

Volume 1

Number 1

January-March 2013

ISSN :



Journal of Indian Research



Journal of Indian Research

A Quarterly Journal of Multidisciplinary Research

Volume 1 Number 1 January- March , 2013

Editorial Board

CA Ashok Kumar Gadiya, Chairperson, Mewar University

Dr. Mahesh Chandra Sharma, ex-Member of Parliament

Ram Bahadur Rai, Senior Journalist

Dr. Pankaj Chandna, President, Mewar University

Dr. Ram Chandra, Dr. D.B. Ojha

Dr. K.K. Vashisth, Dr. V.P. Singh

Editor (H.)

Niraj Kumar

Book Review Editor

Pankaj K.Deo

Contact Us

Editor, Journal of Indian Research

Mewar University

Sector-4C, Vasundhara, Delhi-Gzb. Link Road, Ghaziabad-201012(U.P.)

E-mail: jir@mewaruniversity.org

Phone number: 0120-4758300

Abstracts and Indexing

<http://nkrc.niscair.res.in/>

Journal set by

Y.K. Saini

Copyright© Authors. All rights reserved. Authors are responsible for obtaining permission to reproduce copyright material from other sources. The Publisher assumes no responsibility for any statement of fact or opinion or copyright violations in the published papers. The views expressed by authors do not necessarily represent the view-point of the Journal.

Journal of Indian Research

A Quarterly Journal of Multidisciplinary Research

Volume 1 Number 1 January-March, 2013

TABLE OF CONTENTS

Message from Chairperson	5
Editorial	6
<i>Niraj Kumar</i>	
Articles	
Asia in Post-West Age	8
<i>Niraj Kumar</i>	
Constraints of China's Emergence as a Political Alternative to the Western World	31
<i>Dr. Binod Singh</i>	
Contemplating the Image of Bhairava- A Study of <i>Kshemarâja's Bhairavânukaranastava</i>	42
<i>Dr. Sthaneshwar Timalshina</i>	
Basel-3 and Its Impact on Indian Banking System	53
<i>Mamta Shah</i>	
Internal Marketing Practices in Publishing Industries: A Case study of Saraswati House PVT. LTD.	59
<i>Mukta Goyal, Dr. Lokesh Jindal</i>	
A Literature Review on Business Practices of Marwari Business Houses in India	69
<i>Yash Kumawat, Dr. Narayan Baser</i>	
Design Secure Object Oriented Software	73
<i>M.U. Bokhari, Mahtab Alam, Prashant Johri</i>	
Multi-Stage Software Project Efforts Estimation	85
<i>Chetan Nagar & Dr. Anurag Dixit</i>	
Establishing Trust in Cloud Computing	91
<i>Shweta Agrawal</i>	
Parenting and Adolescent Behavior: Feedback from the Classroom	96
<i>Dr. Raju Narayan Swamy</i>	
Pedagogy of Mathematics	105
<i>Ashish Kumar Mittal, Dr. Neetu Chawla</i>	
Volume 1, No.1, January-March, 2013	3

Revamping Teacher Education: Curriculum in the Context of Inclusive Education <i>Seema Sharma, Dr. Satveer S. Barwal</i>	111
Right to Education & Schooling <i>Dr. V.P. Singh,</i>	118
Hindu Festivals: Hazards to Environment & Ecology <i>V.S.Khan</i>	136
Sensuality – A Catalyst in <i>The God of Small Things</i> <i>Rakhi Sharma, Dr. Pradeep Kumar Talan</i>	142
Book Review	
School Education, Pluralism and Marginality: Comparative Perspectives by Christine Sleeter, Shashi Bhushan Upadhyay, ArvindK.Mishra, Sanjay Kumar (2012) <i>Pankaj K. Deo</i>	146

CHAIRPERSON'S MESSAGE


Moving into the second decade of the 21st century, we can assert with a sense of pride that India has made giant strides of progress, be it the field of science and technology, trade, industry or education. It will be no exaggeration to say that the 21st century belongs to us, and we Indians need to project ourselves as the new torch bearer of the human race.

We need to present our own perspective on new discoveries and innovation in the field of science and technology and our own insight on new theories being propounded in the field of humanities and social sciences.

Mewar University has taken a small step in this direction by launching *Journal of Indian Research*, which intends to serve as a new forum of its own kind, bringing together academia and industry and expanding the horizon for all those who are engaged in research. Mewar University has been working hard to forge a mutually beneficial relationship between industry and academia as well as to encourage interdisciplinary approach to research. I believe one day this small step of the university will prove to be a quantum leap, and the journal will become the breeding ground for new ideas and innovation in every field of research.

I request everyone engaged in research in India as well as abroad to send their innovative and path breaking research articles and papers for publication in our journal.

I congratulate the editorial team and wish them good luck.



CA Ashok Kumar Gadiya

EDITORIAL

The Journal of Indian Research(JIR) has been founded by Mewar Education Society under the aegis of Mewar University. This is the journal's inaugural issue. The JIR will be published quarterly. As part of the inaugural edition of the quarterly publication schedule, the JIR editors take this opportunity to reflect over the journal's objectives and to offer some thoughts on the way forward.

The JIR has since its inception received tremendous support from the research scholars and Mewar University. The JIR intends to establish itself as one of Asia's pioneering, peer-reviewed journal. The JIR research articles will present theoretically sound and factually dense arguments for illuminating the readers. The JIR aims to maintain high research standards and seek submissions from scholars working at best universities and institutions in India and around the world.

The JIR is multi-disciplinary in its scope. This is the only outcome in an interconnected, digital age. Spanish philosopher Rosa María Rodríguez Magda (1953-2010) who propounded the idea of Trans-modernism argued in her work, *Transmodernidad* (2004) that “*Our mode of thinking should become, just as our social reality, “trans -border”, fluid, interconnected and unstable. A risk-type thinking for a global risk society. Following the national comes the post-national and, at a later stage, the trans-national. Trans is the prefix that should guide the new digital form of Reason in a reality that is virtual and fluctuating.*”

We have entered into a Post-western age. Our mode of thinking must reflect gigantic epistemological shift. The world is polycentric and networked , inter-connected whole. Asian thinking emphasizes synthetic approach rather than analytic tradition of the western world. In Asian thinking , there is a constant flow of signs, matter, energy across Man-Nature continuum. In the analytic tradition of the West, knowledge is sliced, packaged and transmitted into packets called disciplines. The disciplines were based on “exclusion”. The academic boundaries were enumerated and tightly regulated . The knowledge achieved maximum quantization. Asian thought moves in the continuous aspect like a wave, flowing and ebbing at constant interval. Knowledge is beyond excluded disciplines.

In this age of massive transformation, everything functions as long as it is interconnected. Earlier, various academic disciplines were like individual boats sailing alone in the high sea of knowledge. But, the great wave of transformation under the impact of globalization has reduced academic disciplines into cabin of a common ship of knowledge. Colombian philosopher mathematician, Fernando Zalamea terms this synthetic turn as “sheaffing paradigm” where focus has shifted back to re-integration. There is continuous attempt to integrate man and machine. The cyborg model is making trans-human future possible. Is it possible to bring together the synthetic tradition of the East and the analytic tradition of the West under a common roof that can create the possibility of integrating respective continuum, nature-man and man-machine, feasible?

The multi-disciplinary nature of this journal aims to address this possibility. The research scholars from different streams must receive simultaneous knowledge about the new issues and challenges in different streams. It is no longer possible to compartmentalize knowledge.

JIR editors are looking for manuscript submissions in three main areas of research. The first is on cutting-edge technology and theoretical contributions to basic sciences. The second area of interest is that of the theoretical contributions in social sciences and the third is the literature and aesthetics.

The current issue examines the myriad possibilities springing up from the great transformation. The ‘power shift’ from the West to the East has been examined by Niraj Kumar in the article ,’Asia in Post-western Age”. Dr. Binod Singh argues about the domestic weakness in China which might thwart its emergence as an alternative to the western world order in his extensive examination, ‘Constraints of China’s Emergence as a

Political Alternative to the Western World". Prof. Sthaneshwar Timalsina has translated Bhairavanukaranstava, a 11th century text of Kashmiri Shaivism. Mamta Shah discusses the regulatory system upon global financial system under Basel-3 and its impact on Indian banking System. Yash Kumawat et al. has contributed on the business practices of India's most successful trading community, Marwari, in their excellent article, "A Literature Review on Business practices of Marwari Business Houses in India." Mukta Goyal has excavated non-monetary incentives as the motivating factor and stability of the employees in her study of Management of Saraswati Publishing House. M.U. Bokhari et al. has discussed on latest trend in the security of software in an elaborate piece, "Design secured Object Oriented Software". Chetan Nagar & Dr Anurag Dxit has contributed another piece on software security, "Multi-stage Software project Efforts Estimation".

Dr. Raju Narayn Swamy conducted study of parenting and adolescent behavior in classroom and discussed the result in his article, "Parenting and Adolescent Behavior - Feedback from the Classroom". Ashish Kumar Mittal & Dr. Neetu Chawla elucidates effective ways for teaching mathematics in classroom in their article, "Pedagogy of Mathematics".

Dr. V.P. Singh conducted a study of schooling under the NCERT . The study Report, "Right to Education & Schooling" is being published. V.S. Khan writes about impact of commercialization and consequent environmental degradation caused by the immersion of idols in water bodies or fire crackers during various Hindu festivities in his article, "Hindu Festival: Hazards to Environment & Ecology". Rakhi Sharma has done a thorough examination of evocation of sensuality in Arundhati Roy's celebrated work, the God of Small Things.

Our book review editor Pankaj Deo has reviewed Sanjay Kumar, Christine Sleeter et al. edited work on school education , "School Education, Pluralism and Marginality: Comparative Perspectives".

We have taken the first step towards renaissance of synthetic approach towards the world at large . We wish to continue with our endeavour and seek the co-operation of our readers and research scholars to transform this little step into an ever-growing movement. To grow is the inherent propensity of every creation. May this Journal as cornucopia of sign overflow with wisdom!

ASIA IN POST-WESTERN AGE

Niraj Kumar*

ABSTRACT

The Asian age has arrived. The uninterrupted growth story has been fuelled by new paradigm of growth and intra-regional cooperation and networking. The countries like Australia and Turkey which are on Asian periphery are hankering to be part of Asian growth story. China will soon surpass the US in terms of GDP. Indonesia, India and Japan are the major players of the resurgence story. Though, the US has launched the Asia as Pivot strategy to perpetuate the hegemony, Asian nations are cutting the cord of the global hegemony. The dollar has been replaced from the East Asian region as the dominant reference currency and the Asianization of Middle east oil trade is further replacing the role of dollar from intra-Asian trade. The world is moving towards a tripolar global monetary system. The rise of Asia is multi-dimensional. Asia is fast catching the US in research and technology. The paper examines the multifarious dimension of this complex change and elucidates how the post-western age would be more peaceful and discourage emergence of any belligerent hegemon.

Keyword: *Asia, dollar hegemony, OPEC, Asianization, renminbi bloc, G-20, ADB, virtual economy, steel production, centre of gravity, Wealth Report, urbanization, WIPO, Patents, High-tech industry, Bancor, MENA, ASEAN, China, Carter Doctrine, fracking, Oil-dollar regime(ODR)*

The world has entered Post-Western Age. The demise was drumbeated vigorously by the western masses in anticipation of the apocalypse. The best of the minds got afflicted with the dystopic vision. The Mayan calendar was made the reference point. It was the history coming full circle. Only the Spanish conquest of the New America and decimation of the native Indians fuelled the industrial revolution in Europe and subsequent ascendancy of the West as the new territory offered capital in the form of bullion and land for cash crop plantation to bypass the payment crisis. Now, the visions of those “lost natives” turned into a meme for the declining West. The World did end on 21st December, 2012. But, it was the Western world-vision. Coinciding with the event, dozens of intelligence agencies based in the US prepared a strategic vision for the future under the aegis of the National Intelligence Council , *Global Trends 2030: Alternative Worlds*.¹ This Report publicly accepted the fact that the “unipolar moment” is over and “*Pax Americana-the era of American ascendancy in international politics that began in 1945-is fast winding down.*”² Another major think tank, Atlantic Council based in the US topped up the NIC assessment with a companion for perpetuating the limping hegemony in the post-western world, “*Envisioning 2030: US Strategy for a post-Western World*”.³ Kishore Mahbubani, Asianist scholar-diplomat from Singapore has come up with his bird’s eye view of the changing power shift from the West to Asia and convergence of material aspirations world across at a time when he foresees China as the world’s largest economy within this decade and the United States turned down from the world’s sole superpower to a Number 2 position in his new book, “*The Great Convergence: Asia, the West, and the Logic of One World*”⁴

On the other hand, there is plethora of writings by the American experts devising devious ways to perpetuate hegemony through art of offshore-balancing, or instigating turmoil in domestic political system in the developing Asia in the name of liberal democracy. The foremost American exponent of geopolitical (dis)ordering, Zbigniew

*Niraj Kumar is the editor of Journal of Indian Research and author of *Arise, Asia!* (2002)

Brzezinski is rancouring again with his new book, *Strategic Vision: America and the Crisis of Global Power(2012)*⁵. Brzezinski explores following major questions of the new global reality:

1. *What are the implications of the changing distribution of global power from the West to the East, and how is it being affected by the new reality of a politically awakened humanity?*
2. *Why is America's global appeal waning, what are the symptoms of America's domestic and international decline, and how did America waste the unique global opportunity offered by the peaceful end of the Cold War? Conversely, what are America's recuperative strengths and what geopolitical reorientation is necessary to revitalize America's world role?*
3. *What would be the likely geopolitical consequences if America declined from its globally preeminent position, who would be the almost-immediate geopolitical victims of such a decline, what effects would it have on the global scale problems of the twenty-first century, and could China assume America's central role in world affairs by 2025?*⁶

The clamor for renewing the Western primacy under the American hegemony is growing wild. The Return to Asia strategy announced by the US under which 60% of all naval assets are to be shifted to the Asia-Pacific region (APR) by 2020 A.D. springs from this imperial hubris. But, geopolitical ordering of 19th or 20th century is a wide and far-flung idea in this age when the power has decisively shifted back to the Asian pivot. Asia's rise is irreversible. Asia has returned to its position of the pole star and the post-Western world is straddled with everyday news of Asia's home coming as numero uno in tangible and intangible things .

There is a concerted attempt to amputate Asia of its Islamic colour and valour. Asia has been downsized in western discourse to a region encompassing upto India only. The terrain of Asia keep on shifting in western imagination. Only few months back, 'Asia' was limited merely to South East and East Asia. India was part of South Asia. US government statistics have devised another category, Asia-8 comprising Asia-Pacific nations excluding China and Japan. Samuel P. Huntington in his paradigm of "Clash of Civilization" had reduced Asia into four competing civilizations-Islamic, Hindu, Confucian and Japanese (1993).⁷ Asia in spite of geographical unity, common belief system in human-nature continuum, and unity of purpose in the ethos of 'peaceful rise' through 'harmonious , inclusive development commensurate with cultural sensibility' is represented as a heterogeneous land-physically, socially and politically. While on the other hand, the 'West' is pitted as an essentialist category encompassing separated geographies extending as far as Australia, New Zealand, North America and the northern Europe.⁸

In fact, Australia has rafted back into Asia. Australia is part of Asia. The same was echoed by the Chinese thinkers like Liang Ch'chao who promoted the view of Yellow Australia through the fortnightly influential journal, *Xinmin Congbao*(The New People's Journal) which continued publication till 1907. ⁹ Australian Prime Minister Julia Gillard has realized the imperative to be part of Asia. She commissioned Australia in the Asian Century Implementation Task Force under the Department of the Prime Minister and Cabinet to prepare a White paper on Australia in the Asian Century. The task force in its report Australia in the Asian Century¹⁰ has affirmed that the country's destiny is tied to its geography. Since the West fades out of eminence, Australia is rooting for space in the Asian pivot. Gillard has launched a plan to teach every Australian student a key Asian language and to make every school have a sister-school in Asia. Singapore's Asianist proponent Kishore Mahbubani has welcomed Australia into comity of Asia and argues that "by the logic of geography, the continent of Australia should have been populated with Asians. Instead, by an accident of history, Australia has been predominantly populated with Westerners", but "the logic of cultural identity cannot" indefinitely "trump hard geopolitical considerations" Mahbubabni declared that historical accident is now coming to an end.¹¹

Turkey, too, is part of Asia. Turkey's bid to join EU since 2005 was stalled on one or another pretext. Turkey has realized that it remained the distant "Orient" in Western imagination. French president Nicolas Sarkozy humiliated by taking a dig at Turkey that "*Turkey has no place inside the European UnionI want to say that Europe must give itself borders, that not all countries have a vocation to become members of Europe, beginning with Turkey which has no place inside the European Union.*"¹² But, now EU is on the ventilation, while Turkey is booming with growth. Turkey is now back to Asian co-prosperity sphere. It is wooing out Arab countries. Turkey is consistently taking up the issue of the plight of the Palestinians and their rights to statehood in the United Nations.

Asia is the world's largest and most populous continent continues to grow even in geography. It covers 29.9% of the earth's land area and is the land of more than 60% of the world's current population. Asia is the mesocosm in the hierarchical nesting of the universe. Scientists squiggle that seventy percent of the Universe is dark energy. Similarly, seventy percent of the earth's surface consists of water and seventy percent of human body contains water. In cosmic nesting of matter, nearly thirty percent of matter has the centrality and remaining act as the connecting space. Asia's centrality fits neatly into the cosmic scheme. In fact, the political theorists find *Nested Hierarchy* model as the most apt way to understand the complex security architecture in Asia¹³. Asia is expanding like the spider web, producing, consuming, weaving, growing benignly unlike malignant growth of the Western powers, which had to succumb to the overstretch and overgrowth.

Asia's rise is not merely a cliché. The recovery of lost dynamism which was caused by the manipulation of colonialism and imperialism by the west fuels this multifarious balanced and sustained growth. But, the examination must proceed from the measurement of the most tangible product- steel. Steel production is a very important marker of tangible economic activity of a nation. The virtual economy trumps over tangible economy in the GDP calculations as the virtual economy is assumed to be value-added. But, sign-economy is not a substitute for the physical economy. The infrastructure , machine production, automobile industry, housing sector, railway line, ship—each requires persistent supply of steel. Let us compare the figures of steel production in Asia vis-à-vis other regions.(Table :1)

Table:1

		Steel Production (million tonne,Mt)			
Rank	Country	2007	2008	2009	2012
1	Peoples Rep. China	494.9	500.5	567.8	716.5
2.	EU	209.7	198	139.1	169.4
3.	Japan	120.2	118.7	87.5	107.2
4.	Russia	72.4	68.5	59.9	70.6
5.	USA	98.1	91.4	58.1	88.6
6.	India	53.1	55.2	56.6	76.7
7.	South Korea	51.5	53.6	48.6	69.3
8.	Germany	48.6	45.8	32.7	42.7
9.	World	1351.3	1326.5	1219.7	1547.8

Source: *World Steel Association, 22 January,2013*¹⁴

Asia's share grew from 598.1 million tonne in 2005 to 1012.7 million tonne in 2012 i.e. by 414 .6Mt.. World production has gone down except Asia in same period. World production grew from 1146.5 Mt to 1547.8 Mt. between 2005 -2012, growth of mere 401.3 Mt, whole of which can be attributed to production in Asia. In the

world, ‘Other than Asia’, production is either stagnant or have declined. Europe, North America and Africa, have been in the latter category.

Asia’s share of world steel production has increased slightly from 64.5% in 2011 to 65.4% in 2012. It is commensurate with the population share of Asia in the world population. China’s crude steel production in 2012 reached record 716.5 Mt. Only China’s share is hopping 46.3% in 2012. Within a couple of years, China and South Korea would surpass US in steel production.

The figure clearly indicates the status of “hard” economic activity in the US. China is now producing 46% of global steel while the US produces less than 6%. But, this staggering difference is not revealed in the GDP figure. Similar situation exists all across the economic spectrum. US produced 5.7 million vehicles in 2009, China produced 18 million. Printed circuit board(PCB) production in US went down to \$4 billion in 2008 while the value of PCB produced in China was \$16 billion for same period. In 2009, US produced machine tools worth \$2.3 billion, while China’s corresponding figure is \$15 billion.¹⁵ If one takes up the number or weight (currency-free parameters or money-neutral measurement criteria) to compare the manufacturing output between the US & China, the US invariably falls behind China in most of the items. The US is still touted as the biggest economy and according to the IMF’s latest estimates for 2010, the value of total US GDP was \$14.6 trillion while that of China was \$5.7 trillion and China’s GDP can surpass US in PPP terms only in 2016. ¹⁶ Though, some economist like Arvind Subramanian of Peterson Institute for International Economics has been arguing that Chinese economy had surpassed the US economy sometimes in 2010 with total output of &14.8 trillion. His calculations are based on new estimates of GDP published by the Penn World Tables (PWT) under the University of Pennsylvania. ¹⁷

How much is Asia’s projected share in world GDP?

In the din of arguments focusing on US-China competition for ‘hegemony’ or “Wang”(humane authority), the narrative of Asian resilience receives reduced attention. Asian share in world GDP is growing fast. Angus Maddison(1926-2010), the leading economist of the OECD , calculated that Asia’s share of world GDP grew to 40.5% in 2003. This is stupendous feat of Asian genius and hard labour . Asia’s share after the end of the second World War was 14.9% in 1950. Asians took off in a baton relay mode.

Japan led the resurgence soon to be joined by the neighboring countries and cities termed as Newly Industrialized Economies(NIEs)- South Korea, Singapore, Taiwan and Hong Kong. Then , this growth zone began to expand fast. From Malaysia and Thailand, it reached the shores of China. India, Indonesia and Viet Nam have joined the fray. Between 2000 and 2006, around a million people were lifted out of poverty every week in East Asia alone.¹⁸ Japan, the Republic of Korea (South Korea), Singapore and, more recently, China and India doubled their income per person within a decade. Some went on to repeat this achievement two or three times. To put this into perspective, it took the United Kingdom over 50 years to double its income per person during the epoch-defining Industrial Revolution.¹⁹

The causes of growth is being discerned by the economist. A common pattern is apparent. All these growing economies “set out to support prosperity by investing in people, building capital and undertaking institutional change, including expanding the role of markets. With the benefits of a good education and employment-creating reforms, large numbers of young people have become productively employed as they reached prime working age, while a global system of rules has promoted stability and interdependence.” ²⁰

There have been enormous competition to project the future shape of global economic system. Asia’s current share in global GDP is set to increase since the US is still battling the Fiscal cliff under which a \$7 trillion program of automatic tax increases and spending to reduce the fiscal deficit and the public debt cuts cannot be postponed indefinitely . This might cause fiscal contraction of the US . On the other hand, Euro zone is battling hard to tackle debt crisis. The ray of hope and growth is emanating from Asia alone.

Angus Maddison estimated that by 2030 A.D. , Asia (including Middle east) will grow to 53.4% of global GDP (Table:2). Since in 2030, Asia’s share of world population will be 58.6%, (Asian population is projected to grow to 4.79 billion out of projected world population of 8.17 billion), the population-GDP optimization can be realized.

Table:2
Share of World GDP,1820-2030

	1820	1950	1973	2003	2030
Western Europe	23	26.2	25.6	19.2	13.0
USA	1.8	27.3	22.1	20.7	17.3
Western Offshoots*	0.1	3.4	3.3	3.1	2.5
Japan	3.0	3.0	7.8	6.6	3.6
China	32.9	4.6	4.6	15.1	23.8
India	16.0	4.2	3.1	5.5	10.4
Other Asia	7.4	6.8	8.7	13.2	15.4
Eastern Europe	3.6	3.5	3.4	1.9	1.3
Former USSR	5.4	9.6	9.4	3.8	3.4
Latin America	2.1	7.8	8.7	7.7	6.3
Africa	4.5	3.8	3.4	3.2	3.0
Asia as % of World	59.3	14.9	24.2	40.5	53.5

Source: Shares of the Rich and the Rest in the World Economy: Income Divergence between Nations, 1820-2030 ²¹

Maddison estimates that by 2030, 9 Asian nations will be among the top 20 largest GDP. The list will include China(Rank 1), India(Rank 3), Japan (Rank 4), Indonesia(Rank 9), South Korea(rank 12), Turkey(Rank 15), Thailand (Rank 17), Iran (Rank 18), Taiwan(Rank 20). By including Australia among the comity of Asian nations, the number would grow to 10.

The projections of different teams converge on the list. The Citigroup projects the world economy to grow until 2050 .The global real GDP at PPP exchange rates would rise from \$73 trillion in 2010 to about \$377 trillion in 2050. They estimate Asia’s share in the global GDP(in PPP terms) to rise from 38.1% in 2010(Includes Middle east) to 51% in 2030 and further zooming to 56% in 2050 A.D.²² (Table:3) The analysts with the Citi Investment Research and Analysis, William Buiter & Ebrahim Rahbari , has coined the concept of 3G- Global Growth Generators. ²³ These are the countries selected on the basis of their average real per –capita GDP growth over the period 2010-50 to be 5% or higher at PPP exchange rates. There are only 11 such countries in the 3G list and nine out of those are in Asia. These are- Bangladesh, China, India, Indonesia, Iraq, Mongolia, Philippines, Sri Lanka, and Vietnam. Only Egypt and Nigeria represent the Other- than Asia(OTA).

In their estimate ,China will overtake the US to become the largest economy in the world by 2020 (at PPP exchange rates).India will overtake China by 2050. By 2025, four of the 10 largest economies in the world will be in Asia—China (Rank 1), India (Rank 3), Japan (Rank 4) and Indonesia (Rank 10).

Table:3

Note: GDP measured in 2009 PPP USD.

Composition of World GDP

	2010	2030	2050
Africa	4	7	12
Developing Asia	28	44	49
Japan	6.1	3	2
Aus & Nz	1	1	1
CEE	3	3	2
CIS	4	4	3
Latin America	9	8	8
Middle east	4	4	5
North America	22	15	11
West Europe	19	11	7

Willem H. Buiter and Ebrahim Rahbari: Global growth generators: Moving beyond emerging markets and BRICs

In another recent report of the United Overseas Bank, Singapore prepared by Alvin Liew ²⁴, it has been estimated that by 2020 A.D. Four Asian economies will be among the global top 10 in terms of GDP. Indonesia with 3 trillion dollar economy at market price will join the top league. China will surpass US with its 24 trillion dollar economy (Table:4). This will be a remarkable gain for Asia since in 1990, China could manage a place in the top league just by whisker and its GDP was less than Brazil and Spain. In 2011, India joins at tenth spot. But, within next decade, it will surpass Japan to become third biggest economy in market price.

