP, Per-Capita GDP, Globalisation, Health, Education, Panel Regression, Productivity**

# **IMPACT OF GLOBALISATION, PRODUCTIVITY, HEALTH AND EDUCATION ON GROWTH: AN ANALYSIS OF SELECTED ASIAN COUNTRIES USING PANEL REGRESSION METHOD**

**Surajit Sengupta**

Assistant Professor, Dept. of Commerce, Bhairab Ganguly College

**Sumana Bandyopadhyay Chatterjee**

Contractual Whole time teacher (Govt. Approved), Dept. of Commerce, Bhairab Ganguly College

## **I. INTRODUCTION:**

It is indubitable that, in terms of cross-border transfer of goods, services, technologies, knowledge etc global economy has gone through remarkable changes after the process of economic liberalization undertaken by many countries. The process of economic liberalization started in many countries at different periods. The impact of globalization differs across the countries and also from region to region primarily depending on the achievement of economic, political and social development coupled by macroeconomic policies. There was an uncertainty about the trade liberalization from the part of developing countries as well as under-developed countries as it seems to them the element of losing of financial independence. However, today liberalization is essential and many researches reveal that globalization has significant positive effect on the growth of developing countries, although some study go against this findings either partially or totally. Nowak and Dahal (2016) in their country specific study on evaluating the contribution of education to economic growth explores that there exists a long run relationship between education and economic growth. Globalization and economic growth set a direction towards the development of a particular country. Here development indicates development in the field of infrastructure which is more precisely denoted in terms of energy consumption. It is undeniable that with the increase in the economic growth energy consumption also increases directly almost at the same percentage in the increase in growth. But, with the increase in globalization energy consumption also increases but at a much lower rate. This is the picture of BRIC countries (Dogan & Deger, 2016). Now, it is known to all that mere import and export worldwide does not mean globalization, it has broader concept. Transfer of technology, know-how, transfer of knowledge would be beneficial if a country has high quality of human capital such that it enjoys a benefit of science and

technology. If any country does not have improved technology for production of goods and rendering services, it has two options- imitate or import of recent technology. Import makes BOP position adverse and imitation requires higher expenditure in the area of research and development. Developing and underdeveloped countries spend less in R&D coupled by lack of skilled personnel which brings about a situation where proper imitation becomes impossible. Innovation is the only way for economic growth and development. To do so the education system of the developing and underdeveloped countries must be upgraded and need oriented. Education is not only the crucial factor but also another component of human capital i.e. health which has got today sufficient attention and considered as one of the significant component for development. If the workforce of a particular country acquires higher level of education the overall productivity will be higher owing to the fact that more educated people are highly efficient in innovation. Numerous micro level studies explore that enhancement in the earnings are associated with additional years of education. (Behrman, 1990, Psacharopoulos, 1994). Moreover, if life-expectancy at birth increases and proportion of government expenditure on health as percentage of GDP decreases with safe drinking facility and toilet facility, a country enjoys benefits not only from savings in GDP but also get personnel who can work more that ultimately increases a country's output. On the other hand, presence of healthy financial sector brings positive environment in the production sector. Expansion of trade in terms of volume has contributed to technological change albeit some other factors are there that have positive impact in bringing about technological change. Stronger export promotion with lowering trade and tariffs with neighbor countries enhance the economic growth. Easy access of credit with liberal condition for repayment encourage entrepreneur to produce more or expand their business. It also encourages new entrepreneur to set up new business. In our study we have made a modest attempt to explore the effects of education, health, productivity, globalization and net capital formation on the growth of per capita real GDP measured at constant price (2005 US\$) and on the growth of GDP measured at constant price (2005 US\$) across the selected Asian countries over the period from 1990 to 2014. Several researches have explored that developing countries and underdeveloped countries remain far from productivity frontier because of absence of adequate skilled labors. These countries do not able to enjoy the fruits of globalization as these countries do not possess wealthy human capital base. Several variables may have an impact on the growth of a country like education, health, existence of strong financial sector, productivity, existing resource, globalization etc. For this reason we try to measure the impact of aforesaid variables on the rate of economic growth of some selected countries from Asia using

well known econometric technique i.e. panel regression method. So, in our study we consider mean years of schooling as a proxy for education, trade openness as a measure of globalization, domestic credit provided by the financial sector (% of GDP) as a measure of existence of healthy financial sector, productivity is considered as total factor productivity (TFP henceforth), life expectancy at birth is used as a proxy for status of health across the selected Asian countries and finally net capital formation represents country's resource base.

## **II. Review of literature**

Literature in this area is plenty and we can classify the literature on the basis of nature and focus. Some studies are there which have shown the impact of globalization on economic growth by taking into account few countries [Kilic.Cuneyt (2015); Ibrahim (2013); Ch. Muhammad et. al. (2011) Moghaddam (2012); Ying et. al. (2014)] or country specific [Feridun et. al. (2006); Konyenso (2016)]. Few are there which have measured the impact of different types of globalization on economy, society etc. [Hamdi F.M (2013); Stiglitz (2003); Suci et. al. (2015); Sharma N.K (2013)]

A study done by Kilic.Cuneyt (2015) on measuring the effect of globalization on economic growth for developing countries using panel data analysis have shown that the co-efficient of economic globalization index has significant and positive effect on growth and also political globalization is positively and significantly influence the economic growth measured in terms of GDP. This study considers 74 developing countries for the purpose of the analysis. Moreover, this study also reveals that social globalization negatively affect economic growth. In the study done by Ibrahim (2013) for measuring the impact of globalization on Africa have found that majority of the African states are not prepared for getting the fruits of globalization because for achieving the benefits of globalization there should be certain levels of capacity so that all rich and poor can effectively participate in the growth process. This study also has general opinion that globalization benefits those who have the capacity to harness but it has adverse effect to those who are not prepared for globalization. On the other hand Ch. Muhammad et. al. (2011) in their study for measuring the impact of globalization on the world economic development have found that there is a shift of job from developed to developing countries but globalization increases the level of inequalities about the job. Globalization creates new avenues for expanding trade and investment which ultimately leads to reduce the level of poverty. In the era of

globalization the MNCs get more advantages than the domestically operated organizations. Another study made by Moghaddam (2012), for establishing the relation between globalization and economic growth by taking into account few developing countries over the period from 1980 to 2010, explores that like other studies this study also establish a strong overall relationship of FDI , export and import with countries economic growth measured in terms of GDP. This study also reveals that impacts of FDI on economic growth end up in increasing of economic efficiency and more development in the field of export and import. Sa'idu et. al. (2014) in their country specific study for measuring the effect of globalization channels on economic growth reveals that for achieving meaningful growth in Nigeria openness and external reserve should be reduced coupled by encouraging FDI, external debt stock. External reserve must be utilized in investment because idle reserve is meaningless in the growth process of Nigeria. On another hand Ying et. al. (2014) in their study for the measuring the impact of globalization on economic growth using panel fully-modified OLS have found that economic globalization have a positive and highly significant influence on economic growth, albeit, the social globalization has a negative influence on economic growth. In a study done by Hamdi F.M (2013) opined that the developing countries have been affected by globalization either positively or negatively. The globalization has brought much negative impact like different values and cultures are disappeared, drug abuse, deadly diseases have spread etc. On the other hand, globalization gives a biggest opportunity for people in both developed and developing countries to sell as many goods to as many people as right now. So this can be a golden age for business, commerce and trade. Stiglitz (2003) explained that the globalization may have success or failure depending on its management. By narrowing the technological knowledge and capital gaps and increasing the volume of exports can make globalization success for a particular country. Suci et. al. (2015) explored in their study related to the overall globalization level, economic and political globalization was found to be positively influential towards economic growth. The economic globalization accounts for increase on volume of trade, FDI, portfolio investments as well as reducing barriers and taxes in international trade. On the other hand, the increase in economic growth in ASEAN demands improvement in the level of economic globalization, political globalization, quality of infrastructure, quality of education etc. In a study conducted by Sharma N.K (2013) opined that globalization reduces government's role in the economy and increases economic inter-dependency among nations. This inter-dependency could beneficial to the developed nations which have sufficient exportable capabilities with comparative low cost of production technique.

Globalization is not seems to be as beneficial to the third world countries when there are fundamental economic challenges such as massive poverty, increasing unemployment, multi-dimensional human deprivations, starvation, inequality and environmental degradation. Therefore, to get the positive effect of globalization ad to reduce negative economic impacts of globalization the governments' of the third world nations should work together with private sectors to improve supply constraints. Feridun et. al. (2006) in their country specific study, measuring the impact of globalization on economic development for the period from 1986 to 2003, explores that Nigeria being the second most corrupted country in the world can use the international market for service to improve economic governance and to achieve the accelerated economic growth it demands for integration to global economy by removing all barriers to trade and liberalizing all sectors of the economy. Ocanpo (2010) has covered another side that is the rethinking on the matter of global economic and social governance and offered a new typology of global cooperation and development which is based on three crucial objectives namely a) managing interdependence b) attaining the qualitative development of society and c) finally overcoming the asymmetries existing world economic system gradually. Konyenso (2016) in his country specific study for measuring the impact of globalization on Nigerian economy have revealed that to make globalization gainful there is a future need to integrate the international trade by diversifying export and for that a healthy business environment is required for attracting global investment.

It is evident from the above literature that majority of the studies are country specific and no study is there that consider all elements like education, health, productivity, credit availability on growth of per capita GDP and also on growth of GDP. Again, none of the above has made any study on Asian economy by selecting sample countries in a panel framework. This motivates us to undertake this study.

### **III. Data and Methodology**

This study is basically an empirical study based on secondary data available from various issued of World development indicators, PENN world table 9.0 version and human development report database. For the purpose of our study we have selected 12 countries from Asia namely China, India, Sri-Lanka, Japan, Korea Rep., Indonesia, Malaysia, Singapore, Thailand, Philippines, Israel and Tajikistan. The basic objective of this study is to access the effect of several explanatory factors like education, health, productivity, globalization and existence of financial sector on the growth of GDP and also on the growth of per-capita GDP in a panel framework. Here, mean years of schooling is used as a proxy for

the variable education, life expectancy is used to measure the status of health across the countries and trade openness measured as percentage of GDP is used in this study as a measure of globalization and domestic credit provided by the financial sector represents the variable financial strength and finally productivity is expressed as total factor productivity. All these factors are used as explanatory factors for measuring the impact of these on economic growth measured in terms of annual growth of per-capita GDP and growth in absolute GDP over the period from 1995 to 2014 separately. Moreover, in this paper we have made a modest attempt to find the trends in the contribution of agricultural sector, manufacturing sector, construction sector and transport sector to GDP. To this end we have taken five yearly inter-temporal change to reflect the trend for each country.

### **Econometric model specification**

Our econometric model will be as follows:

$$Y_{it} = \alpha_i + \beta X_{it} + \epsilon_{it}$$

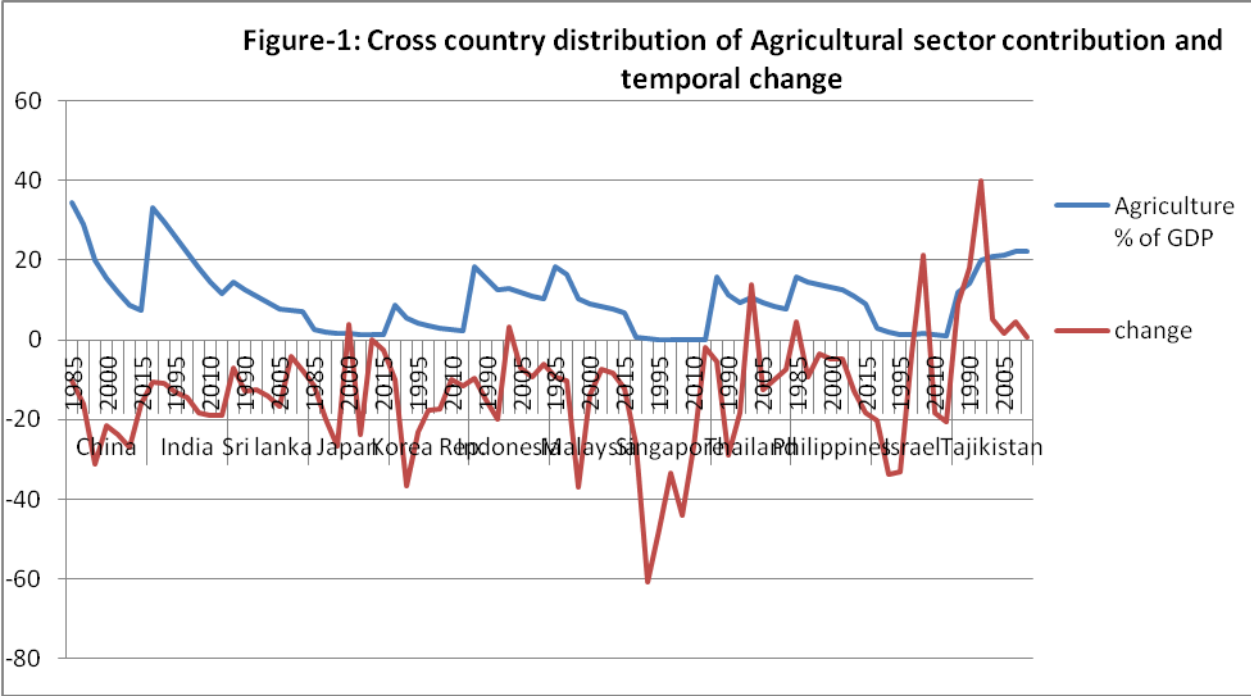
Where,  $Y_{it}$  is the dependent variable observed for individual  $i$  at time  $t$ ;

$\alpha_i$  represents unobserved time-invariant individual effect;  $X_{it}$  represents time-variant  $1 \times k$  (the number of independent variables) regressor matrix;  $\beta$  is  $k \times 1$  matrix of parameter and finally  $\epsilon_{it}$  represents error term.

### **IV. Analysis and findings**

In this section we have made a modest attempt to identify the effect of independent variables on the growth of economy in a panel framework. Our analysis of data begins with the measurement of trends in respect of contribution that a country earn from different sectors i.e. we analyse the trends in the contribution of several sectors to GDP at cross country level. Actually, agriculture depends on several things like fertility of land, rainfall, irrigation facilities, existence of good quality of seeds and technology. So, again the levels of economic development also affect the contribution of agricultural sector to GDP. Our cross country analysis regarding contribution of agricultural sector to GDP reveals that India and China are largely dependent on the agricultural sector. However, its contribution is

decreasing over the period of our study. In case of Israel the contribution of primary sector is significantly low and surprisingly in case of Tajikistan we found that the contribution of primary sector to GDP is increasing. That's why barring Tajikistan the inter-temporal change in respect of contribution of primary sector towards GDP shows negative value over the period of our study. The dispersion across the countries regarding contribution of GDP to agricultural sector is low over the period of our study. Before going to econometric analysis we first try to capture the trends in the composition of GDP taking into account five yearly temporal changes over the period of our study. It is obvious from fig-I that contribution of agricultural sector in GDP widely vary across the countries with highest figure 34% amongst all countries and the minimum contribution is found to be 1%.



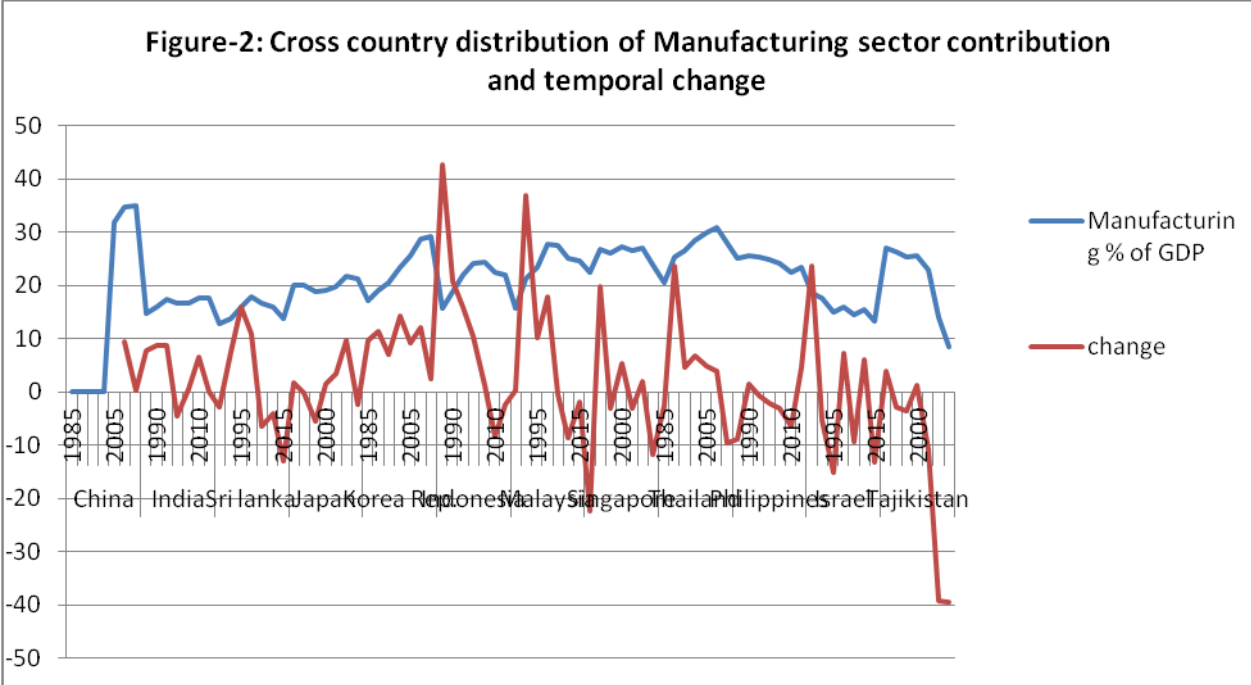
Source

**e: Authors computation from various issues of WDI**

On the other hand, contribution of manufacturing sector totally depends on the existence of modern technology, skilled labour, government patronage, political stability etc. Actually, economically developed countries have improved capital intensive technology which ultimately leads to greater earnings via getting improved quality of production. As a result in case of developed countries contribution from secondary sector to GDP is much higher. In case of Japan, Korea, Singapore, Indonesia, Thailand, Philippines etc. the contribution from manufacturing sector shows increasing trend



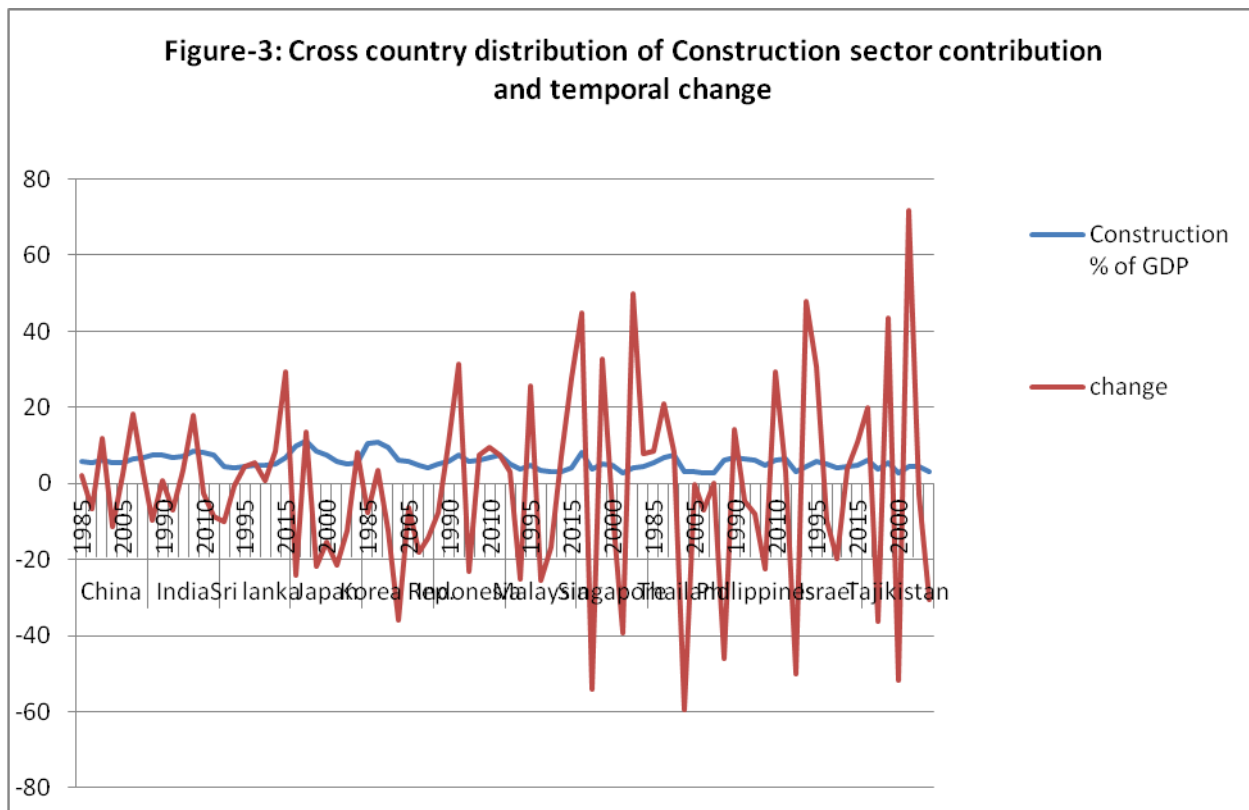
over the period of our study. China in this respect from 2005 achieves unprecedented growth in terms of manufacturing sector's contribution to GDP (see fig-2).



Source

**e: Authors computation from various issues of WDI**

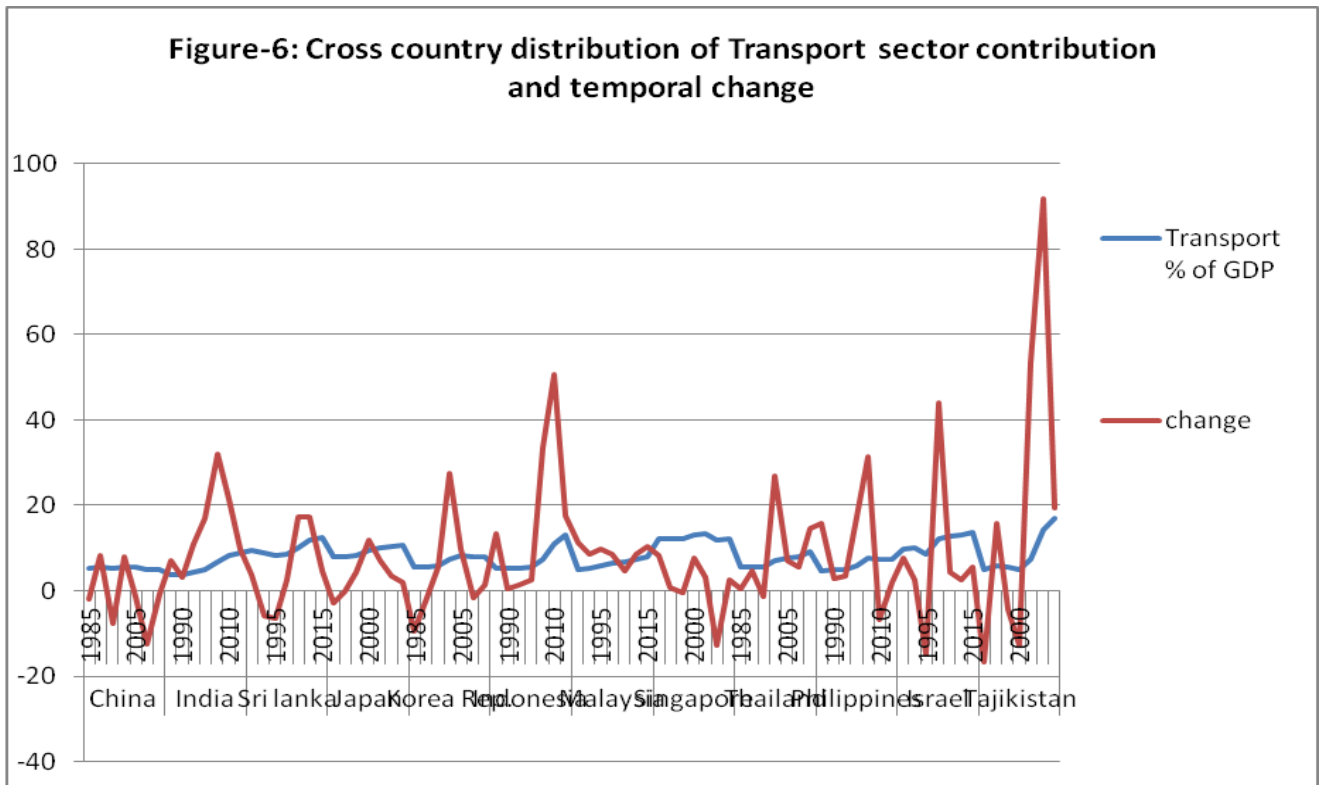
Construction sector is one of the major contributory factors in GDP. It is known to all that developed countries have already well advance in terms of establishment of buildings and other infrastructures, whereas, developing countries have indulged themselves now to develop their infrastructure targeting industrial development. However, form our cross country analysis it is found that for most of the developing countries like China, India, Indonesia, Sri Lanka, Israel the construction sector is growing moderately. On the other hand, in case of developed countries like Japan, Korea Rep. we find a declining trend in growth. The highest contribution of construction sector to GDP is found to be 11% owing to Japan and Korea Rep. for the year 1990. On the contrary, the lowest contribution of construction sector to GDP is 3% over the period of our study.



Source

**e: Authors computation from various issues of WDI**

It is well known that improved transport system is crucial for economic development and social progress. It goes without saying that well established transport sector enhances labour mobility as well as improve trading activities there by brighten the profitability position of entrepreneurs. However, the contribution of transport sector to GDP in case of our cross country analysis is depicting different pictures for different countries over the time length of our study. Though, for most of the countries this sector has shown an increasing trend but the rate of growth is different for the countries. For the countries like India, Sri Lanka, Japan, Korea Rep., Malaysia, Thailand, Philippines, the growth is found to be moderate for the transport sector. On the other hand, for the countries like Indonesia and Tajikistan the growth in this sector is very encouraging. Interestingly, in case of China and Singapore there is no significant change in transport sector over the period of our study. In this context, Singapore is the only country which has contributed uniformly highest share for transport sector to GDP over the period of our study.



**Source: Authors computation from various issues of WDI**

**Econometric analysis:**

In our Panel regression analysis we take cross section fixed effect and periodic random effects. Our panel is balanced panel. We have taken 12 countries from Asian continent and time period framed as 1995 to 2014 and thus we have 240 observations. We have taken GDP measured at 2005 constant US \$ as dependent variable and to measure the effect on GDP we have taken trade openness (TDOP), life expectancy (LE), total factor productivity (TFP), domestic credit provided by financial sector (DCF), Mean years of schooling (MYS), Net capital formation (NCF) and percentage of employment (EMP) as independent variables. We use fixed effects regression model (FEM). The term ‘fixed effects’ is due to the fact that although intersect may differ across individuals, each individual’s intersect does not vary over time that is it is time invariant. Now our panel regression equation will be as follows:

$$GDP_{it} = \alpha_i + \beta_1 TDOP_{it} + \beta_2 LE_{it} + \beta_3 TFP_{it} + \beta_4 DCF_{it} + \beta_5 MYS_{it} + \beta_6 NCF_{it} + \beta_7 EMP_{it} + \epsilon_{it} \dots (i);$$

where  $\epsilon_{it}$  is the error term.

Our panel regression analysis has shown that globalization measured in terms of TDOP, LE, DCF and NCF have positive and highly significant effect on GDP. Here, adjusted  $R^2$  is highly significant on GDP

with 99.78% and F-statistic also has shown highly significant value indicating that our model specification is statistically significant (see appendix table-1). The differences in the intercepts may be due to unique features of each country. So, in this model we can conclude that TDOP, LE, DCF and NCF have positively and significantly influenced the GDP. It implies that the globalization, health, existence of well financial system and the net stock of capital are the key determinants of GDP across the countries taken for the purpose of our study.

We again consider per capital GDP as dependent variable and the same set of variables as specified earlier are taken as independent variables for panel regression. Here also we use fixed effect regression model as follows:

$$PCGDP_{it} = \alpha_i + \beta_1 TDOP_{it} + \beta_2 LE_{it} + \beta_3 TFP_{it} + \beta_4 DCF_{it} + \beta_5 MYS_{it} + \beta_6 NCF_{it} + \beta_7 EMP_{it} + \epsilon_{it} \dots \dots \dots (ii);$$

In this case we have found that LE and TFP have positive and significant impact on PCGDP where DCF has negative and highly significant impact on PCGDP (See appendix table-II). So we can conclude that health and productivity have positive impact on per capital GDP of the countries taken for the purpose of our study. On the other hand, domestic credit provided by the financial sector has negative significant effect on PCGDP. This is quite surprising because existence of well organized financial system indicates easy availability of funds for investment. So we can plausibly conclude that growth may be jobless.

Again, taking Growth in per capita GDP (GPCGDP) as dependent variable and the same set of variables as specified earlier as independent variables our fixed effect panel regression model is considered as under:

$$GPCGDP_{it} = \alpha_i + \beta_1 TDOP_{it} + \beta_2 LE_{it} + \beta_3 TFP_{it} + \beta_4 DCF_{it} + \beta_5 MYS_{it} + \beta_6 NCF_{it} + \beta_7 EMP_{it} + \epsilon_{it} \dots \dots \dots (iii)$$

Now, in case of GPCGDP we found that TFP and LE have positive and significant impact on GPCGDP while DCF has negative and highly significant impact on GPCGDP (see appendix table –III). In this case it is evident that the levels of productivity and health have positively influenced the growth of per capital GDP where as investments across the countries may be jobless that’s why domestic credit provided by the financial sector has highly negative influence on the growth of per capita GDP.

## **V. Concluding Observations**

The following conclusions have emerged from the study:

First, the contribution of Agricultural sector to GDP has fallen over the period of our study in case of all countries barring Tajikistan. It indicates that the countries selected for the purpose of our study have got saturation position in agriculture except Tajikistan.

Second, in case of developed countries like Japan, Korea rep. etc. the contribution from manufacturing sector shows an increasing trend over the period of our study. On the other hand, in case of China, India, Israel the contributions from construction sector shows a moderate trend and in case of developed countries persistence of saturation is observed.

Third, now in service sector arena we all know that transport system has a crucial role for economic development. Our study reveals that in case of Indonesia, Tajikistan the growth rate of transport sector's contribution is quite encouraging. On the other hand, in case of India, Sri Lanka, and Malaysia the contribution of transport sector to GDP reflect moderate trends.

Forth, our econometric result reveals that the variables like trade openness, life expectancy, domestic credit provided by the financial sector and net stock of capital have positive and highly significant influence on the levels of GDP.

Fifth, the variables like life expectancy, total factor productivity have positive and significant influence on the Per capita GDP. But, domestic credit provided by the financial sector has negative and significant impact on the per capita GDP.

Finally, the same variables i.e. life expectancy, total factor productivity have positive and significant impact on growth of per capita GDP while, domestic credit provided by the financial sector has negative and highly significant impact.

## References:

1. Bhattacharya. B.B and Sakthivel.S, 1990. *Economic Reforms and Jobless Growth in India in 1990s*, Economic and Political Weekly, 12(4), 567-578.
2. Bhalla.S, 1994. *Globalization, Growth and Employment*, Har Anand Publication, New Delhi.
3. Ch. Muhammad Akram, Faheem, Bindost and Abdullah, 2011. *Globalization and its Impacts on the World Economic Development*, International Journal of Business and Social Science. Vol.2, No.23.
4. Dogan. Buhari and Deger.Osman, 2016. *How Globalization and Economic Growth affect energy consumption: Panel Data analysis in the sample of BRIC countries*, International Journal of Energy Economics and Policy. Vol.6, No.4.
5. Elshehawy.M.A, Shen.H and Ahemed.R.A, 2014. *The Factors Affecting Egypt's Exports: Evidence from the Gravity Model Analysis*, Scientific Research, Open Journal of Social Sciences, 2014, 2,138-148.
6. Feridun.Mete, Olusi.Janet.O, Folorenso. Benjamin.Ayodele, 2006. *Analyzing the impact of globalization of economic development in developing economies: An application of error correction Modeling (ECM) to Nigeria*, Applied Econometrics and International Development. Vol.6, No.3.
7. Filipovic.A, 2005. *Impact of Privatization on Economic Growth*, Issues in Political weekly, Vol.14.
8. Ghosh.B.N, 1991. *Development of Tertiary Sector*, Economic and Political Weekly, 14(9), 642-659.
9. Hamdi Fairouz Mustafa, 2013. *The impact of Globalization in the Developing Countries*, Developing Country Studies. Vol.3, No.11.
10. Hussain.M.E and Haque.M, 2016. *Impact of Economic Freedom on the Growth Rate: A Panel Data Analysis*, Economies 2016, 4, 5.
11. Ibrahim Alhaji Ahemadn, 2013. *The Impact of Globalization on Africa*, International Journal of Humanities and Social Science. Vol. 3, No.15.
12. Ijeoma. N.B, 2013. *Trade Liberalization in Nigeria: An Examination of Impact and Policy Strategies*, International Journal of Scientific and Engineering Research, 4, 1277-1283.
13. Kilic. Cuneyt, 2015. *Effects of Globalization on Economic Growth: Panel Data Analysis for Developing Countries*, Economic Insights- Trends and Challenges. Vol. IV (LXVII), No.1.

14. Kira. A.R, 2013. *The Factors Affecting Gross Domestic Product (GDP) in Developing Countries: The case of Tanzania*, European Journal of Business and Management. Vol-5, No.4.
15. Kitov. I, 2005. *GDP Growth Rate and Population*, Research Announcements, Economic Bulletin , Vol.28, No.9, pp-1.
16. Kitov. I, 2006. *Real GDP per capita in developed countries*, MPRA paper No.2738, Vol.07/0.42.
17. Konyeaso. Felix. Uchecherkwu, 2016. *Impact of Globalization on Nigerian Economy*, Pyrex Journal of Business and Finance Management Research. Vol.2, No.10.
18. Moghaddam Abdlmajid Arfali, 2012. *Globalization and Economic Growth: A case study in a few developing countries (1980-2010)*, Research in World Economy, Vol.3, No.1.
19. Nowak. A.Z and Dahal. Gangdhar, 2016, *The Contribution of Education to Economic Growth: Evidence from Nepal*, International Journal of Economic Sciences. Vol. V, No.2.
20. Pandey. A.K and Dixit. A, 2008. *Performance and Determinants of India's GDP since 1950: A Quantitative Analysis*, Journal of Global Economy, 4(2), June, 106-131.
21. Paudel.R.C, 2014. *Liberalization reform and export performance of India*, ASARC Working Paper 2014/03.
22. Sa'idu.Bello.Malam, Umark.Aminu and Yusuf.Mohammad, 2014. *How do Globalization Channels affect Economic Growth? Evidence from Nigeria*, European Scientific Journal. Vol.10, No.1.
23. Sharma. Neelam. Kumar, 2013. *Globalization and its impact in the third world economy, crossing the border*: International Journal of Interdisciplinary studies. Vol.1, Number.1.
24. Suci.Stannia.Cahaya, Asmara.Alla and Mulatsih, 2015. *The Impact of Globalization on Economic Growth of ASEAN*, International Journal of Administrative Science and Organization. Vol.22, No.2.
25. Upreti.P, 2015. *Factors Affecting Economic Growth in Developing Countries*, Major Themes in Economics, Spring 2015.
26. Ying.Yung.Hsiang, Chang.Koyin and LEE.Chen-Hsun, 2014. *The Impact of Globalization on Economic growth*, Romanian Journal of Economic Forecasting, Vol. XVII, No.2.

## Appendix table: I

Dependent Variable: GDP

Method: Panel EGLS (Period random effects)

Date: 05/25/18 Time: 12:09

Sample: 1995 2014

Periods included: 20

Cross-sections included: 12

Total panel (balanced) observations: 240

Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-6.79E+11	3.09E+11	-2.195234	0.0292
TDOP	5.95E+08	2.20E+08	2.709447	0.0073
TFP	1.05E+11	7.78E+10	1.356153	0.1764
LE	1.44E+10	4.09E+09	3.532588	0.0005
MYS	-1.34E+10	8.59E+09	-1.555822	0.1212
NCF	78195.10	1099.638	71.10984	0.0000
DCF	5.28E+08	3.05E+08	1.732589	0.0846
EMP	-9.18E+08	3.26E+09	-0.281274	0.7788

### Effects Specification

	S.D.	Rho
Cross-section fixed (dummy variables)		
Period random	0.000000	0.0000
Idiosyncratic random	6.52E+10	1.0000

### Weighted Statistics

R-squared	0.998095	Mean dependent var	8.41E+11
Adjusted R-squared	0.997939	S.D. dependent var	1.41E+12
S.E. of regression	6.41E+10	Sum squared resid	9.08E+23
F-statistic	6431.284	Durbin-Watson stat	0.534576
Prob(F-statistic)	0.000000		

### Unweighted Statistics

R-squared	0.998095	Mean dependent var	8.41E+11
Sum squared resid	9.08E+23	Durbin-Watson stat	0.534576



## Appendix table:II

Dependent Variable: PCGDP

Method: Panel EGLS (Period random effects)

Date: 05/25/18 Time: 12:20

Sample: 1995 2014

Periods included: 20

Cross-sections included: 12

Total panel (balanced) observations: 240

Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-63020.41	5880.885	-10.71614	0.0000
TDOP	28.77685	4.176522	6.890147	0.0000
TFP	1931.004	1478.204	1.306318	0.1928
MYS	1193.500	163.2871	7.309211	0.0000
LE	388.7470	77.67851	5.004563	0.0000
NCF	1.37E-05	2.09E-05	0.654896	0.5132
DCF	18.02515	5.794514	3.110726	0.0021
EMP	468.1271	62.05470	7.543781	0.0000

### Effects Specification

	S.D.	Rho
Cross-section fixed (dummy variables)		
Period random	0.000000	0.0000
Idiosyncratic random	1239.771	1.0000

### Weighted Statistics

R-squared	0.990952	Mean dependent var	9900.906
Adjusted R-squared	0.990215	S.D. dependent var	12228.72
S.E. of regression	1209.657	Sum squared resid	3.23E+08
F-statistic	1344.669	Durbin-Watson stat	0.467822
Prob(F-statistic)	0.000000		

### Unweighted Statistics

R-squared	0.990952	Mean dependent var	9900.906
Sum squared resid	3.23E+08	Durbin-Watson stat	0.467822

### Appendix table: III

Dependent Variable: GPCGDP

Method: Panel EGLS (Period random effects)

Date: 05/25/18 Time: 12:27

Sample: 1995 2014

Periods included: 20

Cross-sections included: 12

Total panel (balanced) observations: 240

Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.334884	0.172981	-1.935957	0.0541
LE	0.004588	0.002302	1.992726	0.0475
TDOP	-0.000185	0.000113	-1.632771	0.1039
TFP	0.122950	0.038994	3.153079	0.0018
MYS	-0.005156	0.004398	-1.172457	0.2423
EMP	0.001343	0.001661	0.808089	0.4199
DCF	-0.000503	0.000157	-3.195089	0.0016
NCF	-8.00E-11	5.52E-10	-0.144717	0.8851

#### Effects Specification

	S.D.	Rho
Cross-section fixed (dummy variables)		
Period random	0.011403	0.1127
Idiosyncratic random	0.032004	0.8873

#### Weighted Statistics

R-squared	0.330414	Mean dependent var	0.036570
Adjusted R-squared	0.275878	S.D. dependent var	0.038659
S.E. of regression	0.032897	Sum squared resid	0.239166
F-statistic	6.058594	Durbin-Watson stat	1.461313
Prob(F-statistic)	0.000000		

#### Unweighted Statistics

R-squared	0.310723	Mean dependent var	0.036570
Sum squared resid	0.286307	Durbin-Watson stat	1.591840

# FIELDWORK IN GEOGRAPHICAL EDUCATION: AN EMPIRICAL OVERVIEW

Tanmoy Basu <sup>\*B.Ed., 2018, Shyamangini Kundu College of Education, Salar-Kagram Road, Salar, Murshidabad, West Bengal, 742401,</sup>  
[tanmoybasu.2011@rediffmail.com](mailto:tanmoybasu.2011@rediffmail.com)

Bappa Mondal <sup>B.Ed., 2018, Union Christian Training College, Khagra, Berhampore, Murshidabad, West Bengal, 742101,</sup>  
[mondalbappaku93@gmail.com](mailto:mondalbappaku93@gmail.com)

**Abstract:** Fieldwork is the practical aspect of Geography where students go out of the classroom to study geographical features. Based on Collins English Dictionary (2018), ‘**Fieldwork**’ is the gathering of information about something in a real, natural environment, rather than in a place of study such as a laboratory or classroom practical work conducted by a researcher in the field is also called as excursion. The present study aims to obtain the necessity of field work to gather original information or data about a geographical feature or aspect. Moreover, by obtaining and acquire skills in research methods, interviewing, observation, questionnaire method, as such field work study enrich the diversifying and dynamic field of geographic education. The present study builds up a conceptual framework about the objectives, equipment and methods of field study implicated through a particular methodology from pre-field to post-field works. Besides, the paper is concluded with mentioning the necessity, problems, prospects and role of field study in geographic educational process.