Table:4

In trillion US \$

Rank.	1990	2000	2011	2020
1	US 5.8	US 10	US 15.1	China 24
2	Japan 3	Japan 4.7	China 7.3	US 23.5
3	Germany 1.5	Germany 1.9	Japan 5.9	India 9
4	France 1.2	UK 1.5	Germany 3.6	Japan 6
5	Italy 1.1	France 1.3	France 2.8	Germany 5
6	UK 1.0	China 1.2	Brazil 2.5	Brazil 4.5
7	Canada 0.6	Italy 1.1	UK 2.4	France 3.5
8	Spain 0.5	Canada 0.7	Italy 2.2	Russia 3.2
9	Brazil 0.5	Brazil 0.6	Russia 1.9	UK 3.1
10	China 0.4	Mexico 0.6	India 0.4	Indonesia 3

Source: "*The Rise of Intra-Regional Trade in Asia*" United Overseas bank, Singapore, Nov. 2012, Alvin Liew based on IMF,UOB Economic-Treasury Research Estimate

In fact, the centre of gravity of the global economy has decisively shifted to Asia. Danny Quah, a well-known LSE economist calculated the planet's centre of gravity of economic activity measured by GDP generated across 700 identifiable locations on the earth's surface. He discovered that the world's economic centre of gravity (WECG) located in 1980 was at a point in the middle of the Atlantic Ocean. By 2008, WECG drifted to a location east of Helsinki and Bucharest. The WECG is projected to locate, between India and China in 2050. The WECG has finally come back home after meandering for two centuries across oceans and the mountains.²⁵



Image source: Danny Quah, The Global Economy's Shifting Centre of Gravity

What will fuel Asia's growth in risky & uncertain future?

The US and Eurozone are battling with their indebted economy. There is less prospect of renewing growth in Europe after Europe has lost the demographic dividend and the motivation for the productivity. Europe lies like a cold neutron star, emptied of steam for growth. Asian growth is attributed to export-led strategy, high saving rates and the resulting capital accumulation. The skeptics raise doubt about the sustainability of this strategy for enough growth since the two markets viz. US & Europe can no longer act as the sink for Asian manufacturing in current scenario.

But, Asian growth is no longer tied to the Eur-American market. At the time when the US was engaged with deleveraging its economy in the wake of series of mega-collapse in 2008, Asian economies turned to decouple from the western markets. The growth will be fuelled by internal demand and growing consumption.

Asia is urbanizing fast. The urbanization spur growth as cities are the centre of major economic activity. NIC's Global Trends 2030 report estimates that Urban centres are engines of productivity, generating roughly 80 per cent of economic growth.²⁶ Cities breed middle class which are the consumers. The size of Asian middle class far surpass the western middle class. The shift from export-led growth strategy to consumption-based strategy in turn will deepen Asian regionalism.

Let us survey the tectonic shift in Asian urbanization. In 2010, 3.5 billion of the world's 7.1 billion people live in urban centers. The UN estimates bring out this gigantic shift. By 2030, 4.9 billion of the world's projected 8.3 billion will be living in the cities.²⁷ In 1800 A.D., the urbanization was merely 3%. It took 150 years to climb to the level of 30%. But, another 30% jump will be achieved within 80 years.²⁸ The global landscape has completely changed from largely agrarian to urbanized centres. The UN further estimates that between 2011 and 2030, there will be an additional urban population of 276 million in China and 218 million in India which will together account for 37 per cent of the total increase for urban population in 2030.

CITI PRIVATE BANK has released its annual Wealth Report, 2012, “A Global Perspective on Prime Property and Wealth”²⁹ in which it rely on forecasts that suggest China to have around 130 cities with over one million inhabitants by 2020. This will be more than the US and Europe combined. Of those, around 90 are expected to have over five million people, while eight will be home to more than 10 million. Shanghai will be a Super mega city with over 50 million population and may turn into the global financial centre. In contrast, New York is the only US city that has a population of more than five million (8.2 million in 2010). China’s urban population has now surpassed that of rural area . The country’s urbanization rate jumped to fifty percent in 2011 from mere 39.1 percent in 2002. China has 690.79 million people living in urban areas at the end of 2011, compared with 656.56 million in the countryside. The 18th CPC National Congress has formulated strategy to increase urbanization to 70% in next decade. This accelerated urbanization is intended to boost domestic demand through housing demand and further investment growth, infrastructure development and public utilities.

The pace of urbanization has picked up all across developing Asia. It is not only Beijing, Shanghai, Singapore and Hong Kong , but even cities like Surat and Nagpur which are rising into megacities. As of now, Citi private Bank’s Wealth Report,2012 calculate, nine of the top 10 cities in the world in GDP growth are in China while the top 20 are all in China or India. And except for Doha, Lagos, Panama City, and Lima, the top 30 are all in the Asia-Pacific region.³⁰

The growing urbanization foster higher consumption by the growing middle class . The insatiable demand boosts growth. The Asian middle class has become the main driver of Asia’s economic growth (Table:5).Centennial Group projects this veritable explosion in Asian Middle class.

Table:5
Growth of Asian Middle Class

	2030	2050
PRC	1120	1240
India	1190	1400
Indonesia	220	250
Japan	100	60
Republic of Korea	30	10
Vietnam	80	100
US	185	120
Germany	50	25
World	4990	5900

Source: Centennial Group projections, 2011³¹.

Upper

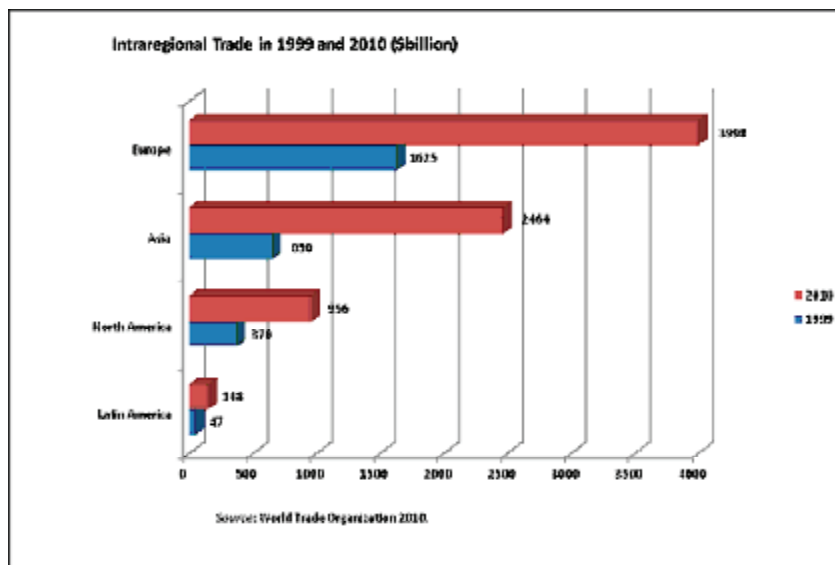
(The middle class is defined to include those living in households spending between \$10 and \$100 a day in purchasing power parity terms .)

While middle class will be shrinking in the advanced economies after 2030, Asia’s middle tier countries will continue to prosper with swelling of this consumer base. In fact, Asia is also creating ultra-wealthy *High Net Worth individuals* (HNWI) at an accelerated pace. According to The Wealth Report,2012,there are now 63,000 people worldwide with \$100m or more in assets. The report indicates the shifting emphasis from the

West to the East. There are now 18,000 centa-millionaires in the region covering South-East Asia, China and Japan. North America has 17000 and Western Europe has 14,000. It is anticipated that by 2016, only this region will have extended its lead, with 26,000 centamillionaires, compared with 21,000 in North America and 15,000 in Western Europe.³² The Report mentions that “South-East Asian deca-millionaires (those with \$10m or more in assets) already outnumber those in Europe, and are expected to overtake those in the US” soon.³³ The Report notes that there is exponential growth in luxury items in Asia’s dynamic region suggesting how the affluence boosts consumption.

There is discernible structural shifts in the pattern of global demand. Asia’s growth is being fuelled increasingly on the Asian markets. The export-led strategy with the Western market as the sink has been relegated into past. Asian middle class consumers have emerged as the substitute for those in western markets. Soon, Asian countries will become major exporters to each other boosting intra-Asian trade and demand for Pan-Asian infrastructure for integrated market. The trend is clearly visible. There is an uncanny commonality of interest among Asian countries in boosting intra-Asian trade.

According to the World Trade Organization, Intra-Asian trade has grown from 650 billion dollar in 1999 to 2464 billion dollar in 2010. This is faster than growth in intra-regional trade in any other region³⁴.



WTO statistics reveal that 52.6% of Asian merchandise trade is intra-Asian. In a recent report “*The Rise of Intra-Regional Trade in Asia*” by the United Overseas Bank (UOB) of Singapore, it has been anticipated that “the global economy will increase by 73 percent over the US\$63 trillion seen in 2010 to reach US\$109 trillion by 2020, with Asian trade flows one of the key factors contributing to this robust growth.”³⁵ The report emphasizes how bilateral trade corridors involving China and India will be the fastest growing sectors. India-china trade has reached record figure of US\$ 73.90 billion in 2011 from US\$ 2.92 billion in 2000 within a span of a decade. There are other fast developing trade corridors like MENA-India, China-Asia. Intra-Asia trade is expected to constitute 40% of global trade by 2030 jumping from current 18% ,with domestic consumption growing due to increased urbanization and swelling of middle class. In 1990, intra-Asian trade was mere 7% of global trade. ASEAN has become the nucleus of this intra-regional integration within Asia. Intra-ASEAN trade stands at 25.3% of its total trade in 2011. ASEAN’s trade within Asia is estimated to grow from current level of 53.1%(2011) to 62.5% in 2020. Only in a couple of years, free trade across ASEAN will be established by 2015.

ASEAN can act as the glue between India and China. ASEAN can also boost intra-regional connectivity for integrating markets further. China and ASEAN is connected through new railway link, Mengzhi railway. There are proposals under consideration to link ASEAN and India with railway lines. Such spurt in connectivity will be boon for intra-Asian trade. Asia is also home to the maximum number of Free Trade Agreements being signed. The FTAs will create gridlocks and reduce the chances of mutual anatagonism as the prosperity vision trumps over now narrow- enumerated nationalism. Kishore Mahbubani rightly points in his new book that there is direct correlation between the decline in the number of wars and the rise in the number of FTAs among states. ³⁶

The Trade rebalancing is occurring all across Asia after the crisis has hit US and Western Europe . China has launched rebalancing of trade drive vigorously. We are witnessing asianization of Asian production and consumption. The opening of economies and reducing trade barriers under the impetus of globalization has led to greater regionalization. Asian nations are thus grid locking their commercial interest and through unmanifest sense of conciliation, pursuing pan-Asian integration agenda. This is in sharp contrast to the imperial rivalry among various European powers who fought for offshore empires and pursued the ‘balance of power’ strategy for its survival. Eur-America indulged in the two World Wars over imperial and commercial interests. Asian countries are pursuing institutionalization and greater integration to resolve their differences.

Is rise of Asia quantitative?

Asia is picking up growth in traditional low technology items as well as high tech economy. While the United States and Europe are the world leaders in science and research, Asia is cornering the application part in production. It is this innovation that has added to the dimension of productivity growth. Asian technology levels are catching up with the best in the world. There are select pockets of excellence concentrated in Japan and NIEs. But, such nodes are multiplying and it would not be oversimplification in saying that the mantle of science and technology leadership will lie with Asia.

WIPO figure reveals that Chinese residents filed maximum number of application in all three categories- patents, marks and designs. India and Turkey have joined the top 10 club in intellectual property ³⁷ (Table:6).In 2010, Japan overtook the United States to become the highest producer of triadic patent families . The rise in patent application springs from the growing number of graduates in science and technology.

Table:6

Overview of resident IP activity by origin, 2011

Origin	Patents	Marks	Designs
China	1	1	1
Germany	5	4	2
United States of America	3	2	9
Japan (5)(7)	2	8	6
Republic of Korea	4	9	3
France (5)(7)	7	3	8
Italy	9	10	4
India	10	5	11
Turkey	17	6	5
United Kingdom (6)	8	11	10

Source: WIPO,2012³⁸

64.5%, 63.2% and 64 % respectively. Contrast this share with US or EU's corresponding share. US share in semiconductor industry was meager 19.3% and in communication equipment 19.6. China earned trade surplus on high- tech trade in 2010, while the US again had trade deficit.

Asia is though still way behind the west in fundamental research and the aircraft and spacecraft. But, the burgeoning engineers and scientists with high sense of confidence and pride in the post-western world can match up to the west before 2030 A.D.

Complex Monetary Regime for US hegemony in a nutshell!

How does the US maintain hegemony? The key lies in the paper-feudalism orchestrated by the American policy makers in the wake of collapse of the Bretton Woods Agreement in 1973 and the Arab-Israel war. The Second World War put America on the forefront of global system. America was the largest producer of oil. The USA orchestrated weakling European powers at San Francisco and Bretton Woods. Dollar became the international reserve and transaction currency on the precondition of dollar-gold convertibility as prescribed by Harry J. White. John Maynard Keynes' proposal for an international body to issue bank note, **bancor**, was turned down. At this juncture, USA ran a trade surplus and accumulated 60% of world's central bank gold with its Federal Reserve System that guaranteed the stability of Bretton Woods system. By the early 1960s, USA began to run massive balance of payment deficit and budget deficit due to domestic tax cuts, domestic spending under Great society program and military expenditure in Vietnam War. French President Charles de Gaulle put up a European vision to challenge America. De Gaulle asked the US to convert Eurodollars for gold as the U.S. dollar's fixed value against gold(\$35 per ounce of gold) was seen as overvalued. On 15th August 1971, U.S. President Richard Nixon suspended the dollar's convertibility into gold .⁴⁰ By March 1973 the major currencies began to float against each other. paving way for a flexible exchange rate system, also known as Bretton Woods II system . Once the fixed exchange rate system was discarded, global trade in currencies accelerated. Capital became mobile and capitalism developed disjunctive spheres within as finance capitalism slowly got delinked from productive sphere.

In 1973, OPEC countries hiked oil price several times in the wake of Arab – Israel war. America's oil production had peaked. It needed new source for increasing demand of oil at home. Henry Kissinger entered into secret negotiation with the OPEC leader, Saudi Arabia in 1974 to denominate oil bills in dollar only and to invest their surplus oil proceeds in US debt securities. The United States-Saudi Arabian Joint Commission on Economic Cooperation was established and it would facilitate annual meetings between Finance officials from Saudi Arabia and US Treasury officials. US extended security guarantee to the Oil producers in MENA. This was the beginning of Petrodollar and its recycling system. The emergence of oil-dollar axis allowed America to widen its primacy internationally. Oil substituted gold as the bedrock of dollar economics. Every oil-importing nation require dollar. Global artificial demand for dollar kept on soaring since oil is the necessary requirement for economic growth. Dollar can be obtained only in two ways – either as loan from the US and US controlled multilateral bodies or by exporting more and more goods as well as services to the USA.

It is no coincidence that neoliberal philosophy of economic growth emphasizes export- led growth. Economic theories have been manipulated to show currency devaluation as a measure to boost export. Rest of the world, particularly developing world, enters into competitive devaluation vis-à-vis dollar to increase its market share in the USA. As a result, the US became the biggest consumer of goods at the cheapest price that brought consumer revolution there. Half of the world's exports are priced in dollar. Apart from being the transaction currency, dollar also acquires the role of reserve currency since that assures the nations the undisrupted supply of oil to grease national economies.

When petrodollar is recycled into American bond market, US derive three kinds of benefit from this recycling. First, American current account deficit is balanced. Second, the surplus capital is loaned to correct balance of payment deficit of those developing countries which face instability in its economy due to mobile nature of capital. Third, share indices and asset prices in the US are kept at maximum which reflects erroneously strong fundamentals in the American economy. These factors make dollar stable. Devaluation of other currencies vis-à-vis dollar maintains a strong dollar, hence, its primacy continues unabated.

US does not want this system to go . Only this system sustains a spendthrift government and consumerist society. The US pays merely a fiat currency i.e. dollar in lieu of ‘real physical goods’ as dollar can be printed without any limit after the collapse of dollar – gold convertibility in 1971. In the US, the Federal reserve print dollar against debt. The debt ceiling keep on raising and as on 31st December,2012; is at the level of \$16.4 trillion. The profligate government pursue huge military and social sector expenditure through deficit financing. The excess dollar is pumped out through disrupting the Oil market. One can discern the pattern in the overtly militaristic policy of the US after the 2008 economic crisis hit major American banks. The US is pursuing hit and scoot policy in the MENA , merely to disrupt the oil market. This causes increase in oil prices and heightens artificial demand for dollar. The excess dollar which is being pumped in the US economy against raising of debt limit and fiscal deficit is pumped out offshore. The developing world gets scared with the devaluation of dollar fearing the dip in their export if their currencies strengthen. To protect their currencies from appreciation vis-à-vis dollar, their central banks intervene in forex market openly by buying up dollars. These dollar reserve is recycled into buying T-bonds in US. The reserve accumulation leads to excessive money supply in domestic economy, which if not sterilized through various market stabilization bonds, will cause high rate of inflation.

The US finances its deficit at low interest rate and keeps on accumulating debt by raising up debt ceiling through the Congress. It is not afraid of roll over or debt default as its currency, dollar, is the world’s reserve currency and can be printed at will without any ‘gold’ or ‘material’ backup .Since the Plaza Accord in 1985, the US is the biggest debtor, but its foreign debt is denominated in its own currency under this complex recycling process backed up by the OIL-Dollar Regime(ODR). The US need not produce anything to pay back its debt but merely fiat dollar which can be printed at no cost. Therefore, the US aims at a monetary policy that keeps low interest rate, low inflation and strong dollar so that it’s T-securities and bonds can be sold internationally with confidence. But, the system is on verge of being dismantled. The post-Western World will be agape with the news of demise of this complex, tributary regime. The last vestiges of the Western imperial domination is crumbling.

Imminent Demise of Dollar Hegemony

The global monetary machination is under stress. It is an unintended consequence of the US strategy to diversify its energy source. OPEC no longer is major supplier of oil to the US. The US is increasingly shifting back to Western Hemisphere as destination of its oil imports. OPEC supplied 20.82% of its total crude to the US in 2011, while the American share of the total export from Middle East has dwindled to mere 12.21%.⁴¹

This has to do with technical breakthrough to extract oil from non-conventional source like shale and sand. The US has emerged as the world’s largest producer of the natural gas. The latest estimate suggest that US has a 100-year supply of natural gas. Production of oil after deploying the fracking (hydraulic fracturing) has tremendously improved the oil extraction in the US and Canada. In 2011, the United States became a net exporter of petroleum products for the first time since 1949, thanks to industry investment in domestic oil and natural gas production and refinery upgrades.⁴² Total domestic production of liquid fuel is expected to be 11.4mb/d this year in the US. API report mentions that increases in production in shale areas have increased domestic oil production by 25 percent since 2008. and U.S. output from eight tight oil prospects alone is expected to grow to 4.5 million barrels per day by 2020, up from 2 million barrels per day in 2012. Two of the

most prolific tight oil prospects are responsible for much of this production—the Bakken Shale, located in western North Dakota and eastern Montana, and the Eagle Ford Shale in Texas.³⁴³ Apart from shale and sand oil, the increased production of ethanol from the biofuel and the hybrid technology to use artificial photosynthesis through nanotechnology to produce ethanol as the fuel for the vehicles are redrawing the contour of future energy import. It is estimated that by 2035, the United States will be importing just 6 million barrels of oil per day (bpd). The corresponding figure for the year 2000 was almost 11 million b/d in 2000. Brazil and Mexico has emerged as major producer of oil (*Table:7*), U.S. oil imports is estimated to be halved in next 20 years. The energy independence from the MENA is touted as the biggest achievement by the US administration. The Carter Doctrine under which the security of the Middle East was considered the prime objective for the sustenance of the US stands abdicated. The table clearly indicates that Canada and Mexico outstrip Saudi Arabia as source of oil import. With the production picking up in Brazil, the US can relieve itself from the Middle east oil import. Even now, US's import dependence on Middle East has reduced to 22% and that on OPEC to 39.6%. In fact, the US expects astronomical increase in oil production from its investment in exploration and non-conventional drilling in Brazil and has already begun to woo Brazil away from the BRICS.

Table:7

Source of Import of Crude Oil to the US(1000 b/d)

	2006	2007	2008	2009	2010	2011
All Countries	13,707	13,468	12,915	11,691	11,793	11,504
Persian Gulf	2,211	2,163	2,370	1,689	1,711	1,861
OPEC*	5,517	5,980	5,954	4,776	4,906	4,555
Algeria	657	670	548	493	510	358
Angola	534	508	513	460	393	346
Ecuador	278	203	221	185	212	206
Iran	-	-	-	-	-	-
Iraq	553	484	627	450	415	459
Kuwait	185	181	210	182	197	191
Libya	87	117	103	79	70	15
Nigeria	1,114	1,134	988	809	1,023	818
Qatar	2	2	0	10	1	6
Saudi Arabia	1,463	1,485	1,529	1,004	1,096	1,195
United Arab Emirates	9	10	4	40	2	10
Venezuela	1,419	1,361	1,189	1,063	988	951
NonOPEC	8,190	7,489	6,961	6,915	6,887	6,948
Brazil	193	200	258	309	272	253
Canada	2,353	2,455	2,493	2,479	2,535	2,796
Colombia	155	155	200	276	365	433
Congo	35	65	68	65	72	53
Equatorial Guinea	60	59	78	89	58	23
Mexico	1,705	1,532	1,302	1,210	1,284	1,206

Russia	369	414	465	563	612	624
Thailand	10	16	14	23	13	18
Trinidad & Tobago	117	100	63	84	73	77
United Kingdom	272	277	236	245	256	159
Virgin Island(US)	328	346	320	277	253	186

Source: US EIA, 27.9.2012⁴⁴

Since, the US is pursuing path of energy independence from MENA and OPEC, the OPEC is losing interest in denominating oil bills in dollar. Moreover, just as the Western Hemisphere oil production is getting Americanized in consumption, Asian oil production is getting Asianized. Asia's share in global oil consumption hovers around 40% . Oil import from all OPEC countries to Asian market is 54.6%. But, one will be surprised to look at the share of Middle East oil being consumed in Asia. In 2011, Asia imported 11586 b/d out Middle East's export of 16654b/d. (Table:8) This approximates 70%. With asianization of Asian oil achieved in production and consumption, in all likelihood, the invoicing of the bills will begin in local currency or new mechanism would substitute the decrepit Oil-Dollar Regime(ODR).

Table:8

OPEC Member's Crude Oil Export by destination (1000 b/d), 2011⁴⁵

	Total world	Asia & Pacific	North America	Middle East	
Middle East	16654		11299	2035	287
Iran	2537		1392	-	-
Iraq	2166		1125	460	-
Kuwait	1816		1500	195	-
Qatar	588		585	-	-
Saudi Arabia	7218		4487	1313	284
UAE	2330		2211	66	-
North Africa	997		158	289	-
Algeria	698		112	289	-
Libya	300		46		-
Africa	3919		742	1935	-
Nigeria	2377		91	1233	-
Angola	1543		651	702	-
Latin America	1887		333	627	-
Ecuador	334		11	207	-
Venezuela	1553		323	419	-
OPEC	23457		12532	4885	287

There is a stable energy linkage with Middle east oil and East Asia consumption. The interdependence is integrating the Middle East more and more with dynamic Asia. Intra-Asian trade is growing fast in other sphere of economy too. By 2030, it is estimated that intra-Asian trade would constitute 40% of the world trade. Regionalization of trade would further fuel the demand for non-dollar denominated invoicing of the bill.

This is already happening with series of swap agreements which China, Japan, south Korea have signed. The artificial demand for dollar is naturally dying. With the Asian economic strategy shifting from the export-led growth to consumption-led growth, further pressure will pile up against dollar. The lowering of demand of dollar in both oil sector and export market as well as growing fiscal deficit will cause devaluation of dollar. The Asian Central Banks have lost the appetite for accumulating dollar in their kitty. Though Saudi Arabia is buying dollar to stimulate dollar's primacy, with more than \$620 billion in its kitty, it will soon lose the appetite else the cost of maintaining the reserve would drag its economy during turbulent times. If dollar further devalues, there will be pressure on OPEC to move pricing from dollar since oil is priced in U.S. dollars on the world market, and the dollar's depreciation contributes to rise in crude prices and also erodes the value of their dollar reserves.

The pressure to dismantle Oil-Dollar Regime(ODR) is already building up. Iran is OPEC's second-largest producer and it has already ended conducting oil transactions in U.S. dollars in 2012. Iran has offered to conduct oil transaction in non-dollar currencies. Iran's oil transaction is conducted in euro, yuan, rupee and yen. China is the biggest buyer of Iranian oil and increasing import of Iranian oil.

Iran is not only puncturing the ODR, but also encouraging the other OPEC members to shift from dollar-pricing.

Iranian President Mahmoud Ahmadinejad called the depreciating dollar a "worthless piece of paper" on November 19, 2007 at OPEC summit in Saudi Arabia and urged OPEC to "disconnect oil and dollar".⁴⁶ Initially, it was Iran which gave a twist to the end of unipolarity of global currency. In 2003, Iran began pricing its oil exports in Euro. Further Iran opened oil bourse on 17 February, 2008 on the island of Kish in the Persian Gulf for trading oil in Euro and other currencies.⁴⁷ This led to the rise of share of euro in forex reserve globally.

The Gulf Cooperation Council (GCC) is also pitting to go off dollar billing of oil. GCC consists of nations like Saudi Arabia, Kuwait, Qatar, UAE. Many of the GCC countries had unofficial pegs to the US dollar- 3.8 riyal per dollar in Saudi Arabia; 3.7 dirham per dollar in UAE; 0.3 dinar per dollar in Kuwait; 3.6 riyal per dollar in Qatar. But, UAE and Bahrain opposed a currency union, Khaleej dinar only because the new currency was to be pegged to dollar. The dollar peg of these currencies are causing higher inflation in these countries as the US economy continues to be mired in recession. Moreover the US is pursuing deliberate policy of Quantitative Easing under which trillion of dollars have been pumped into domestic financial markets to push down the value of the dollar. This is the US implicit indulgence in the 'Beg Thy Neighbour Policy'. The competitive devaluation of dollar is dragging down the gulf currencies tied to dollar and building huge inflationary pressure in these countries.

Since, these countries have high food-import dependency. In the wake up of the Arab Spring, the high cost of food prices have become threat to their stability. The GCC states are loosening their peg to the US dollar and slowly shifting their reserves out of dollars.

Venezuela, another OPEC country which too has its currency Bolívar to dollar (4.3 Bolivar per dollar) is now pitting for SDR and Yuan. The Arab springs has paved way for anti-American groups gripping power in the region. With the US's intent to pursue energy independence and shift to "Pivot of Asia" strategy to build a Trans-Pacific Partnership(TPP), the oil-producing Gulf states are relentlessly working to wriggle out of dollar strangulation.