**Keywords:** Fieldwork; objectives; equipment; methods; necessity.

**1. Introduction:** Fieldwork is the practical aspect of Geography where students go out of the classroom to study geographical features. In other words **fieldwork** is the gathering of information about something in a real, natural environment, rather than in a place of study such as a laboratory or classroom (Collins English Dictionary, 2018). Practical work conducted by a researcher in the field (Compact Oxford English Dictionary, 2016). Work done or firsthand observations made in the field as opposed to that done or observed in a controlled environment (The Free Dictionary, 2003-2018). According to Lai (1999:2), “Geographical fieldwork is often justified by appeal to multiple purposes, and its published aims are characterized by their diversity of explicit and implicit educational goals.” Observation techniques are the most powerful techniques related to field work. In this aspect, Yilmaz and Bilgi (2011:978) stated that, “Observation is a powerful research tool in determining, analyzing, and interpreting about prospective teachers’ individual perceptions concerning fieldworks as a teaching method.” Woolhouse, (2016:40) postulated that, “Fieldwork techniques such as recording data, use of equipment and making field observations” can help the geography students and the students of allied disciplines. The broad application of fieldwork extends from the domain of geography to the other sciences and in the area of academic and research disciplines workshop, seminar, conference, symposium as such are performed and the collected data from fieldwork are discussed in the form of paper presentation or group discussion. In this regard, Lambert and Reiss (2014:4) researched “In the sciences too, fieldwork is crucial, it can be regarded as that sub-set of practical science that is particularly valuable for introducing students to investigating the complexity and messiness of the real world.” Lambert and Reiss (2016:28) also mentioned in their study that, “The workshop itself comprised a sequence of intensive group discussions and plenary feedback, exploiting the extensive direct experience of teaching and examining provided by the participants” in the post-field situation. The fieldwork is necessary from the level of primary geographical education to higher research work with its varying dimensions which improve the skill, power of observation and practical knowledge to the both the students and teachers of primary, secondary, college and university level educational institutions.

**2. Objectives:** The study aims to

1. Build up a conceptual framework on fieldwork
2. Mention the approaches, equipment and stages related with fieldwork.

3. State about the significances of field work in geographical education with mentioning its problems and prospects.

**3. Databases and methodology:** The present study is based on mainly secondary databases and e-resources. The main methodology is that to describe the conceptual framework about fieldwork in geographical education with an empirical overview.

**4. Discussion:**

**4.1. Reasons for carrying out fieldwork:** Some reasons for carrying out fieldwork are as follows,

1. To obtain original information or data about a geographical feature or aspect. Such information may not exist in a documented form.
2. To obtain and acquire skills in research methods, such as interviewing, observation, questionnaire method, as such.
3. To obtain and acquire skills in the use of geographical equipment.
4. To provide an opportunity for relaxation from routine classroom teaching.
5. To relate what has been studied in class with real examples in the field in order to understand them better.

**4.2. Methods of gathering information in the field:** Some methods to obtain information in the fields are,

- |                 |                         |
|-----------------|-------------------------|
| 1. Observation  | 8. Questionnaire        |
| 2. Interviewing | 9. Map Reading          |
| 3. Recording    | 10. Photo reading       |
| 4. Sketching    | 11. Map Orientation     |
| 5. Measuring    | 12. Documentary Method  |
| 6. Pacing       | 13. Filling in Sketches |
| 7. Sampling     |                         |

**4.3. Modes of field studies and some approaches:** Field studies are performed in different modes, such as teacher-centered and student-centered. The main fieldwork approaches are shown in the figure 1.

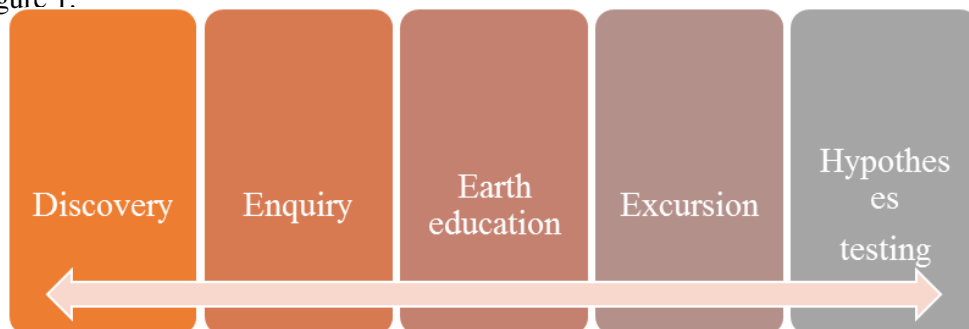


Figure 1. Some approaches of fieldwork.

<b>Traditional equipment</b>	<b>Modern equipment</b>
Stationery, Field Compass/Prismatic Compass, Binoculars/Telescopes, Leveling instruments, Maps: Cadastral/ Municipal Map, Topographical map, Excavation Tools; Measurement equipment; eather instruments. Moreover soil kit, specimen collection kits, camera, recorder and questionnaires as such.	Aerial photo, personal computers, Global Positional System (GPS) satellite imagery as such.

**4.4. Fieldwork equipment:** The following tools or equipment are used when collecting information in the field (Traditional or Modern).

Table 2. Equipment of fieldwork.

(Source: The authors' observation)

In organizing a field trip the instructor should follow some guideline like all required academic fieldtrips must be identified by the teachers as such in the course syllabus; advance instruction to the students regarding the trip should be given. The teacher or some responsible official would accompany with the students. If possible prior visit may be done by the teacher or officials to plan effectively. Guideline to students to follow the rules & instructions during the trip should be given. Parent meetings should be organized and permission must be taken in written form. Transportation by school bus or govt. vehicle should be used.

**4.5. Types of field work:** Field Work for the students of Geography are of three types, namely.

- ❖ Local trips of the duration of one or two lesson period.
- ❖ Community or neighbourhood trips of half or full day's duration.
- ❖ Tours to different places or parts of the country of several days' duration.

The other categories are:

- i. Virtual: Collection and gathering data through World Wide Web same as secondary survey. Advanced technology and satellite remote sensing techniques are used here.
- ii. Live field trips: Face to face visit with nature or natural components or humanistic components same as primary survey. It is more reliable than virtual field trip because ground truth is observed and performed here.

**4.6. Stages of fieldwork:** There are three stages of field work which include the following:

1. Preparation stage (Pre- field): In this stage basic preparation are performed by the students and teachers like gathering of pre-field knowledge, packaging, work distribution and schedule planning with the preparation of questionnaire if it is needed. This stage is like pre-experimental stage.
2. Fieldwork proper stage (During field): Observation and interviewing are performed by the students under the guidance of the teachers in the proper field area. Sometimes sample are collected in this stage. This stage is experimental stage.
3. Follow up stage (Post-field): In this post-experimental stage collected data and sample are distributed, tabulated or arrayed. Analysis and representation also be performed to build up a general content of the whole fieldwork in this stage.

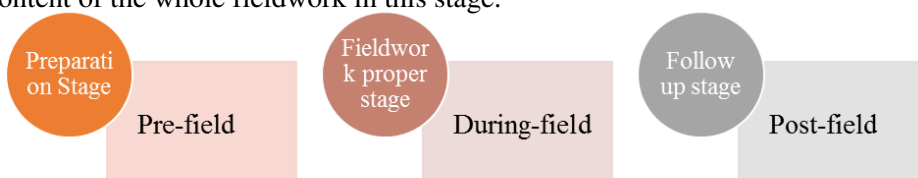
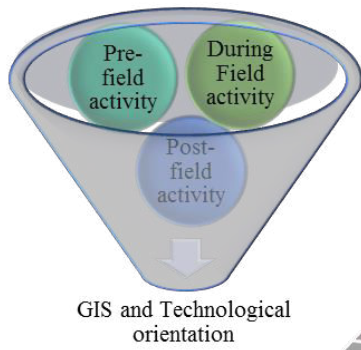


Figure 2. Stages of fieldwork.

Preparation of field work (step-by-step methodology) is performed in the pre-mentioned stages through the following steps (Figure 4).



GIS and Technological orientation

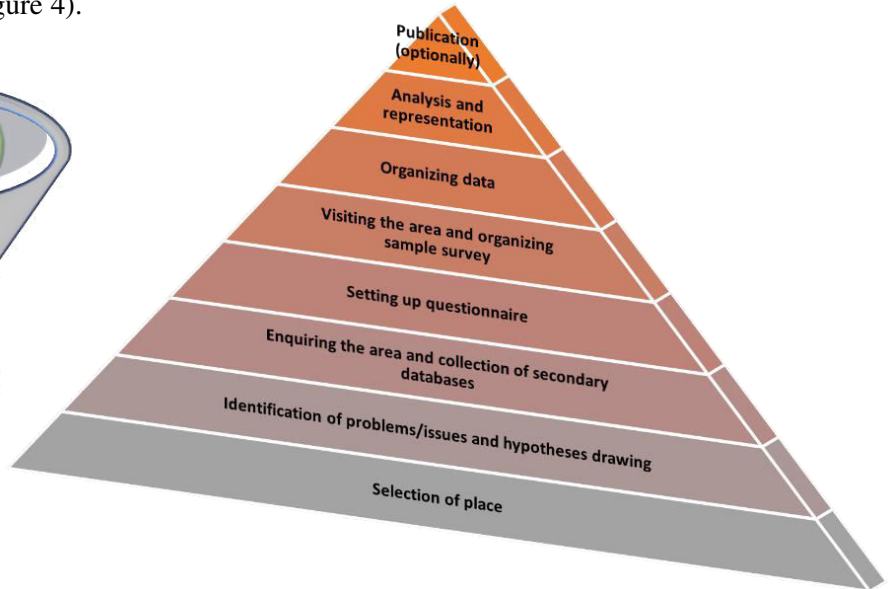


Figure 3. Information and technological orientation in fieldwork.

Figure 4. Preparation of field work (step-by-step methodology).



Figure 5. Teacher's guidance during fieldwork.



Figure 6. Student preparing land-use map.



Figure 7. Perception survey done by the student.



Figure 8. Household survey.

**4.7. Some socio-economic sites for studying fieldwork:** Some physical and socio-economic sites for studying fieldwork are mountainous and hilly plateau area, forests, 'KHOAI' (Badland/Ravine), sea-beach, river-sided place; rural area, agricultural land, urban and industrial area, educational and institutional hub as such.

Table 2. Fieldworks performed by the authors.

year	Study and Place
2017	Yulin, China*
2016	Samudragar, India”
2015	Payradanga, India
2014	Berhampur, India
2012	Krishnagar, India

\*” Only performed by the 1<sup>st</sup> author.

(Source: The authors)

**4.8. Necessity of fieldwork in geographic education:** Some importance or necessity of fieldwork in geographical education are as follows.

1. It is of great pedagogical importance as it lets students experience the geography of a particular region which theoretical texts can't do.
2. Field surveys enhance our understanding about patterns and spatial distributions, their associations and relationships at the local level.
3. Field surveys facilitate the collection of local level information that is not available through secondary sources.
4. It is very important as it helps to gather required information so as the problems under investigation is studied in depth as per the predefined objectives.
5. Field studies enable the investigator to comprehend the situation and processes in totality and at the place of their occurrence.

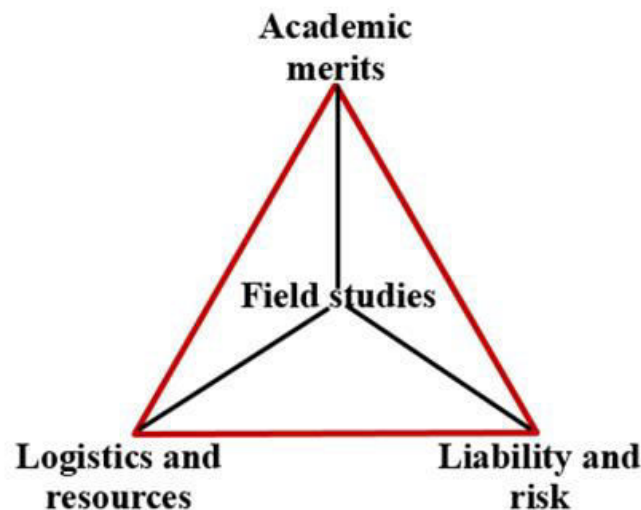


Figure 9. Triangular shape to balance the necessities and significances of fieldwork in Geographic education.

**4.9. Problems/limitations of fieldwork:** Some probable limitations occurred during field study. Those are

- a. It tends to be time consuming, that is a lot of time is taken to gather information.
- b. Language barrier may hinder communication with the local people in the area being studied.
- c. It is expensive in terms of transport, equipment and other expenses.
- d. It may be hindered by poor or bad weather conditions such as rain, fog, hot sunshine.

e. There is a risk of accidents and danger from wild animals or insects.

**5. Conclusion:** Field survey in geographic education reveals the identity of a particular area or place, or it is said that it can be applied for identifying the problems of a geographic region or earthly physical or socio-economic space. In geographic education the implementation of fieldwork certainly increase the out knowledge of the students, teachers and researchers beyond the bookish situation and the actual objectives of the study of geography can be fulfilled properly. Some integrated management systems would be applied for better performance to gather knowledge from fieldwork with solute the basic limitations and thus it is better to say about the geographic field work that *“The Earth never tires...I swear to you there are divine things more beautiful than words can tell.”- Walt Whitman (Song of the Open Road).*

## **6. References:**

Collins English Dictionary, HarperCollins Publishers Ltd., Glasgow, 13<sup>th</sup> ed., 2018.

Compact Oxford English Dictionary, Oxford University Press, United Kingdom, New ed., 2016.

Lai, K.C., Geographical Fieldwork as Experiential Learning: A Case Study of Secondary School Field Trips in Hong Kong, Submission for Degree of Doctor of Philosophy, School of Professional Studies, Faculty of Education, Queensland University of Technology, P 447, 1999, [https://eprints.qut.edu.au/36614/7/36614\\_Digitised%20Thesis.pdf](https://eprints.qut.edu.au/36614/7/36614_Digitised%20Thesis.pdf).

Lambert, D. and Reiss, M.J., The place of fieldwork in geography and science qualifications, Leading education and social research, Institute of Education, University of London, P 19, 2014, <https://www.field-studies-council.org/1252064/lambert-reiss-2014-fieldwork-report.pdf>.

Lambert, D. and Reiss, M.J., The place of fieldwork in geography qualifications, Geography, vol. 101(1), pp 28-34, 2016, [https://www.researchgate.net/publication/303496695\\_The\\_place\\_of\\_fieldwork\\_in\\_geography\\_qualifications](https://www.researchgate.net/publication/303496695_The_place_of_fieldwork_in_geography_qualifications).

The Free Dictionary, Farlex, Inc., USA, Version 4.0, 2003-2018, <https://www.thefreedictionary.com/fieldwork>.

Woolhouse, J., A Case Study of Progressing Geography Fieldwork Skills over Years 7–10, Geographical Education, vol. 29, P 45, 2016, <https://files.eric.ed.gov/fulltext/EJ1123186.pdf>.

Yilmaz, C. and Bilgi, M.G., Prospective Teachers' View on Geography Fieldworks, Educational Sciences: Theory & Practice, vol. 11(2), pp 978-983, 2011, <https://files.eric.ed.gov/fulltext/EJ927386.pdf>.



## Two Foliicolous Hyphomycetous Fungi from the State of Nagaland, India

Dr. Tarun Kumar Jana  
Asst. Professor, Department of Botany,  
St. John College, Dimapur, Nagaland-797112;  
Email ID: dr.tkjana40@yahoo.com.

### ABSTRACT

Two foliicolous hyphomycetous fungi viz. *Stenella aegles* and *Alternaria compacta* causing leaf spots on *Aegle marmelos* Corr. (Family-Rutaceae) and *Amaranthus viridis* Linn. (Family-Amaranthaceae) respectively were collected from Dimapur district of Nagaland. These are described and illustrated in this paper. The main object of this study is to identify the known and unknown pathogens which cause diseases on the economically important plants. Secondly, this study would be helpful to a fungal taxonomist to arrange the fungi in different groups under biodiversity study.

**Key words:** Hyphomyetous foliicolous fungi, *Stenella*, *Alternaria*, fungal taxonomy, Dimapur, Nagaland, India.

### INTRODUCTION

Geographically the state of Nagaland is almost triangular in shape having an area of 16,579 sq. Km. It is one of the north-eastern states of India. It lies between 93° 20' E and 95°15' E longitudes and between 25° 6' N and 27° 4' N latitudes. The great variation of climate in Nagaland with many contrast of ideal meterological condition initiates profuse and abundant growth and development of various kinds of leaf inhabiting fungi.

A review of literature ( Bilgrami *et al.*, 1979, 1981, 1991; Das *et al.*, 1990, 1991, 2003; Gupta and Prasad, 1983; Halder *et al.*, 1997, 1998; Ellis, 1971, 1976; Jamaluddin *et al.*, 2004; Kar and Ray, 1987; Kumar *et al.*, 1980; Roy and Saikia, 1989; Narain, Udit, 1983; Sarbajana and

chattopadhyay, 1991; Sarbhoy *et al.*, 1996; Singh *et al.*, 1974) reveals that good number of the workers confirmed their area of investigation in all other states of India except north eastern state specially Nagaland.

During mycological survey in 2001-2005, several interesting foliicolous hyphomycetous fungi were collected from different districts of Nagaland. This paper deals with description of two foliicolous hyphomycetous fungi viz. *Stenella aegles* and *Alternaria compacta* causing leaf spots on *Aegle marmelos* Corr. (Family-Rutaceae) and *Amaranthus viridis* Linn. (Family-Amaranthaceae) respectively.

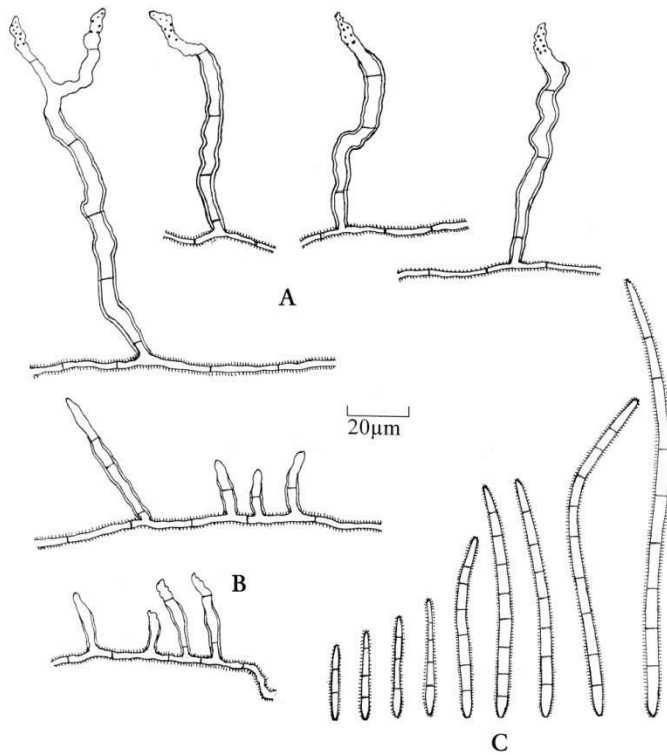
## **MATERIALS AND METHODS**

The fungi were collected from Dimapur District of Nagaland during 2001-2003. They were worked out from fresh and preserved materials and preparations were stained in lacto-phenol and cotton blue.

The fungal specimens were sent to Indian Agricultural Research Institute(IARI), New Delhi and Agharkar Research Institute (IARI), Pune, India for confirmed identification (ITCC 4646.01, ARI 6054, ). The voucher specimens are deposited in Mycological Herbarium, Post Graduate Department of Botany, Presidency college, Kolkata as Presidency College Collection (PCC 6131, PCC 6150).

## **RESULTS AND DISCUSSION**

*Stenella aegles* S. S. Prasad, *Indian Phytopath*, **20**: 253-255, 1968. (Fig. 1)



**Fig. 1. *Stenella aegles***  
 A & B. Mycelial hyphae with conidiophores  
 C. Conidia

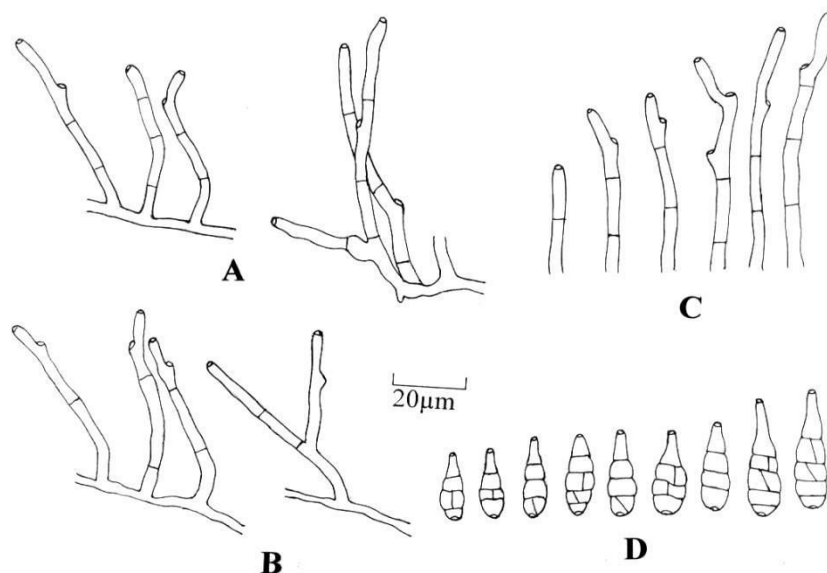
Leaf spots amphigenous, distinct, olivaceous brown, older leaves more affected, irregular, scattered, sometimes coalescent covering the major portion of the leaves. Mycelium mostly superficial; hyphae pale olivaceous brown, thin walled, septate, minutely verrucose producing conidiophores laterally and terminally, 1-3.5  $\mu\text{m}$  in wide; conidiophores developed from external mycelial hyphae, brown, paler towards the apex, straight to flexuous, smooth, unbranched or loosely branched, thick walled, sometimes geniculate near the apex, 1-6 septate, 16-125 x 3.5-8  $\mu\text{m}$ . Conidia solitary, straight or flexuous, cylindrical to narrowly obclavate, pale olivaceous, thin walled, verruculose, multiseptate (1-11), septa distinct, tip subobtuse to subacute, base obconically truncate, 25-158 x 3-5  $\mu\text{m}$ .

**Specimen examined:** On the leaves of *Aegle marmelos* Corr. (Family-Rutaceae), Tinali, Dimapur, Nagaland, India, Coll. T.K. Jana, 20.01.2002, PCC 6131, ITCC 4646.01.

Review of literature (Bilgrami *et al.*, 1979, 1981, 1991; Ellis, 1971, 1976; Das, 1990; Jana *et al.*, 2005, 2007, 2008, 2009; 2017; Halder *et al.*, 1997, 1998; Kar and Ray, 1987; Kumar, P. *et al.*, 1990; Sarbhoy *et al.*, 1996; Sarbajna, K.K. and Chattopadhyay, B.K., 1991) shows that this species has not yet been reported from the state of Nagaland. Hence it is reported for the first time from this state.

*Alternaria compacta* (Cooke) McClennan, *Phytopathology*, **34**: 229, 1944. (Fig. 2)

Synonym: *Macrosporium compactum* Cooke, *Journal of Linnean Society of London (Botany)*, **17**: 141-144, 1880.



**Fig. 2.** *Alternaria compacta*  
A & B. Mycelial hyphae with conidiophores  
C. Conidiophores  
D. Conidia

Leaf spots amphigenous, circular to subcircular, few, grayish brown, scattered, mostly marginal, sometimes necrotic, 2-7 mm in diameter. Caespituli amphigenous, non-stromatic; mycelium partly immersed and partly superficial, superficial mycelium usually branched, septate, brown, 3-6  $\mu\text{m}$  wide bearing conidiophores both laterally and terminally. Conidiophores arising usually singly, rarely in small groups of 2-3, simple or occasionally branched, straight or flexuous, multiseptate (2-5), pale to mid olivaceous or golden brown, smooth, geniculate with lateral scars, base slightly swollen, apex rounded with single conidial scar, 30-125 x 4-7  $\mu\text{m}$ . Conidia solitary or in short chain (2-3), obclavate, sometimes ellipsoidal, mid olivaceous brown, usually smooth, transverse septation 3-8, longitudinal and oblique septation 0-3, slightly constricted at the septa, beak short, unbranched, smooth, paler, indistinctly constricted at the septa, 7-25  $\mu\text{m}$  long and 5-7  $\mu\text{m}$  thick, conidia conidia with beak, 33-55 x 12-18  $\mu\text{m}$ .

**Specimen examined:** On the living leaves of *Amaranthus viridis* Linn. (Family- Amaranthaceae), Vateria colony, Dimapur, Nagaland, India, Coll. T. K. Jana, 10.04.2001, PCC 6150, ARI 6054.

Review of literature (Bilgrami *et al.*, 1978, 1981, 1991; Ellis, 1971, 1976; Jana *et al.*, 2005, 2007, 2008; 2009, 2017; Rao, V. G., 1963; Narain Udit, 1983; sarbhoy *et al.*, 1996; Sing, S. R. and Sing, R. I., 1990) shows that this species has not yet been reported from the state of Nagaland. Hence it is reported for the first time from this state.

#### **ACKNOWLEDGEMENT**

The author is grateful to Dr. H. J. Chowdhury, Joint Director, Mr. M. C. Biswas, Senior Botanist, Botanical Survey of India, Howrah, West Bengal for host identification and Dr. P. N. Chowdhury, Senior Mycologist, Division of Plant Pathology, IARI, New Delhi and Dr. (Mrs.) Alka Pande, Senior Scientist, Agharkar Research Institute (ARI), Pune, India for confirmed

identification of the fungal specimens and Head, Post Graduate Department of Botany, Presidency College, Kolkata for providing necessary facilities.

#### REFERENCES

- Benali, S., Mohamed, B., Eddine, H. J. and Neema, C. Advances of molecular markers application in plant pathology research. *Eur. J. Sci. Res.*, **50**: 110-123, 2011.
- Bilgrami, K.S., Jamaluddin, S. and Rizwi, M.A. *Fungi of India*. Part-I & II. Today and Tomorrow's Printers and Publishers, New Delhi, 1-469pp. & 1-140pp, 1979, 1981.
- Bilgrami, K.S., Jamaluddin, S. and Rizwi, M. A. *Fungi of India*. List and References. Today and Tomorrow's Printer & Publishers, New Delhi, 1-798pp, 1991.
- Das, A.K. A new species of *Stenella* Sydow. from West Bengal. *J. Mycopathol. Res.* **28** (2): 147-151, 1990.
- Das, A.K. and Chattopadhyaya, B.K. Studies on the genus *Alternaria*. Nees.. *J. Mycopathol. Res.* **29** (1): 51-56, 1991.
- Das, A.K. Two new species of *Cladosporium*. *Indian Phytopath.* **56** (2): 164-167, 2003.
- Deep, S., Sharma, P., Behera, N., Chowdappa, Pallem. Diversity in Indian Isolates of *Alternaria brassicicola*(Schwein) Wiltshire Causing Black Leaf Spot Disease in Cauliflower. **13** (4): 232-245, 2014.
- Ellis, M.B. Dematiaceous Hyphomycetes. C.M.I., Kew, Surrey, England, 1-680 pp, 1971.
- Ellis, M.B. More Dematiaceous Hyphomycetes. C.M.I., Kew, Surrey, England, 1-507 pp, 1976.
- Gupta, G.M. and Prasad, G. A new host of *Alternaria alternata*. *Indian J. Mycol. Pl. Pathol.* **13**: 359, 1983.
- Jamaluddin, Goswami, M. and Ojha, B.M. *Fungi of India (1989-2001)*. Scientific Publishers (India), Jodhpur. 1-326pp, 2004.

- Jana, T. K., Ghosh, S. N. and Das, A. K. Two New Species of *Meliola* from Nagaland. *Indian Phytopathology*, **58** (4) : 443-447, 2005.
- Jana, T. K., Ghosh, S.N. and Das, A. K. New *Meliola* Fries from Nagaland (India). *Geobios*, **32** (2-3) : 141-148, 2005.
- Jana, T. K., Ghosh, S. N. and Das, A. K. New Meliolineae from Nagaland ( India). *Geobios*, **32** (4) : 265-274, 2005.
- Jana, , T. K., Ghosh, S.N. and Das, A. K. New *Asterina* species from Nagaland. *Journal of Hill Research*, **18** (2): 86-95, 2005.
- Jana, T. K., Ghosh, S. N. and Das, A. K. Meliolaceae of Nagaland, India-1. *Journal of Mycology and Plant Pathology*, **35** (2): 330-338, 2005.
- Jana, T. K., Ghosh, S. N. and Das, A. K. Meliolaceae of Nagaland (India) – II. *Journal of Mycopathological Research*, **43** (1): 33-40, 2005.
- Jana, T. K., Ghosh, S. N. and Das, A. K. Meliolaceae of Nagaland (India) – III. *Journal of Mycopathological Research*, **43** (2): 159-166, 2005.
- Jana, T. K., Das, A. K. and Ghosh, S. N. Studies on Follicolous Fungi- 1. *Geobios*, **33** (1): 9-16, 2006.
- Jana, T. K., Ghosh, S. N. and Das, A. K. Meliolaceae of Nagaland, India- IV. *Journal of Botanical Society of Bengal*, **61** (2): 123-130, 2007.
- Jana, T. K. and Ghosh, S. N. A new species of *Meliola* from West Bengal. *Journal of Mycopathological Research*, **45** (2): 277-279, 2007.
- Jana, T. K. and Ghosh, S. N. New *Meliola* species from Jalpaiguri, West Bengal. *Geobios*, **35**: 72-74, 2008.

- Jana, T. K. and Ghosh, S. N. New *Asteridiella* Species from Darjeeling, West Bengal. *Geobios*, **35** (2-3): 167-168, 2008.
- Jana, T. K., Das, A. K. and Ghosh, S. N. Four Foliicolous Hyphomycetes, First report from Nagaland. *Journal of Mycopathological Research*, **46** (1): 101-103, 2008.
- Jana, T. K. and Ghosh, S. N. A New *Appendiculella* Species from Darjeeling, West Bengal, India. *Journal of Mycology and Plant Pathology*, **38**(1): 517-519, 2008.
- Jana, T. K. and Ghosh, S. N. A New Species of *Meliola* from West Bengal, India. *Journal of Mycology and Plant Pathology*, **38**(1): 520-522, 2008.
- Jana, T. K. and Ghosh, S. N. New Species of *Meliola* from Inia. *Indian Phytopathology*, **61**(4): 510-513, 2008.
- Jana, T. K. and Ghosh, S. N. A new variety of *Meliola mammeae* Hansf. From Darjeeling district of West Bengal. *Journal of Botanical Society of Bengal*, **62** (2): 43-44, 2008.
- Jana, T. K. and Ghosh, S. N. New *Meliola* species from West Bengal. *Journal of Mycopathological Research*, **48** (1): 153-154, 2009.
- Jana, T. K. and Ghosh, S. N. A new variety of *Asteridiella winteri* (Speg) Hansf. (Meliolaceae) from Coochbehar district of West Bengal. *Journal of Mycopathological Research*, **47**(1): 91-92, 2009.
- Jana, T. K. One new variety of *Meliola acalyphidis* Toro from Southern West Bengal. *IJIRD*, **2**(Additional): 38-40, 2017.
- Haldar, D., Das, A.K. and Chattopadhaya, B.K. Two more dematiaceous fungi from West Bengal. *J. Mycopathol. Res.*, **35** (1): 59-62, 1997.
- Halder, D., Das, A.K. and Chattopadhaya, B.K. Two foliicolous hyphomycetous fungi from West Bengal. *J. Mycopathol. Res.* **36** (1): 45-47, 1998.



- Kar, A.K. and Ray, J.B. Studies on the Genus *Stenella* Sydowa from West Bengal. *Indian J. Mycol. Res.* **25** (1): 31-34, 1987.
- Kumar, P., Shukla, D.N. and Kamal. A new species of *Stenella* from India. *Curr. Sci.* **49**: 234-235, 1980.
- Narain, Udit. Some new host records of *Alternaria tenuissima* from India. *J. Mycol. and Pl. Pathol.* **13**: 49, 1983.
- Rao, V.G. Some new host record of *Alternaria* species from India. *Mycopath et. Mycol. Appl.* **19**: 181-183, 1963.
- Roy, A.K. and Saikia, V.N. Addition to the fungus flora of Assam-III. *Journal of Research. Assam Agricultural Univ.* **10**: 82-87, 1989.
- Sarbajna, K.K. and Chattopadhyay, B.K. New *Stenella* species from India. *J. Mycopathol. Res.* **29** (1): 31-38, 1991.
- Sarbhoy, A.K., Varshney, D.K. and Agarwal, D.K. *Fungi of India (1982-1992)*. New Delhi, India, 1996.
- Singh, S.R. and Singh, N.I. *Alternaria* leaf spot of *Vicia faba*. *Indian Phytopath.* **43**: 475, 1990.

# EFFECT OF FLY ASH ON SEED GERMINATION AND SEEDLINGS GROWTH OF SOME CROP PLANTS

**Dr. Tridib Kumar Sahoo**

Dept. of Botany TamraliptaMahavidyalaya, Tamluk, Purba-Midnapore  
E-mail Id- tksahoo.botany@gmail.com

## ABSTRACT:

Fly ash is the finely divided mineral residue resulting from the combustion of powered coal in electric generating plants. Fly ash consists of inorganic, incombustible matter present in the coal that has been fused during combustion in to a glossy, amorphous structure. Depending upon the source and makeup of the coal being burned, the components of fly ash vary considerably, but all fly ash includes substantial amounts of silicon dioxide (SiO<sub>2</sub>) and Calcium Oxide (CaO), both being endemic ingredients in many coal bearing rock strata. This fly ash disposal is a major problem in and around thermal power plants. The comparative study of seed germination and seedlings growth of four crop plants are done in absolute fly ash, in pure soil and in mixed condition (soil : fly ash=1:1). The study reveals that the fly ash inhibits the seed germination but the low concentration of fly ash i.e. the mixed condition could be beneficial in improving the vigour of early seedlings, while adverse effect is found in higher concentration i.e. in absolute fly ash. This finding is encouraging the farmers for an agro-friendly cultivation and disposal of fly ash.

**Key Words :** Fly ash, Imbibitions, Seed germination, TTC.

## INTRODUCTION:

Fly ash is the notorious waste product of coal based thermal power plant known for its all effects on agriculture land, now it come as an aid for farming community. It also known as a coal combination residue resulting from the combination of powdered coal in electric generating plant. Fly ash consist of inorganic incombustible matter present in the coal that has been fused during combustion in to a glossy, amorphous structure. Indian thermal power plants are produced more than 120 million tonnes/year, which is expected to reach 175 million tonnes in near future (Vitekaryet. *al.* 2012). This would further baring to changes in land use pattern and contribute to land, water and atmosphere degradation. Use of fly ash in agriculture provides a feasible alternative for its safe disposal to improve the soil environment and change the crop productivity. More than 80 coal-fired thermal power plant install at different parts of India. In these thermal power station high amount of ash (up to 40%), sulphur (0.2 to 0.6%) and heavy metals like Hg, Mn, Cu, Pb, Ni and Fe used in huge quantity. Some of thermal power plants are used lignite coal as fuel for power generation. Similarly there are so many disturbances or problems regarding the pollution in Kolaghat Thermal Power Plant (KTPP), Mecheda, Tamluk, Purba-Medinipur, W.B., India. So this power station is going to be closed by the order of High Court of W.B., which is published in daily Bengali News paper "AISAMAY", dated- 23.02.2017.

To day fly ash disposed in wet process, at first disposed in a wet slurry then transfer to a nearby ash pond, where the ash become settled and the clear water allowed to over flow from the ash pond. Then dry fly ash is stored in open land, which degrades the soil and enhance the air and water pollution. It also effect on the human health and the plants, specially on crop growth and productivity of different crop plants. So the fly ash disposal is a major problem in an around the thermal power plants. The present study is carried out in order to find out the

effect of fly ash on seed germination and seedlings growth of crop plants.

## STUDY AREA

The fly ash samples are collect from Kolaghat Thermal Power Plant (KTPP), Mecheda, Tamluk, Purba-Medinipur, W.B., India. It is located in 22°24' N latitude and 87°54' E longitude. Soil samples are collect from the cultivated land of Tamluk, which is situated in 22°18' N latitude and 87°55' E longitude.