But, the unipolarity of dollar in global monetary system is being replaced by a new post-western monetary system due to reckless policy of the American administration. The US is projecting itself as a victim of the global monetary system by putting up Triffin Paradox argument (Belgian economist Robert Triffin (1912-1993) argued that in an international monetary system, if the reserve currency is foreign currency, the issuer of the reserve currency has to run the current account deficit to fulfill the responsibility to supply the world with

risk-free asset. By doing so, the Central country becomes more and more indebted to foreigners until the risk-free asset ceases to be risk-free). The US is that it has earned foreign debt of \$4 trillion as of now only to facilitate global trade. This is the ultimate victimhood parried by a decadent hegemonic power. The US is creating a brouhaha against alleged ‘currency manipulators’, but no longer intends to radically alter its own domestic policy and overtly militaristic foreign policy.

The U.S. government has borrowed trillions of dollars from foreign banks and governments to help finance Iraq & Afghan wars and to bloat and overstretch its hard military power to secure its interests. The US also kept on encouraging domestic consumption at the cheapest import price to keep the population away from political engagement and questioning the administrations moves world across. Further, when the US was hit by banking crisis in 2008, it heavily borrowed to stimulate economy and rescue these huge financial institutions with bail out packages. In last five years, estimate for only the present year is below \$ 1 trillion.

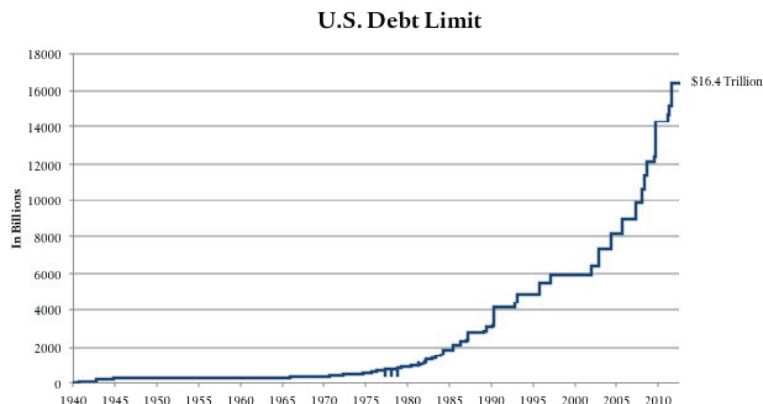
Recent US Federal Deficit Numbers

<i>Deficits during Obama’s Presidency</i>	<i>Deficits during Bush’s Presidency</i>
FY 2013*: \$845 billion	FY 2009†: \$1,413 billion
FY 2012: \$1,089 billion	FY 2008: \$459 billion
FY 2011: \$1,300 billion	FY 2007: \$161 billion
FY 2010: \$1,293 billion	

* CBO Projection⁴⁸

The federal government has already reached debt limit of \$16.39 trillion on 31st December 2012. There is no new borrowing authority from the Congress and the US government will have to handle possible default on interest payment or even payment of salary to employees by early March ,2013. The Congressional budget Office further project fiscal deficits of \$7.0 trillion for the 2014–2023 period, . Federal debt would remain above 73 percent of GDP—far higher than the 39 percent average seen over the past four decades. (As recently as the end of 2007, federal debt equaled just 36 percent of GDP.)⁴⁹

Federal debt held by public stands at \$11.28 trillion or 72.5% of US GDP at the end of 2012. The CBO projects that this figure would boom to \$19.94 trillion in 2023(77% of the then GDP). Gross federal debt that consists of debt held by the public and debt issued to government accounts is projected to reach \$26.1 trillion by 2023.⁵⁰ The increase in debt will also increase the expenditure towards interest payment on the debt. Interest rates which is bottomed at almost zero will increase as the US cannot continue to maintain artificially near zero interest rate and attract investment. The CBO projects that, under current law, the government’s yearly net interest spending will double as a share of GDP—from 1.5 percent in 2014 to 3.3 percent in 2023.



Source: WhiteHouse.gov | Graphic: Hagit Bachrach

While fiscal deficit and debt is skyrocketing, neither the taxpayers nor the administration are ready to tighten the belt . The public uproar led to the postponement of fiscal cliff under which sharp decline in the budget deficit had to occur beginning the FY 2013 due to increased taxes and reduced spending. But, the fiscal cliff was eliminated by the passage of the American Taxpayer Relief Act of 2012 (Public Law 112-240), was enacted on January 2, 2013 that permanently extended some lower tax rates and other tax provisions that expired at the end of FY 2012 . But, this will add \$4.0 trillion to federal deficits over the 2013–2022 period⁵¹ The US, rather than tightening its consumption binge, is indulging in “beggar-thy neighbour” policy by pursuing the Quantitative easing under the Fed’s macroprudential approach. This is aimed to dupe and disrupt the global financial system. The Fed creates credit, and uses it to buy mortgage-backed securities(MBS) and Treasuries from American banks. The banks take off old debt off from balance sheet and extend further credit to make more loans. The increase in money supply devalues dollar. The US intends to make its export cheaper as well as to export its own inflation. Since oil is denominated in dollar, the oil prices soar up due to dollar devaluation. This impacts the dynamic economies which are oil-dependent like India , Japan and China, the troika of Asian powers which are expected to be among the top four global economic powers within a decade. The artificial hike in oil prices is then blamed over growing appetite of Asian nations. There is an artificial demand for dollar. These nations hoard the dollar for energy security as well as to protect its export to the global consumption sink, the US. The Fed pumps this excess dollar into global financial system to maintain low level of interest rate and inflation within USA which safeguards the strength and stability of dollar. The draining out of dollar is also achieved through currency traders via the ‘dollar carry trade’. The US is maintaining lowest possible interest rate in spite of huge turbulence in economy. The Fed fund rate till 2015 is zero. It helps the nation in two ways. The interest payment amount on the public debt is kept at minimum. Secondly, the emerging economies which maintain higher rate than the US, became destination for hot money through carry trade in dollar. The dollar gluts the world economy. This enters stock markets and raises the indices. Asset bubbles are created in these growing economies and then high inflation builds up. With huge amount of dollar, there is panic among exporters in other countries, since the domestic currencies are expected to rise in strength. There is a cacophony to devalue currencies to maintain the cheap export to the US. US dollar retains the strength since other currencies enter into competitive devaluation.

Asian Central Banks intervene in the market and pile up dollar in forex reserve and inject corresponding amount of money in domestic economy which fuels inflation. Through this way, the US can continue to expand debt base and export inflation. China has piled about &3.3. trillion in reserves by October 2012. Japan is number two with \$1.2 trillion in its kitty. (Table:9) On the other hand, US which is the world’s largest economy has mere \$52 billion in forex reserve in comparison with the standard requirement of three month of import, which in US case should be \$666 billion.

Table:9

Foreign Currency Reserve Accumulation: Major holders

October 2012(reserves &million)

China	3,285,095
Japan	1,196,844
Saudi Arabia	613,373
Russia	476,380
Switzerland	456,124
Taiwan	399,216
Brazil	369,212
Korea	314,255

Hong Kong	291,210
India	260,465

(Latest data are for September for China, Saudi Arabia, Russia, Brazil, Hong Kong)

Saudi Arabia is the only major economy for which the pace of reserve accumulation has been increasing, reflecting rising oil prices. India's foreign currency reserve has fallen since July 2011.⁵²

Under this process, the US is gleeful that with each bout of devaluation of dollar, the value of the substantial dollar assets in forex reserves of these Asian economies get driven down. Realizing the baneful effect of getting caught in this endless cycle of financing US debt and losing hard earned wealth, ACBs have stopped further piling dollar. The US has managed the Saudi Arabia to purchase dollar so that the latest round of the QE policy does not fuel domestic inflation. But, in spite of the QE policy, the trade deficit in the US is widening. The US Trade balance deteriorated from 645.1 billion trade deficit in 2010 to 738.4 billion in 2011.⁵³ This also points to the need for the US to engage in domestic tightening and not to create imbalance in global monetary system.

The mischievous strategies are getting thumbs down from various quarters. The credit rating agencies like S & P are downgrading the US economy and it is further exacerbating the negative confidence effect among the global business community for the dollar as a transaction currency.

The US finds itself at the fag end of monetary unipolarity as the nations have begun to shun dollar after the regular bouts of devaluation and the American economy in doldrums. C. Fred Bergsten and Joseph E. Gagnon of Peterson institute for International economics have argued in their recent policy brief, "Currency Manipulation, the US Economy, and the Global economic order",⁵⁴ argues for the end of dollar's international role:

*"With respect to the international role of the dollar, it is now clear that the United States pays a considerable price and might be better off without it. The dollar's role makes it easier for other countries to set the exchange rate of the US currency and more difficult for the United States itself to do so. Moreover "deficit without tears" that other countries have jealously criticized for so long have turned out to be a poisoned chalice for the United States itself. By depressing demand for US output, currency manipulation has simultaneously driven the United States to larger fiscal deficit and made the financing of those deficits easier. The net result is an unsustainable path of national and external debt."*⁵⁵

Bergsten & Gagnon plots the evolution of a multiple reserve currency system with multiple international financial centres and argues that the other countries would not be forced to use the dollar or US financial assets, and thus the US can achieve autonomy to contemplate dollar policies. Their prescription for the United States is to *"gracefully accept the steady, and most likely continued slow, decline of the dollar's international role and react with equanimity when the inevitable day arrives that it will no longer be number one on one or another of the relevant criteria."*⁵⁶

The end of dollar hegemony will deprive the US from the multiple advantages that sustained hegemony. The foremost of which was to indefinitely and exponentially feed on foreign debt and foreign oil, both denominated in their national currency, dollar, which could be printed at will without any tangible backing. But, will the US allow peacefully to let a new global monetary system emerge in the post-western world or will it destabilize global monetary system in a game of brinkmanship?

Tripolar Global Monetary System

China has surpassed the US in 2012 to become the world's biggest trading nation. While US exports and imports totaled \$3.82 trillion, China's total trade amounted to \$ 3.87 trillion.⁵⁷ The biggest trading nation has incentive to promote the use of its own currency for smooth flow of trade. China has embarked upon internationalizing yuan through swap agreements. Bilateral swap agreements lead to short-term liquidity and

ease trade conditions It has already signed 18 currency swap agreements with a total of 1.6 trillion yuan involving such diverse countries like South Korea, Japan, Phillipines,Brazil, Australia, Indonesia, Belarus,UAE, Turkey. ⁵⁸ The deal between China and Japan is a deal between world's second and third largest economy. China is already Japan's largest trading partner with bilateral annual trade exceeding \$340 billion. Similarly, China is the biggest trade partner of Germany now and a similar swap agreement is being negotiated. India and Japan have agreed to enhance the amount of currency swap agreement from \$ 3 billion to a tune of \$15 billion on December 4,2012⁵⁹ .Such swap agreement reduces the dollar role in international transaction.

Moreover, Japan has been allowed to buy yuan denominated bonds issued inside China. . China is also working to develop yuan offshore market. Apart from Singapore and Hong Kong, London and Taiwan has become offshore yuan trading centre. Now, all over the world, the financial centres are competing to emerge as the major centre for yuan transaction. has become the clearing centre for yuan market. China has now officially declared to pursue Yuan internationalization on market –oriented basis.⁶⁰ A report in China Daily estimates that “in 2012, cross-border trade settlement in the yuan rose 41 percent to 2.94 trillion yuan, while investment settled in the currency rose by 153 percent to more than 280 billion yuan⁶¹ . The bankers project that within next two years , yuan would be adopted as a reserve currency. Thus by multiplying bilateral swap agreements, China is aiming to make yuan as a global reserve currency and an alternative to the dollar.

The clamour for replacing dollar as reserve currency is growing manifold .Russian President Dmitri Medvedev told an economic forum in St. Petersburg in June,2010 that American financial policy had made the dollar an undesirable currency for reserves held by central banks. Russian Finance Minister Alexi Kudrin suggested making China's renminbi as a world reserve currency after it becomes fully convertible in about next ten years. Following such bonhomie, from November, 2010;Russia and China began to use their own national currencies for bilateral trade, instead of the U.S. dollar. The yuan started trading against the ruble in the Chinese bank market in Shanghai, and in December 2010, began trading on the Moscow Interbank Currency Exchange.

Yekaterinburg Summit(2009) of BRIC nation & Pittsburgh Summit of G-20 nations same year witnessed clampdown against dollar's over bloated role. China led the creation of Chiang Mai Initiative in 2010 for an Asian Monetary Fund- kind of institution with 10-member ASEAN and China, Japan, South Korea as signatories. This created a \$120 billion regional currency swap fund with objective to bail out member nations in times of illiquidity or balance of payment shortfall. Now, the members are considering doubling the fund in response to the perceived increasing threat of global instability.

Such initiative has encouraged the institution like the ADB to visualize a Pan-Asian Integration scenario. In its report, *ASIA-2050:Realizing the Asian Century*, ADB chalks out the future of global monetary system:

There are four possible paths to the future Global Reserve Currency System. The first is the status quo, if Asia remains non-convergent, fragmented and subject to economic setbacks and internal conflict. The second is a single dominant Asian currency that then contends for the dominant position in the Global Reserve Currency System. This has a low probability, because it would be quite difficult for a single Asian economy to achieve Asian dominance or global dominance on its own. The third path is an intermediate Asian Monetary System before negotiating to join the Global Reserve Currency System. ⁶²

Emboldened with dollar's diminishing role, the G-20 nations have sought a stable and resilient international Monetary system and aims to review the developments afresh in 2015.

In the 6th Summit of G-20 nations in Cannes, France held in the year 2011 ; the G-20 countries agreed to accept the emergence of new international currencies. The relevant paragraph of the Agreement is reproduced below:

“Reflecting the changing economic equilibrium and the emergence of new international currencies

12. We affirm our commitment to move more rapidly toward more market-determined exchange rate systems and enhance exchange rate flexibility to reflect underlying economic fundamentals, avoid persistent exchange rate misalignments and refrain from competitive devaluation of currencies. We are determined to act on our commitments to exchange rate reform articulated in our Action plan for Growth and Jobs to address short term vulnerabilities, restore financial stability and strengthen the medium-term foundations for growth. Our actions will help address the challenges created by developments in global liquidity and capital flows volatility, thus facilitating further progress on exchange rate reforms and reducing excessive accumulation of reserves.

13. We agreed that the SDR basket composition should continue to reflect the role of currencies in the global trading and financial system and be adjusted over time to reflect currencies' changing role and characteristics. The SDR composition assessment should be based on existing criteria, and we ask the IMF to further clarify them. A broader SDR basket will be an important determinant of its attractiveness, and in turn influence its role as a global reserve asset. This will serve as a reference for appropriate reforms. We look forward to reviewing the composition of the SDR basket in 2015, and earlier if warranted, as currencies meet the criteria, and call for further analytical work of the IMF in this regard, including on potential evolution. We will continue our work on the role of the SDR.”⁶³

But, 2015 may be far distant in time. The economists have confirmed that in East Asia, dollar bloc has effectively been replaced by a yuan bloc. Arvind Subramanian and Martin Kessler of the Peterson institute for International Economics have come out with their study, “The Renminbi Bloc is Here: Asia Down, Rest of the World to Go?”⁶⁴. They find that the renminbi has increasingly become a reference currency (meaning emerging market exchange rates move closely with it). Since June 2010 when the renminbi resumed floating, the number of currencies tracking it has increased while the number tracking the euro and the dollar have declined.

They have studied this tracking and find how East Asia is already a renminbi bloc because the currencies of seven out of 10 countries in the region – including South Korea, Indonesia, Taiwan, Malaysia, Singapore and Thailand – track the renminbi more closely than the US dollar. Only three economies in the group – Hong Kong, Vietnam and Mongolia – have currencies following the dollar more closely than the renminbi. But these three economies does not have high GDP.

The shift emanates from China's rise in the share of east Asian countries' manufacturing trade . East Asian countries that sell to the growing Chinese market or are locked in supply chains centered on China maintain a stable exchange rate against the renminbi.

The economists have also tracked the rise of the renminbi outside East Asia. Even the currencies of India, Chile, Israel, South Africa and Turkey now follow the renminbi closer than dollar. Subramanian & Kessler have projected that in 2037, the global renminbi currency bloc may emerge.⁶⁵

The multipolarity of global monetary regime will virtually end the tottering American hegemony. The Post-Western world will no longer be marred by the world wars and imperialism. Asian nations have pursued the path of integration in contrast to the halcyon days of the west when the nation-states pursued the policy of balance of power and Beggar Thy Neighbor policy. Asian resilience and reliance on conciliation rather than power politics will help create a stable and peaceful global environment. The international hegemon, in such conditions, will have to pursue a benign approach. It will be a networked and nested global system and not the hierarchic system. Harmony and rule of law will extend sway over international system. The post-western world will have many more positive surprises for the citizens world across. Asia-centric global civilization will emanate peace and prosperity and facilitate the great leap in mankind's quest for a rational ,moral and aesthetically soothing social and political order.

References:

- 1 *Report of National Intelligence Council, Global Trends 2030: Alternative Worlds, December 2012, NIC 2012-001 available at www.dni.gov/nic/globaltrends last accessed on 18.2.2013*
- 2 Ibid. p.x
- 3 *Robert A. Manning, Principal Drafter, Envisioning 2030: US Strategy for a Post-Western World- A Report of the Strategic Foresight Initiative at the Brett Scowcroft Centre on International Security, Atlantic Council,2012*
- 4 *Kishore Mahbubani, "The Great Convergence: Asia, the West, and the Logic of One World" , Public Affairs. 2013. Also Is the US Ready to be Number Two? Yaleglobal, 11 February,2013 Source: <http://yaleglobal.yale.edu/content/us-ready-be-number-two> Last accessed on 18th February,2013*
- 5 *Zbigniew Brzezinski **Strategic Vision: America and the Crisis of Global Power(2012)***
- 6 Ibid. p.2
- 7 Niraj Kamal, Arise Asia: Respond to White Peril, 2002 ,p.15
- 8 Ibid.,pp.24-29
- 9 Ibid., p.172
- 10 Government of Australia, Australia in the Asian Century White Paper, October,2012. available at <http://asiancentury.dpmc.gov.au/white-paper> last accessed on 19.2.2013
- 11 Kishore Mahbubani, Australia's Destiny in the Asian Century, The Jakarta Post, September 7,2012.
- 12 Lucia Kubosova, Sarkozy launches presidential bid with anti-Turkey stance, EUObserver.com, 15.1.2007 available at <http://euobserver.com/political/23251>
- 13 George J. Gilboy, Eric Heginbotham; Chinese and Indian Strategic Behaviors: Growing Power and Alarm, Cambridge University Press,2012,pp.273-277
- 14 Press Release of World Steel Association, World crude steel output increases by 1.2% in 2012; 22 January,2013 available at <http://www.worldsteel.org/media-centre/press-releases/2012/12-2012-crude-steel.html>
- 15 Peter Marsh, US manufacturing crown slips, Financial Times, June 20,2010 available at http://www.ft.com/intl/cms/s/0/af2219cc-7c86-11df-8b74_00144feabdc0.html#axzz2LF1yJA13. Also see, Richard McCormack,ed. Manufacturing- A Better Future for America, Alliance for American Manufacturing, 2009
- 16 Mark Weisbrot, 2016: When China overtakes the US; guardian.co.uk, 27 April, 2011 available at <http://www.guardian.co.uk/commentisfree/cifamerica/2011/apr/27/china-imf-economy-2016>
- 17 Arvind Subramanian; Is China Already Number One? New GDP Estimates ; Peterson Institute for International Economics Real Time Economic Issues Watch, Jan. 13, 2011 available at <http://www.piie.com/blogs/realtime/?p=1935>)
- 18 Indermit Gill & Homi Kharas;"An East Asian Renaissance," World Bank, 2007,p.61
- 19 Angus Maddison, Contours of the world Economy, IMF World Economic Outlook, October, 2010

- 20 Asian Development Bank, Asia- 2050, Realizing Asian Century,2012.
- 21 Angus Maddison, Shares of the Rich and the Rest in the World Economy: Income Divergence between Nations, 1820-2030 Asian Economic Policy Review 3(1) ,2008,pp. 67-82
- 22 Willem Buiters Ebrahim Rahbari, Global growth generators: Moving beyond emerging markets and BRICs, 21 February 2011; Citi Investment Research & Analysis, a division of Citigroup Global Markets Inc, *Centre for economic Policy Research, Policy Insight No.55*
- 23 *ibid.*
- 24 Alvin Liew, “The Rise of Intra-Regional Trade in Asia” ,UOB Economic-Treasury Research Estimate, Singapore, 29th Nov. 2012, available at <http://www.media-server.com/m/p/w32xt45v>
- 25 Danny Quah , *The Global Economy’s Shifting Centre of Gravity , Global Policy 2(1),. January 2011*
- 26 n.1, p.29
- 27 UN, Department of Economic & Social Affairs, Population Division : World Urbanization Prospects: The 2005 Revision.,2006 . Also see, UN’s Report on Population Distribution, Urbanization, Internal Migration and Development: An International Perspective;2011
- 28 Šlaus, Ivo; Jacobs, Garry. “Human Capital and Sustainability, sustainability 3(1),2011, pp. 97-154 Available at <http://www.mdpi.com/2071-1050/3/1/97/>
- 29 Knight Frank Research,The Wealth report 2012:A Global Perspective on Prime Property and Wealth, Knight Frank & Citi Private Bank,2012
- 30 *Ibid.* pp.16-17
- 31 cited in n.20, p.24
- 32 n.29, p.10
- 33 *Ibid.*
- 34 WTO, International Trade Statistics, 2011, p.21
- 35 n.24
- 36 Manik Mehta, Southeast Asia, Once Described As Asia’s Balkan, Is Today A Peaceful Community, 7 February,2013 available at www.bernama.com/bernama/v6/bm/newsworld.php?id=926819
- 37 WIPO , World Intellectual Property Indicators,2012,p.28 available at <http://www.wipo.int/ipstats/en/wipi/figures.html>
- 38 *Ibid.* ,p.38
- 39 National Science Board,NSF, Science and Engineering Indicators 2012 available at <http://www.nsf.gov/statistics/seind12/pdf/seind12.pdf,p.O-7>
- 40 Niraj Kumar, Primacy of Dollar and Global Inequality, Otherside, May,2008
- 41 OPEC Annual Statistics Bulletin,2012
- 42 American Petroleum Institute, The State of American Energy,2013,p.7
- 43 *Ibid.*,p.9

- 44 US Energy Information Administration,US Net Import by Country, release date 27.9.2012 available at http://www.eia.gov/dnav/pet/pet_move_net_i_a_ep00_imn_mbbldpd_a.htm
- 45 n.41, p.47
- 46 BBC News, Iran Leader dismisses US Currency, 18 November, 2007 available at <http://news.bbc.co.uk/2/hi/7101050.stm>
- 47 Press TV, Oil Bourse opens in Iran’s Kish Island, 17 February,2008
- 48 Congressional Budget office, The Budget and Economic Outlook: Fiscal Years 2013 to 2023, February 5,2013 available at <http://www.cbo.gov/publication/43907>
- 49 *Ibid.*
- 50 *Ibid.*,p.9
- 51 *Ibid.*,p.12
- 52 US Department of the Treasury, office of International affairs, Report to Congress on International Economic and Exchange Rate Policies, , November 27,2012, p. 8
- 53 US Bureau of Economic Analysis, US International Trade in Goods and Services, December,2012; Released on February 8,2013. Also available at http://www.census.gov/foreign-trade/Press-Release/current_press_release/ft900.pdf
- 54 C. Fred Bergsten and Joseph E. Gagnon ;Currency Manipulation, the US Economy, and the Global Economic Order, Peterson Institute of International Economics, Policy Brief No. PB 12-25, December, 2012
- 55 *Ibid.* p.23
- 56 *Ibid.*
- 57 Bloomberg News, China eclipses US as Biggest Trading Nation, February 10,2013
- 58 Sudeshna Sarkar, Currency swaps to take on Bigger Role, China Daily, 28th November, 2012. also available at http://www.chinadaily.com.cn/cndy/2012-11/28/content_15965069.htm
- 59 The Financial Express, India, Japan ink \$15 billion currency swap arrangement , 4th December, 2012 available at <http://www.financialexpress.com/news/india-japan-ink-15-billion-currency-swap-arrangement/1040334>
- 60 Xinhua News Agency, Challenges ahead to make Yuan a global currency; January 27, 2013
- 61 Wang Xiaotian, Global Use of yuan to see “major leap” in 2013, China Daily, 17.1.2013
- 62 n.20, p.57
- 63 Full Text-G-20 Cannes summit Communiqué, available at <http://www.reuters.com/article/2011/11/04/g20-communicue-idUSP6E7K902Z20111104>
- 64 Arvind Subramanian & Martin Kessler ;The Renminbi Bloc is Here: Asia Down, rest of the World to Go?” **Peterson Institute of International Economics**, Working Paper Series WP 12-19 , October, 2012
- 65 *Ibid.* p.15

CONSTRAINTS OF CHINA'S EMERGENCE AS A POLITICAL ALTERNATIVE TO THE WESTERN WORLD

Dr. Binod Singh*

ABSTRACT

With the end of western era, the ideological dominance of the West is under challenge. The new breed of intellectuals are rooted in own tradition and yet not antagonistic to the logic of universalization of categories. China , after having arrived at the world stage as the economic power house, is striving to build an alternative to the Western world order based on Confucian tradition. The paper reviews the current Chinese domestic political situation and attempt to predict its impact on the emergence of China as an alternative to the Western World order.

Keywords : Confucian values, CCP, Central Committee, Beijing Consensus, Daniel Bell, Deng Xiaoping, tao guang yang hui

INTRODUCTION

In the 21st Century, when the world enters into the “Post-Western World order” we encounter a growing debate among the prevailing political theory to explain this political and ideological transition. The old world order is collapsing and it's giving way to a new world order which is perceived to be multipolar.¹ In our own generation we have witnessed the rise and fall of communism, and mused over Francis Fukuyama's clarion call of the end of the history. Now we are witnessing the end of capitalism as some of the main torch bearers of capitalism are enmeshed in financial mess and sooner or later they will succumb to the nemesis of their own making. The Western world is also facing moral crisis and taking disastrous steps in insanity such as military intervention in Afghanistan, Iraq, Libya, and now Syria and Mali. Ideologically also, the Western intellectuals have started looking towards the East for their continued survival.

At the same time we have seen the rise of the Rest, especially the rise of the East. India and China has occupied the center stage of the world as they continue to become more dynamic and vibrant both economically and politically. China, after winning over the world market² has now launched a new campaign to challenge the Western hegemony and Western values in order to create an alternative to the Western Capitalism. But there have been different voices with regard to Chinese emergence as an alternative to current domination of western world order. Economic success does not directly imply a country to take over the role of a world superpower. China has to set some clear examples in domestic and external governance so that its ideas and institutions find appeal among countries outside its region. In the following sections, we review the current Chinese domestic political situation and attempt to predict its impact on the emergence of China as an alternative to the Western World order.