## AIMS & OBJECTIVES

The main aims and objectives of this study is to determined the effect of fly ash on seed germination and seedlings growth of crop plants. In this study four different types of crop plant species are selected, among them two are belongs to the family Papilionaceae of Dicotyledons and another two species belongs to the family Poaceae of Monocotyledons. The study may give a concept about the effect of fly ash to the seed germination and seedlings growth to the cultivars.

## MATERIALS

**Plant Species** --- Gram- (*Cicerarietinum*L.) and Garden Pea- (*Pisumsativum*L.) under Papilionaceae of Dicotyledons, Paddy- (*Oryza sativa* L.) and Wheat- (*Triticumsativum*L.) under Poaceae of Monocotyledons.

**Soil and fly ash samples**— Three type of samples are used, one is only soil i.e. pure soil, another is only fly ash and the third sample is mixed(Soil : Fly ash =1:1).

## METHODOLOGY

- Seed viability- It is calculated by TTC (TriphenylTetrazolium Chloride) method.
- Seed imbibitions- 10 gm of each seed is shocked in water for one hour and calculate the rate of imbibitions/gm/hr.
- Seed germination –It takes place in our laboratory, for each plant species 10 replica of earthen pots are used. In each earthen pot 120 seeds of a species are shown.

## RESULT & DISCUSSION:

Table.1.Determination of % of seed viability

Types of seeds	Total no. of seeds	No. of non-viable seeds	No. of viable seeds	% of seed viability
Gram	120	20	100	83.33 %
Garden Pea	120	48	72	60.00 %
Paddy	120	31	89	74.16 %
Wheat	120	37	83	69.16 %

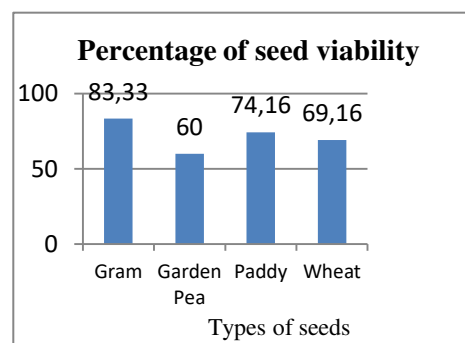


Fig.1. % of seed viability

**TABLE- II**

DETERMINATION OF % OF SEED GERMINATION (No. of seeds shown in each pot = 20 )

Type of seeds	Type of sample	Initiation of embryoids	Germination observed on	Avg. no. of seeds germinated	Total no. of seeds germinated	% of seed germination
<b>Gram</b>	<b>Soil</b>	1 <sup>st</sup> time	3 <sup>rd</sup> Day	5	5+3+3+5=16	<b>80.00%</b>
		2 <sup>nd</sup> time	4 <sup>th</sup> Day	3		
		3 <sup>rd</sup> time	5 <sup>th</sup> Day	3		
Last time		6 <sup>th</sup> Day	6			
	<b>Fly ash</b>	One time	5 <sup>th</sup> Day	1	1	<b>5.00 %</b>
	<b>Mixed</b>	1 <sup>st</sup> time	4 <sup>th</sup> Day	3	3+2+2= 7	<b>35.00 %</b>
		2 <sup>nd</sup> time	5 <sup>th</sup> Day	2		
		Last time	6 <sup>th</sup> Day	2		
<b>Garden Pea</b>	<b>Soil</b>	1 <sup>st</sup> time	4 <sup>th</sup> Day	3	3+2+3+4=12	<b>60.00%</b>
		2 <sup>nd</sup> time	5 <sup>th</sup> Day	2		
		3 <sup>rd</sup> time	7 <sup>th</sup> Day	3		
Last time		9 <sup>th</sup> Day	4			
	<b>Fly ash</b>		7 <sup>th</sup> Day	2	2	<b>10.00%</b>
	<b>Mixed</b>	1 <sup>st</sup> time	5 <sup>th</sup> Day	2	2+2+2= 6	<b>30.00 %</b>
		2 <sup>nd</sup> time	6 <sup>th</sup> Day	2		
		Last time	8 <sup>th</sup> Day	2		
<b>Paddy</b>	<b>Soil</b>	1 <sup>st</sup> time	4 <sup>th</sup> Day	5	5+3+4+1 = 13	<b>65.00%</b>
		2 <sup>nd</sup> time	5 <sup>th</sup> Day	3		
		3 <sup>rd</sup> time	8 <sup>th</sup> Day	4		
Last time		10 <sup>th</sup> Day	1			
	<b>Fly ash</b>	1 <sup>st</sup> time	6 <sup>th</sup> Day	1	2	<b>10.00%</b>
		Last time	8 <sup>th</sup> Day	1		
	<b>Mixed</b>	1 <sup>st</sup> time	5 <sup>th</sup> Day	3	3+2+3=8	<b>40.00%</b>
		2 <sup>nd</sup> time	6 <sup>th</sup> Day	2		
		Last time	8 <sup>th</sup> Day	2		
<b>Wheat</b>	<b>Soil</b>	1 <sup>st</sup> time	4 <sup>th</sup> Day	6	6+3+1= 10	<b>50.00 %</b>
		2 <sup>nd</sup> time	5 <sup>th</sup> Day	3		
		Last time	7 <sup>th</sup> Day	1		
	<b>Fly ash</b>	Nil	Nil	Nil	Nil	Nil
	<b>Mixed</b>	1 <sup>st</sup> time	5 <sup>th</sup> Day	1	1+1+1 =3	<b>15.00 %</b>
		2 <sup>nd</sup> time	7 <sup>th</sup> Day	1		
		Last time	8 <sup>th</sup> Day	1		

Table- I shows that the seed viability are 83.33%, 60.00%, 74.16% and 69.16% respectively in gram, garden pea, paddy and wheat. From Table-II it is shown that in pure soil the average seed germinations are 80% in gram, 60% in garden pea, 65% in paddy and 80% in wheat, where as these are very negligible in pure fly ash i.e. 5% in gram,10% in garden pea, as well as in paddy and no seed germination takes place in wheat. But a moderate no. of seeds germinated in mixed condition (Soil : Fly ash =1:1), like 35% in gram, 30% in garden pea, 40% in paddy and 15% in wheat. So it is seen that the highest % of seed viability found in gram (83.33%) and lowest in wheat (69.16%). The highest % of seed germination is found in gram (80.00%) in pure soil condition and no seed germination takes place in wheat at pure fly ash.

**TABLE- III**

COMPARISION OF SEED IMBIBITIONS, SEED VIABILITYAND SEED GERMINATION

Type of Seeds	% of Seed Imbibitions	% of Seed Viability	% of Seed Germination		
			Soil	Fly ash	Mixed
<b>Gram</b>	<b>49.50</b>	<b>83.33</b>	<b>80</b>	<b>05</b>	<b>35</b>
<b>Garden Pea</b>	<b>41.00</b>	<b>60.00</b>	<b>60</b>	<b>10</b>	<b>30</b>
<b>Paddy</b>	<b>34.00</b>	<b>74.16</b>	<b>65</b>	<b>10</b>	<b>40</b>
<b>Wheat</b>	<b>31.50</b>	<b>69.16</b>	<b>50</b>	<b>Nil</b>	<b>15</b>

The comparative study of seed imbibitions, seed viability and seed germination (Table- III) shows that the imbibitions, viability and germination are highest in gram seed, lowest imbibitions found in paddy seed (34%), lowest viability found in garden pea (60%), and lowest seed germination found in wheat seed (50%). The study also reveals that in all type of seeds the rate of germination are higher in pure soil and are negligible in pure fly ash. This is supported by Panda and Tikadar (2014), according to them the increase in concentration of fly ash decrease the seed germination and least germination was seen in 100% fly ash.

The main three factors like wind, light and water are more useful for seed germination. In this study it is seen that the rate of imbibitions, as well as the rate of seed germination both are higher in same type seeds (gram) and lowest in wheat, which is supports to Singhet.*al.*(1997).

**TABLE- IV**  
**COMPARATIVE STUDY OF SEEDLINGS GROWTH IN 1<sup>ST</sup> MONTH**

	AVERAGE LENGTH OF SEEDLINGS (in cm)											
	SOIL				FLY ASH				MIXED			
	1 <sup>st</sup> week	2 <sup>nd</sup> week	3 <sup>rd</sup> week	4 <sup>th</sup> week	1 <sup>st</sup> week	2 <sup>nd</sup> week	3 <sup>rd</sup> week	4 <sup>th</sup> week	1 <sup>st</sup> week	2 <sup>nd</sup> week	3 <sup>rd</sup> week	4 <sup>th</sup> week
<b>Gram</b>	2.9	4.5	8.6	<b>9.7</b>	1.7	2.1	4.3	<b>4.9</b>	3.9	8.8	12.2	<b>17.7</b>
<b>Garden Pea</b>	2.1	3.1	5.6	<b>8.9</b>	1.1	2.1	3.9	<b>4.6</b>	2.6	5.8	8.5	<b>11.6</b>
<b>Paddy</b>	3.8	5.2	7.8	<b>11.9</b>	1.3	1.9	2.8	<b>3.8</b>	5.8	10.7	11.9	<b>21.3</b>
<b>Wheat</b>	1.6	3.1	7.9	<b>9.9</b>	Nil	Nil	Nil	<b>Nil</b>	7.6	9.8	12.7	<b>18.4</b>

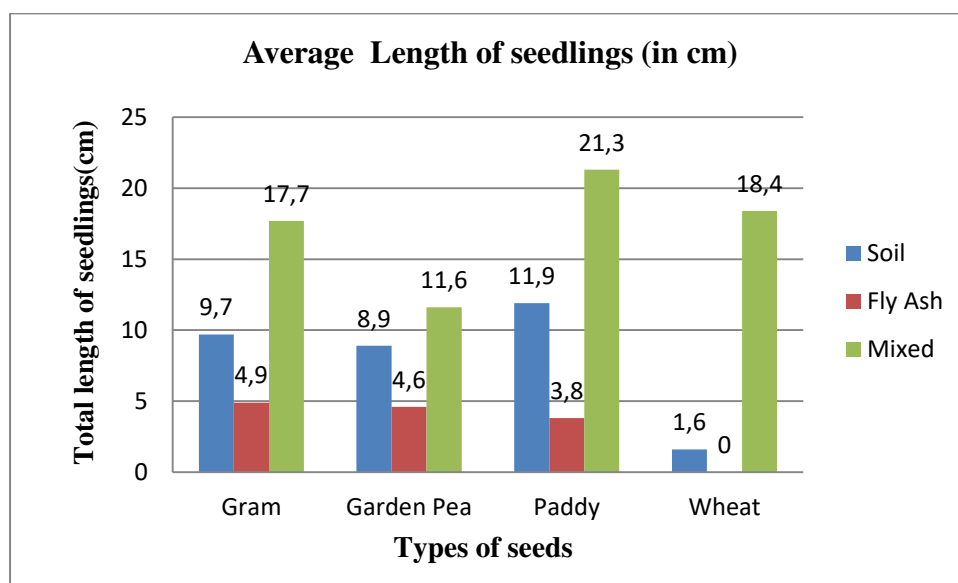


Fig.2. Growth of seedlings of different crop plants

In this study it is seen that the growth of the seedlings of all the species are higher in mixed

condition (Soil : Fly ash =1:1), where as lowest growth of seedlings are found in pure fly ash and moderate growth found in pure soil (Table-IV). It indicate that higher concentration of fly ash inhibit the growth of seedlings, where as the low concentration (here mixed condition) of fly ash increase the growth of seedlings in all the species. According to Panda and Tikadar (200014) the growth of seedlings in terms of both shoot length and root length was found to be significantly more in low concentration (30%) of fly ash, in comparison to the higher concentration of fly ash. This is also supported by Ghosh and Kumar (2010),they suggest the lower application of fly ash enhance the seed germination as well as seedlings growth, where as higher application either delayed or inhibit these processes drastically.

## **CONCLUSION**

The study reveals that the fly ash in low concentration could be beneficial in improving seed germination, early seedling growth and plant growth of different crop plants, while its adverse effect was observed at higher levels.This finding is encouraging the farmers for an agro-friendly cultivation and disposal of fly ash.

## **REFERENCE**

Ghosh, A. K. and Kumar, D. (2010), Use of fly ash in agriculture: A way to improve soil fertility and its productivity, *Asian Journal of Agricultural Research*; 4 (4), 1-14.

Panda, D. and Tikadar, P. (2014), Effect of Fly Ash Incorporation in Soil on Germination and Seedling Characteristics of Rice(*Oryzasativa L.*). *Biolife*, 2014, 2 (3); 800-807.

Singh, S. N. Kulshreshtha, Kamala and Ahmad, K. J. (1997), Impact of fly ash soil amendment on seed germination, seedling growth and metal composition of *Viciafaba L.* ,*Ecological Engineering*. Vol. -9 : (3-4), pp. 203-208.

Vitekary NHrishikesh, Talele P ashish, Mane G Ravindra, GaikwadS Varsha, Shah Vjay 2012; Fly ash based biopesticides : a comprehensive review. *IJPBS* (Vol.- 2), jan- march, 76 - 82.

## **ACKNOWLEDGEMENTS**

Iacknowledge to my guide Prof. Dr. T. K. Mishra, for his valuable guidance to complete this work. I convey my thanks to my friend Dr. Debabrata Das, Lalgarrh Govt. College, Jhargram, who always inspire me to study such type of work. Lastly thanks to my student Mr. Bikram Pal and Miss. NadiraHossain who worked in this project.

# h<sub>i</sub>wm<sub>i</sub>l HLçV çhØj«a Sefc i¶löV l<sub>i</sub>-SÉI E»je J fa-el pwçrç Cçaqip Evm L<sub>i</sub>ç”

pqL<sub>i</sub>l£ AdÉ<sub>i</sub>fL (Cçaqip çhi<sub>i</sub>N),  
çnhfçl c£ehå¥ CeçØVçVENE (L-mS), q<sub>i</sub>Js<sub>i</sub> z

## Abstract

fEQ£e J jdÉk<sup>α</sup>-N h<sub>i</sub>wm<sub>i</sub>l HLçV AeÉaj Sefc qm "i¶löV" h<sub>i</sub> "i¶çl-nËù" l<sub>i</sub>SÉ z HçV NçWa q-uçRm q<sub>i</sub>Js<sub>i</sub>, ýNm£ J fshÑ -jçce£fçl -Sm<sub>i</sub>l çLR¥ çLR¥ A'm çe-u z a-h i¶çl-nËù l<sub>i</sub>SÉ L-h fEçaçùa q-uçRm, a<sub>i</sub>l L<sub>i</sub>m pçWL i<sub>i</sub>-h çeeÑu Ll<sub>i</sub> k<sub>i</sub>u e<sub>i</sub> z j-e Ll<sub>i</sub> qu, f<sub>i</sub>m l<sub>i</sub>S<sub>i</sub>-cl AiÉ¥cu L<sub>i</sub>-m çLwh<sub>i</sub> a<sub>i</sub>l B-N -N±sl<sub>i</sub>S nn<sub>i</sub>-¹ Bj-m fEçaçùa q-uçRmz 913 M££x S°eL d£hl n<sub>i</sub>pe LaÑ<sub>i</sub>-L fl<sub>i</sub>çSa L-l L<sub>i</sub>uÙÙ hwn£u f<sub>i</sub>ä¥ç<sub>i</sub>p i¶lö-VI l<sub>i</sub>S<sub>i</sub> qe z a-h f<sub>i</sub>ä¥ç<sub>i</sub>-pl q£ehm hwnd-ll q<sub>i</sub>a -b-L l<sub>i</sub>SÉçV AçdL<sub>i</sub>l L-le nçei<sub>i</sub>PI e<sub>i</sub>-j S°eL -S-m h<sub>i</sub> h<sub>i</sub>Nc£ l<sub>i</sub>S<sub>i</sub> z a<sub>i</sub>l l<sub>i</sub>Sd<sub>i</sub>e£ qu ýNm£ -Sm<sub>i</sub>l çcmL<sub>i</sub>p NË<sub>i</sub>j z flhaÑ£ L<sub>i</sub>-m nçei<sub>i</sub>PI-L fl<sub>i</sub>çSa L-l i¶lö-V hË<sub>i</sub>ßZ hw-nl fEçau<sub>i</sub> L-le Qa¶<sub>i</sub>jee çe-u<sub>i</sub>N£ z Qa¶<sub>i</sub>jee çcmL<sub>i</sub>p -b-L l<sub>i</sub>Sd<sub>i</sub>e£ ÙÙ<sub>i</sub>e<sub>i</sub>ç<sup>1</sup>çla L-le Nsih<sub>i</sub>e£fçl z Qa¶<sub>i</sub>je-el -L<sub>i</sub>e Eš<sub>i</sub>çdL<sub>i</sub>l e<sub>i</sub> b<sub>i</sub>L<sub>i</sub>u S<sub>i</sub>j<sub>i</sub>a<sub>i</sub> pç<sub>i</sub>e<sup>3</sup>/<sub>4</sub>ç i¶lö-VI l<sub>i</sub>S<sub>i</sub> qe z a-h HC hw-nl jçqm<sub>i</sub> n<sub>i</sub>pL l<sub>i</sub>Z£

ihn¹£ l<sub>i</sub>SÉ fçlQ<sub>i</sub>me<sub>i</sub>l -r-œ cra<sub>i</sub>l fçlQu -ce z HjeçL çcõ£l h<sub>i</sub>cn<sub>i</sub> BLh-ll -pe<sub>i</sub>fçal p-%o l<sub>i</sub>Z£ HL<sub>i</sub>çdL<sub>i</sub>l k<sup>α</sup>-Ü Aha£ZÑ qe z l<sub>i</sub>Z£l h£l-aÆ jç± q-u BLhl ay<sub>i</sub>-L "l<sub>i</sub>u h<sub>i</sub>çOe£" pç<sub>i</sub>j<sub>i</sub>e fEç<sub>i</sub>e L-le z a-h HC hw-nl n<sub>i</sub>pL ele<sub>i</sub>l<sub>i</sub>u-el l<sub>i</sub>SaÆ L<sub>i</sub>-m çLwh<sub>i</sub> ay<sub>i</sub>l j<sup>a</sup>aÉ¥l çWL f-IC 1713 M££ø<sub>i</sub>-ë hdÑ<sub>i</sub>j<sub>i</sub>e l<sub>i</sub>S L£çañQ<sup>3</sup>/<sub>4</sub>çÊ hmfshÑL i¶löV flNe<sub>i</sub> cMm L-le z g-m i¶löV l<sub>i</sub>SÉ d£-l d£-l L<sub>i</sub>-ml N-iÑ çhm£e q-u k<sub>i</sub>uz haÑ<sub>i</sub>j<sub>i</sub>-e HC l<sub>i</sub>-SÉI p<sub>i</sub>r£ çq<sub>i</sub>-h çV-L B-R Nsih<sub>i</sub>e£fçl-ll HL fE<sub>i</sub>Q£e cšNÑ J h<sup>a</sup>qv -N<sub>i</sub>f£e<sub>i</sub>b çSEI jç<sup>3</sup>/<sub>4</sub>ç-ll dÆ<sub>i</sub>wp<sub>i</sub>h-noz