The Current Political Setup

Every political system is made of its own historical discourse and developmental process, and whether it can be exported as a packaged ideology to outside its boundary is a question solely to be decided by the importer (the searcher) of the ideology. The Chinese Communist Party (CCP) has ruled China since 1949 and we do not see any greater challenge to its rule in the near future. The party is in the full grip of the power and there

*Dr. Binod Singh is the Assistant Professor in Peking University, China and Vice President of the Society for Asian Integration.

is hardly any strong oppositions group organized to challenge its supremacy, except some individuals and intellectuals who have challenged the legitimacy of the party to rule the country. There has been some minimal political reform in the early 1980s when Deng Xiaoping took control of the party. In the late 1980s and 1990s China witnessed the introduction of greater political checks and balances at the top leadership under the initiative of Deng Xiaoping. But even today the party continues to be Marxist Leninist in its hierarchical structure. The highest formal organ of power is the Politburo Standing Committee (PSC) consisting of seven members, currently headed by the General Secretary of the CCP. Other important institutions are the State Council, led by the Premier, Wen Jiabao, and the National People's Congress (NPC), a largely rubber-stamp parliament. The PLA is the armed instrument of the Chinese Communist Party (CCP) and organizationally, subordinate to the Party apparatus. Career military officers are CCP members, and units at the company level and above have political officers responsible for personnel decisions, propaganda, and counterintelligence. Major decisions at all levels are made by CCP committees, and also led by the political officers and commanders. The PLA's highest decision-making body, the Central Military Commission (CMC), is technically a department of the CCP Central Committee, but is staffed primarily by military officers. The Chairman is a civilian, usually the General Secretary of the CCP and the President. Other members include the commanders of the service arms and the four general headquarters departments, and a number of Vice Chairmen. Vice President Xi Jinping, the chosen successor to the PRC President Hu Jintao, is already the Chairman and the only other civilian on the CMC.³

Current Leadership Transition and Challenges

China has seen a power transition from the fourth generation (Hu Jintao-Wen Jiabao system) to the fifth (Xi Jinping-Li Keqiang system) after the 18th National Congress of the Communist Party of China on December 15, 2012. The previous generations of China's leaders were focused on growing the country's economy. However, now that China has emerged as an economic superpower—the second largest economy in the world—policy changes made by the new generation of leadership will have broader implications for China and the world. In the current period of political transition, the party is faced with the need to balance, on the one hand, the domestic expectations of a burgeoning middle class who are pressing for social, political and economic change and, on the other, the conservative views of elderly statesmen and military commanders. The hard handling of 'Bo Xilai incident' sends a clear signal to all stakeholders that the party will not tolerate any open factionalism and indiscipline.

The Western version of opinion, that China, since ruled by one party (the CPC) is unstable in long run might be over exaggerated. But the ruling party is facing severe challenges which can hinder its prospect of emerging as an alternative to western liberal democratic order. The ruling communist party continues to command the hold of its power across the length and breadth of the world's third largest territory and the most populous nation on this planet. Chinese citizens enjoy only limited rights and their right to freedom of speech is restricted by various conditions. The current Chinese political system limits the free flow of information, lacks the self-correcting mechanisms of democracy, and hence stifles creativity. Its problems are daunting. Income inequality is growing. Inflation is a threat. The country is rapidly aging. The divide between urban and rural quality of life is vast. Corruption is widespread (Zakaria, 2009). The rising Gini-index and wealth gap among the rich and the poor has emerged as a major social and political destabilizing force in the country. The rich and poor in China cannot live in harmony with each other as the officials are alleged to have favored their kith and kin in getting rich first.

In 2010, China has emerged to be the world's largest economy overtaking Japan and also the largest trading nation in the world. The year, 2011 also marked the Tenth anniversary of China's joining of WTO. Despite all the above achievements, China is emerging as one of the most unequal society in terms of the gap between rural and urban areas. Deng, who was the chief architect of the Chinese economic reform, then said that "to

grow rich is glorious” and allowed the theory of *“let a few pockets of country get rich first”*. The same theory is now haunting back the country. Although the Chinese government shifts its policy away from an insular focus on economic expansion and moves to pursue sustainable development, the working-age population (ages 15-59) begins to decline in 2014, and by 2020 the percentage of the population over 60 will reach 17%. Therefore China will experience a large generational shift between 2020 and 2030. This decade will mark the first time that those born and raised as single children under the “one-child” law will acquire positions of power and it is difficult to predict exactly what effects this development will have on Chinese society.

In 2012, there was less number of coal mine accidents compared to the last year. But the environmental cost of the pollution caused by chemical industry has been claiming the lives of average citizens. It was in Dalian, in October that thousands of citizens took to road in order to demand the closure of a chemical plant, amidst fears of a toxic leak. Government has to finally shut down the plant on the assurance of relocating it to other region. Later in the same area, an oil spill which was for long concealed by the authorities, but when discovered by the public and spread on Weibo, the Government was forced to take actions. As the time goes on, and number of cancer patients rises in the country, the cost of China emerging as World’s factory seems to be very high. There were similar protests in thousands across China demanding shut down of polluting plants and other scandals. The Government officials especially from the National Development Reform Commission have been trying hard to ensure the consumer rights and reign into the food adulterity but with little success. The Chinese mothers distrust the local milk food and rely mainly upon imported quality. There were similar scandals which exposed the farce of rule of law in the country. As the use of Social media grows in China, it will be further difficult for the party to continue its propaganda.

As per the reports in domestic media, the incidents of school bus accidents exposed that how Chinese society is still vulnerable to poverty and underdevelopment despite China emerging as the second largest economy.⁴ The social security system in the country is still in complete jeopardy and the health care is unaffordable to majority of its citizens. China will be facing an aging society in the coming years when there will be much more dependent people than the number of working population. Social unrest in China is mainly rooted in the uneven distribution of the wealth among its different regions; especially the gap between the coastal and Western region is rising. Chinese villages are getting deserted and all the young people are moving to cities. At the same time many party officials are alleged to have sent their families abroad and transfer illegal wealth to them. There has been growing trend among many private entrepreneurs in China to move abroad and acquire foreign nationality. Like in India, the life of common Chinese is getting harder due to rising food inflation without relative increment in their salaries. Inflation did occupy most of the working time of Chinese Premier Wen Jiabao, but it was reigned into with limited success. The realty sector for the first time in a decade saw a fall of 5-10 percent in price. Majority of the Chinese people cannot afford to buy one sweet home as the ratio of their income to the housing price is quite disproportional. Nevertheless, although China surpasses Japan to become the world’s second largest economy in GDP terms, per-capita income and social infrastructure remain at levels on par with an undeveloped nation. Decades of rapid economic growth may come to an end before income disparities and the gap between the urban and rural areas are corrected and those Chinese who are yet to benefit from economic development will remain be left behind.⁵ The frustration and discontent with the Communist Party felt by those who have had their lives and health ruined by worsening environmental problems reaches its peak. Popular demonstrations and riots that had until this point remained more-or-less isolated expand across regional borders, and becoming far more organized in the process. The Communist Party, overwhelmed by the massive riots now occurring throughout the country, attempts to maintain social order by force and is showered with criticism from international society. Economic growth grinds to a halt and China descends into chaos. (PHP Report, 2008)

Another looming crisis the Chinese government will be facing in 2013 is the huge bad loans concurred by its state owned banks. As Dr. Subramianum Swamy has predicted in his research paper⁶ and also other media

has reported that the Local governments have borrowed huge amount of loan from these banks which needs to be bailed out sooner or later. However, the government denies this banking crisis, and argues that there is no risk to Chinese financial system as China enjoys a huge foreign currency reserves which can be utilized to bail out these banks. However, if it goes the other way around, then a financial crisis is in waiting and the housing bubble burst (ghost townships) can send China into chaos.

But at the same time ,the party has started a crackdown against the corrupt officials and it is supposed to be cleaned and purified in the coming years. This has won the sympathy of most of its citizens and hence the legitimacy of the party will be maintained. The top party leaders have already signaled for political reform and establishment of the rule of law. But all this will not materialize into an early holding of popular elections in China. China will continue to be ruled by Communist party. Nowadays, in mainland China or outside, no public intellectual will desist from using the “D” word⁷ in their formal or informal talk or lectures. It has become an accepted norm that China is developing towards a democratic society as well as polity on its own pace. The censorship on discussion of this topic in the open space no longer holds under the articulate public intellectuals at Chinese Universities as well as millions of bloggers.

Prospects for Democracy

What are the prospects for democracy in contemporary China? The students of liberal-democracy will be certainly disappointed with the progress of the democratic institutions building in the recent history of Communist China. It seems that “Democracy” is normally an ideal to be achieved for China in the coming years. But it seems that, in the coming decade, the CCP does not seem to be serious about launching China into democratic mode of governance. China calls itself a government of democratic parties that are led by the communist party. One of the other parties is the China Democratic League (Minmeng) which has more than 100,000 members, who are mostly educated intellectuals. On the other hand, the All-China Federation of Industry and Commerce (ACFIC) is far larger than any of the democratic parties. It is made of the mostly rich private entrepreneurs who are adopted by the party.

But whether China will become a democratic country based on popular elections and civil rights with freedom of speech have raised doubts among its longtime observers. If one is well versed in Mandarin, then he can find several websites which have listed extensive articles and papers on rural democratic construction in China. These intellectuals are playing safe by not questioning the legitimacy of the party and at the same time embracing certain values of Western Liberal democracy. Therefore some commentators conclude that they are not committed to the goal of democracy in China. In their recent writings and pamphlets, even they have attempted to redefine the concept of democracy in a Chinese context. Some Western Scholars, such as Daniel Bell, who teaches Philosophy at Tsinghua University have also joined this chorus by publishing few works in favor of East Asian illiberal tradition of democracy based on Confucian ethics.⁸ These scholars have questioned the Western values and Human Rights which may not be perceived in East Asia in the same way.⁹

Improvements in the standard of living stimulate a desire among the Chinese people to actively participate in the political process and this eventually evolves into a democracy movement. While there remain concerns that rapid democratization will foment political instability, a shared awareness spreads throughout society that progress toward political democratization and the realization of a “harmonious society” are necessary to maintain economic development. Particularly those young Party members who majored in law, economics, and other similar fields and were educated overseas begin to champion gradual democratization. China’s political and social development gradually catches up with its economic development.

The paradox of the Chinese society today is that at one hand they are longing for a clean, accountable and popular government based on democratic values, but they are also scared to disturb the current stability in the country, which has been propagated to be major factor behind China’s continued prosperity. The people in power argue that demand for democracy and liberty is limited to a section of intellectuals who have studied or

being trained in the Western Countries, and the majority of Chinese people continue to believe in the might of the communist Party in leading their nation. But the fact is that the Chinese are scared of power vacuum which will be created, if legitimacy of the communist party is questioned, and an alternative form of government based on Western Liberal system is proposed. At the same time, the grassroots democracy is taking place in the country in a very controlled way. Village level elections as well as local elections in the cities are getting popular, but still more than 80% of the elected candidates are party members. If this is the pace of democratization in the country, then it may take another century for China to join the mainstream of nation-states. Transition to Democracy in China seems to be a mirage.

Hence, the future of the Chinese Communist party seems to be full of challenges as the growing demands for free speech and accountability steps up in the coming years. The areas resided by minorities such as Tibet and Xinjiang continue to be under constant police patrolling, and there has been heavy crackdown in these regions due to growing activities of terrorism and secessionist activities. In the last two months, several bomb blast have occurred in shopping malls of the city of Xi An and Wu Han without any trace of conspirators. But to any regular visitor who comes to China, it appears to be a normal country with stable polity and dynamic economy. It is up to the Party leaders who may either chose to liberalize their control on media and the civil society or further tighten their grip in panic. The consequences of each of the two actions will be unpredictable. Currently, the biggest threat to the ruling party in China is corruption, and if, it is not reigned into in time, there could be lasting political and social instability in this country.

The policies of the next administration are unlikely to depart significantly from those of Hu Jintao. But there have been some gestures of political reform from new leader Xi Jinping who have openly talked about reforming the party and carrying out long-awaited political reforms. He recognized that official corruption has become the Achilles heel of the entire system and hence started a cleanup campaign across the party organization and country's administration. More than thousand officials are being tried and there has been a new revelation of corruption on the social media almost every day.

Will China emerge as a Political Alternative to the West?

On the other hand, Chinese scholars have reinvigorated the debate on whether China should adopt a Western style political system or should carve out its own socialist democratic model. In the social media as well as among the serious academicians, the Chinese intellectuals have launched a countrywide debate focused on the pros and cons of Western democracy. They are also joined by some China watchers from the West such as Professor Daniel Bell who recently published an article expressing the view that Chinese Meritocracy has several advantages over Western capitalist institutions.

This is the second wave of Confucian challenge to Western political and economic ideas and institutions. The first was in the early 1990s, when the four East Asian countries (and regions also known as four little dragons including Singapore, Hong Kong, Taiwan and S. Korea) achieved miraculous success in their economic growth and attributed it to their Confucian ethics. A huge debate was generated among economists and policy makers on the issue of Confucian collectivism vs. Western Individualism. Singaporean leader Lee Kuan-Yew preached Americans about his country's achievement guided by Confucian society and Authoritarian state. But it faded away once these Asian economies faced a severe currency crisis in the late 1997-98.

Now the same thing is being advised by the Chinese policy makers to their Western counterparts in US and European who are in deep financial mess since the unfolding of Subprime mortgage crisis in 2007-08. Chinese economists find their own economic system superior to that of Western capitalism and hence came out with the idea of "Beijing Consensus" (A term coined by a Latin American Scholar Joshua Cooper Ramo). But there have been differences with regard to the concept of Asian Values, and Indian scholars have never supported these kinds of perceptions. Many overseas scholars of Indian origin such as Dr. Amartya Sen have

argued that democracy is a universal value, hence it is misguided for East Asian leaders to advocate Asian values or an Asian development model.¹⁰ Chinese Confucianism has found its main constituency among the African countries as well as the Arab world. Most of these countries are victim of American propaganda of promoting democracy.

In its long history Chinese conception of political rights has evolved from various sources such as Confucianism, Chinese Republicanism, and lately Marxism. Some Chinese intellectuals like David Kang have propagated that in East Asia, China should restore its historical Sino-centric tributary system of world order which is quite an odd idea to the current popular Euro-centric capitalist-world system.¹¹ Scholarship on Chinese legalism has been scanty, especially in contrast to that on Confucianism. But recent works of Prof. Yan Xuetong of Tsinghua University has brought this school in perspective along with prevailing Confucianism. Legalism has been criticized for its totalitarian philosophy by other commentators, as Communist China has been watched for its totalitarian politics.¹²

There is no doubt that China will democratize at its own pace, but what kind of democracy it will have and how it will be different from the Western liberal democracy is yet not clear. There has been no party document except some references in the 18th Party congress with regard to political reform, which clearly underlines the fact that China will carve out its own course of political institutions which will suit its national conditions and not introduce western style popular elections to elect its top leaders.¹³ In fact, China is no more a communist country apart from retaining all the communist and Stalinist nomenclature. The Chinese society as well as the Chinese State has practiced pragmatic socialism and has adopted most of the economic and social reforms which were mainly practiced by Capitalist countries. As China's economic development brings greater standards of living to greater number of the population, concern for environmental degradation is expected to increase and demands for a greener development path are expected to grow ever louder.¹⁴ Therefore the new left in the country holds the view that China's present leaders have turned their back upon revolutionary solutions to the problems of socialism. In an interview in 1980, Deng Xiaoping upheld socialism but refused to predict if it would prevail in the future.

Predicting Future

It is an impossible task to predict the future of Chinese course in the coming years. The China collapse theory has been propagated since the 1980s, but on the contrary, the country has been growing stronger and stronger, and has come up to challenge the world's sole Super power, the United States. Brimming with confidence consequent to its economic success and social stability, China, now with extensive experience of working through maze of multilateral institutions, seeks to play a role in international society as a responsible power. Now it is evident that, while the US was busy fighting the War on Terror, China managed to achieve several milestones and emerged as the most formidable challenger to American supremacy. Beyond doubt, China will be the most important country to be watched in 2013, for her economic, military and foreign policy maneuvers. China has rapidly re-emerged as a major regional power in East Asia. Although this represents a return to a long-established historical pattern, the ability of China's political elites to reassure nervous neighbors about the implications of its rise will be a major test of its evolving and increasingly sophisticated foreign policies. For India, the military rise of communist China will continue to be the foremost challenge in her foreign policy making. India will find it difficult to reconcile her national interest with that of giant northern neighbor.

On the external front, it was stated in the 2008 and 2010 PRC Defence White Papers that, "*China will never seek hegemony...no matter how developed it becomes*".¹⁵ Furthermore, Zheng Bijian the former Vice Chairman of the Central Party School stated that "*China will not follow the path of...Germany and Japan leading up to World War II, when these countries violently plundered resources and pursued hegemony.*" Further, speaking at Cambridge University in February 2009, Premier Wen proclaimed: "*The idea that a strong country must be a hegemon does not sit well with China. Hegemonism is at odds with our*

*cultural tradition, and it runs counter to the wishes of the Chinese people. China's development harms no one, nor does it threaten anyone. China wants to be a great country of peace, a great country of learning, a great country of cooperation, and China exerts effort on building a harmonious world."*¹⁶

In order to maintain growth, the Chinese leadership desires a peaceful international environment and the possibility that it would initiate large-scale military conflict remains extremely small. Outside its borders, China does adopt policies to limit American hegemony, but avoids direct confrontation, choosing instead to maintain a cooperative relationship with the United States.¹⁷ By quietly carrying out military and intelligence exchanges with the United States, Japan, and other neighboring countries and making a sincere effort to see that its defense expenditures and strategic intentions are made as transparent as possible, China contributes to confidence-building in the region. Rather than impatiently forcing a solution to the Taiwan issue, China adopts a posture that maintains the status quo and stresses a solution through dialogue. However, the danger that the Taiwan issue or territorial disputes in the South and East China Sea could result in an unplanned military clash remains.

China continues to face a number of domestic contradictions and societal problems and, even after its economy stalls for a brief period of time, it will irresistibly evolve into a political and economic global power. While the global economy faced recession in 2011, Chinese economy grew at the rate of above 9%, which was possible mainly by huge investment in infrastructure sector. The current system will work as long as the Chinese economy continues to achieve high growth and the government could earn ample money through tax revenues. However, when the bubble economy will burst; China will suffer hard landing with possibility of major social instability and change of regime. But the party may continue to rein if there is no strong and viable opposition group to challenge its legitimacy. The party control is still quite strong and the Chinese capitalism lurks forward as the morphed form of planned socialism.

Footnote

¹ However, some continue to argue that the world is still dominated by US hegemony and China is emerging to play an important role in the world governance. On the eve of US President Obama's visit to China in 2009, the Chinese media was overwhelmed with the view of New World order emerging in the 21st century to which they put the label of G-2 (although the term was first used by an American itself). The G-2 which is China and America (Niall Ferguson of Harvard University has coined Chimerica to represent the symbiosis of two powers), was coined by Zbigniew Brzezinski, who said that the two countries will be at the driver's seat of the new global governance. Obama had also said in his Town Hall speech that China is such an important country that no global issue can be resolved without her cooperation. This single remark clearly puts China at par with the United State in terms of global influence. But it also appears that Obama is playing a double card by asserting the USA to be a Pacific nation and therefore seeking for the US an important role in the peace and stability of this region

² The emergence of China as the most important player in the Asia-Pacific region is a fact now. There is no doubt that the Asia Pacific region is now at the center of the global politics and it has subdued the importance of Atlantic region. The Chinese economy overtook the Japanese economy in 2010 and became the second largest after the USA. It is expected to surpass the US GDP sometime around 2020 (World Bank, 2010). It is believed that, China's rise represents the key driver in the evolving security landscape in Asia. China is now attracting regional states with its economic power and is offering competing vision to the U.S.-centric "hub and spoke" system of alliances. China's increasing economic, diplomatic, and military strength is compelling countries to rethink existing security arrangements and take initial steps that may lead to the formation of regional groupings of nations with common interests and values.

³ China's Ministry of National Defense is a relatively small office specializing in military-related tasks that are the responsibility of the civilian government rather than the armed forces, including foreign military relations, mobilization, recruitment, and civil support to military operations. The Minister of Defense is a uniformed

military officer and CMC member. The PLA currently has less representation in key party decision-making bodies than in the mid-1990s or even the mid-2000s. With the passing of China's revolutionary generation, fewer national leaders hail from a military background. However, PLA leaders are increasingly inclined to voice their thoughts and opinions on international affairs in the public domain. For further details related with Chinese Decision making on national security see http://www.defense.gov/pubs/pdfs/2011_CMPR_Final.pdf

⁴ Despite the tall claim (also supported by WB economists) that 500 million people have been brought out of poverty, ADB report said that millions of them are on periphery and if the economy slows down then these people will be pushed back into poverty. The Chinese Society is currently witnessing widening economic and social disparity. As a result, the contrast between urban prosperity and rural depopulation has become sharper, which is a major problem for Chinese society.

⁵ The Chinese government maintains the quadrupling of per-capita GDP in the two decades between 2000 and 2020 as official government policy. It successfully shifts from fast-paced growth to sustainable development, implements adjustments to the industrial structure, and achieves its objective. Labor-intensive industries are transferred to the mid-west and people in rural areas also receive the blessings of economic development. (PHP, 2008)

⁶ See Subramanian Swamy, (2005), Financial System Constraints in China and India-A Comparative Perspective, SCMS Journal of Indian Management, Vol.2(4).

⁷ "D" for Democracy.

⁸ Joanne R. Bauer and Daniel A. Bell, editors. The East Asian Challenge for Human Rights. Cambridge: Cambridge University Press, 1999. Also see: Daniel A. Bell. East Meets West: Human Rights and Democracy in East Asia. Princeton: Princeton University Press, 2000.

⁹ The 1993 Bangkok Declaration constituted the most serious challenge to the movement in its short life by calling into question the universality of its normative claims. Increasingly self-assured as a result of tremendous economic growth, Asian governments started to champion their own Asian values. They also began to denounce what they considered to be self-righteous preaching by Western states that in many cases were responsible for a colonial legacy of rights abuses in the Asian countries over which they now sat in judgment, and in any event had human rights problems of their own, back at home. Although Asian leaders stopped short of denying outright the universality of human rights, their assertion that human rights must reflect the particular circumstances of particular country at particular time smacked of a cultural relativism that threatened to erode the seeming consensus on human rights that had developed over the previous five decades. The Bangkok Declaration along with the statements of Asian governments at the Vienna World Conference on Human Rights in 1993 plus the Asia-Pacific Non-Governmental Organizations' response to the Bangkok Declaration can be found in James T. H. Tang, ed., Human Rights and International Relations in the Asia-Pacific Region (New York: St. Martin's Press, 1995).

¹⁰ Amartya Sen, "Democracy as a Universal Value," Journal of Democracy 10, no. 3 (1999):15.

¹¹ China is only the latest name of the Middle Kingdom which has remained isolated and closed for millenniums. Most of the Chinese still think local and behave in a narrow setup of the "Tianxia" (or the Chinese World) mindset which tells them that they are at the helm of world affairs. Japanese think tank (PHP) research have predicted that, the most probable scenario for "China in 2020" is that of "China as an immature power," not a "mature power." The report also professed that the like-minded Asian countries such as Japan and India should work together to avoid the scenario of "China as a hegemonic power," or "China as an unstable power," and "total collapse." The report warned about China's hard landing after a long period of spectacular growth (civil unrest).

¹² For a concise recapitulation of this legalist view in contrast to the Confucian position, see A. C. Graham, "The Place of Reason in Ancient Chinese Philosophical Tradition," in Chunshu Chang, ed., *The Making of China: Main Themes in Premodern Chinese History* (Englewood Cliffs, New Jersey: Prentice-Hall, 1975), pp. 72-84. Liang Qichao analyzes in sociological terms the legalist focus on the concentration of power as a necessary stage in historical development (*History of Chinese Political Thought*, p.125).

¹³ The 18th Party Congress report is available at [http:// www.chinadaily.com.cn/china/2012cpc/2012-11/18/content_15939493.htm](http://www.chinadaily.com.cn/china/2012cpc/2012-11/18/content_15939493.htm).

¹⁴ China has thus far permitted the establishment of environmental NGOs to appease foreign audiences and provide useful information regarding the state of the country's environment and popular opinion in that regard. But the standard it follows for environmental reporting are quite different than practiced in other countries. The US embassy comes out with its own pmi level with regard to the air quality in Beijing.

¹⁵ China began publishing defense white papers in 1998, partly as a means of increasing transparency in response to regional concerns about the growing capabilities and actions of the People's Liberation Army (PLA). See Information Office of the State Council..., 'China's National Defense in 2008: I The Security Situation';

¹⁶ See "China in the Light of Her Development," Speech by Premier of the State Council of the People's Republic of China, Wen Jiabao, Cambridge University, United Kingdom, February 2, 2009.

¹⁷ Following Deng Xiaoping's advice to focus on building national strength and avoid conflict with other powers (i—IQ{Qfftao guang yang hui), China continues to promote an "omni-directional foreign policy" in order to ensure continued economic development and, despite openly protesting America's unipolar domination of the international system, makes every effort to avoid direct confrontation. China not only attempts to establish leadership in Asia, but also actively works to expand its diplomacy with states in Africa and Latin America in order to guarantee access to energy resources.

References:

Aaron L. Friedberg, "Ripe for Rivalry: Prospects for Peace in a Multipolar Asia," *International Security*, Winter 1993/94, pp. 5-33.

Aaron L. Friedberg, "Europe's Past, Asia's Future," SAIS Policy Forum Series (October 1998, No. 3)

Akio Takahara, "A Japanese Perspective on China's Rise and the East Asian Other." in Robert Ross and Zhu Feng. eds. "China's Ascent", Ithaca: Cornell University Press, 2008.

Amartya Sen, "Democracy as a Universal Value," *Journal of Democracy* 10, no. 3 (1999):15.

Angus Maddison, *Contours of the World Economy 1-2030 AD*. Oxford: Oxford University Press, 2007.

Bijan Zheng, *China's Peaceful Rise to Great-Power Status*; 84 *Foreign Aff.* 18 (2005)

Conrad Totman, *A History of Japan*. Malden: Blackwell Publishing, 2005.

David Shambaugh, ed., *Power Shift: China and Asia's New Dynamics* (Berkeley, CA: University of California Press, 2005), p. 13.

David M. Lampton, *The Three Faces of Chinese Power: Might, Money, and Minds* (Berkeley, CA: University of California Press, 2008),

Daniel A. Bell. *East Meets West: Human Rights and Democracy in East Asia*. Princeton: Princeton University Press, 2000.

- David S. Landes, *The Wealth and Poverty of Nations: Why Some Are So Rich and Some So Poor*. New York: W.W. Norton, 1998.
- Friedman, Edward. "Preventing War Between China and Japan," In *What if China Doesn't Democratize? Implications for War and Peace*, ed. Edward Friedman and Barrett L. McCormick. Armonk: M.E. Sharpe, 2000.
- Gregor Benton and Alan Hunter, editors. *Wild Lily, Prairie Fire: China's Road to Democracy, Yan'an to Tiananmen*. Princeton: Princeton University Press, 1995.
- Hugh White, "Why War in Asia Remains Thinkable," *Survival: Global Politics and Strategy*, Dec. 2008-Jan. 2009, p. 6, pp. 85-103.
- Jian Zhang, "The Influence of Chinese Nationalism on Sino-Japanese Relations." In *China-Japan Relations in the Twenty-First Century: Creating a Future Past?* edited by Michael Heazle and Nick Knight. Northampton: Edward Elgar, 2007.
- Joanne R. Bauer and Daniel A. Bell, editors. *The East Asian Challenge for Human Rights*. Cambridge: Cambridge University Press, 1999.
- John J. Mearsheimer, *The Tragedy of Great Power Politics* (New York: W. W.Norton, 2001);
- Kindleberger, Charles P. *World Economic Primacy: 1500-1990*. Oxford: Oxford University Press, 1996.
- Kishore Mahbubani, *The New Asian Hemisphere: The Irresistible Shift of Global Power to the East* (New York: Public Affairs, 2008).
- Kurt M. Campbell, Nirav Patel and Vikram J. Singh, *The Power of Balance: America in Asia* (Washington DC: Center for a New American Security, June 2008), pp. 14-15.
- Liang Qichao, *History of Chinese Political Thought during the Early Tsin Period*, trans. L. T. Chen (New York: Harcourt, Brace, 1930), p. 115.
- Mancur Olson., *The Rise and Decline of Nations: Economic Growth, Stagflation, and Social Rigidities*. New Haven: Yale University Press, 1982.
- Mark R. Peattie, "The Poisoned Well: Fifty Years of Sino-Japanese Animosity." In *Cross Currents*. Stanford: Walter H. Shorenstein Asia-Pacific Research Center, 2007.
- Mearsheimer, John J. *Why Leaders Lie*. New York: Oxford University Press, 2010.
- Martin Jacques, *When China Rules the World: The End of the Western World and the Birth of a New Global Order*, Penguin Group US, 2009.
- Michael J. Green, "Asia in the Debate on American Grand Strategy" *Naval War College Review*, Winter 2009, pp. 15-30.
- Ministry of Foreign Affairs of the People's Republic of China. "Some Sensitive Issues." www.fmprc.gov.cn/eng/wjlb/zzjg/yzs/gjlb/2721/2722/t15974.htm (accessed February 15, 2013).
- Niall Ferguson, "The G2: Are America and China Headed for a Divorce?" *New Perspectives Quarterly*, vol. 27.1 (Winter 2010) pp. 35-38;
- Paul. Kennedy, *The Rise and Fall of the Great Powers: Economic Change and Military Conflict From 1500 to 2000*. New York: Random House, 1987.
- Peter Worthing, *A Military History of Modern China*. Westport: Praeger Security International, 2007.

PRC White Paper on National Defense, December 2008, 2010.

R. D. Putnam, "Diplomacy and Domestic Politics: The Logic of Two-Level Games." *International Organization*, 1998, vol. 42(3) pp. 427-460.

Robyn Lim, *The Geopolitics of East Asia: The Search for Equilibrium* (London: Routledge, 2003);

Saul Bernard Cohen, *Geopolitics: The Geography of International Relations* (2nd ed., Lanham, MD: Rowman and Littlefield, 2009), Chs. 8-11.

Takashi Yoshida, *The Making of the "Rape of Nanking": History and Memory in Japan, China, and the United States*. New York: Oxford University Press, 2006.

Zha Jianying. *China Pop: How Soap Operas, Tabloids, and Bestsellers Are Transforming a Culture*. New York: The New Press, 1995. 210 pp.

Zbigniew Brzezinski, *The Choice: Global Domination or Global Leadership* (New York: Basic Books, 2004), p. 107.

Zbigniew Brzezinski, *The Grand Chessboard: American Primacy and its Geostrategic Imperatives* (New York: Basic Books, 1997), c. 5.

Zhu Feng, "China's Rise Will Be Peaceful: How Unipolarity Matters," in Robert S. Ross and Zhu Feng, eds., *China's Ascent: Power, Security, and the Future of International Politics* (Ithaca, NY: Cornell University Press, 2008), pp. 34-54.

**CONTEMPLATING THE IMAGE OF BHAIRAVA¹: A STUDY OF
KSHEMARÂJA'S BHAIRAVÂNUKARANASTAVA**

*Sthaneshwar Timalisina**

ABSTRACT

The cult of Bhairava appears around the 6th Century. Though, the genealogy can be traced to the earlier extant Kapalika tradition, the advent of Trika Saivism in Kashmir during the 9th-10th centuries, provided impetus to the spread of the cult of Bhairava. This paper examines one image of Bhairava, the Svachhandabhairava, as detailed in a text by the Kashmiri Tantric theologian and philosopher Kshemarâja (11th C.), disciple of the Abhinavagupta credited with synthesizing Indian culture. The text narrates the process of absorption (samâvesha) wherein the yogin experiences himself as Bhairava. The practice of visualization in the imagery of Bhairava induces experience of non-duality where the self is experienced as identical to the totality of manifestation and also with the Bhairava deity.

Key Words: Bhairava, tantra, Kâpâlîka, Trika, dhyâna, pratyabhijñâ, consciousness, mandala, ritual

INTRODUCTION

Bhairava is the central deity of Kaula Tantrism. In medieval Tantras, Bhairava is considered to be the central deity of sixty-four Âgamas, and while separate Tantric texts are attributed to goddesses such as Kubjikâ, Bhairava resides at the center of the deity *mandala* in many of these traditions. The peculiarity of Bhairava as carrying a skull cup, as well as other weapons such as a staff or a trident, helps to relate this deity to the Kâpâlîkas. The shrines of Bhairava located nearby the cremation grounds (most often near the shrines of Yoginî, Châmunda, or Kâlî), or the deity shown with a dog as his ride further confirm his Kâpâlîka association. Bhairava, however, is not merely worshipped by the Tantrics in their esoteric rituals, as the deity is widely revered throughout the pan-Indian continent, with shrines dedicated to him widely distributed in Kathmandu valley, Varanasi, Rajasthan, Karnataka, and Tamil Nadu. While the earliest imagery of Bhairava appears around the 6th Century, this deity comes to prominence with the rise of the distinctive philosophical school of Trika in Kashmir during the 9th-10th centuries. The objective of this paper is to examine one image of Bhairava, the Svachhandabhairava, as detailed in a text by the Kashmiri Tantric theologian and philosopher Kshemarâja (11th C.), disciple of the prominent Kashmiri philosopher Abhinavagupta.

With the development of the Tantric Kaula and Trika systems in Kashmir during 9th-11th centuries, Bhairava emerged in a prominent position. Texts dedicated to one or another emanation of Bhairava were written, and prominent scholars such as Abhinavagupta composed their texts with Bhairava at the center of their liturgy. The available myths and ritual texts relate Bhairava to Shiva, depicting him as immanent, oriented towards world with his wide open gaze. Like the many depictions of Shiva begging for alms, Bhairava is clearly a renunciant, wandering with his skull cup (*kapâla*). Following one myth, Bhairava is the manifestation of Shiva after he severed one of Brahmâ's heads and had to beg to redeem himself from the sins of Brahmanicide. This identification of Bhairava with Shiva has, while making Shaivism esoteric, brought Bhairava to wider acceptance.

**Sthaneshwar Timalisina* is Professor of Religion and Philosophy, San Diego University, USA

The above-mentioned myth of Bhairava lends support to the interpretation of central motifs associated with him, that the skull he carries is the head of Brahma, and that he has turned dark due to the sins he collected in severing the head of Brahmâ. Although the description found in this myth is widely distributed in Purânic and Âgamic literature, the popular imagination of Bhairava does not address Bhairava as the central deity that embodies emotions. If we analyze some of the names associated with this deity, Bhairava embodies time and death in his emanation of Kâla; becomes a ferocious deity called Chanda; is in fury, as his name Krodha suggests; is aroused, as the name Unmatta describes; generates fear, as the name Bhîshana suggests; and embodies destructive characteristics, portrayed by the name Samhâra.

The centrality of Bhairava in theological discourse is clearly seen in Abhinava's *Tantrâlôka* or Kshemarâja's commentary on *Svacchandatantra*. The image of Bhairava as depicted in these texts, however, is not of a deity begging in penance or playing the part of destruction. These texts depict Bhairava as the almighty, carrying out all the roles through different emanations. Bhairava, in this depiction, is at the center of *mandala*, with the deities surrounding his *mandala* carrying out his command. The origins of this tradition, as Sanderson (1988: 699-701) suggests, are associated with the early cremation ground practices of the Kâpâlikas. The image of Svachchanda Bhairava as presented by Kshemarâja in his *Bhairavânukaranastava* (BAS) transcends earlier depictions of this deity. In the non-dual Trika paradigm, Bhairava is the supreme reality, embracing all that exists, and is identical to the self. The image of Bhairava in this shifted paradigm becomes emblematic of the yogis and one's experience of oneself, as 'Bhairava' is no longer just the name of a deity in this context but a concept to depict the highest state of cosmic awakening, the surge of bliss and consciousness that embodies the totality.²

The objective of this paper is to decipher the imagery of Bhairava as described in BAS by Kshemarâja. According to the Trika tradition that Kshemarâja upholds, Bhairava stands for both the supreme deity and the state of experience of a yogin in the state of highest absorption (*samâvesha*) wherein the yogin experiences himself as Bhairava. This experience is the culmination of the practice of visualization in the imagery of Bhairava. The experience of non-duality where the self is experienced as identical to the totality of manifestation and also with the deity is cultivated in this visualizing process. This process, thus, is an active gaze upon Bhairava imagery, relating specific gestures and weapons of Bhairava with the central tenets of the Trika doctrine. Accordingly, the focus on Bhairava's imagery is no longer a mere observation of it, but a conscious and creative gaze where the consciousness of the aspirant is oriented towards non-dual experience while focusing upon the image of the deity as support.

The Image of Bhairava

The focus of this paper, as mentioned above, is the image of Bhairava detailed in a small treatise, *Bhairavânukaranastava* (BAS) of Kshemarâja.³ By bringing to light this work of Kshemarâja, this paper aims to initiate a reading of Tantric visual culture in relation to its literary culture. Tantric images provide ample examples that support the claim that a society's literary culture at any given time defines and describes the visual culture. In the absence of a proper awareness of Tantric literature, interpreting these images and even experiencing their aesthetic modes can be compromised. Historically, an image over time accretes meanings that are found in different systems, and any interpretation needs to keep these integral cultural processes within the conceptual framework. This awareness allows a viewer to enter the heart of the artist and acquire his refined gaze. The interpretive enterprise is not isolated within philosophical texts, with liturgical texts and the manuals for architecture providing a glimpse of the meaning of images as well. By focusing on a single Tantric image that is prototypical of many other images, the objective here is to investigate the philosophical foundation of Tantric visual culture.

While the argument that Tantric images are embedded within an inherent system of signs and can be understood only in light of Tantras in particular and the layered philosophical perspectives in general has its own validity, a question begs for an answer: have any of the classical philosophers applied these perspectives to deciphering images? This paper intends to provide textual support for the claim that Tantric images have been the repository of meaning since classical times and the process of deciphering meaning has remained integral to ritual visualization (*dhyâna*), essential to Tantric practice. BAS is significant in that this concise treatise reveals the philosophical scaffolding necessary for understanding the central Tantric deity, Bhairava.⁴

Kshemarâja, the foremost disciple of Abhinavagupta (950-1020 CE), contributed greatly to the development of the Trika system. That Kshemarâja has a particular relation to Bhairava is explicit in his commentarial writings.⁵ What is evident in BAS is that Kshemarâja treats the image as a text and endeavors to read it in light of Trika philosophy. This reading or process of visualization is for him a means to access self-realization (*pratyabhijñâ*).⁶ In light of this, Kshemarâja considers weapons, gestures, and other physical characteristics as meaningful elements of the Trika text.

The text begins with the identification of the self with Bhairava, ascribing to him aspects of self-awareness. In light of this, the physical gestures, posture, and ornaments are deciphered as instances of cognition and specific feelings. Seeing the body of Bhairava, for Kshemarâja, is recognizing the self or consciousness actively engaged through the senses in grasping the externals and returning back to the self. For him, the highest realization does not isolate the self from its engagement in the world. The ever-enfolding and unfolding entity, Bhairava or the self, is described here as simultaneously transcendent and immanent. While the essential nature of Bhairava is beyond the triad of cognized object, the process of cognition, and the cognizing subject, at the same time, he also embodies this triad. The image of Bhairava is thus the intermediary ground of form and the formless. Bhairava, following this understanding, is the latent force in all manifestation, comparable to the lines that constitute alphabets or images.

This Bhairava-awareness is recognized in the heart, with the aspirant seeking identity between his body and that of the deity. Pleasing Bhairava thus results in nourishing one's own senses. As the limbs of Bhairava parallel those of the practitioner, the attributes of the deity reflect specific modes of the subject engaged in visualization. Kshemarâja interprets the skull of Brahmâ as the fivefold power of awareness, bliss, will, knowledge, and action (BAS 9). These five energies are visualized as the five *pretas*, and stand for the first five principles (*tattvas*) in the process of emanation, identified as the 'pure path' (*shuddhâdhvan*). Kshemarâja interprets the heart, head, tuft, shield, eyes, and weapons of Bhairava as six divine attributes, including omnipotence, omniscience, pervasiveness, and so forth (BAS 10).

That Bhairava embodies paradoxes is vivid in all his gestures and aspects. For instance, the fire and water elements signify poison and ambrosia, death and life. Visualized as his attributes, these contradictory elements reside in harmony within Bhairava (BAS 12). It is noteworthy that the distinctive gesture called 'Bhairavî' is the gaze that looks outward while remaining fixed within, revealing the nature of Bhairava in which paradoxes resolve. This gaze is frequently found in the images of Bhairava, indicative of awareness melded together inside and out, harmonizing the external world with intrinsic bliss and awareness. Bhairava is pure awareness eternally free from duality, while remaining vibrant within and as the world, enjoying objects of the senses. According to Kshemarâja, in holding a skull cup filled with blood, Bhairava metaphorically enjoins the practitioner to likewise imbibe the fluids of life in an embrace of sensory pleasure (BAS 31). Bhairava drinks blood, a metaphor for the self enjoying life, recognizing sensory pleasure as a valid means for entering into the heart of reality. Bhairava, as uninterrupted self-awareness, is ever-present, even when the senses are fully engaged

with the world (BAS 37). The supreme reality, although eternally free, assumes the form of Bhairava to demonstrate that one who knows reality is free, even though duality may appear within the phenomenal realm (BAS 40). The cremation ground, where Bhairava resides, is populated with ghosts and goblins. This, according to Kshemarâja, signifies awareness-in-itself as free from modifications, even while appearing in the form of segmented cognitive modes signified by the surrounding beings (BAS 41). Bhairava is the essential nature of awareness-in-itself and the deities surrounding him in his *mandala* express the *mantras*, or words that reveal awareness in all its glory (BAS 43). The central deity and the deities in the periphery can be compared with the self and the body, with the senses allowing the self to embrace the reality that is externalized.

Kshemarâja interprets the garland made of hands and heads as the collection of individual selves that dissolve into Bhairava's nature of bliss and awareness (BAS 13). Bhairava thus is the image of singular self-awareness, where the phenomenal selves are subordinated and become mere objects of ornamentation. Following BAS 14, the entrails that Bhairava wears and grotesquely displays highlight the bondage of the body. Both what Bhairava wears and how he appears as demonstrate specific modes of the self being engaged in the world. For instance, the lion's skin that Bhairava wears or stretches taut signifies an illusory and stained state that does not exist in consciousness, devoid of all forms (BAS 15).

Bhairava's weapons symbolize the powers that sever bondage and allow the self to manifest in its true nature. The sword of Bhairava cuts through the haze of mental agitation that gives rise to instances of cognition (BAS 16). The shield the deity wields similarly demonstrates that the devotees of Bhairava, armed with his protection, may free themselves from fear (BAS 17).

According to Kshemarâja, the rope signifies time, and since Bhairava, the deity or self-awareness incarnate, carries it, time is in his grip (BAS 18). The hook signifies the reabsorbing aspect of Bhairava that dissolves difference (BAS 19), leading to the solitary nature of Bhairava-awareness. Deities such as Brahmâ and Vishnu refer to the divinity manifest within the realm of causation and bound in terms of time. Bhairava's bow and arrow demonstrate the reabsorption of the deities that allow the world to manifest (BAS 20). The gestures of boon and fearlessness, along the same lines, demonstrate the liberating nature of Bhairava, granting release from suffering in the world (BAS 21-22).

By carrying the freshly chopped head that signifies illusion, Bhairava demonstrates his mastery over it (BAS 23). The skull-staff of Bhairava signifies that the self is the foundation of creation (BAS 24). As the staff of Bhairava bears skulls, consciousness, likewise, holds the world manifest in the form of multiple subjects. Another gesture of Bhairava, carrying freshly-chopped heads by their tufts of hair, confirms this same aspect: awareness in terms of I-sense is manifest in manifoldness (BAS 32).

Kshemarâja interprets the musical instruments of Bhairava as mental modifications. The lute, bell, and drum thus refer to three varieties of mental constructions and Bhairava, the enlightened self-awareness, demonstrates his control over them (BAS 25). In Kshemarâja's terms, the strand of beads that Bhairava holds refers to his pulsating nature that maintains the world through emission and reabsorption by opening and closing the sensory orifices (BAS 34). The trident refers to the triadic divinities, Parâ, Parâparâ, and Aparâ, who comprise the fundamental nature of Bhairava (BAS 26). The bolt, with six spokes, demonstrates the all-pervasive, divine nature that permeates the three different modes of awareness in the form of subject, object, and cognition (BAS 27). Other weapons, such as the stick that Bhairava wields, demonstrate his control over the world (BAS 28), while the club and axe signify the power that shatters difference (BAS 29). By holding a citron (*bijapûra*), Bhairava identifies consciousness as the seminal nature of the cognized world (BAS 33).

Bhairava wears severed hands and bones smeared with blood, demonstrating that the world is nonetheless pure, because even the most impure elements are fundamentally of the nature of Brahman (BAS 35). Bhairava's nudity, along these lines, stands for his eternally free nature that never undergoes suffering caused by limitation (BAS 38). The dark-blue color of Bhairava's body refers to his all-reabsorbing nature (BAS 39), dissolving all light and manifestation into his deep hue. Bhairava's third eye shows that those who are merged within the bliss of self-awareness perceive that the pleasure obtained through sensory objects is futile, as external objects are momentary, like bubbles on the surface (BAS 36). In Kshemarâja's cosmology, Bhairava's image itself is 'the seal,' an unmistakable symbol that grants the bliss of self-awareness and liberates the aspirant from the notion of difference that is rooted in the world (BAS 44-45).

Kshemarâja concludes the BAS by highlighting that this visualization results in self-realization even when senses are engaged with their particular objects (BAS 47). The purpose of this hymn is thus to experience this shimmering self-awareness even when difference appears in terms of cognized objects and instances of mental modification (BAS 48). Following this depiction, Bhairava realization is the most exalted Tantric experience, as it embraces the world while experiencing non-duality.

Visualization of Bhairava is thus a means to recognize the self that in essence is awareness itself. Encountering an image, along these lines, is in itself the liberating experience where what is seen and the perceiver become one. Since Bhairava is identical to his manifestation, the world, being in the world becomes a metaphor for the divine presence. The hymns of BAS are thus the image of Bhairava. The words describe an image and the image is deciphered through language. The speech, found in the form of prayer, culminates in deciphering the divine image or that which is real, and thus is able to touch upon reality and not merely the mental constructs. In the non-dual gaze of Bhairava, the manifest world in terms of language and meaning depicts two modes of the same awareness assuming embodiment.

What is the significance of the image of Bhairava? The above description has portrayed Bhairava as the essence of Trika doctrine, an embodiment of self-realization. However, if we dissociate the philosophical foundations of Kshemarâja, is there an independent meaning to the image? This is a thorny question and requires a different treatment, as the question requires further clarification of 'meaning.' One truism can be asserted, that any conscious act generates and embodies meaning. Things perceived in the background, a passive perception, may not have any meaning associated with it, but the moment we bring an entity to our awareness, we constitute meaning. Kshemarâja consciously utilizes this meaning-making aspect of consciousness for transforming his vision towards the world, the divine, and the self.

The objective of this visualization, as summed up by Muller-Ortega (2002) is 'becoming Bhairava.' While being aware of the body and the cosmos and thus retaining the gesture identified as Bhairavî, the aspirant seeks to find his self-awareness as merged within the cosmic experience of Bhairava. Bringing an image to mind, or the ritual of visualization, thus culminates in transforming experience, where the subject shifts the notion regarding the self from a bound and suffering individual to the one at the center of the wheel of shaktis, simultaneously transcendent and immanent, enjoying the worldly presence while retaining awareness of the absolute. Kshemarâja's approach of deciphering the imagery is merely one step towards retaining this experience.

BHAIRAVĀNUKARANASTAVA⁷: HYMNS IN IMITATION OF BHAIRAVA

Salutations to Bhairava of the nature of consciousness

1

Manifesting [the highest wisdom] to those filled with devotion [with the instruction], “Those of you taking refuge in the foundation of consciousness! Rest on the glory of consciousness [and] do not wander in vain;” victorious is Shiva, skilled in bestowing grace.

2

I bow to Shiva, the supreme Bhairava of the character of consciousness, solitary, of the form of supreme nectar, radiant, [and] who has devoured the entire [existence] with the realm of senses streaming out [to their corresponding objects].

3

There exists nothing here that is distinguished as the [deity] that is prayed, the subject that prays, and the prayer. In whichever form one mentally touches, this [Bhairava-awareness] manifests in that form, since [it is] of the form of awareness [itself].

4

Lord, I bow your image that is in imitation of your true nature of the form of bliss and the [formless] void of consciousness, which, although the essence of all differences, in truth, is devoid of all differences.

5

Supreme self! [Just] as a sketch of a person suggests [the real] person, [and] the lines indicating alphabets identify the real phonemes, in the same way, the image manifests you having innumerable forms.

6

The supreme reality is not at all the object of imagination. We experience whatever [we do] having entered your essential nature of consciousness that is devoid of mental constructions.

7-8

I extol the supreme lord while experiencing my very self, the mass of consciousness alone, with the collection of ties dissolved by assuming the effulgence of the self as the goddess of speech [Sarasvati] and having worshipped [her] by assuming the objects [of experience] as the flowers [to offer], having bowed to the preceptor, the first flash [of awareness], [and] having entered the heart.

9

The omnipresent one! Victorious are [your] powers called awareness, bliss, will, cognition, and action [that are] distinguished as the heads of Brahmâ, having assumed the faces with the distinction of subtle and gross [forms].

10

Lord! The heart [and so forth] that corresponds to omnipresence and so forth are your six limbs. Since all [entities] up to Sadâshiva are of the character of the dead [or within the realm of death, and so constitute] your seat.

11

Lord! The goddess Parâ is the power of reflection [of the self] that has the body of the supreme light [or consciousness]. All the goddesses such as Brâhmî are the emanations of herself.

12

By carrying fire and water, or [by] the flow of nectar and poison, you instruct that, although the world is [comprised of] conflicting [natures], this world (*etat*) does not conflict in me, [being] of the nature of being and consciousness [alone].

13

Lord! You as if show us by wearing the rosary of hands and heads that this mass of cognizing subjects threaded into awareness is devoid of essence [in itself].

14

You appear to be telling us, by the gesture of wearing entrails, that ‘look, look, I have removed these bonds (*pâsha*) which are hard to break.

15

Lord! By carrying an elephant hide covered with blood on your head, you tell [us] that the garment of illusion accompanied with passion [and other emotions] is expelled from the supreme void [of consciousness].

16

By the sword, you demonstrate the inner sword of power, which cuts [the illusion of] creation. Victorious are those who have embraced the entire world by the glory of one’s own power.

17

Our lord! In displaying the shield making sound striking on the arms, you instruct [us] that “fear not, I am your assistance, I am the destroyer of the fear of transmigration (*bhava*).”

18

In carrying a rope, you who subdue even death or time (*kâlakâla*), show us that time or death (*kâla*) that is surrounded by the bondage of its own powers is constrained by you with your body of [pure] consciousness.

19

By carrying a hook, our supreme Bhairava reveals that He dispels with His own powers all of this comprised of distinctions in order to dissolve them [in the essential nature of the self].

20

[You suggest] by displaying an arrow taut within the bow that you with your [infinite] power slay the creator beasts, Brahmâ, Vishnu, Rudra, Ishvara, and Sadâshiva.

21

With [your] hand [displaying the gesture] of boons, you play the role of bestowing prosperity on the world. One abiding in the supreme reality cannot be touched by the defilements of coming into being [birth].

22

Your hand [gesture] of fearlessness constantly displays your nature of showering [grace] upon the world by having obliterated the fear of coming into being.

23

In clutching a head that signifies illusion, you show that this head [referring to limited Pramâtra] here is a fragmented part of illusion, uneven and of the character of not revealing the real nature (*akhyâti*) [that is carried by] supreme realization.

24

With the stance of wielding the skull staff, you declare that the sustenance of the world whose entire essence has been dissolved is within you, the mass of consciousness alone.

25

In playing a lute, bell, and a loud drum, you show that you are resting [while] listening to the sound divided into three distinct forms of mental modifications (*vrtti*) [of the forms of waking, dreaming, and dreamless states].

26

Moreover, by the external gesture of carrying a trident, you constantly imitate the supreme Shakti [who is] decorated [with a wheel] with the spokes comprised of three Shaktis including Parâ.

27

You hold your own supreme power comprised of the bolt that has six spokes [or aspects] that has the lower three objects of senses manifest by [three energies] beginning with will which are the powers of the self.

28

Our Bhairava of the nature of awareness! You demonstrate by wielding a stick that the entire sustenance of the whole world rests within the control of your power.

29

Lord! You demonstrate your orientation towards shattering difference by carrying a hammer and axe that imitate the drop (*bindu*) and sound (*nâda*).

30

Lord! While assuming different forms [to accommodate] differences in [people's] viewpoints, you manifest your abode of the nature of Bhairava comprised of supreme awareness in all [of these forms].

31

In holding the human skull cup filled with blood, you suggest in my heart that you as if always drink the essences [of the world] found in the middle of the cosmic Shakti-egg.

32

Mahākāla! You carry the lotus [upside down by its stalk] like a heads [held] by its tuft [of hair], demonstrating as if [it is] the materialized bondage [of *mâyâ* and *karma*] accompanied by the limited ego [*Anava mala*] that have been eradicated.

33

Lord! Ocean of awareness! You demonstrate the seminal form of the entire world in its primordial [state] by the gesture of holding citron fruit with your hand.

34

Although you are of ferocious [Bhairava] form, you nonetheless carry counting beads. With this (*tat*), you change the entire world by engaging all the senses outwards.

35

Lord! By wearing bones and the rosary made of hands and heads, and shining with the human blood, you instruct that the world is pure because it is of the nature of Brahman.