-Lhm l<sub>i</sub>S°eçal -r-œ eu ; çnr<sub>i</sub>, pwú«çla J djÑ£u S£h-eJ HC l<sub>i</sub>-SÉI Ahç<sub>i</sub>e Aeü£L<sub>i</sub>kÑ zHM<sub>i</sub>eL<sub>i</sub>l l<sub>i</sub>S<sub>i</sub>-cl f<sup>a</sup>ù-f<sub>i</sub>oLa<sub>i</sub>u h<sub>y</sub> çnr<sub>i</sub> fEçau<sub>i</sub>je J Qa¶xØf<sub>i</sub>W£ N-s E-WçRm z çhœ²jn£m<sub>i</sub> j<sub>i</sub>q<sub>i</sub>çhq<sub>i</sub>-ll AdÉfL nË£dl<sub>i</sub>Q<sub>i</sub>kÑ, i<sub>i</sub>laQ<sup>3</sup>/<sub>4</sub>çÊ l<sub>i</sub>u...e<sub>i</sub>l fE<sub>i</sub>çM fçääNe HC l<sub>i</sub>SÉ-L çnr<sub>i</sub> J pwú«çal çcL -b-L p<sub>i</sub>ªÜ L-lçRmz HM<sub>i</sub>-e hË<sub>i</sub>ßZ l<sub>i</sub>S<sub>i</sub>-cl q<sub>i</sub>a d-l °nh, n<sub>i</sub>š², N<sub>i</sub>jeaÉ, °ho·h fEi«çla d-jÑl pjeÄu O-VçRm z HC l<sub>i</sub>l<sub>i</sub> Açieh J Ec<sub>i</sub>l fE-Qø<sub>i</sub> AeÉœ -Q<sub>i</sub>-M fs<sub>i</sub> jçpçLm z HC<sub>i</sub>-h i¶löV l<sub>i</sub>SÉ l<sub>i</sub>S°eçal -r-œ -k<sub>i</sub>e ...l<sub>i</sub>aÆfšZÑ i<sub>i</sub>ç<sub>i</sub>L<sub>i</sub> f<sub>i</sub>me L-lçRm ; -ajçe p<sub>i</sub>j<sub>i</sub>çSL, p<sub>i</sub>wú«çal J djÑ£u -r-œ L«çla-aÆl ü<sub>i</sub>rl -l-MçRm z

pšQLnë x- Sefc, i¶löV l<sub>i</sub>SÉ, nçei<sub>i</sub>PI Qa¶<sub>i</sub>jee çe-u<sub>i</sub>N£, l<sub>i</sub>uh<sub>i</sub>çOe£ z

pççfE<sub>i</sub>Q£e L<sub>i</sub>m -b-LC i<sub>i</sub>lah-oÑl h<sup>α</sup>-L fEçaçùa q-u-R e<sub>i</sub>e<sub>i</sub> l<sub>i</sub>Shwn J p<sub>i</sub>j<sub>i</sub>E<sub>i</sub>SÉ; -k<sub>i</sub>e fE<sub>i</sub>Q£e L<sub>i</sub>-m e<sup>3</sup>/<sub>4</sub>ç, -j±kÑ, L¥o<sub>i</sub>e, p<sub>i</sub>ah<sub>i</sub>qe, ...ç fEi«çla ; jdÉk<sup>α</sup>-N pççma<sub>i</sub>e£ J jçOm p<sub>i</sub>j<sub>i</sub>E<sub>i</sub>SÉ z i<sub>i</sub>lah-oÑl phÑ-no p<sub>i</sub>j<sub>i</sub>E<sub>i</sub>SÉ qm

ϕhĒϕVn pijĒiSÉ z HC pijĒiSÉ ...ϕml E>je-fae, l<sub>i</sub>SL<sub>i</sub>ϕqeĒ, ϕnr<sub>i</sub>-pwú«ϕa, ŪŪjfaÉ-i<sub>j</sub>úkŅÉ fĒi«ϕa ϕe-u B-m<sub>i</sub>Qe<sub>j</sub> J N-hoe<sub>i</sub>l A<sub>z</sub><sup>1</sup> -eC z Aeαpá<sub>i</sub>-e E-W H-p-R e<sub>j</sub>e<sub>j</sub>e AS<sub>j</sub>e<sub>j</sub> abÉ, NϕWa q-u-R Cϕaq<sub>i</sub>p z HC ph phŅ<sub>i</sub>l<sub>a</sub>Ēu pijĒiSÉ R<sub>i</sub>s<sub>j</sub>J i<sub>j</sub>lah-oŅl hα-L B'ϕmL i<sub>j</sub>-hJ ϕhϕiæ S<sub>j</sub>uN<sub>i</sub>u ϕhϕrϕ i<sub>j</sub>-h fĒϕaϕàa q-uϕRm e<sub>j</sub>e<sub>j</sub>e -R<sub>i</sub>V -R<sub>i</sub>V l<sub>i</sub>SÉz HC ph rϕâ l<sub>i</sub>SÉ h<sub>j</sub> Sefc ...ϕm LM-e<sub>j</sub> h<sup>a</sup>qv pijĒi-SÉl j-dÉ ū<sub>j</sub>dĒei<sub>j</sub>-h rϕâ l<sub>i</sub>SÉ fĒϕaù<sub>j</sub> L-lϕRm, Bh<sub>i</sub>l LM-e<sub>j</sub>h<sub>j</sub> Ll<sub>c</sub> l<sub>i</sub>SÉ ϕqp<sub>i</sub>-h -b-L ϕN-uϕRm z HC p<sub>j</sub>Ū<sup>1</sup> rϕâ Sefc ...ϕmJ °alĒ LlϕRm Cϕaq<sub>i</sub>p z ϕnr<sub>i</sub> J pwú«ϕa-aJ H-cl Ahc<sub>j</sub>e L<sub>j</sub> ϕRm e<sub>j</sub> z ϕL<sub>z</sub><sup>1</sup>ϕ H...ϕm -p<sub>i</sub>-h B-m<sub>i</sub>ϕQa quϕe z h<sup>a</sup>qšl -r-œ fĒϕaù<sub>j</sub> f<sub>j</sub>uϕe z HL fĒL<sub>j</sub>l hĒ<sub>j</sub>aÉC l-u -N-R z Hl<sub>j</sub>C HLϕV ϕhØj«ϕal Aam p<sub>j</sub>α-â aϕm-u k<sub>j</sub>Ju<sub>j</sub> rϕâ l<sub>i</sub>SÉ qm h<sub>j</sub>wm<sub>j</sub>l "iϕlöv h<sub>j</sub> iϕl-nĒù l<sub>i</sub>SÉ'z HC fĒh-â HC Sef-cl E>je J fa-el Cϕaq<sub>i</sub>p aϕ-m dl<sub>j</sub> q-u-R z -pC p-% a<sub>j</sub>l ϕnr<sub>i</sub> J pwú«ϕal ϕcLϕVl Efl<sub>j</sub> B-m<sub>i</sub>Lf<sub>j</sub>a Ll<sub>j</sub> qm z

Cϕaq<sub>i</sub>p ϕhØj«a "iϕlöv", "iϕl-nĒù" h<sub>j</sub> "iϕl-nĒùĒ" l<sub>i</sub>SÉ pϕf-LŅ S<sub>j</sub>e<sub>j</sub>l Ef<sub>j</sub>c<sub>j</sub>e -k<sub>j</sub>e AfĒaϕm, -ajϕe CaxŪ<sup>1</sup>a ϕhϕrϕ z ahαJ -j<sub>j</sub>V<sub>j</sub>αϕV<sub>i</sub>-h fĒ<sub>j</sub>ϕ a-bÉl ϕiϕš-a iϕlöv l<sub>i</sub>-SÉl Cϕaq<sub>i</sub>p NWe pñh z f<sub>j</sub>mkα-N fĒϕaϕàa ϕhnÄϕhcÉ<sub>j</sub>mu ϕhoe<sup>2</sup>jnĒm<sub>j</sub> j<sub>j</sub>q<sub>j</sub>ϕh<sub>j</sub>q<sub>i</sub>-ll ū<sub>j</sub>e<sub>j</sub>deÉ AdÉ<sub>j</sub>fL nĒĒdl<sub>j</sub>Q<sub>i</sub>-kŅl "eÉ<sub>j</sub>uL<sup>3</sup>/<sub>4</sub>cmĒ' NĒ-ĵŪ fĒbj "iϕl-nĒù" ŪŪ<sub>j</sub>eϕVl E-ōM f<sub>j</sub>Ju<sub>j</sub> k<sub>j</sub>u z Hl f-l<sub>i</sub>—ch (1025-1150MĒĒx)Hl iϕh-enÄ-l fĒ<sub>j</sub>ϕ ϕnm<sub>j</sub>ϕmϕf-a "iϕl-nĒù" l<sub>i</sub>-SÉl hZŅe<sub>j</sub> f<sub>j</sub>Ju<sub>j</sub> k<sub>j</sub>u z jαOm p<sub>j</sub>Ē<sub>j</sub>V BLh-ll p<sub>j</sub>uL<sub>j</sub>-m Bhαm gSm fĒeĒa "BCe-C-BLhĒ' -a "iϕlöv" Hl Lb<sub>j</sub> E-ōM B-R z HR<sub>i</sub>s<sub>j</sub>J l<sub>j</sub>l«o· l<sub>j</sub>-ul -mM<sub>j</sub> "ϕnh<sub>j</sub>ue L<sub>j</sub>hÉ', fϕāa ila jϕō-Ll -mM<sub>j</sub> "Q<sup>3</sup>/<sub>4</sub>cĒfĒ<sub>j</sub>i' (1675 MĒĒx) J "laÀfĒ<sub>j</sub>i' (1680 MĒĒx) NĒ<sub>z</sub>Ūàu, l<sub>j</sub>u...e<sub>j</sub>l<sub>j</sub>l i<sub>j</sub>la Q-<sup>3</sup>/<sub>4</sub>cĒl "Aæc<sub>j</sub>ij%om' (1707 MĒĒx) NĒ<sub>z</sub>Ū -b-LJ iϕlöv flNe<sub>j</sub>l Lb<sub>j</sub> S<sub>j</sub>e<sub>j</sub> k<sub>j</sub>u z

iϕl-nĒù l<sub>i</sub>SÉ NϕWa q-uϕRm BdαϕeL L<sub>j</sub>-ml q<sub>j</sub>Js<sub>j</sub> -Sm<sub>j</sub>l Ns<sub>j</sub>h<sub>j</sub>eĒfαl, ϕXϕq<sub>i</sub>iϕlöv, -fy-s<sub>j</sub>-hp<sub>z</sub><sup>1</sup>fαl, f<sub>j</sub>l-iϕlöv, -c<sub>j</sub>N<sub>j</sub>ϕRu<sub>j</sub> fĒi«ϕa c<sub>j</sub>-j<sub>j</sub>cl ecĒl aĒlhaŅĒ A'mp<sub>j</sub>šq Hhw ýNmĒ -Sm<sub>j</sub>l S<sub>j</sub>ϕ%of<sub>j</sub>s<sub>j</sub>, BVfαl, l<sub>j</sub>Shmq<sub>i</sub>V fĒi«ϕa Sefcpq HLϕV ϕhl<sub>j</sub>V Hm<sub>j</sub>L<sub>j</sub> ϕe-u z<sup>1</sup> HR<sub>i</sub>s<sub>j</sub>J q<sub>j</sub>Js<sub>j</sub> J ýNmĒ -Sm<sub>j</sub>l pϕæϕqa fšhŅ -jϕceĒfαl -Sm<sub>j</sub>l ϕLRϕ Awn iϕlöv l<sub>i</sub>-SÉl A<sub>z</sub><sup>1</sup>iŅ"š<sup>2</sup> ϕRm z<sup>2</sup> iϕl (h<sub>y</sub>) -nĒùĒl (hϕZL) h<sub>j</sub>p -qaϕ l<sub>i</sub>-SÉl e<sub>j</sub>j "iϕl-nĒùĒ'z f<sub>j</sub>W<sub>i</sub>ĵ<sup>1</sup>-l iϕlϕnV, iϕlöv, iϕl<sup>a</sup>ϕø fĒi«ϕa z<sup>3</sup> iϕlöv ϕRm cϕre l<sub>j</sub>-tl l<sub>j</sub>S<sub>d</sub>j<sub>e</sub>Ē J h<sub>j</sub>ϕeSÉ -L<sup>3</sup>/<sub>4</sub>cĒ z c<sub>j</sub>-j<sub>j</sub>c-ll aĒ-l AhϕŪŪa HLϕV ...l<sub>j</sub>aĒfšZŅ j<sub>j</sub>q<sub>j</sub>eNĒ z "BCe-C-BLhĒ' NĒ-ĵŪ iϕlöv j<sub>j</sub>q<sub>j</sub>m-L pαm<sub>j</sub>C<sub>j</sub>e<sub>j</sub>h<sub>j</sub>c flNe<sub>j</sub>l A<sub>z</sub><sup>1</sup>iŅ"š<sup>2</sup> Hhw Hl i"ϕ<sub>j</sub> l<sub>j</sub>Sü 19,68, 990 c<sub>j</sub>j h-m E-ōM Ll<sub>j</sub> q-u-R z 1961 -a -mM<sub>j</sub> ýNmĒ -Sm<sub>j</sub>l -p<sup>3</sup>/<sub>4</sub>p<sub>i</sub>p qÉ<sub>j</sub>ähαL Aeαp<sub>i</sub>-l "On the bank of Damodor river Bhursut was once the capital of South Rarh and famous port."

a-h iϕlöv l<sub>i</sub>-SÉl fĒϕaù<sub>j</sub> L-h q-uϕRm, a<sub>j</sub> pϕWL l<sub>j</sub>-h ϕeeŅu Ll<sub>j</sub> pñh eu z f<sub>j</sub>m l<sub>j</sub>S<sub>j</sub>-cl AiÉϕcu L<sub>j</sub>-m ϕLwh<sub>j</sub> a<sub>j</sub>l B-N -b-LC iϕl-nùĒl fĒϕaù<sub>j</sub> q-uϕRm h-m Aeα<sub>j</sub>e Ll<sub>j</sub> k<sub>j</sub>u z Bh<sub>i</sub>l -L HC l<sub>i</sub>-SÉl fĒbj l<sub>i</sub>S<sub>j</sub> ϕR-me, a<sub>j</sub>J S<sub>j</sub>e<sub>j</sub> k<sub>j</sub>u e<sub>j</sub> z nšl hw-nl -L<sub>j</sub>e l<sub>j</sub>S<sub>j</sub> q-a f<sub>j</sub>-le Abh<sub>j</sub> AeÉ -L<sub>j</sub>e ŪŪ<sub>j</sub>eĒu p<sub>j</sub>z<sup>1</sup> l<sub>j</sub>S<sub>j</sub>z HL<sub>j</sub>ϕdL p<sub>j</sub>z<sup>1</sup> l<sub>j</sub>S<sub>j</sub>l AdĒ-eJ i"löv l<sub>i</sub>SÉ b<sub>j</sub>L<sub>j</sub> ϕhϕQœ euz<sup>4</sup> SenĒ<sub>j</sub>ϕa B-R, h<sub>j</sub>wm<sub>j</sub>l l<sub>j</sub>S<sub>j</sub> nn<sub>j</sub>-<sup>1</sup> -N±sh-%ol ϕāaĒu l<sub>j</sub>S<sub>d</sub>j<sub>e</sub>Ē ϕRm HC iϕlöv l<sub>i</sub>SÉ z -N±s<sub>j</sub>ϕdfϕa nn<sub>j</sub><sup>1</sup> b<sub>j</sub>-enÄ-ll



l<sub>i</sub>S<sub>i</sub> qoÑhdÑ-el p-%<sub>o</sub> kαÜ IZ-L±nm ϕÛÛi Ll<sub>i</sub> SeÉ pijϕuL i<sub>j</sub>-h ay<sub>i</sub>l l<sub>i</sub>-SÉI l<sub>i</sub>Sd<sub>i</sub>eÉ jαϕnÑc<sub>i</sub>h<sub>i</sub>c -Sm<sub>i</sub>l "LeÑpααhZÑ' -b-L iϕlöV Hm<sub>i</sub>L<sub>i</sub>u l<sub>i</sub>Sd<sub>i</sub>eÉ ÛÛ<sub>i</sub>e<sub>i</sub>ç<sup>1</sup>ϕla L-le z NϕWa qu c<sub>i</sub>-j<sub>i</sub>c-ll aÉ-l ϕàaÉu l<sub>i</sub>Sd<sub>i</sub>eÉ "ϕàaÉu LeÑpααhZÑ' z haÑj<sub>i</sub>-e HϕV "L<sub>i</sub>e-p<sub>i</sub>e' e<sub>i</sub>-j ϕlϕQa z HC A'mϕV ϕRm ecÉM<sub>i</sub>a, ϕejÀi'ϕj J Oe he-S%<sub>o</sub>-m ϕlϕS<sub>Z</sub>Ñ z a<sub>i</sub>C ÛÛ<sub>i</sub>eϕV BaÈ-N<sub>i</sub>fe J noæϕl Efl qW<sub>i</sub>v Ty<sub>i</sub>ϕf-u fs<sub>i</sub>l f-r Efkaš<sup>2</sup> z<sup>5</sup>