36

You instruct by opening wide (*prath*) the eye on your forehead of the nature of fire that incinerates the lord of desire that, for those who are enjoying [their] own [limited] self, although the bubbles of these objects are uneven, nonetheless, are of no significance.

37

As you always have your attention fixed within, even when the senses are spread out, you demonstrate that your self-nature is of the character of awareness, free from afflictions (*moha*) and limiting adjuncts (*kalā*) in all the states.

38

Lord! Your [acceptance of] the sky as raiment speaks of the nature of the self, free from limitations. How could the rays of supreme Brahman be veiled by illusion?

39

You demonstrate by the body of the hue of the cloudless autumn sky that you, the dark foundation, are the destroyer of all [celestial bodies] such as the sun.

40

Lord! As you are of the nature of supreme Brahman but still assume the form of Bhairava, you demonstrate that one who knows the reality is liberated even when there is difference.

41

Having been surrounded by the goblins in the circle of cremation grounds, you demonstrate that you are the Bhairava of the nature of consciousness, abiding at the center of consciousness streaming towards objects.

42

Lord! You are endowed with the flow of nectar of the form of supreme power, [and] you are the highest among the cognizing selves (pramâtra), and so you appear in our heart that you are the life of the [entire] world.

43

Bhairava! There are external [circles of] family in every group of eight [phonemes] of your body comprised of the mass of phonemes, with an initial Lokeçvara following the distinction of the transcendent, subtle, and [gross] forms.

44-45

Lord! Your image is considered the seal for the reasons that [1] it affirms all the visible world (*etat*) by transcending the entire forms, [2] it delights the circle of devotees having bliss as their abode (*gati*), [3] it liberates from the net of bondage and dissolves differences, and [4] seals the wealth of gold in the form of various modes of consciousness.

46

Victorious is this [image of yours (*mûrtti*)] that is the lower ground for the stage of the supreme reality. Let this [image of yours] purify the defilements of the heart by vividly manifesting the reality.

47

Supreme Lord! The entire world manifests underneath within the consciousness that arises in every moment. Those engaged in the [inner] sacrifice realize that [this entire manifestation is] of the essence of the glory of Shiva and Shakti.

48

Bhairava, of the nature of consciousness! The self of all the beings! You always appear to me in this way. [And due to this,] all [the rituals starting from] your worship to the recitation of the *mantras* has been accomplished without any effort.

Thus completes the hymns in imitation of Bhairava composed by Mahâmaheshvara Kshemarâja.

Notes:

¹ I am thankful to Dr. Phyllis Granoff, Dr. Jürgen Hanneder, and Mrs. Mary Hicks for reading the earlier drafts, and Mr. Jason Schwartz for the library support

² For the gradual stages of self-realization in *Svacchandatantra*, see Goudriaan 1992, 139-174

³ The *Bhairavânukaranastava* of Kshemarâja. See Gnoli 1957.

⁴ The most extensive study update on Bhairava is the analytical translation of the *Manthânabhairavatantra* (Dyczkowski 2009). For studies on Bhairava, see Pandey 1963; White 1996; Muller-Ortega in Harper and Brown 2002, 213-230; Chalier-Visuvalingam in Hildebeitel 1989, 157-229.

A small treatise in ten verses by Abhinavagupta, *Bhairavastava*, (see Pandey 1963, 951-52) is another noteworthy text in understanding the significance of Bhairava in the Trika lineage of Abhinavagupta-Kcemarâja.

⁵ For instance, see his commentaries on *Svacchandatantra* and *Vijñânabhairavatantra*.

⁶ Kshemarâja also authored texts entirely dedicated to the philosophical system of *pratyabhijñâ*, such as the *Pratyabhijñâh[daya]*.

⁷ This translation relies on Gnoli's (1958) reading of the manuscript, except as indicated in the footnotes.

⁸ Gnoli has read the text as, 'mâyâ mundam.'

⁹ I have read âkriti instead of ârhati.

References:

Dyczkowski, Mark. (2009). *Manthânabhairavatantram*: New Delhi: Indira Gandhi National Center for the Arts.

Gnoli, Raniero. [ed.] (1958). "Bhairavânukaranastava," 'Miscellanea Indica,' *East and West* 9, 215–226.

Harper, Katherine and Robert Brown. 2002. *The Roots of Tantra*. Albany: State University of New York Press.

Hiltebeitel, Alf. 1989. *Criminal Gods and Demon Devotees: Essays on the Guardians of Popular Hinduism*. Albany: State University of New York Press.

Pandey, K.C. 1963. *Abhinavagupta: An Historical and Philosophical Study*. Varanasi: Chowkhamba Sanskrit Series Office.

White, David Gordon. 1996. *The Alchemical Body: Siddha Traditions in Medieval India*. Chicago: The University of Chicago Press

BASEL-3 AND ITS IMPACT ON INDIAN BANKING SECTOR**Ms Mamta Shah*****ABSTRACT**

Indian banking industry is considered as a blooming and sustainable sector in the global financial system. This paper deals with the banking sector reforms in India and the ways designed to manage the risks associated with huge banking sector. An evaluation of Basel Norms and their impact on economic growth of the country has been done pursuant to the globalization of the industry. Emergence of BASEL-3 and its impact on banking in India has been explored. Since economic reforms of 1991, most of the traditional and outdated concepts, practices, procedures and methods of banking have significantly changed. Competition among financial intermediaries has gradually helped the interest rates to decline significantly. Deregulation has been achieved. The real interest rate has been effectively maintained at moderate rate. The borrowers did not pay high price while depositors had incentives to save. Such condition are atypical of bank failure, if not properly managed. The banks had to formulate strategies to manage their risk by proper provisioning. The introduction of Basel- Norms is one of the various initiatives towards that objective. Reforms in the financial and the banking sectors have enabled better financial products. This has allowed financial viability of the banks and help to boost the economic growth.

Keywords: Banking Sector, Reforms, Economy, Inflation, Growth, BASEL, Risk-weighted assets, common equity, Liquidity Coverage Ratio (LCR) and Net Stable Funding Ratio (NSFR)

Introduction- Indian banking sector has undergone major changes and reforms during economic reforms. Though it was a part of overall economic reforms, it has changed the very functioning of Indian banks. This reform has not only influenced the productivity and efficiency of many of the Indian Banks, but has left everlasting footprints on the working of the banking sector in India. The efficient, dynamic and effective banking sector plays a decisive role in accelerating the rate of economic growth in any economy. The Government of India introduced economic and financial sector reforms in 1991 and banking sector reforms were part and parcel of financial sector reforms. These were initiated in 1991 to make Indian banking sector more efficient, strong and dynamic. Almost 80% of the business are still controlled by Public Sector Banks (PSBs). PSBs are still dominating the commercial banking system. Shares of the leading PSBs are listed on the stock exchanges. The RBI has given licenses to new private sector banks as part of the liberalisation process. The RBI has also been granting licenses to industrial houses. Many banks are successfully running in the retail and consumer segments but are yet to deliver services to industrial finance, retail trade, small business and agricultural finance

The PSBs will play an important role in the industry due to its number of branches and foreign banks facing the constraint of limited number of branches. Hence, in order to achieve an efficient banking system, the onus is on the Government to encourage the PSBs to be run on professional lines. This chapter focuses on India's banking sector, which has been attracting increasing attention since 1991 when a financial reform programme was launched. It assesses whether the reform programme has been successful so far in restructuring public-sector banks.

* Ms. Mamta Shah is Research Scholar of Mewar University and Faculty at GNIM , Punjabi Bagh, New Delhi

Role of BASEL-The objective of the Basel Committee's reform package is to improve the banking sector's ability to absorb shocks arising from financial and economic stress, whatever the source, thus reducing the risk of spillover from the financial sector to the real economy. A strong and resilient banking system is the foundation for sustainable economic growth, as banks are at the centre of the credit intermediation process between savers and investors. Moreover, banks provide critical services to consumers, small and medium-sized enterprises, large corporate firms and governments who rely on them to conduct their daily business, both at a domestic and international level. To address the market failures revealed by the crisis, the BASEL Committee is introducing a number of fundamental reforms to the international regulatory framework. The reforms strengthen bank-level, or micro prudential, regulation, which will help raise the resilience of individual banking institutions during periods of stress. The reforms also have a macro prudential focus, addressing system wide risks that can build up across the banking sector as well as the procyclical amplification of these risks over time. Clearly these two micro and macroprudential approaches to supervision are interrelated, as greater resilience at the individual bank level reduces the risk of system wide shocks.

About BASEL Norms - The Basel Committee on Banking Supervision provides a forum for regular cooperation on banking supervisory matters. Its objective is to enhance understanding of key supervisory issues and improve the quality of banking supervision worldwide. It seeks to do so by exchanging information on national supervisory issues, approaches and techniques, with a view to promoting common understanding. The Committee's Secretariat is located at the Bank for International Settlements (BIS) in Basel, Switzerland. The committee drafted a first document to set up an international 'minimum' amount of capital that banks should hold. This minimum is a percentage of the total capital of a bank, which is also called the minimum risk-based capital adequacy. In 1988, the Basel I Capital Accord (agreement) was created. In 1988, BCBS (*Basel committee for Banking Supervision*) introduced capital measurement system called Basel capital accord, also called as Basel 1. Basel I define capital based on two tiers:

Tier 1 (Core Capital): Tier 1 capital includes stock issues (or share holders equity) and declared reserves, such as loan loss reserves set aside to cushion future losses or for smoothing out income variations. It focused almost entirely on credit risk.

Tier 2 (Supplementary Capital): Tier 2 capital includes all other capital such as gains on investment assets, long-term debt with maturity greater than five years and hidden reserves (i.e. excess allowance for losses on loans and leases). However, short-term unsecured debts (or debts without guarantees), are not included in the definition of capital.

BASEL-1, defined capital and structure of risk weights for banks. The minimum capital requirement was fixed at 8% of risk weighted assets (RWA). RWA means assets with different risk profiles. A portfolio approach was taken to the measure of risk, with assets classified into four buckets (0%, 20%, 50% and 100%) according to the debtor category. For example, an asset backed by collateral would carry lesser risks as compared to personal loans, which have no collateral. India adopted Basel 1 guidelines in the year 1999.

BASEL-1 was the first international instrument assessing the importance of risk in relation to capital and proved to be a milestone in the finance and banking history. Some loopholes continued to prey upon the risk-sensitive sector. Fixation of 8% capital ratio to protect banks from credit risk was recommended. But, no recognition was given to risk associated with maturity of credit, risk associated with different currencies and macroeconomics risk. Due to these limitations BASEL Committee decided to propose a more risk-sensitive framework in June, 1999 which was signed as BASEL-II accord.

BASEL-II- The objective of BASEL-II was to “*promote safety and soundness in the financial system; enhance competitive equality; constitute a more comprehensive approach to addressing risks; and to develop approaches to capital adequacy that are appropriately sensitive to the degree of risk involved in a banks’ positions and activities*”. The Basel II capital accord is a three-pillared framework consisting of Minimum Capital Requirement, Supervisory Review Process and Market Discipline. Minimum Capital Requirement is based upon certain calculations at which minimum capital requirement has to be maintained. Under the Supervisory Review Process, the Central Bank (RBI in India) of the concerned country has to ensure that each bank has an adequate capital to adopt better management techniques. The Market Discipline mandates strict disclosure on risk management practices with transparency.

Basel II provides three approaches of increasing sophistication to the calculation of credit risk capital:- the Standardised Approach (SA), the Foundation Internal Ratings Based Approach(FIRBA) and the Advanced Internal Ratings Based Approach (AIRB). Basel II also introduced capital requirements for operational risk (OR) for the first time.

Implementation in India- The process of implementing Basel II norms in India was planned to be carried out in phases. Phase I was for foreign banks operating in India and Indian banks having operational presence outside India with effect from March 31,2008. In phase II, all other scheduled commercial banks (except Local Area Banks and RRBs) were to adhere to Basel II guidelines by March 31, 2009. With the deadline of March 31, 2009 for full implementation of Basel II norms fast approaching, banks are looking to maintain a cushion in their respective capital reserves. The minimum capital to risk-weighted asset ratio (CRAR) in India was placed at 9%, one percentage point above the Basel II requirement. All the banks have their Capital to Risk Weighted Assets Ratio (CRAR) above the stipulated requirement of Basel guidelines (8%) and RBI guidelines (9%). As per Basel II norms, Indian banks should maintain tier I capital of at least 6%.

The hurdles which were faced by India for implementation of BASEL-II were that first of all, there is a need for improved risk management and measurement. It aims to give impetus to the use of internal rating system by the international banks. Second requirement is to arrange risk capital requirement by the banks. Also, Basel II gives some scope to extend the rating of issues to issuers, this would only be an approximation and it would be necessary for the system to move to ratings of issuers. Encouraging ratings of issuers would be a challenge.

But, the accelerating financial globalization made it necessary to evolve new strategies to reduce financial risks associated with the banking sectors.

BASEL-III- Basel III released in December, 2010 is the third in the series of Basel Accords. Basel III is a comprehensive set of reform measures, developed by the Basel Committee on Banking Supervision, to strengthen the regulation, supervision and risk management of the banking sector. Its aim is to improve the banking sector’s ability to absorb shocks arising from financial and economic stress, improve risk management and governance, strengthen banks’ transparency and disclosures.

The Basel III which is to be implemented by banks in India as per the guidelines issued by RBI from time to time, will be challenging task not only for the banks but also for GOI. It is estimated that Indian banks will be required to raise Rs 6,00,000 crores in external capital in next nine years or so i.e. by 2020. Basel III is a comprehensive set of reform measures, developed by the Basel Committee on Banking Supervision to strengthen the “regulation, supervision and risk management of the banking sector”. These measures aim to improve the banking sector’s ability to absorb shocks arising from financial and economic stress, whatever the source improve risk management and governance strengthen banks’ transparency and disclosures.

Features of BASL-III The features of BASEL-III, which make it more stringent than BASEL-I and II are as follows.

1. Basel III aims to introduce much stricter definition of capital. Better quality capital means the higher loss-absorbing capacity. This in turn will mean that banks will be stronger, allowing them to better withstand periods of stress.
2. By introduction of Basel III ,banks will be required to hold a capital conservation buffer of 2.5%. The aim of asking to build conservation buffer is to ensure that banks maintain a cushion of capital that can be used to absorb losses during periods of financial and economic stress.
3. The countercyclical buffer has been introduced with the objective to increase capital requirements in good times and decrease the same in bad times. The buffer will slow banking activity when it overheats and will encourage lending when times are tough i.e. in bad times. The buffer will range from 0% to 2.5%, consisting of common equity or other fully loss-absorbing capital.
4. The minimum requirement for common equity, the highest form of loss-absorbing capital, has been raised under Basel III from 2% to 4.5% of total risk-weighted assets. The overall Tier 1 capital requirement, consisting of not only common equity but also other qualifying financial instruments, will also increase from the current minimum of 4% to 6%. Although the minimum total capital requirement will remain at the current 8% level, yet the required total capital will increase to 10.5% when combined with the conservation buffer.
5. Under Basel III, a framework for liquidity risk management will be created. A new Liquidity Coverage Ratio (LCR) and Net Stable Funding Ratio (NSFR) are to be introduced in 2015 and 2018, respectively.

Comparison of Basel-II and Basel-III

<i>Requirements</i>	<i>Under Basel II</i>	<i>Under Basel III</i>
<i>Minimum Ratio of Total Capital To RWAs</i>	8%	10.50%
<i>Minimum Ratio of Common Equity to RWAs</i>	2%	4.50% to 7.00%
<i>Tier I capital to RWAs</i>	4%	6.00%
<i>Core Tier I capital to RWAs</i>	2%	5.00%
<i>Capital Conservation Buffers to RWAs</i>	None	2.50%
<i>Leverage Ratio</i>	None	3.00%
<i>Countercyclical Buffer</i>	None	0% to 2.50%
<i>Minimum Liquidity Coverage Ratio</i>	None	TBD ¹ (2015)
<i>Minimum Net Stable Funding Ratio</i>	None	TBD ¹ (2018)
<i>Systemically important Financial Institutions Charge</i>	None	TBD ¹ (2011)

(TBD-To be Determined)¹

Literature Review- Several previous studies describe the reform effort and the inefficiency of the banks. IMF (2004 and 2005) provides an overview of the most recent reforms and Barnett (2004) reviews the structure and recent developments in the banking sector. For a review of previous banking system reforms, since the mid-1990s, (Karacadag ,2003). Strengthening financial systems has been one of the central issues facing emerging markets and developing economies. This is because sound financial systems serve as an

important channel for achieving economic growth through the mobilization of financial savings, putting them to productive use and transforming various risks (Beck, Levin and Loayza 1999; King and Levin 1993; Rajan and Zingales 1998; Demirgüç-Kunt, Asli and Maksimovic 1998; Jayaratne and Strahan 1996). Many countries including India adopted a series of financial sector liberalization measures in the late 1980s and early 1990s that included interest rate liberalization, entry deregulations, reduction of reserve requirements and removal of credit allocation. It has been argued by a number of economists that a well-developed financial system enables smooth flow of savings and investments and hence, supports economic growth (King and Levine, 1993, Goldsmith, 1969). A healthy financial system can help achieve efficient allocation of resources across time and space by reducing inefficiencies arising out of market frictions and other socio-economic factors.

Analysis of BASEL-III in Indian Context- Presently, a bank’s capital comprises Tier 1 and Tier 2 capital with a restriction that Tier 2 capital cannot be more than 100% of Tier 1 capital. Within Tier 1 capital, innovative instruments are limited to 15% of Tier 1 capital. Further, Perpetual Non-Cumulative Preference Shares along with Innovative Tier 1 instruments should not exceed 40% of total Tier 1 capital at any point of time. Within Tier 2 capital, subordinated debt is limited to a maximum of 50% of Tier 1 capital. However, under Basel III, with a view to improving the quality of capital, the Tier 1 capital will predominantly consist of Common Equity. At present, the regulatory adjustments (i.e. deductions and prudential filters) to capital vary across jurisdictions. A revised version of this document was issued in June 2011, generally applied to total Tier 1 capital or to a combination of Tier 1 and Tier 2 capital. They are not generally applied to the Common Equity component of Tier 1 capital. With a view to improving the quality of Common Equity and also consistency of regulatory adjustments across jurisdictions, most of the adjustments under Basel III will be made from Common Equity. The qualifying criteria for instruments to be included in Additional Tier 1 capital outside the Common Equity element as well as Tier 2 capital will be strengthened. This requirement will improve the market discipline under Pillar 3 of the Basel II framework. The minimum Common Equity, Tier 1 and Total Capital requirements will be phased-in between January 1, 2013 and January 1, 2015, as indicated below:

As a percentage of risk weighted assets(RWA)	January 1,2013	January 1,2014	January 1,2015
Minimum Common equity Tier-1 Capital	3.5%	4%	4.5%
Minimum Tier-1 Capital	4.5%	5.5%	6%
Minimum total Tier-1 Capital	8%	8%	8%

Recently RBI Governor, D. Subbarao declared that “Implementation of Basel III is expected to result in a decline in Indian banks’ ROE [return on equity] in the short term.” The global Basel III requirements, which require all banks to hold top quality capital equal to 7 per cent of their assets, adjusted for risk, are aimed at improving financial stability and avoiding a repeat of the American crisis of 2008. But the sharply higher capital requirements have drawn warnings from analysts and financiers about their impact on banking lending rates and wider economic growth across the developing world.

Conclusion- By implementation of the Basel III norms, the capital of many banks will reduce by around 60% because of the phased removal of certain components of capital from Tier 1. In addition, the risk weightings are expected to grow by nearly 200%. The twin impact of these two stipulations will greatly reduce the ROE and the profitability of banks. The proposed shift from short-term to long-term liquidity will increase the cost of funds for the banking system. This will further squeeze the banks’ profit margins. One of the basic tenets of prudent banking is to borrow long and lend short. There must be a match between the duration of

liabilities and the duration of assets, which is at the heart of asset-liability management. Long duration assets were acquired with short duration funding. However, it is a known fact that illiquid banks will soon become insolvent.

The leverage ratio of Indian banks is moderate, and hence, not a cause for concern. However, with capital dilution, increased risk weightings and ceilings on derivative trading, the new leverage ratio will impact the lending capability of the banks. As India is a developing economy, the shrinkage of bank credit can set in recessionary trends. Further, the developmental agenda of the Indian banks will take a backseat in such a situation. While systemic stability is welcome, it cannot be at the cost of the larger economic goals of poverty alleviation, employment generation, priority sector lending and balanced regional growth.

Therefore, it is opined that the new regime of prudential regulations will result in greater stability of the banking industry in various countries. Exercising controls on the capital, liquidity and leveraging of banks will ensure that they have the ability to withstand crises.

References:

- Asian Policy Forum, 2000. Policy Recommendations for Preventing Another Capital Account Crisis.
- Barth, James, Gerard Caprio and Ross Levine, 2001a. "Banking systems around the globe: Do regulation and ownership affect performance and stability"? *Forthcoming* in Frederic Mishkin, ed., Prudential Regulation and Supervision: Why it is Important and What are the Issues (Cambridge, Mass., National Bureau of Economic Research).
- Santos, Joao A.C., 1998. "Commercial banks in the securities business: a review", Bank for International Settlements Working Papers No. 56.
- Chaitanya, V Krishna (2004). Causes of Non-performing Assets in Public Sector Banks. *Economic Research*, 17 (1): 16-30.
- Chakravarty, S (1985). Report of the Committee to Review the Working of the Monetary System. Mumbai: Reserve Bank of India.
- Das ,Abhiman (2002). Risk and Productivity Change of Public Sector Banks. *Economic and Political Weekly*, 37 (5): 437-48.

INTERNAL MARKETING PRACTICES IN PUBLISHING INDUSTRIES: A CASE STUDY OF SARASWATI HOUSE PVT. LTD.

Mukta Gupta*, Dr. Lokesh Jindal**

ABSTRACT

Internal Marketing (IM) is a new and emerging discipline. It is meant to align, motivate and empower employees at all functions and levels to consistently deliver positive customer experiences that are aligned with firm's organizational goals. This paper discusses findings from an exploratory study concerning internal marketing in the publishing industry. This study demonstrates to what extent non-monetary incentives are utilized in the public sector and applies the principle to study the impact of such non-monetary incentives in the Saraswati House Pvt. Ltd. The study also focuses on gender-wise effect of non-monetary benefits.

Keywords: internal marketing, monetary benefits, non-monetary benefits, motivation, gender

INTRODUCTION

Internal marketing is all about the relationship an employer forms with its employees. It is said that staff should be seen as internal customers and their needs should be met, as well as external customers. Part of internal marketing pertains to communication and making sure the staff share the overall vision and goals of the firm or similar systems like the intranet and staff newsletters aid in sharing these common values.

The concept of Internal Marketing originally emerged from the services marketing Literature (Berry and Parasuraman, 1992). As consumers, we use service every day. Turning on a light, listening to the radio, talking on the telephone, taking a bus, getting haircut are all examples of service consumption at the individual level. Unfortunately consumers are not always happy with the quality and value of the service they receive.

Suppliers of services, who often face stiff competition, sometimes appear to have a very different set of concerns, many owners and managers complain about how difficult it is to make a profit, to find skilled and motivated employees or to please customers.

Fortunately, some suppliers know how to please their customers while also running a productive, profitable operation, staffed by pleasant and competitive employees.

Service Marketing involves 3 types of marketing (Fig.1):

- a. External Marketing: "Setting the promise", marketing to end-users.
- b. Internal Marketing: "Enabling the promise", marketing to employees, Involves training, motivational and teamwork. Programs and all communication with employees. Performed to enable employees to perform the service. Effectively and keep up the promise made to the customer.
- c. Interactive Marketing: Moment of Truth, Service Encounter

*Mukta Gupta is Research Scholar, Mewar University

** Dr. Lokesh Jindal is Associate Professor in Maharaja Agrasen Institute of Technology, GGSIP University



Fig.1 Service Marketing

1. INTERNAL MARKETING

Internal marketing (IM) is a process that occurs within a company or organization whereby the functional process aligns, motivates and empowers employees at all management levels to deliver a satisfying customer experience. Over recent years internal marketing has increasingly been integrated with employer branding and employer brand management which strives to build stronger links between the employee brand experience and customer brand experience.

According to Burkett and Zealley, *“the challenge for internal marketing is not only to get the right messages across, but to embed them in such a way that they both change and reinforce employee behavior”*.

A growing body of research amply demonstrates there is a link between internal marketing and profitability. The 2006 *Internal Marketing Best Practices* study identified the six key characteristics that drive successful internal marketing programs. Conducted by graduate students of the Integrated Marketing Communications department at Northwestern University, the study shed light on strategies and tactics that align motivate and empower employees — at all functions and levels — to consistently deliver a company’s “brand promise,” which, in turn, helps businesses reach their goals.

The six common characteristics of highly effective internal marketing programs are: (1) senior management participation, (2) integrated organizational structure, (3) strategic marketing approach, (4) human resources partnership, (5) focus on employee engagement and (6) internal brand communication.

Internal marketing is inward facing marketing. Internal marketing is used by marketers to motivate all functions to satisfy customers. With internal marketing, the marketer is really extending and developing the foundations of marketing such as the marketing concept, the exchange process and customer to internal customers.

Internal customers would be anybody involved in delivering value to the final customer. This will include internal functions within business with which marketing people interact including research and development, production/operations/Logistics, human resources, IT and customer services. A BNET Editorial raises the issue emphatically:

“Why is internal marketing important? Although external marketing remains the most important business development task, it is essential to sell inwardly toward a company’s people. When employees understand

and commit to the value proposition of the company and its brands, external marketing becomes more effective, because the employees become product champions.”

Key concepts of internal marketing include:

- Internal Marketing functioning as a continual internal “up skilling process”.
- Alignment of the organization’s purpose with employee behavior.
- Motivation, reframing, empowerment of employee attitude.
- Employees, reframing and empowerment of employee attitude.
- Inside-out management approach.

Companies at the forefront of internal marketing share particular beliefs regarding the role of employees in achieving business success and improve the efficiency of the company’s employees.

Importance of Internal marketing

Internal marketing concept is increasingly being deployed world across by various firms as such practices:

- Encourages the internal market (employees) to perform better.
- Empowers employees and give them accountability and responsibility.
- Periodic evaluation of employee performance.
- Integrates business culture, structure, human resource management, vision and strategy with the employee:



Fig 2: Internal Marketing

The 2012 Workplace Benefits Report found that nine out of 10 employers believe that financial benefits — which include 401(k) plans, health savings accounts (HSA) and financial advice and education — are equally or more important to potential hires today than five years ago, with half believing such benefits are more important than ever.

Employee benefits go beyond the individual. Family benefits are important to potential employees when choosing where they will work. Laws such as the FMLA help individuals when it comes to being there for themselves and their families.

Direct compensation refers to monetary benefits offered and provided to employees in return of the services they provide to the organization. The monetary benefits include basic salary, house rent allowance, conveyance, leave travel allowance, medical reimbursements, special allowances, bonus, PF/Gratuity, etc. They are given at a regular interval at a definite time.



Fig 3: Direct Compensation

When recruiting employees, it's easy to fall into the trap of thinking that money is what brings in the best and the brightest. After all, employees tend to receive paychecks a bit beefier than other professionals with similar levels of experience and education. But at the end of the day, it is often the non-financial rewards that attract the top employees— and that are almost always what keeps them on staff. Here are some ways to entice and hold onto first-class employee talent. Non-monetary compensation can equal 20-60% of the value of the cash compensation that an employee receives. For the current job seeker, starting salaries have barely increased, frozen or actually dropped. To find non-monetary benefits in an offer can be essential when an employee evaluates it. These added perks can sweeten (and seal) the deal.

There are a host of benefits that companies can offer to attract and retain top talent. Here is a list of a few for employers to consider.

- On-site childcare
- Flex-time schedules
- Free or discounted parking
- Free or discounted food and drinks

- Gym membership discounts
- In-office massage or yoga
- Casual Fridays
- Mentoring programs for career advancement
- Free or discounted educational and training opportunities
- Work opportunities in multiple locations
- Cross-training in other areas of the business
- Annual or quarterly company parties

Rahul Sharma, Senior Vice President (Human resources), India Info line Ltd explains,

“Monetary rewards have very short-term benefits as opposed to non-monetary ones. Also, it’s been observed that employees often complain after receiving monetary gains and usually aren’t satisfied with the benefit given. Therefore, it is better to move from monetary forms of benefits to intangible ones,”

Saraswati House Pvt. Ltd is an innovative, vibrant, creative and energetic organization where each one of the employee strives wholeheartedly to serve students and make every learning moment a joyful, effective and meaningful one. Their objective is to create and distribute exceptional publishing material, that’s instantly recognizable, with creativity and valuable information. This paper discusses findings from an exploratory study concerning internal marketing in the Company in order to enhance efficiency and provide motivation to employees. The purpose of this study is to demonstrate to what extent non-monetary incentives are utilized in the publication house and whether non-monetary incentives have the potential to increase the motivation of employees as much as the monetary incentives. Incentives is any means that makes an employee desire to do better, try harder and expand more energy. Non-monetary incentives such as participation in decision-making verbal or written recognition of good work etc. are the kinds of incentives that do not in value direct payment of cash.

2. LITERATURE REVIEW

A concept of Internal marketing (IM) is a new management philosophy that organizations regard its organization member as internal customers (*Berry, 1981*), as it should be internal marketing is also subject to development of customer-oriented employees (*Gronroos, 1985*). According to *Johnson, Scheuing and Gaida (1986)*, internal marketing is to allow employees within organizations to be aware of mission, objectives and vision of organization and to achieve the expectation of the organization through education training, incentives and performance evaluation for employees. According to *Parasuraman, Berry, & Zeithaml (1991)* internal marketing is attracting, developing and retaining qualified employees through job(products) that satisfy staff needs. It is also the philosophy of treating employees as customers and it is the strategy of shaping job (products) to fit human needs. Over the last years researchers began to recognize that Internal Marketing could help an enterprise to implement its strategy. Thus, it is presented as a mechanism for reducing departmental isolation and inter-departmental frictions as well as overcoming resistance to change.

As it emerged from the above definitions, some researchers conceive the Internal Marketing as a concept, while others as a philosophy and others as a management practice [*George (1990), Wilson (1991)*]. Moreover, some relate it to human resources management to service or to change management.

However, researchers agree that Internal Marketing could contribute in the improvement of quality provided from service business [George (1990), Berry and Parasuraman (1991), Piercy (1995)]. This justified the initial stance of Gummesson (1987) who proposed the Internal Marketing as a solution for high quality of services provided to the customers in a continuous base. Greene et al, (1994) support that Internal Marketing is important to all Industries but it is even more important to services.

Some scholars suggest alternative classification of internal marketing. Bekkers and Van Maastricht (1993) identify three approaches to Internal Marketing: hierarchical exchange Process, internal supplies and exchange process organization/employee. In addition Money and Foreman (1996) provide a matrix that presents four different aspects of the concept of Internal Marketing depending on who is the customer and who is the marketer:

Type 1: the marketer is a department and the customer is another department

Type 2: the marketer is the organization and the customer is the department

Type 3: the marketer is a department and the customer is the organization

Type 4: the organization is both the marketer and the customer.

This paper deals with the fourth type where the organization is both the marketer and the customer and Internal Marketing helps business to keep both markets (internal and external) satisfied.

Motivation Theories

Many theories of motivation implicitly assume that effort, while a function of many things, is positively correlated with the predicted utility of the award earned for that effort. For example, expectancy theories hold that effort exerted in pursuit of a reward is positively related to the value of the reward offered for performance (Bandura, 1986, 1997; Porter & Lawler, 1968; Vroom, 1964). Consistent with this and many other valence based theories of motivation, the propositions put forward in this paper will assume that employees exert effort to maximize their “*expected utility*” (Naylor, Pritchert, & Ilgen, 1980). There has been extensive research in both economics and management regarding different types of incentives. Much of this work concerns whether the use of an extrinsic reward will reduce intrinsic motivation to perform a task (Banker, Lee, Potter, & Srinivasan, 1996; Bloom & Milkovich, 1998; Deci 1971; Deci & Ryan 1985; Deci, Koestner, & Ryan 1999; Eisenberger, Rhoades, & Cameron, 1999; Gerhart & Trevor, 1996; Jordan, 1986; Kruglanski, 1975). Research has also been done on how extrinsic rewards interact with other motivational tools such as goals (Jessup & Staehlski, 1999; London & Oldham, 1976; Tolchinsky & King 1980), job design (Futrell, 1979; Gallagher & Einhorn, 1976; Kelly, 1992), and job challenge (Radhakrishnan & Ronen 1999). In addition to work on extrinsic incentives and performance, a large body of research exists on psychological interventions and their impact on performance (See Guzzo, 1985 for a review). Economists would claim that money is always better (or at least no worse) than any non-monetary incentive of equal market value because cash has option value (List & Shogren, 1998; Waldfogel, 1993, 1996). The economic argument continues by stating that if a firm were to choose a non-cash incentive, it could do no better than matching exactly what a person would have chosen for himself or herself. Understanding why and when to use tangible non-monetary incentives is an important endeavor, since U.S. firms spent over \$20 billion on tangible non-monetary incentives in 1999 (Incentive Federation, 2000). According to Nelson (2001), positive reinforcement is most effective when it is ‘directly reinforcing of the desired behavior’, ‘is immediate’, ‘is valued’ by the individual and is ‘frequent’. Recognition is one such positive reinforce which when used on the lines of reinforcement theory, increases the frequency of desired behavior.

1. *Varey and Lewis (2000)* indicate that internal marketing was “invented” in the 1970s, as a managerial approach to build and inculcate service delivery competence. At the context of the manufacturing industry the operations management as long ago as the 1950s (*Ishikawa, 1985*).
2. *David (2003)* mentioned that the internal marketing in knowledge-based era should be defined as strategy for relationship development that organizations would like to achieve knowledge renewal on his “medium theory that effects internal marketing”.
3. Increasingly, organizations look for ways to improve their marketing orientation and effectiveness through internal marketing, which is part of the Holistic Marketing Concept (*Kotler, 2008, p.10, 24; Little & Little, 2009*). Some companies are focusing on marketing orientation because they want to increase service quality (*Little & Little, 2009*). Ultimately, all companies want to gain competitive advantage, which research has shown is closely linked to being marketing oriented (*Schlosser & McNaughton, 2007*)

Kotler's (2008) internal marketing theory, which is part of the ‘**Holistic Marketing Concept**’, was used as the basis for understanding the internal marketing concept. Kotler writes:

“ Holistic marketing incorporates internal marketing, ensuring that everyone in the organization embraces appropriate marketing principles, especially senior management. Internal marketing is the task of hiring, training, and motivating able employees who want to serve customers well. Smart marketers recognize that marketing activities within the company can be as important as or even more important than marketing activities directed outside the company. It makes no sense to promise excellent service before the company’s staff is ready to provide it “ (Kotler, 2008, p.24).

Kotler’s theory on internal marketing has been broken down to look at the four components more closely (as listed below). It has to be kept in mind while considering the mechanism of Internal Marketing that hiring, training and motivating employees could be considered as three separate components themselves, but for the purpose of this report these have been bundled as human resources activities and looked through different perspective. Herein is the four compnents in Kotler’s conception:

1. Hiring, training and motivating employees;
2. All marketing functions must work together and be coordinated from the customer’s point of view;
3. There must be vertical alignment with senior management and employees.
4. Horizontal alignment with other departments.

According to *Mosley (2007)*, service-mindedness and customer-oriented behaviors focusing staff attention on the internal activities that need to changed in order to enhance market place performance and creating motivated and customer-oriented. *Gaunaris (2008)* indicates that “*marketing has an additional, internal, role that is to ensure that service employees are customer conscios and also satisfied with their job*”. *Mcclure (2010)* mentioned that the internal marketing through improving innovative and supportive culture have direct influence on marketing effectiveness.

Brand is the incorporation of all impressions received by consumers which will lead to a distinctive position in their mind based on perceived emotional functional benefits (*Raj and Jyothi, 2011*)

3. RESEARCH METHODOLOGY

3.1 Statement of Research Problem

Whenever we look into any Publication house, the Turnover Ratio always appear very high. But Saraswati House Pvt. Ltd has a low turnover . In spite of this constraint, the employee retention period is quite prolonged which calls for elaborate reasons to explain seemingly peculiar circumstance.

3.2 Objectives of the present study

The present study aims to demonstrate to what extent non-monetary incentives are utilized in the publication house and whether they have the potential to motivate employees as much as monetary incentives.

The term internal marketing is defined as the policy of treating employees as internal customers of the organization, responding to employee's needs or wants and promoting the organization and its policies to the employees. Customer Service is one of the most crucial aspects of an organization's competitive advantage and it is the critical element which internal marketing influences. The retention in Saraswati House Pvt. Ltd. is very high and the turnover ratio is very low. One is required to explore and understand the perspectives of both the employees and the employer to understand this unique positioning. The study has been conducted to seek out the ways employer deploy to motivate his employees and make them comfortable in the company for prolonged period.

The main objective of our research is to:

- To understand employer's perspective
- To understand employee's perspective
- To identify best practices in the industry
- To identify reasons for employee's satisfaction level as the retention in company is very high.

3.3 The scope of the present study:

This research has been carried out in the company related to Publication house .

3.4 METHODOLOGY

• Research Design

A research design is a framework or blueprint for conducting the marketing research project. Research Designs may be broadly classified as exploratory or descriptive research. My Research work is descriptive in nature as we are studying the current practices in company. Sample is large and representative. Data analysis is qualitative. There are 3 types of Research Design:

- Exploratory Design
- Descriptive Design
- Causal Design

My research is descriptive in nature as the research work is qualitative. As we want to know the employee's satisfaction level and their efficiency through monetary and non-monetary benefits given by employer and the company, we can get this information through the qualitative work rendered by employees in the company.

• Sample Design

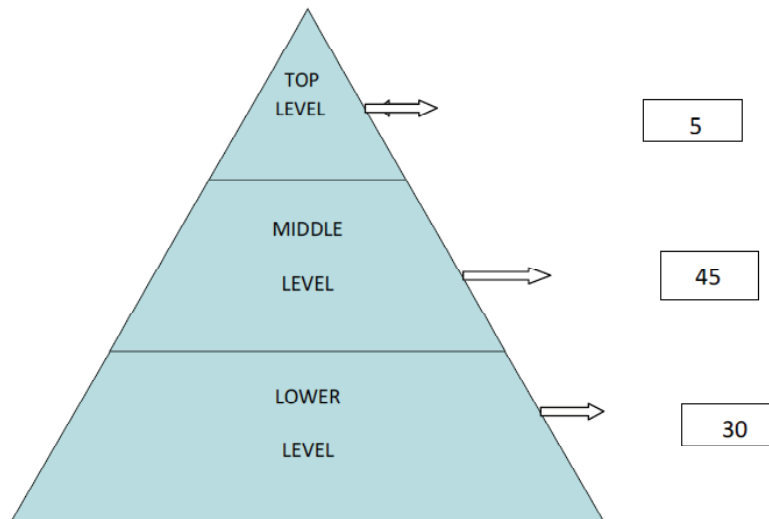
There are 2 types of Sample Design:

- Probability sampling
- Non-Probability sampling

Sampling is one of the components of Research Design. A Sampling Frame is a representation of the element of the target population. We have used probability Sampling as the population is finite.

- **Sample Technique**

My research is based on Stratified Random Sampling because we are covering the hierarchy in the organization. The Sample Size is 80.



Data collection strategy:

Primary: We will be using Survey Method through questionnaire

Secondary: Journals, Books, E-journals: DELNET, EBSCO

3.5 Limitations of the present study:

We are limiting ourselves to only Delhi branch (NCT) of the company. The employees surveyed in the study completed the questionnaire accurately and honestly. In order to get the reliable information regarding the efficiency in internal marketing interview schedule of survey method is being used as a main tool of study. The questionnaire is framed which would clearly indicate their meaning to the respondents, relevant to the objectives of the study.

4. FINDINGS AND RESULTS

The research incorporated interactive variables between non-monetary benefits and major occupation level of the employee. Satisfactory working conditions are associated with a slightly improvement in productivity in three occupation level: senior officials and managers; middle level professions; technicians and elementary occupation level (bottom most). These findings are consistent with several possible interpretations. *First*, satisfactory non-monetary benefits may be associated with an improvement in productivity among workers in the three occupations mentioned.

Second, employers may selectively guarantee better non-monetary working conditions to their more productive employees in those occupations. *Third*, the association between productivity and non-monetary working conditions may be positive across all occupations.

For the sample of men (Sample size = 47), the table exhibits significantly variable values of coefficients (in the scale of 1-5 indicating 1 for “*strongly disagree*” and 5 for “*strongly agree*”) for three level of job profile. For
Volume 1, No.1, January-March, 2013

the sample of women (sample size = 33), all interactive variables (except top level service workers) are significant and positive. Thus, we find wide and distinct gender-based effects of non-monetary work benefits. The findings suggest a clear cut distinction of females falling into the consideration of non monetary benefits at a lower and middle level of occupation thus making these benefits an important factor and value drivers in the organization.

5. CONCLUSIONS

Although non-monetary measures are increasingly important in decision-making and performance evaluation, companies should not simply copy results and measures used by others. The choice of measures as well as benefits must be linked to factors such as corporate strategy, value drivers, organizational objectives and the competitive environment. In addition, companies should remember that performance measurement choice is a dynamic process - measures may be appropriate today, but the system needs to be continually reassessed as non monetary strategies and competitive advantages evolve. The philosophy of internal marketing is that employees of an organization constitute its internal market, which has customers and suppliers and as a result, a chain of value if formed inside the organization which must be intended to supply the needs of both the internal and external customers. When the internal customers of an organization are satisfied they will perform better and maintain better interaction with the customers. As a result, the customers will get more satisfied, which will bring about their faithfulness in the long run and ultimately a competitive advantage will be obtained from the internal customers. Internal marketing influences the customers' understanding of the quality of services. On the other hand, Internal marketing can also influence both the quality of services and the customers' satisfaction.

References

- Forum for People Performance Management and Measurement, Internal Marketing Best Practice Study(2008).
- Christopher Lovelock, Jochen Wirpz ,Jayanta Chatterjee(2006) "Services Marketing " Pearson edu,5th ed.
- Hugh Burkitt and John Zealley (2006) "Marketing Excellence:Winning Companies reveal the secrets of their success", John Wiley & Sons Ltd..p.295.
- Irit Nitzan & Boraklibai (2011),"Social effects on Customer Retention"
- Kanter, R.M. (1983), "The change Masters" Simon and Schuster, New York NY.
- Kuo-Songlu (2012), "Brilliant intelligence and internet marketing Effect on organizational citizenship Behavior-study of employee in high Technology Industry".
- Naresh K Malhotra,Satya Bhushan Dash (2010) ,"Marketing research :An applied orientation" Pearson, 6th ed.
- Nilay Yavuz (2004) ,"The use of non-monetary incentives as a motivational tool: A survey study in a Public Organization in Turkey.
- Pervaiz K. Ahmed , Mohammed Rafiq (2004), "Internal Marketing : tools and concepts of or customer focused Management", Elsevier.
- Philip J. Kitchen (2004) , Internal Marketing in UK Banks: Conceptual Legitimacy or window dressing." Hull University,pp. 421-452.
- Valarie A Zeithaml,Mary Jo Bitner,Dwayne D Gremler,Ajay Pandit(2006) "Services Marketing"Mc Graw-Hill Co,4th ed.

**A LITRETURE REVIEW ON BUSINESS PRACTICES OF MARWARI
BUSINESS HOUSES IN INDIA**

Mr. Yash Kumawat*, Dr. Narayan Baser**

ABSTRACT

Business practices of different business houses in India are undergoing massive transformation. Sound business practices of various business houses in India, including Marwaris, have instilled focus, discipline, and structure within the current organization and lead it to the expected level of growth. This paper primarily focuses on review of various literatures on business practices of Marwari business houses in India. The reasons for spread of Marwari community's diaspora across the country and their success in commercial activities has been explored .

Keywords: Business Community, Business practices, Marwari houses,

INTRODUCTION

A literature review corresponds to a systematic review of texts that aims to discuss critical issues of current knowledge as well as its finding on a particular topic. Literature review are secondary source for any further research. Most often this term is associated with preliminary activity of the particular research. The ultimate goal of such exercise is to update reader about the current literature on a topic and form the basis for another goal. A well structured review leads towards real goal of any research. In the absence of well structured review, the research might get deviated from actual goal.

India is a large country with a diverse population, tackling numerous socio-economic and political challenges throughout history and experiencing growth and development while facing economic and fiscal pressure in a context of regional inequalities in terms of various different business houses. Business practices of these different business houses in India are undergoing massive transformation. Sound business practices of various business houses in India have instilled focus, discipline, and structure within the current organization and lead it to the expected level of growth. This paper primarily focuses on review of various literature on "Business practices of Marwari Business houses in India"

Several authors, scholar, and academician contributed significantly in this area. They were confined with the historical review, autobiographies, and articles. *Thomas A. Timberg* "The Marwaris From Trader To Industrialist" and *Dr. D. K. Taknet* "Industrial Entrepreneurship Of Shekhawati" have contributed fundamentally on the business practices of this community. Apart from this some autobiographies, articles and few research papers were also published on this area with varied time frame. *Thomas A. Timberg* (1979) published a very famous book 'The Marwaris From Trader To Industrialist' in which he emphasized on macro level research on the Marwaris living in the important cities and some Indian provinces. *Dr. D. K. Taknet* (1986) has published a book on 'Industrial Entrepreneurship Of Shekhawati' which focuses on pre- independence contribution and post- independence contribution of Marwaris in India. In this study, Dr. Taknet reveals the secret of Marwari business like practical training in business, enterprises skill, cooperative system of banking, partnership and good will, philanthropy, support to British government and interest of politics. They gradually adopted British techniques in their accounts and they also started correspondence in English. He finally concluded this study

**Mr. Yash Kumawat is Research Scholar, Mewar University, Chittorgarh*

***Dr. Narayan Baser is Associate Professor, NICM SJPI, Gandhinagar*

by the wording” *Community had followed eleven major ideals that are training, experience, organizing, risk taking ability, achievement motivation, thrift, diligence, community cooperation, intimacy, confidence, charity, simplicity, innovation.*” Gita Piramal (1996) in her contribution called “Business Maharajas”, has mentioned about vast business empire and the most powerful man who control sales to the tune of Rs. 550 billion through over 5000 companies and that directly employed 6,50,000 people. In this study, she focused on the businessmen who are different and varied. Some of them were college topper, in contrast some merely college drop-out. In this study, she also described about what they do, how they think, how they react on influence on general economy and how they operate their business. She focused mainly on the notable marwaries like Bajaj, Birla, Goenka, Khaitan. This book separately focuses on the development of various business groups, their critical phases, joint ventures. Ms. Piramal exquisitely narrated on Rahul Bajaj, Aditya Vikram Birla, R.P. Goenka, and Khaitan as Marwari business leaders. *Narayan Chandra Shah* (2003) in his study on ‘The Marwari Community in Eastern India’ studied Marwari groups mainly based of North Bengal’s three districts of Cooch Bihar, Darjeeling, Jalpaiguri. The work focus on Calcutta’s early history of the Marwari community and its social, economic, religious, caste and cultural identities. This community migrated from their original place of birth. He studied the factors that were behind this migration. He also focusses on the way Marwari community emerged as a strong business community in North Bengal. He also elaborates in his study about their switching principal business from money lenders to money investors. He also threw light on the commercial ventures of Marwari business in eastern Calcutta. The narration covers the history of change from agrarian economy to a market oriented and surplus generating economy, the commodities and cash crops like paddy, sugarcane, tobacco, coffee and tea. Finally, Shah examined the influence of adaptability to local conditions and amiable temperament which helped them to set up business in far away places from their home in Rajasthan. Shah concluded the study in following words:

“Marwaries business starts with very humble beginning. In beginning they started with hawkers or traders. With the passage of time Marwari moved in all business area. Today there is not a single field in which Marwaris are not found. They made notable contribution in community apart from profit making in the concern region. They opened the schools, colleges in the respective areas, published magazines, dailies and journals for dissemination of the information and knowledge. Significant social cultural activities were performed by marwaries. Marwari Yuva Munch which came in to existence in 1977 with main aims of National integration, implementation of welfare programmes for the handicapped, Medical services, relief work during natural calamities and even fight against social evils. They made ‘Dharmashalas’ for tourists and visitors in all three northern districts that provide services on very economical rates. Marwaries also encouraged a bit for urbanization. They provide large donation for construction of Hospitals, Power house in Jalpaiguri district. Finally they moved in public life and political arena.”(Shah,2003)

Marwaries always live as integral part of the society. They befriend all communities and maintain harmonious relationship. Marwari have played effective role as rural money-lenders. They also conducted large-scale credit transaction in urban and semi urban area in absence of financial institution in the area. These things conferred them strong financial position. Seldom surplus property of peasant would become property of money lenders. But there is no record of tensions between local peasant and Marwari money lenders. Sample study of Shah does not indicate that marwaries have been solely responsible for any fundamental or revolutionary, social economic change in the area. At present, marwaries are captain of North Bengal Trade. *Anne Hardgrove* (2005) in his study on ‘Community and public Culture, The Marwaris in Calcutta, 1887-1997’ discussed historical facts about marwaries such as their migration from Rajasthan to various part of India, their economic activities, custom or rituals. He emphasised over the structure, nature and reasons for the success of the Marwari business organizations. *Antoinette Schoar; Raj Kamal Iyer; Sandya Kumar* (2008) in their research named “Importance of Ethnic Networks for Business Transactions of the Small Enterprises” focused to understand the effect of ethnicity across business transactions of the business communities Andhra,

Tamilian & Marwari. They used an “Audit study methodology” to collect field data and “Randomization technique” to have an unbiased allocation of shops to the auditors. The auditors entered into contracts with the wholesaler with a predetermined script and the observations helped them to investigate the nature of the business transactions and variation in contract terms because of ethnicity of Tamilian & Marwari communities. It also gave the researchers an insight into the “entrepreneurial instinct of a specific Marwari community.” It was also revealed that a match in the ethnicity of wholesaler and auditor does not help alleviate the hold-up problem. However, the team found that “when traders of the same ethnicity meet they offer lower prices.” The study suggest that all business transactions in the SME sector have a combination of formal and informal contracting and the ethnicity of the parties plays an important role in determining the features of the contract. *Ajai Singhal & Mohd. Wamique Hisam* (2009) in their study “Nature And Characteristic Of Marwari’s Business: A Brief History From 16th To Early 20th Century” explained how Marwari community achieved the heights of the success. Their paper focuses on the development of the Marwari business houses in early 18th century to 20th century. Initial part of the paper mentioned the introduction and their migration trend which was started in early 16th century. They settled their business mainly in the West Bengal. The nature of the business organization was very simple. It was controlled by the family members.

The Marwari business organizations have following characteristics:

Family controlled: Traditionally, they followed family firm institution. Business is mainly controlled by family members. This tradition of family firms pass on their business generations after generations. Banking, trading in commodities, Hundis, Futures, Broking, and Manufacturing Industries were their prominent business interests.

Centralized control and Accounting: As Marwari business organizations were managed and owned by the family, the centralization of power was the key feature of the business organization. In a large business firm with several branches, they have centralized book keeping. They moved one branch to another branch for checking accounts which was maintained by the clerks. Time to time family member would meet for accounting purpose.

Proper liasioning with the Government: Marawaries maintained exceptionally healthy relationship with the government (Nawab, Britishers, Rulers of Princely state). The history indicates that whenever the ruler got into crisis, marwaris always backed them to get rid from financial crisis. It can be summarized that from 16th century to early 20th century, marwaris entered from one business to another depending upon the opportunity and the nature of their businesses. The business can be summed up in four categories. First category is trading and banking which dominated almost all the marwaris up to 18th century. Second category is that of bania or brokership in which marwaris took the role of middlemen to the European firms. The third category is speculation in which many marwaris entered from late 19th century to early 20th century and made huge money. And the last category is manufacturing in which many marwaris entered after the end of First World War. *Ashok Som* (2010) in his article “Emerging trends of human resources practices at Aditya Birla” described the emerging trends of human resources practices at Aditya Birla group and strategic redesigning of the whole organization from 1995 to 2006. This article also focused on business economy like India, and the nature of HR practices needed to new capabilities to beat the global complexities of the business. It focused mainly on two issues; (1) the peculiarities or defining characteristics of HR models unique to India and (2) the main factors that shape people, management policies and practices.

Conclusion

After reviewing available literature, it is observed that Marwari community’s Diaspora spread throughout the country and their success in commercial activities could be attributed to their knack of grabbing the business opportunities whenever it came, their willingness to move to any place which offered them opportunity, and creating a strong and continuously growing commercial network of fellow community members which provided

a platform to any Marwari who wanted to enter into a commercial activity anywhere in the country. Along with that, they always ensured the government patronage which helped them in running their business organizations without any interference and retaining the autonomy. Marwaris were successful in developing such a strong financial network that even government started depending upon this community in financial difficulties and this network also helped in grabbing many businesses from local community and other business communities across different parts of the country.