913 MÈÉø<sub>i</sub>-è S°eL dÉhl n<sub>i</sub>pe LaÑ<sub>i</sub>-L fl<sub>i</sub>ϕSa L-l L<sub>i</sub>uÛÛ hwnÉu f<sub>i</sub>äϕc<sub>i</sub>p iϕlö-VI l<sub>i</sub>S<sub>i</sub> qe z "BCe-C-BLhlÉ' -a cϕre l<sub>i</sub>t<sub>i</sub>ϕdfϕa nÉl hwnÉu k<sub>i</sub>ϕjeÉ nÉl-L k<sub>i</sub>ϕjeÉ l<sub>i</sub>eÛ h-m E-öM Ll<sub>i</sub> q-u-R z f<sub>i</sub>äϕc<sub>i</sub>p ϕR-me k<sub>i</sub>ϕjeÉ nÉ-ll pijç<sup>1</sup> l<sub>i</sub>S<sub>i</sub> z f<sub>i</sub>äϕc<sub>i</sub>p ÛÛ<sub>i</sub>ϕfa l<sub>i</sub>Sd<sub>i</sub>eÉ ϕRm f<sub>i</sub>äϕu<sub>i</sub>, k<sub>i</sub> haÑj<sub>i</sub>-e -fy-s<sub>i</sub> e<sub>i</sub>-j ϕlϕQa z a-h f<sub>i</sub>äϕc<sub>i</sub>-pl qÉehm hwndln-el q<sub>i</sub>a -b-L l<sub>i</sub>SÉϕV AϕdL<sub>i</sub>l L-le nϕei<sub>i</sub>Pl e<sub>i</sub>jL S°eL -S-m h<sub>i</sub> h<sub>i</sub>NcÉ l<sub>i</sub>S<sub>i</sub> z ay<sub>i</sub>l l<sub>i</sub>Sd<sub>i</sub>eÉ ϕRm ýNmÉ -Sm<sub>i</sub>l ϕcmL<sub>i</sub>p NÈ<sub>i</sub>j z Lϕba B-R, l<sub>i</sub>Sd<sub>i</sub>eÉl ϕeLVhaÑÉ Al-ZÉ HL -chÉjSϕaÑ fÈϕaù<sub>i</sub> fÉhÑL ϕaϕe elhϕm pqL<sub>i</sub>-l fS<sub>S</sub><sub>i</sub> ϕc-ae z HLh<sub>i</sub>l -chÉl pÇjϕ-M hϕml SeÉ HLϕV Aøj hoÑÉu hÈ<sub>i</sub>pZ h<sub>i</sub>mL BeÉa q-m nϕei<sub>i</sub>P-sl L<sub>i</sub>f<sub>i</sub>ϕmL ...l<sub>i</sub>-ch -pÀqhna ay<sub>i</sub>l fÈ<sub>i</sub>Z l<sub>r</sub><sub>i</sub> fÉhÑL a<sub>i</sub>-L fæøhv m<sub>i</sub>me-f<sub>i</sub>me L-le Hhw kαÜ ϕhcÉ<sub>i</sub> -nM<sub>i</sub>e z HC h<sub>i</sub>mLC EšL<sub>i</sub>-m nϕei<sub>i</sub>Ps-L fl<sub>i</sub>ϕSa L-l i'ϕl-nÈ-ùl l<sub>i</sub>S<sub>i</sub> qez e<sub>i</sub>j Qaϕl<sub>i</sub>ee jg<sub>i</sub>ϕe-u<sub>i</sub>NÉ z<sup>6</sup> Qaϕl<sub>i</sub>ee ϕcmL<sub>i</sub>p -b-L l<sub>i</sub>Sd<sub>i</sub>eÉ ÛÛ<sub>i</sub>e<sub>i</sub>ç<sup>1</sup>ϕla L-le Nsih<sub>i</sub>eÉfαl z<sup>7</sup> Qaϕl<sub>i</sub>e-el -L<sub>i</sub>e fæø pç<sup>1</sup><sub>i</sub>e ϕRm e<sub>i</sub> z ay<sub>i</sub>l LeÉ<sub>i</sub> a<sub>i</sub>l<sub>i</sub> -chÉl ϕh-u ϕc-uϕR-me pc<sub>i</sub>e<sup>3</sup>/<sub>4</sub>c jα-M<sub>i</sub>f<sub>i</sub>dÉ<sub>i</sub>-ul p<sub>i</sub>-b z HC pc<sub>i</sub>e<sup>3</sup>/<sub>4</sub>c jα-M<sub>i</sub>f<sub>i</sub>dÉ<sub>i</sub>u q-me "nÈÉl<sub>i</sub>j fy<sub>i</sub>Q<sub>i</sub>mÉ'l lϕQua<sub>i</sub> jq<sub>i</sub>Lϕh L«ϕšh<sub>i</sub>-pl i<sub>i</sub>C-f<sub>i</sub> j<sub>i</sub>c-el fæø z Qaϕl<sub>i</sub>e-el -L<sub>i</sub>e Ešl<sub>i</sub>ϕdL<sub>i</sub>l e<sub>i</sub> b<sub>i</sub>L<sub>i</sub>u S<sub>i</sub>j<sub>i</sub>a<sub>i</sub> pc<sub>i</sub>e<sup>3</sup>/<sub>4</sub>c q-me iϕlö-VI l<sub>i</sub>S<sub>i</sub> z pc<sub>i</sub>e<sup>3</sup>/<sub>4</sub>cl fl iϕlö-VI l<sub>i</sub>S<sub>i</sub> qe L«o· z<sup>8</sup> iϕlöV flNe<sub>i</sub>l fÈ<sub>i</sub>QÉe a<sub>i</sub>uc<sub>i</sub>c<sub>i</sub>ϕcl fÈ<sub>i</sub>j<sub>e</sub> -b-L S<sub>i</sub>e<sub>i</sub> -k, -j<sub>i</sub>Om B<sub>j</sub>-m BLh-ll l<sub>i</sub>SaÆL<sub>i</sub>-m HC hÈ<sub>i</sub>pZ l<sub>i</sub>Shw-nl L«o· jα-M<sub>i</sub>f<sub>i</sub>dÉ<sub>i</sub>u q-me iϕlö-VI l<sub>i</sub>S<sub>i</sub> z<sup>9</sup> L«o· jαOm p<sub>i</sub>È<sub>i</sub>V BLh-ll hnÉa<sub>i</sub> üÉL<sub>i</sub>l L-l ϕe-m l<sub>i</sub>SÉϕV jαOm pijÈ<sub>i</sub>-SÉI Ll<sub>c</sub> l<sub>i</sub>-SÉ ϕleá qu z<sup>10</sup> L«o· ϕcöÉl n<sub>i</sub>p-Ll L<sub>i</sub>R -b-L "l<sub>i</sub>u' Ef<sub>i</sub>ϕd f<sub>i</sub>e z L«o· l<sub>i</sub>-ul ϕae fæø kb<sub>i</sub>-hpç<sup>1</sup>, j-q<sup>3</sup>/<sub>4</sub>cÈ J jαLϕV z hpç<sup>1</sup> c<sub>i</sub>sih<sub>i</sub>eÉfαl, j-q<sup>3</sup>/<sub>4</sub>cÈ -fy-s<sub>i</sub> Bl jαLϕV -c<sub>i</sub>N<sub>i</sub>ϕRu<sub>i</sub>l (S%<sub>o</sub>Éf<sub>i</sub>s<sub>i</sub>) c<sub>i</sub>ϕuaÆ f<sub>i</sub>e z -SÉù fæø ϕq<sub>p</sub><sub>i</sub>-h l<sub>i</sub>S<sub>i</sub> qe hpç<sup>1</sup> z<sup>11</sup>

Hlfl iϕlöV l<sub>i</sub>-SÉI l<sub>i</sub>S<sub>i</sub>-cl e<sub>i</sub>-j<sub>i</sub>l a<sub>i</sub>ϕmL<sub>i</sub> ϕe-u k-bø jaϕh-l<sub>i</sub>d B-R z a-h BLh-ll l<sub>i</sub>S-aÆl -noi<sub>i</sub>-N -j<sub>i</sub>Om-f<sub>i</sub>W<sub>i</sub>e pwO-oÑl p<sub>j</sub>u iϕlö-VI hÈ<sub>i</sub>pZ l<sub>i</sub>S<sub>i</sub> l<sub>i</sub>u hwnÉu -L<sub>i</sub>e hÉl<sub>i</sub>%<sub>o</sub>e<sub>i</sub> AfÉhÑ IZ-L±nm -cM<sub>i</sub>e l<sub>i</sub>SÉl<sub>r</sub><sub>i</sub>-bÑz -L -pC hÉl<sub>i</sub>%<sub>o</sub>e<sub>i</sub> a<sub>i</sub> pϕWL i<sub>j</sub>-h hm<sub>i</sub> k<sub>i</sub>u e<sub>i</sub> z ϕaϕe l<sub>i</sub>S<sub>i</sub> L«o·l<sub>i</sub>-ul fæøhdα (cfÑe<sub>i</sub>l<sub>i</sub>u-el faÀÉ) Abh<sub>i</sub> ay<sub>i</sub>l -f±ø Ecue<sub>i</sub>l<sub>i</sub>u-el faÀÉ (fÈa<sub>i</sub>f e<sub>i</sub>l<sub>i</sub>u-el j<sub>i</sub>a<sub>i</sub>) q-a f<sub>i</sub>-lez<sup>12</sup> HC jϕqm<sub>i</sub>l e<sub>i</sub>j q-me ihn<sup>^</sup>lÉz ihn<sup>^</sup>lÉ ϕR-me AaÉç<sup>1</sup> hαϕÛjaÉ z djÑ, AbÑeÉϕa J kαÜ ϕhcÉ<sub>i</sub>u f<sub>i</sub>lcnÑÉ; ϕeiÑÉL -aSϕüeÉ z üj<sub>i</sub>Él j<sup>a</sup>aÉϕl fl jϕqm<sub>i</sub> ϕlQ<sub>i</sub>ϕma n<sub>i</sub>pe hÉhÛÛ<sub>i</sub>l pαα-k<sub>i</sub>N ϕe-u iϕlöV l<sub>i</sub>-SÉI pijç<sup>1</sup> J Sϕj<sub>c</sub>ill<sub>i</sub> l<sub>i</sub>-SÉ AϕÛÛla<sub>i</sub>l p<sup>a</sup>ϕø Hhw fÈϕaf-c ihn<sup>^</sup>lÉ-L h<sub>i</sub>d<sub>i</sub> -cJ<sub>u</sub>l -Qø<sub>i</sub> L-le z ϕLç<sup>1</sup>ϕ l<sub>i</sub>ZÉ ihn<sup>^</sup>lÉ AaÉç<sup>1</sup> cra<sub>i</sub>l p<sub>i</sub>-b p<sub>j</sub>U<sup>1</sup> h<sub>i</sub>d<sub>i</sub> ϕhfϕš Aϕaè<sup>2</sup><sub>j</sub> L-l l<sub>i</sub>SÉ ϕlQ<sub>i</sub>me<sub>i</sub> Ll-a b<sub>i</sub>-Le z<sup>13</sup> HL jϕqm<sub>i</sub> iϕlö-VI c<sub>i</sub>ϕuaÆ pijm<sub>i</sub>-μRe -S-e, pq-SC ay<sub>i</sub>-L q<sub>i</sub>ϕl-u -cJ<sub>u</sub>l pñh B<sub>n</sub><sub>i</sub> L-l l<sub>i</sub>Sd<sub>i</sub>eÉ Nsih<sub>i</sub>eÉfαl Bø<sup>2</sup><sub>j</sub>e L-le f<sub>i</sub>W<sub>i</sub>e -pe<sub>i</sub>fϕa Jp<sub>j</sub>e My<sub>i</sub> z l<sub>i</sub>SaÆ h<sub>y</sub><sub>i</sub>Q<sub>i</sub>-a kα-Ûl juc<sub>i</sub>-e a-m<sub>i</sub>u<sub>i</sub>l

qj-a e<sub>j</sub>-je l<sub>j</sub>Z£ ihñ^l£ çe-S z iñlöv-L çaçe -a<sub>j</sub> hy<sub>j</sub>Q<sub>j</sub>-meC, -pC p-%o fËh<sub>j</sub>m fl<sub>j</sub>œ<sup>2</sup>-j fl<sub>j</sub>Û<sup>1</sup> LI-me h£l Jp<sub>j</sub>je My<sub>j</sub>-LJ z<sup>14</sup>

HjeçL çcõ£l h<sub>j</sub>cn<sub>j</sub> BLh<sub>j</sub>-ll -peifçal p-%oJ l<sub>j</sub>Z£l HL<sub>j</sub>çdLh<sub>j</sub>l kαÜ qu z f-l Bh<sub>j</sub>l pçfLÑJ ÛÛ<sub>j</sub>çfa qu z çLç<sup>1</sup>¥ ü<sub>j</sub>d£e-Qa<sub>j</sub> l<sub>j</sub>Z£ LM-e<sub>j</sub> hnÉa<sub>j</sub> ü£L<sub>j</sub>l L-leçe z Ec<sub>j</sub>l-Qa<sub>j</sub> h<sub>j</sub>cn<sub>j</sub> BLhl l<sub>j</sub>Z£ ihñ^l£l h£l-aÆ jα‡ q-u ay<sub>j</sub>l -peifçal jjeçpwq pñha 1603 MË£ø<sub>j</sub>-ë h<sub>j</sub>wm<sub>j</sub>u B-pe Hhw l<sub>j</sub>Z£-L "l<sub>j</sub>u h<sub>j</sub>çOe£' pç<sub>j</sub>je fËc<sub>j</sub>e L-le z<sup>15</sup> a-h A-e-L HC abÉ çWL eu h-m jç<sup>1</sup>hÉ L-l-Re z nË£c£-en Q<sup>3</sup>/<sub>4</sub>cÊ i-Q<sub>j</sub>kÑ l<sub>j</sub>Z£ ihñ^l£l J "l<sub>j</sub>u h<sub>j</sub>çOe£' HLC hÉçš<sup>2</sup> ee h-m ja fËL<sub>j</sub>n L-l-Re z<sup>16</sup> H-r-œ çheo -O<sub>j</sub>o h-me -k, "l<sub>j</sub>u h<sub>j</sub>çOe£'l L<sub>j</sub>çqe£l -k lçaq<sub>j</sub>çpL ç<sub>j</sub>içš -eC, a<sub>j</sub> euz çeRL çjbÉ<sub>j</sub> -L<sub>j</sub>e LÒfe<sub>j</sub>-L BñËu L-l -L<sub>j</sub>e çLwhcç<sup>1</sup>£ Hll<sub>j</sub> -m<sub>j</sub>l çfËu<sub>j</sub> ASÑe LI-a f<sub>j</sub>-l e<sub>j</sub> z<sup>17</sup> k<sub>j</sub>C-q<sub>j</sub>l, l<sub>j</sub>Z£ ihñ^l£l HL<sub>j</sub>jœ fœœ fËa<sub>j</sub>f e<sub>j</sub>l<sub>j</sub>ue Efκš<sup>2</sup> q-m l<sub>j</sub>Z£ ay<sub>j</sub>l q<sub>j</sub>-a l<sub>j</sub>-SÉl i<sub>j</sub>l a¥-m çc-u L<sub>j</sub>n£ k<sub>j</sub>œ<sub>j</sub> L-le z -pM<sub>j</sub>-e çaçe Aj<sup>a</sup>aÉ¥ n<sub>j</sub>çç<sup>1</sup>-a S£he Açah<sub>j</sub>çqa L-le z<sup>18</sup>

a-h iñlöv l<sub>j</sub>Shw-nl ph-Q-u L£çañ<sub>j</sub>je fœl<sub>j</sub>o çR-me l<sub>j</sub>S<sub>j</sub> fËa<sub>j</sub>f e<sub>j</sub>l<sub>j</sub>ue z fËa<sub>j</sub>f e<sub>j</sub>l<sub>j</sub>ue çR-me l<sub>j</sub>S<sub>j</sub> L«o· l<sub>j</sub>-ul fË-f±œ z çaçe hý i"ç<sub>j</sub> c<sub>j</sub>e L-lçR-me Hhw -pC ph ç<sub>j</sub>efœ -b-L 1059 pe (1652 MË£x), 1075 pe, 1077 pe, 1091 pe CaÉ<sub>j</sub>çc a<sub>j</sub>çlM f<sub>j</sub>Ju<sub>j</sub> k<sub>j</sub>u z a<sub>j</sub>-a j-e qu, fËa<sub>j</sub>f e<sub>j</sub>l<sub>j</sub>u-el l<sub>j</sub>SaÆL<sub>j</sub>m çRm L<sub>j</sub>f-r 1652 MË£ø<sub>j</sub>ë -b-L 1684 MË£ø<sub>j</sub>ë fkÑç<sup>1</sup> z AbÑ<sub>j</sub>v p<sub>j</sub>Ë<sub>j</sub>v n<sub>j</sub>qS<sub>j</sub>q<sub>j</sub>e J Kl%-S-hl Ad£-e "l<sub>j</sub>S<sub>j</sub>' Ef<sub>j</sub>çdd<sub>j</sub>l£ iñlöv-VI Sç<sub>j</sub>c<sub>j</sub>l çR-me fËa<sub>j</sub>f e<sub>j</sub>l<sub>j</sub>ue z çh-cÉ<sub>j</sub>v<sub>j</sub>p<sub>j</sub>q£ l<sub>j</sub>S<sub>j</sub> çq<sub>j</sub>p<sub>j</sub>-h<sub>j</sub>J ay<sub>j</sub>l k-bø MÉ<sub>j</sub>çal çRmz ay<sub>j</sub>l AeÉa<sub>j</sub> p<sub>j</sub>ipc ila jçõL ay<sub>j</sub>-L çQlØ<sub>j</sub>le£u L-l -N-Re z<sup>19</sup> fËa<sub>j</sub>f e<sub>j</sub>l<sub>j</sub>ue fËp-%o ila jçõL çm-M-Re - ""Cçal fËS<sub>j</sub>d£nÄl-d£lh£l-fËa<sub>j</sub>f e<sub>j</sub>l<sub>j</sub>ue-pvpcpÉ:"z

l<sub>j</sub>S<sub>j</sub> fËa<sub>j</sub>f e<sub>j</sub>l<sub>j</sub>u-el j<sup>a</sup>aÉ¥l fl ay<sub>j</sub>l HL<sub>j</sub>jœ fœœ çnhe<sub>j</sub>l<sub>j</sub>ue r<sub>j</sub>a<sub>j</sub> fË<sub>j</sub>ç qe z çnhe<sub>j</sub>l<sub>j</sub>u-el fl iñlöv-VI l<sub>j</sub>S<sub>j</sub> qe çnhe<sub>j</sub>l<sub>j</sub>u-el fœœ ele<sub>j</sub>l<sub>j</sub>ue z Cçaj-dÉ, hdÑ<sub>j</sub>je A'-m HL fçÕQ<sub>j</sub>Na i§-ü<sub>j</sub>j£ hw-nl p<sup>a</sup>çø qu z Hl<sub>j</sub> q-me hdÑ<sub>j</sub>je l<sub>j</sub>Shw-nl f§hÑf§l<sub>j</sub>o z R-m-h-m--L±n-m Hyl<sub>j</sub> Sç<sub>j</sub>c<sub>j</sub>l£ h<sub>j</sub>çs-u Q-mçRmz<sup>20</sup> ele<sub>j</sub>l<sub>j</sub>u-el l<sub>j</sub>SaÆ L<sub>j</sub>-m (1092-1118 pe) çLwh<sub>j</sub> a<sub>j</sub>l j<sup>a</sup>aÉ¥l çWL f-lC 1119 p-e (1713 MË£x jαOm p<sub>j</sub>Ë<sub>j</sub>v g<sub>j</sub>l<sub>j</sub>l çnu-ll l<sub>j</sub>SaÆ L<sub>j</sub>-m) hdÑ<sub>j</sub>je l<sub>j</sub>S L£çañQ<sup>3</sup>/<sub>4</sub>cÊ hmf§hÑL iñlöv flNe<sub>j</sub> cMm L-le z<sup>21</sup> çaçe l<sub>j</sub>SfË<sub>j</sub>p<sub>j</sub>c -b-L depçfc, -p<sub>j</sub>e<sub>j</sub>-c<sub>j</sub>e<sub>j</sub>, q£-l-Sqla; HjeçL -ch--ch£l çhNËq ...çmJ çaçe mαW L-l çe-u k<sub>j</sub>e z l<sub>j</sub>Sfçlh<sub>j</sub>l AeÉœ f<sub>j</sub>çm-u -L<sub>j</sub>eJ IL-j fË<sub>j</sub>-Z hy<sub>j</sub>-Q z çhØ<sub>j</sub>çal Aa-m açm-u -k-a ö<sub>j</sub>l<sub>j</sub> L-l Ns<sub>j</sub>h<sub>j</sub>e£fœl z<sup>22</sup> -kM<sub>j</sub>e -b-L Oα-l cy<sub>j</sub>s<sub>j</sub>-e<sub>j</sub> ay<sub>j</sub>-cl f-r Apñh q-u cy<sub>j</sub>s<sub>j</sub>u z

l<sub>j</sub>SÉQÉ¥a l<sub>j</sub>Shw-nl flhaÑ£ çhh<sub>j</sub>Z MαhC -n<sub>j</sub>Qe£u z ele<sub>j</sub>l<sub>j</sub>u-el cαC fœœ çR-me z Hl<sub>j</sub> q-me mr£e<sub>j</sub>l<sub>j</sub>ue J q£l<sub>j</sub>l<sub>j</sub>z l<sub>j</sub>u z L£çañQ<sup>3</sup>/<sub>4</sub>cÊl fœœ çQœ-pe hý -c-h<sub>j</sub>šl J hËpšl pçfçš mr£e<sub>j</sub>l<sub>j</sub>ue-L c<sub>j</sub>e L-le Hhw hy<sub>j</sub>n-hçsu<sub>j</sub>l l<sub>j</sub>S<sub>j</sub>l<sub>j</sub> q£l<sub>j</sub>l<sub>j</sub>-L -h<sub>j</sub>-l<sub>j</sub> flNe<sub>j</sub>u hË-ñ<sub>j</sub>šl -ce z mr£e<sub>j</sub>l<sub>j</sub>u-el fœœl<sub>j</sub> Ns<sub>j</sub>h<sub>j</sub>e£fœl -R-s -fy-s<sub>j</sub> hpç<sup>1</sup>fœl NË<sub>j</sub>-j hpçal ÛÛ<sub>j</sub>fe L-le z<sup>23</sup> HC<sub>j</sub>-h d£-l d£-l iñlöv l<sub>j</sub>SÉ L<sub>j</sub>-ml N-iÑ çhm£e q-u k<sub>j</sub>u z haÑ<sub>j</sub>-e HC N-sl j-dÉ l<sub>j</sub>Shw-nl l<sub>j</sub>Sd<sub>j</sub>e£ h<sub>j</sub> AeÉ-L<sub>j</sub>e çQq<sup>2</sup> Bl -cM-a

fjJu<sub>i</sub> kju e<sub>i</sub> z<sup>24</sup> HMe HC l<sub>i</sub>-SÉI p<sub>i</sub>rÉ çq<sub>p</sub><sub>i</sub>-h çV-L B-R i¶löV, NsihjeÉf<sub>a</sub>, Ecuej<sub>i</sub>uef<sub>a</sub>, -fy-s<sub>i</sub>- hp<sub>ç</sub><sup>1</sup>f<sub>a</sub> pq L-uLçV NĚ<sub>i</sub>j BI NsihjeÉf<sub>a</sub>-ll HL fĚ<sub>i</sub>QÉe cšNÑ J h<sup>a</sup>qv -N<sub>i</sub>fÉe<sub>i</sub>b çSEI jç<sup>3</sup>/<sub>4</sub>-ll dwp<sub>i</sub>h-no z

-Lhmj<sub>i</sub>œ l<sub>i</sub>S<sup>o</sup>eç<sub>a</sub>L -r-œ eu ; çnr<sub>i</sub>, pwú«ç<sub>a</sub> J djÑÉu SÉh-eJ i¶löV l<sub>i</sub>-SÉI Ahc<sub>i</sub>e AeüÉL<sub>i</sub>kÑ z ççre l<sub>i</sub>-tl HC i¶çl-nĚ<sub>ù</sub> NĚ<sub>i</sub>j HLC<sub>i</sub> pwú«a QQÑ<sub>i</sub>l fÉWÜŮ<sub>i</sub>e çq<sub>p</sub><sub>i</sub>-h MÉ<sub>i</sub>ç<sub>a</sub> m<sub>i</sub>l L-l çRm z<sup>25</sup> jšmax hĚ<sub>i</sub>ßZ fç<sub>ä</sub>a, hçZL J j<sub>i</sub>çqoÉ AdÉçç<sub>o</sub>a qJu<sub>i</sub>u i¶löV l<sub>i</sub>-SÉI çQ<sub>ç</sub><sup>1</sup><sub>i</sub> SNv-L çh-no i<sub>i</sub>-h fĚ<sub>i</sub>içç<sub>a</sub> L-lçRm z l<sub>i</sub>S<sub>i</sub>-cl f<sup>à</sup>-f<sub>i</sub>oL<sub>a</sub><sub>i</sub>u HC l<sub>i</sub>-SÉ A-eL çnr<sub>i</sub> fĚç<sub>a</sub>ù<sub>i</sub>e J QaçxØf<sub>i</sub>WÉ N-s E-WçRm z haÑ<sub>i</sub>j<sub>i</sub>-e a<sub>i</sub>l çecnÑe NsihjeÉf<sub>a</sub>, BVf<sub>a</sub>, l<sub>i</sub>Shmq<sub>i</sub>V, j<sub>i</sub>Sç fĚ<sub>i</sub>«ç<sub>a</sub> S<sub>i</sub>uN<sub>i</sub>u -cM<sub>i</sub> kju z HC l<sub>i</sub>-SÉI AeÉ<sub>a</sub>j fç<sub>ä</sub>a çR-me çhœ<sup>2</sup>j<sub>n</sub>Ém<sub>i</sub> j<sub>i</sub>ççh<sub>q</sub><sub>i</sub>-ll üej<sub>i</sub>deÉ AdÉ<sub>i</sub>fL nĚÉdl<sub>i</sub>Q<sub>i</sub>kÑ z ay<sub>i</sub>l lçQ<sub>a</sub> "eÉ<sub>i</sub>uL<sup>3</sup>/<sub>4</sub>cmÉ' NĚ<sub>ç</sub>Ů çh-no L«ç<sub>a</sub>-aÆI ç<sub>i</sub>hÉ l<sub>i</sub>-M z "eÉ<sub>i</sub>uL<sup>3</sup>/<sub>4</sub>cmÉ' qm °h-nçol HI fĚ<sub>i</sub>b<sub>j</sub> BçŮ<sup>1</sup>LÉ i<sub>i</sub>oÉ z<sup>26</sup> flhaÑÉ L<sub>i</sub>-m l<sub>i</sub>S<sub>i</sub> fĚ<sub>a</sub><sub>i</sub>f e<sub>i</sub>l<sub>i</sub>u-el B<sub>j</sub>-m -k fç<sub>ä</sub>a l<sub>i</sub>S<sub>p</sub><sub>i</sub> AmwL«a L-lçR-me, ç<sub>a</sub>çe q-me fçŒQ<sub>j</sub>h-%ol °hcÉ NĚ<sub>ç</sub>ŮL<sub>i</sub> ila jçöL z ay<sub>i</sub>l lçQ<sub>a</sub> "Q<sup>3</sup>/<sub>4</sub>çĚfĚ<sub>i</sub>' J "laÀfĚ<sub>i</sub>' ç<sub>a</sub>çV AeeÉ p<sup>a</sup>çø z HR<sub>i</sub>s<sub>i</sub>J l<sub>i</sub>S<sub>i</sub> fĚ<sub>a</sub><sub>i</sub>f e<sub>i</sub>l<sub>i</sub>u-el p<sub>i</sub>lççh çR-me Lçh hp<sub>ç</sub><sup>1</sup> l<sub>i</sub>uz l<sub>i</sub>S<sub>i</sub> ay<sub>i</sub>-L "çhcÉ<sub>i</sub>fç<sub>a</sub>' Ef<sub>i</sub>çd-a i<sub>i</sub>ç<sub>o</sub>a L-lez<sup>27</sup> a-h i¶löV flNe<sub>i</sub>l Açdfç<sub>a</sub> e-l<sup>3</sup>/<sub>4</sub>çĚ e<sub>i</sub>l<sub>i</sub>ue l<sub>i</sub>-ul f<sub>a</sub>œ i<sub>i</sub>laQ<sup>3</sup>/<sub>4</sub>çĚ ph-Q-u MÉ<sub>i</sub>ç<sub>a</sub> ASÑe L-le z L«o·Q<sup>3</sup>/<sub>4</sub>çĚI Aeç-l<sub>i</sub>-d i<sub>i</sub>laQ<sup>3</sup>/<sub>4</sub>çĚ "Aæç<sub>i</sub>j%om' L<sub>i</sub>hÉ IQe<sub>i</sub> L-le Hhw "l<sub>i</sub>u...e<sub>i</sub>l' Ef<sub>i</sub>çd-a i<sub>i</sub>ç<sub>o</sub>a qe z l<sub>i</sub>S<sub>i</sub> L«o·Q<sup>3</sup>/<sub>4</sub>çĚ "Aæç<sub>i</sub>j%om' ö-e M<sub>a</sub>çn q-u i<sub>i</sub>laQ<sup>3</sup>/<sub>4</sub>çĚ-L j<sub>a</sub>m<sub>i</sub>-S<sub>i</sub>s NĚ<sub>i</sub>j CS<sub>i</sub>l<sub>i</sub> -ce Hhw -pM<sub>i</sub>-e h<sub>i</sub>çs °alÉ Ll<sub>i</sub>l SeÉ HLL<sub>i</sub>mÉe 100 V<sub>i</sub>L<sub>i</sub> ç<sub>i</sub>e L-le z HC NĚ<sub>i</sub>-jC ç<sub>a</sub>çe 48 hvpl hu-p fĚ<sub>i</sub>Z aÉ<sub>i</sub>N L-le z<sup>28</sup>

haÑ<sub>i</sub>j<sub>i</sub>-e i¶löV l<sub>i</sub>-SÉI l<sub>i</sub>S-aÆI çecnÑe çLRçC -eC hm-mC Q-m z B-R öd<sub>a</sub> Sl<sub>i</sub>SÉZÑ ç<sub>a</sub>çV jç<sup>3</sup>/<sub>4</sub>clz BI l-u-R HLçV fĚ<sub>i</sub>QÉe cš-NÑI dÆewp<sub>i</sub>h-noz 300çhO<sub>i</sub> Sç<sub>j</sub>l Efl l<sub>i</sub>SfĚ<sub>i</sub>p<sub>i</sub>ç, jç<sup>3</sup>/<sub>4</sub>cl J AeÉ<sub>i</sub>eÉ fĚç<sub>a</sub>ù<sub>i</sub>e N-s E-WçRm z<sup>29</sup> haÑ<sub>i</sub>j<sub>i</sub>-e HC fĚç<sub>a</sub>ù<sub>i</sub>e h<sub>i</sub> ŮŮ<sub>i</sub>faÉ-i<sub>i</sub>ú<sub>k</sub>Ñ ...çm BI -eC z L<sub>i</sub>-ml N-iÑ çhmÉe q-u -N-Rz ýNmÉ L<sub>i</sub>-mLV-IV-H pwlçra "a<sub>i</sub>uc<sub>i</sub>ç'-H -k -lM<sub>i</sub> çQœ B-R, a<sub>i</sub>-a cšNÑ<sub>i</sub>, °ilhÉ, çpwqh<sub>i</sub>çqeÉ, Aiu<sub>i</sub>, i¶h-enÄÉ, N-en, NSmrÉ, C<sup>3</sup>/<sub>4</sub>çĚ<sub>i</sub>eÉ fĚ<sub>i</sub>«ç<sub>a</sub> -ch-çhÉl E-öM fjJu<sub>i</sub> kju z l<sub>i</sub>Sl<sub>i</sub>sÉl HLam<sub>i</sub>l O-l HC -ch--çhÉl jšç<sub>a</sub>Ñ...çm fĚç<sub>a</sub>ç<sub>u</sub>a çRm z -ç<sub>i</sub>am<sub>i</sub>l O-l çRm ç<sub>a</sub>çV çnhjšç<sub>a</sub>Ñ, -N<sub>i</sub>f<sub>i</sub>m, -N<sub>i</sub>fÉe<sub>i</sub>b, ç<sub>i</sub>-j<sub>i</sub>cl J l<sub>i</sub>çdL<sub>i</sub>l jšç<sub>a</sub>Ñ z l<sub>i</sub>S<sub>i</sub> fĚ<sub>a</sub><sub>i</sub>f e<sub>i</sub>l<sub>i</sub>u-el B<sub>j</sub>-m HC ph jšç<sub>a</sub>Ñ...çm fĚç<sub>a</sub>ç<sub>u</sub>a q-uçRm z<sup>30</sup>

NsihjeÉf<sub>a</sub>-ll jçee<sub>i</sub>b çnhjç<sup>3</sup>/<sub>4</sub>cl J jWçV qm a<sub>i</sub>l-LnÄI j-Wl p<sub>j</sub>p<sub>i</sub>jç<sub>u</sub>L z HC jçee<sub>i</sub>bSÉC q-me HMe NsihjeÉf<sub>a</sub>-ll fĚ<sub>i</sub>d<sub>i</sub>e -ç<sub>a</sub><sub>i</sub> z HR<sub>i</sub>s<sub>i</sub>J djÑW<sub>i</sub>L¶I, f<sub>i</sub>çee, l<sub>i</sub>ShöiÉ, jep<sub>i</sub>, nÉam<sub>i</sub> fĚ<sub>i</sub>«ç<sub>a</sub> -m±çLL -ch--çhÉl jç<sup>3</sup>/<sub>4</sub>cl l-u-R z HC ph -ç<sub>a</sub><sub>i</sub>-cl a<sub>i</sub>çmL<sub>i</sub> J çhç<sub>i</sub>æ -L<sub>i</sub>W<sub>i</sub>u fĚç<sub>a</sub>ù<sub>i</sub>u fçlLÒfe<sub>i</sub> -b-L HLb<sub>i</sub> hm<sub>i</sub> kju -k, i¶löV l<sub>i</sub>SÉ hĚ<sub>i</sub>ßZ l<sub>i</sub>S<sub>i</sub>-cl q<sub>i</sub>a d-l °nh, n<sub>i</sub>š<sup>2</sup>, N<sub>i</sub>çfaÉ, °ho·h fĚ<sub>i</sub>«ç<sub>a</sub> d-jÑI p<sub>j</sub>eÄu O-VçRm z HC l<sub>i</sub>J Aç<sub>i</sub>eh J Ec<sub>i</sub>l fĚ-Qø<sub>i</sub> AeÉœ -Q<sub>i</sub>-M fs<sub>i</sub> ç<sub>a</sub>úl z

HC<sub>i</sub>-h -cM<sub>i</sub> kju -k, i¶löV l<sub>i</sub>SÉ h<sub>i</sub>wm<sub>i</sub>l HL pwLÉZÑ fçl<sub>p</sub>-l N-s EW-mJ a<sub>i</sub>l l<sub>i</sub>S<sup>o</sup>eç<sub>a</sub>L AçŮŮ<sub>a</sub>Æ cÉŒŒçce hS<sub>i</sub>u -l-MçRm z HM<sub>i</sub>-e l<sub>i</sub>Shwn J -ea«-aÆI

fçlhaÑe OV-mJ nÿpLlÿ c£ONÑ pju d-l L«çá-aÆI p-%o nÿpe fçlQÿmeÿ L-l-Re z -Lhmjÿœ fçl|o nÿpL-cl L«çá-aÆC eu, jçqmÿ nÿpL lÿZ£ ihn^l£J iÑlöv-L lÿS°eçáL fçlçQçal hÉÿçç çc-uçR-me z lÿS°eçáL LÿkÑLmÿ-fl fÿnÿfÿçn nÿpLlÿ çnrÿ-pwú«çá J djÑ£u S£h-eJ ...l|aÆf£ZÑ i^çjLÿ fÿme L-lçRmz çnrÿl fËpÿ-l ayÿ-cl Bç^1çlLaÿ çRm -kje AL«çœj, -ajçe djÑ£u çcL -b-LJ çR-me Ecÿl j-eÿlÿhÿfæz aÿC çhØj«çal Aam NqÄ-l açm-u -N-mJ nÿpL-cl Ecÿl J fËSÿçq°ao£ nÿpe iÑlöv lÿSÉ-L Øjle£u L-l -l-M-R z

abÉp£œ x-

1. jÿæÿ, çn-h<sup>3</sup>/4c¥, qÿJsÿ : Cçaqÿp-lçaqÉ, qÿJsÿ, 2011, f<sup>a</sup>.33.
2. Qœ<sup>2</sup>haÑ£, X. Ap£j L¥jÿl, ""fËÿQ£e J jdÉk<sup>α</sup>-NI HL çhçnø Sefc iÑçl-nËù lÿSÉ", fËLÿçna q-u-R X. çnçnl L¥jÿl jÿCçá pçfÿçca "Bnÿhl£", qÿJsÿ, 2007(HçfËm pwMÉÿ), f<sup>a</sup>. 44.
- 3) i-ÿQÿkÑ, AQm, qÿJsÿ -Smÿl Cçaqÿp(fËbjMä),qÿJsÿ, 1980, f<sup>a</sup>.32.
- 4) -Oÿo, çheu, fçÖQjh-%ol pwú«çá (çàa£u Mä) ,LmLÿaj, 1978, f<sup>a</sup>.220.
- 5) BcL, çejÿC, ""Cçaqÿ-pl -fËÿf-V Nsÿhÿe£fçl", fËLÿçna q-u-R hç^j Qœ<sup>2</sup>haÑ£ pçfÿçca "Em<sup>α</sup>-hçsuÿl pwú«çá", qÿJsÿ, 2014, f<sup>a</sup>.461.
- 6) i-ÿQÿkÑ, AQm, f£-hÑÿš<sup>2</sup> z
- 7) çpwq, Suç^1, ""Nsÿhÿe£fçl", qÿJsÿ -Smÿ fçloc fËLÿçna "qÿJsÿ -Smÿ fçlœ<sup>2</sup>jÿ" (fËbj Mä), qÿJsÿ, 2003, f<sup>a</sup>.240.
- 8) BcL, çejÿC, f£-hÑÿš<sup>2</sup>, f<sup>a</sup>.462.
- 9) -Oÿo, çheu, f£-hÑÿš<sup>2</sup>,
- 10) Qœ<sup>2</sup>haÑ£, Ap£j f£-hÑÿš<sup>2</sup>, f<sup>a</sup>.45
- 11) BcL, çejÿC, f£-hÑÿš<sup>2</sup>,
- 12) -Oÿo, çheu, f£-hÑÿš<sup>2</sup>, f<sup>a</sup>. 224.
- 13) BcL, çejÿC, f£-hÑÿš<sup>2</sup>, f<sup>a</sup>. 463.
- 14) jqçpe, jqçjc, ""Nslrÿ", HC pju, qÿJsÿ J ýNm£ -fS, LmLÿaj pwúlZ, 14/01/2018, f<sup>a</sup>. 7.
- 15) BcL, çejÿC, f£-hÑÿš<sup>2</sup>,
- 16) fËhÿp£, -f±o, 1361 (h%oÿë)z
- 17) -Oÿo, çheu, f£-hÑÿš<sup>2</sup>,
- 18) BcL, çejÿC, f£-hÑÿš<sup>2</sup>,
- 19) -Oÿo, çheu, f£-hÑÿš<sup>2</sup>, f<sup>a</sup>. 225.
- 20) jS¥ÿçÿl, BÿoQ<sup>3</sup>/4cÉ, qÿJsÿ -Smÿl Cçah<sup>α</sup>š, LmLÿaj, 1423 (h%oÿë), f<sup>a</sup>.117.
- 21) -Oÿo, çheu, f£-hÑÿš<sup>2</sup>,
- 22) -Oÿoÿm, qçlql, ""Cçaqÿ-pl hÿ Eÿje-fa-el pÿr£ iÑlöv lÿ-SÉI lÿSdÿe£ Nsÿhÿe£fçl", haÑÿje, LmLÿaj pwúlZ, 27/04/2010, f<sup>a</sup>.3.
- 23) -Oÿo, çheu, f£-hÑÿš<sup>2</sup>, f<sup>a</sup>. 226.
- 24) i-ÿQÿkÑ, laÀÿ J nçš<sup>2</sup>fc, fÿ-u fÿ-u qÿJsÿ, -LÿmLÿaj, 1418 (h%oÿë), f<sup>a</sup>. 68.
- 25) pyÿalÿ, aÿlÿfc, fçÖQjh%o -Smÿ fçlQu NËç^Ûjÿmÿ-qÿJsÿ, LmLÿaj, 1407 (h%oÿë), f<sup>a</sup>.82.
- 26) i-ÿQÿkÑ, AQm, f£-hÑÿš<sup>2</sup> f<sup>a</sup>.145.

27) j;C#a, X. #n#nl L#jil, f#p%o q;Js; , q;Js; , 2017, f<sup>a</sup>-22.

28) -O;o, #heu, f#-h#j#<sup>2</sup>, f<sup>a</sup>. 228-229.

29) -O;o;im, q#lql, f#-h#j#<sup>2</sup>,

30) #pwq, Su<sub>z</sub><sup>1</sup>, f#-h#j#<sup>2</sup> z