References

- Dr. D.K. Takent (1986) “Entrepreneurship of Shekhawati”, p. 175, p. 165
- Gita Piramal(1996), “Business Maharajas”, pp. 9-10
- Narayan Chandra Shah (2003), “The Marwari Community in Eastern India”, Chapter 9
- Ashok Som (2010), “Emerging Trends of Human Resources Practices at Aditya Birla”
- Ajai Singhal & Mohd. Wamique Hisam (2009), “Nature And Characteristic Of Marwari’s Business : A Brief History From 16th To Early 20th Century”
- Antoinette Schoar, Raj Kamal Iyer, Sandya Kumar (2008), “Importance of Ethnic Networks for Business Transactions of the Small Enterprises”
- Anne Hardgrove (2005), “Community and public Culture, The Marwaris in Calcutta, 1887-1997”

DESIGN SECURE OBJECT ORIENTED SOFTWARE**M.U. Bokhari*, Mahtab Alam**, Prashant Johri*******ABSTRACT**

The paper discusses joint work by scholars from three centres to develop a security mechanism for software development and maintenance. Security is an integral part of the widely distributed modern software systems. But, the software development process does not give primacy to this attribute. Generally, Security mechanisms are added to the existing systems as an afterthought, with all the consequent problems of insufficient security requirements, integration difficulties and mismatches between running system and the design models. We propose to integrate the design of security early into the system's development process. Object oriented software development is a new approach, which is gaining currency among developers. The standard language for modeling the design of Object-oriented systems is Unified Modeling Language (UML). The paper focuses on the security aspects of such an Object-oriented software in early design phase.

Keywords: Vulnerability, Threats, Unified Modeling Language, Object Oriented Software, Risk Assessment, Encapsulation, Polymorphism.

INTRODUCTION

Object Oriented Design (OOD) process is meant to design the classes identified at the requirement and analysis phase. During this phase, the system is viewed as collection of objects and the operation of these classes are performed by the interaction of these objects through messages. At the design phase, a system must present unified security design that takes into account security principles. Many security properties cannot be verified by test activity alone; however verification through analyses and modeling at the design stage can increase the confidence that the specification provides a sound basis for developing a secure program [1]. There are several reasons for the lack of support of *security engineering*. Two most pertinent reasons include (i) security requirements are generally difficult to analyze and model and (ii) the lack of developer acceptance and expertise for secure software development. Security issues that must be addressed during design and development phases are not restricted to avoiding software vulnerabilities, such as buffer overflow errors, and meeting security requirements that were explicitly expressed at the beginning of the development process, but it also includes the Unified Modeling Language (UML). In recent years, UML has become a standard for object oriented modeling in the field of software engineering. Specification of the security policies using UML will ease the understanding of security requirements, so the developer acceptance for security aspects will grow. In this way, security problems will be earlier detected in the system development process, which reduces the costs and effort. Recent research concerns the integration of security engineering into the software development process [2][3].

* M.U. Bokhari is Chairman and Professor, Dept. of Computer Science, Aligarh Muslim University, Aligarh, Email: mubokhari@gmail.com

** Mahtab Alam is Research Scholar, Computer Science, Mewar University, Chittorgarh, Mewar, Email: alam_mahtab@rediffmail.com

*** Prashant Johri is Professor, Dept. of Computer Science, Galgotia University, Greater Noida, Email: johri.prashat@gmail.com

SOFTWARE SECURITY

Security is a measure of the system's ability to resist unauthorized usage while still providing its services to legitimate users. An attempt to breach security is called an attack and can take a number of forms [4]. Security is fast becoming one of the most important quality attribute in Software Engineering. Critical information and transactions need to be safeguarded against malicious users and attackers. Copyright protected Commercial Off-the Shelf Components (COTS) may be used in software development. Due to the inaccessibility of source code, these components act as black boxes, whose credibility against various security attacks is not well established. Another common source of attacks is the people within an organization. *Security Engineering* is the multi-disciplinary technical field addressing such security issues. Security Engineering deals with the security and integrity of real-world systems. It deals with the development, integration, operation, administration, maintenance, and evolution of systems and applications as well as the development, delivery, and evolution of products. Security concerns must be addressed in the definition, management, and re-engineering of enterprises and business processes. Thereupon, Security engineering is delivered in a system, in a product, or as a service. Capability Maturity Models (CMMs) have been successful in setting standards and in maturing the software engineering processes. One of the main aims of Software Engineering Institute (SEI) has been to enable organizations to improve their software capability [5].

“*Systems Security Engineering Capability Maturity Model Version 3.0*” of the Software Engineering Institute, lists the goals of Security Engineering as follows:

- Gain understanding of the security risks associated with a software.
- Establish a balanced set of security needs in accordance with identified risks
- Transform security needs into security guidance to be integrated into the activities of other disciplines employed on a project and into descriptions of a system configuration or operation.
- Establish confidence or assurance in the correctness and effectiveness of security mechanisms
- Determine that operational impacts due to residual security vulnerabilities in a system or its operation are tolerable (acceptable risks).
- Integrate the efforts of all engineering disciplines and specialties into a combined understanding of the trustworthiness of a system .Security Engineering activities are practiced during all life cycle stages, such as Requirement stage, design stage, development stage, maintenance stage and testing stage.

OBJECT ORIENTED SOFTWARE DESIGN

The Software design is the step in the software development process prior to construction. It is the step to think and plan holistically about the heuristic design to be built, and requirements for the tools or the rebuilt components needed to realize the goal . Moreover the selection of proper components and the process to properly fit those together is essential. The amount of time spent on the design of the software depends on the complexity of the software. The change in the programming paradigm from structure programming to object-oriented technology has spread to several application areas. Nowadays, object-oriented software design is the best programming paradigm, because it reduces problems to smaller and more manageable scale.

The Object Oriented Design consists of three big concepts, encapsulation, polymorphism, and inheritance, but the text “Fundamentals of Object-Oriented Design in UML” specifies that the following criteria are necessary for a language to be considered object oriented.

1. **Encapsulation** - the grouping of related ideas into unit. Encapsulating attributes and behaviors.
2. **Inheritance** : a class can inherit its behavior from a super class (parent class) that it extends.

3. Polymorphism : literally means “many forms”.
4. Information/implementation hiding : the use of encapsulation to keep implementation details from being externally visible.
5. State retention : the set of values an object holds.
6. Object identity : an object can be identified and treated as a distinct entity.
7. Message passing : the ability to send messages from one object to another.
8. Classes : the templates/blueprints from which objects are created.
9. Genericity : the construction of a class so that one or more of the classes it uses internally is supplied only at run time.
10. Test here
11. More testing here

SECURITY AT DESIGN PHASE

Security needs to be considered at the onset of a design rather than as an afterthought. One needs to know risks which come with awareness and knowing adversaries and their capabilities. Mitigating risks will involve building controls and security mechanisms that will impact policies, environment, and coding. If there are any weaknesses in the implementation, security becomes ineffective. Security need not be complex but failing to understand the impact of choices will obscure the difference between what is secure and what is just. The proper approach to designing a solution is one that meets business objects and that protects the confidentiality, integrity, and availability against identified risks with controls that are transparent to the user. Before digging into development and implementation, one needs to have some understanding of the requirements for security mechanisms.

Chenxi Wang [6] and William of University of Virginia, states in their work, “*Towards a Framework for Security Measurement*” that,

“Quantifying security is a difficult problem. The difficulties lie in that “computer security” is not a crisply defined term. Moreover, as computing systems grow larger and more complex, it is increasingly more difficult to make statements about any system-wide properties, even those better understood than security.”

Cristian Oancea [7], in their document “*Integrating Security Policy Design in the Software Design*”state that

“There are at least two reasons for the lack of support for security engineering. The first reason is that security requirements are generally difficult to analyze and model. A second important reason is the lack of developer acceptance and expertise for secure software development. Acceptance is a problem because for software developers, security interferes with features and with time to market. Expertise is a problem because security policies are generally specified in terms of highly specialized security models that are not integrated with general software engineering models. This lack of integration is also detrimental to developer acceptance.”

PRINCIPLES OF SECURE SOFTWARE DEVELOPMENT

While principles alone are not sufficient for secure software development, principles can help guide secure software development practices. Some of the earliest secure software development principles were proposed by Saltzer and Schroeder in 1974 [8]. These eight principles apply even today and are reproduced herein:

- *Economy of mechanism*
- *Keep the design as simple and small as possible*
- *Fail-safe defaults: Base access decisions on permission rather than exclusion.*
- *Complete mediation: Every access to every object must be checked for authority.*
- *Open design: The design should not be secret.*
- *Separation of privilege: Where feasible, a protection mechanism that requires two keys to unlock it is more robust and flexible than one that allows access to the presenter of only a single key.*
- *Least privilege: Every program and every user of the system should operate using the least set of privileges necessary to complete the job.*
- *Least common mechanism: Minimize the amount of mechanism common to more than one user and depended on by all users.*
- *Psychological acceptability: It is essential that the human interface be designed for ease of use, so that users routinely and automatically apply the protection mechanisms correctly. [4]*

BEST PRACTICES FOR SECURE DESIGN

The collection of best practices to guide software design have been summarized after reviewing various documents [4][24][7][20][22][23]. Some are listed as below:

(a) Perform Threat Analysis: Threat modeling is an engineering technique used to describe threats to the software application. Threat models are methodically developed in order to understand the risk to a system from malicious users or applications. Threat modeling allows development teams to anticipate attacks by understanding how an adversary chooses targets (assets), locates entry points and conducts an attack. A well-implemented threat model will profile the assets that need to be protected, how the threats to these assets, the attacks that could be used to realize a threat, and the conditions under which the attack may be successful. A threat model shows how adversaries view the system, its components, and where they are likely to attempt its exploitation. Not only is this important for identifying potential threats, but also in understanding what application defenses must be defeated in order for a threat or series of threats to be realized. For example, an e-commerce system may have the following threat, “A malicious user is able to gain an undeserved credit on their account.” A threat model would specify this as:

- Threat: A malicious user is able to gain an undeserved credit on their account
- Attack: User sets item price field to a negative value
- Conditions: Server-side validation doesn't exist on item price field or server-side validation is non-existent.

A threat model will consist of multiple threats each of which can have multiple attacks. Each attack can then have multiple conditions. The conditions indicate how to defend against the threat in the design, and can be used during testing to generate security test cases.

(b) Identify Components Essential to Security: Designing the overall component structure of a system is a key activity in the design phase. Each component identified in the design must be carefully analyzed for its security needs. Some components will require protection. Other components will provide protection in the form of input validation, authentication, or cryptographic routines. These latter components must be the focus of extra attention from security engineers. For every component that implements a security function, engineers must carefully consider how that function is going to be implemented, reviewed and tested. Test planning for

security components is a crucial task that needs to be given attention as early as possible in the SDLC. Planning tests only after a component is implemented may be too late and multiply additional risk to the process.

(c) Artifacts of Secured Design Phase: The design phase builds upon the work done in the requirement phase by detailing initial conceptual solution, which is identified and prioritized business problems. There are three artifacts that come out of the design phase-Software Architecture, UML Object Model and Design Pattern [9].

(d) UML Object Model: UML Object Model in design phase is used by the developer in order to show the key structural and behavioral parts of the application. UML Object Model fills the gap between requirement phase and implementation. In requirement phase, use case diagram are used in order to define a requirement, and UML Object Model consider each and every entity as an object (real world object). Thus, it also helps in coding. Breaking the application into separate slice that represents structural and intersections view is useful to drive pattern and visualized the application for review purpose [9]. Reviewing object model is a good way for security team to find areas of interest to focus on application, for example:

- **State Changes:** There are many security implication to consider when state changes. When the state of sensitive data is changed then it should be recorded in audit log.
- **Context Change Trust Relationship Chain:** when application transfer data from one server to another then it is very critical from the point of view of security, as data can be stolen or modified during this process.
- **Persistence:** The data not only stored securely by application but also by other programs that deals with it, like domain controlled by DBA and System Admin.
- **Access points/Privileges Change Requirements:** Access points, authentication and authorization events are visible in design models. these provide a point of reference for the security to make sure that the security assumptions are made in the analysis phase requiring access levels for functionality usage are implemented in the design phase.
- **Identified Inputs:** In object model, the place of data input is well defined so that security team can get idea of placing input validation on data.
- **Understand Exception Scenarios:** Exceptions are the unavoidable part of every application but with the use of object model, exception handling is quite easy as it give clear understanding to the security team about probable exception conditions and a blueprint to fit in data flows in those conditions

UMLSEC

Given the widespread use of UML, it is important to include explicitly the security characteristics of a system within UML diagrams in a formalized manner. Such additional information can be added using stereotypes and attributes in the easiest case or by means of UML extensions if necessary [10]. When design models (UML) are annotated with security related information, it is possible to carry on automatic verification of the design. Such tools enable the identification of defects and security threats as early as possible in the life cycle, thus reducing the cost of their correction. SecureUML is a proposal for a UML profile for security; more specifically, SecureUML extends UML to support authorization constraints [10]. The capability of specifying significant information related to access control, and of deriving complete access control infrastructures (using EJB components), is presented [13]. Basically, SecureUML defines a set of stereotypes and uses them to automatically produce the code that controls how users can access the different parts of the application. These stereotypes only consider the static parts of UML; dynamic ones are part of the future work.

A more ambitious UML profile is UMLsec [11]. In this case, the approach is quite different: it extends state-charts and component diagrams to enforce the following security requirements: *fair exchange, secrecy/confidentiality, secure information flow, and secure communication link*. The author describes the notation with a formal semantics based on Abstract State Machines language, to precisely analyze designed models. The main goals of UMLsec are [12]:

- Evaluate UML specifications for vulnerabilities in design.
- Encapsulate established rules of security engineering.
- Make available to developers not specialized in security a simpler way to check UML models.
- Consider security from early design phases.
- Make verification cost-effective.

UMLsec offers mostly-used security requirements as stereotypes with tags (secrecy, integrity, etc...); it uses associated constraints to evaluate specifications and indicate possible vulnerabilities; it ensures that stated security requirements enforce given security policy and that UML specification satisfies the defined requirements. Among the mandatory requirements, UMLsec provides basic security requirements such as secrecy and integrity and it allows considering different threat scenarios depending on adversary strengths. Moreover it allows including important security concepts and mechanisms (e.g. access control) and it provides security primitives (e.g. (a)symmetric encryption). The main goal of UMLsec is to automatically check security properties on an extended UML model, stored in XMI standard format; then this model can be checked by a formal tool [14] to verify security requirements.

DESIGN PATTERNS

Design patterns are based on real world architecture. In the book “Design Patterns” [21], the author defines three types of patterns, which occur in the applications:

- **Creational Patterns:** are responsible for constructing objects, creating their initial instance, and managing the lifespan of the object.
- **Structural Patterns:** defines objects composition in terms of its interfaces, structure and relationships.
- **Behavioral Patterns:** describe the ways that the object communicate process logic, handle state and interact with other objects.

The security team can utilize the design pattern format to develop its own security design pattern. They can design a pattern for access control where they can control authentication, authorization etc. The pattern approach is another tool that is already used in much organization and can be a boon to security team. The challenge to the security team is to find the balance between specificity, which helps developer deliver quality on time and reusability, which reaches across enterprise. The design of secured application is not an easy task; it requires deep understanding of various aspects of security, like security measurement, security categories, security policies etc. Effective management of any process requires quantification, measurement, and modeling. Metrics provide a quantitative basis for the development and validation of models of in overall process of software development. Metrics can be used to improve software productivity and quality. Quantifying security, however, is a difficult problem. The difficulties lie in that “computer security” is not a crisply defined term. We tend to know approximately what we mean by “security” and what we want it to do, but we seldom clearly state what security really means to us and how secure is “secure enough”. Moreover, as computing systems grow larger and more complex, it is increasingly more difficult to make statements about any system-wide properties, even those better understood than security. Despite these problems, we believe it is a worthy effort to explore ways to measure attributes that are most important for secure application development. In this framework we are focusing on metrics and measurement of security in order to assess the security in

software development process and thus making our software development process secured. As object oriented programming languages are becoming more and more widely used, metrics are required that are specifically designed for object oriented software security. In recent years there has been an explosion of new, object oriented software metrics proposed in the literature. Unfortunately, many or most of the proposed metrics have not been sufficiently validated to measure what they suppose to measure and also there was no security consideration. An analysis of some of these metrics shows that they do not always satisfy basic properties of measurement theory. Our approach includes identification of threats; attacks and risk of design phase in object oriented software development, then identification of commonly accepted set of software security attributes, and then establishing a relationship between these attributes, so that we would be able to measure security at this phase of SDLC.

QUANTIFICATION OF SECURITY DESIGN

“What is not measurable, make measurable” — Galileo Galilei(1564 - 1642).

One cannot predict and control what one cannot measure [11]. With no certain way currently known to directly measure the security of a software product, identifying one or more surrogate measures may be possible. A surrogate measure of a product or process would produce data that correlates with the security properties of the products produced with the process[4]. Measurement is necessary as it verifies that the product developers are capable of consistently and correctly using the process, that the process instructors properly train the developers to consistently and accurately use the process, that the correct process was properly used to develop the product, and that the process consistently produces secure software products. In addition to measuring all of the product work, measures are also required of all security-relevant product characteristics and properties. To perform in this way, software organizations must work to defined software engineering, security, and management goals and they must precisely measure and track their work throughout the product’s lifetime. These measures must provide the data needed to estimate and plan the work, to establish team and personal goals, to assess project status, to report project progress to management, to verify the quality of all phases of the work, to assess the quality of all products produced, and to identify troublesome product characteristics and elements.

Such measures must also show how well the process was used and where and when corrective actions are needed. These measures can also be used to assess the quality of the training and coaching provided to the developers and their teams. Without such measures, it would be impossible to verify the consistent and proper use of the process or of the methods and practices it supports [15].

(a) Selection of Units and Scales: Units and scale types determine how measurements can be achieved. For example, if we define the unit for availability as “requests served per hour”, we effectively state that the measure of availability is to be derived from dividing the number of requests by a specified time frame. In choosing appropriate units and scale types, the following issues must be considered :

- **Plausibility:** The richer the scale type, the more information the measures represent. However, sometimes it is simply not possible to use a rich scale. For example, if sufficient information or measurement tools are not available, a less ambitious scale may be more appropriate.
- **Accuracy:** Accuracy is an important criterion in selecting a unit and a scale type. Sometimes a good reason to choose one unit or scale type over others is the potential measurement errors caused by one measure as opposed to others. [6]

In the case of computer security, direct measurements of the end-to-end security properties are made impossible because of the scopes and structures of the modern computing systems. In these systems, security attributes are no longer functions of a single entity. They are more often functions of a host of objects and their interactions. To approximate the security strength of large systems, an estimation method must be used. There may be many estimation methods. For example, one can estimate system- reliability by sampling the history of the entire system or by doing so on each component and integrate them in some manner. What one requires is a model to relate the high-level security attributes to that of the low-level, more measurable

components [6]. This methodology uses a decomposition method to develop such models — starting with high-level security properties of the system, work our way down to the basic components of the system and their interactions [6].

(b) Software Measures and Measures of Secure Design: Following the specification of security related requirements, measurement objectives may be formulated that will provide insight into the satisfaction of the security requirements. Examples of measurement objectives include the following :

- What vulnerabilities have been detected in our products? Are our current development practices adequate to prevent the recurrence of the vulnerabilities?
- What process points are most vulnerable to the introduction of security-related risks (e.g., injecting reused code/modules into programs—where the variables could go unchecked, etc.)?
- What proportion of defects relate to security concerns and requirements? Do defect classification schemes include security categories?
- To what extent do practitioners comply with security-related processes and procedures?
- To what extent are security concerns addressed in the intermediate work products (requirements, design, etc.)? Have measures associated with security requirements and their implementation been defined and planned?
- What are the critical and vulnerable modules? Have vulnerabilities been identified and addressed? [24]

Threat modeling or the attempt to identify likely types/sources of attack, can also form a significant guiding requirement to the development processes. A recent thesis by Stuart E. Schechter at Harvard’s Department of Computer Science attempts to utilize economic models for valuing the discovery of vulnerabilities during development. His measurement of security strength depends most on threat scenarios to assign values to vulnerabilities in an effort to extend a market approach to the development process. Many risk and threat methodologies are available publicly, and Microsoft has published extensive materials that delineate the company’s approach in analyzing and mitigating threat risks during the SDLC.

(c) Threat, Vulnerability and Risk identification: In order to start the process of security assessment, there is a need to identify common threat, vulnerability and risk in the software. In the figure 1.1 relationships between threat, vulnerability and risk is shown.

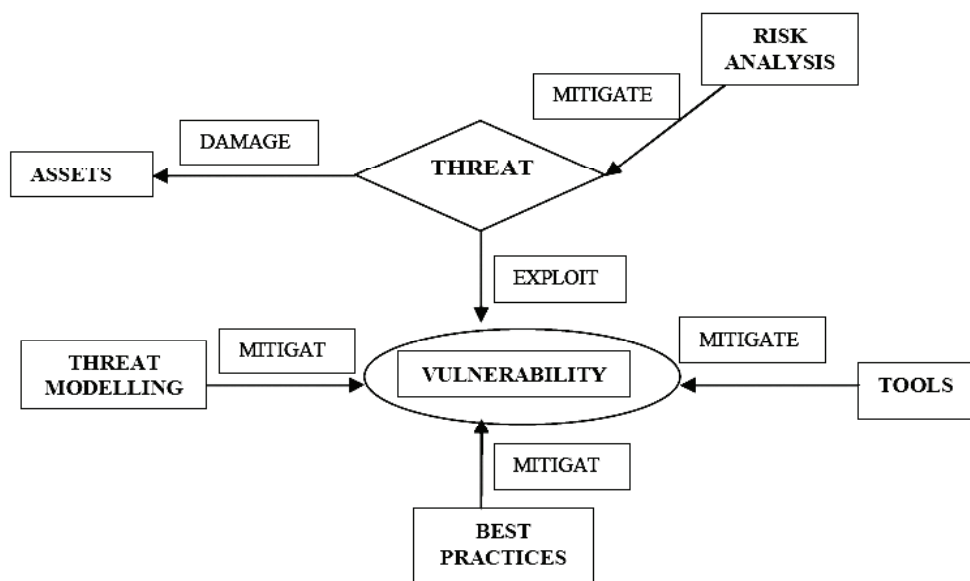


Figure-1, Relationship between Assets, threat, vulnerability and risk analysis

- (d) **Threats:** Software threats can be general problems or an attack by one or more types of malicious programs [16][17].
- A threat is the possibility of a real attack which exploits a vulnerability [17]
 - A threat entails the risk of an attack [17]
 - Usually we cannot eliminate the threats, But we can lower the risk [17]
 - We have to rate the risk of a threat to become a successful attack [17]
- (e) **Threats Categories:** Types of common security threats that our application face, are as follows; these threats are often referred to by the acronym **STRIDE**. These include:
1. **Spoofing identity:** an unauthorized user impersonating a valid user of the application.
 2. **Tampering with data:** an attacker illegally changing or destroying data.
 3. **Repudiability:** the ability of a user to deny that he or she performed an action.
 4. **Information disclosure:** Sensitive data released to users or to locations that should not have access to it.
 5. **Denial of service:** Acts of sabotage that make applications unavailable to users.
 6. **Elevation of privilege:** A user illegally gaining an unacceptably high level of access to the application. [3][4][17][9].
- (f) **Threat Modeling:** Threat modeling is a security analysis methodology that can be used to identify risks, and guide subsequent design, coding, and testing decisions [4][24]. The methodology is mainly used in the earliest phases of a project, using specifications, architectural views, data flow diagrams, activity diagrams, etc. But it can also be used with detailed design documents and code. Threat modeling addresses those threats with the potential of causing the maximum damage to an application. Overall, threat modeling involves identifying the key assets of an application, decomposing the application, identifying and categorizing the threats to each asset or component, rating the threats based on a risk ranking, and then developing threat mitigation strategies that are then implemented in designs, code, and test cases. Microsoft has defined a structured method for threat modeling, consisting of the following steps to identify assets
1. Create an architecture overview
 2. Decompose the application
 3. Identify the threats
 4. Categorize the threats using the **STRIDE** model (Spoofing, Tampering, Repudiation, Information disclosure, Denial of service, and Elevation of privilege)
 5. Rank the threats using the **DREAD** categories (Damage potential, Reproducibility, Exploitability, Affected users, and Discoverability).
 6. Develop threat mitigation strategies for the highest ranking threats [5] [9][4][20].
 7. Other structured methods for threat modeling are available as well [8]. Although some anecdotal evidence exists for the effectiveness of threat modeling in reducing security vulnerabilities, no empirical evidence is readily available.
- (g) **Limitation of Threat Model:** There is no way through which we can discover all types of threats, using threat modeling.
- New technologies or attack strategies can result in new threat scenarios, or may uncover threats that had long been present but not discovered.

- Even when all the basic threats are known, there is no way to ensure that all of a node's wild scenarios have been discovered. If the scenario of interest has been modelled with existing threat diagrams we may find assurance in knowing these diagrams have stood the test of time. However, there is always the possibility that new attacks will appear [24].
- Finally, countermeasures are not always implemented correctly and even those that are act only to reduce threats not eliminate them. Keys may be guessed, well screened employees may be bribed, and components that functioned during a million consecutive tests may fail the next time they are used[24].

(h) Commonly Accepted Set of Security Attributes: The commonly accepted set of security attributes is as follows

- Confidentiality : The information requires protection from unauthorized disclosure.
- Integrity : The information must be protected from unauthorized, unanticipated, or unintentional modification.
- Authenticity : A third party must be able to verify that the content of a message has not been changed in transit.
- Non-repudiation : The origin or the receipt of a specific message must be verifiable by a third party.
- Accountability : A security goal that generates the requirement for actions of an entity to be traced uniquely to that entity.
- Availability : The information technology resource (system or data) must be available on a timely basis to meet mission requirements or to avoid substantial losses. Availability also includes ensuring that resources are used only for intended purposes. :[20][2][18][19][22]

(i) Relationship between Threat Type and Security Attributes: Strong authentication helps mitigate identity spoofing [3]. Use of authorization techniques prevents data tampering and information disclosure threats [3]. A checking of record of both authorized and unauthorized operations [Auditing] reduces repudiability [3]. By proper availability of service, the denial of service can be avoided, and elevation of privileges can be controlled by proper techniques of confidentiality. The overall relationship between threat categories and their mitigations attributes are represented in Table-1.

Threat Category	Controlled by (Security Attributes)
Spoofing identity	Authentication, Authorization
Tempering with data	Integrity, Authorization
Repudiability	Auditing
Information disclosure	Integrity, Confidentiality
Denial of service	Availability
Elevation of privileges	Confidentiality, Integrity

Table-1 Threat categories and Security Attributes.

CONCLUSION

Software Design phase provides the blue print of the software application upon which the entire software depends. The full-proof success of secure software completely depends upon the secure design of the

software. Threat modeling is one of the best method techniques to assess the secure design. A lot of work is going on threat modeling approach. This paper presents such an approach to discover the threat related to the system and categorize them according to their consequences. A STRIDE System has been developed to assess post-categorization ranking.

REFERENCES

- [1] David P. Gilliam, John D. Powell, “*Development of a Software Security Assessment Instrument to Reduce Software Security Risk*”.2001. This is the result of a joint work of Jet Propulsion Laboratory ,California University and NASA. <http://www.trs-new.jpl.nasa.gov/dspace/bitstream/2014/12810/1/01-1121.pdf>
- [2] J. Jurjens. “*UMLsec: Extending UML for Secure Systems Development*”. In Proc. of UML 2002, Number 2460 in LNCS, pp.412–425.Springer, 2002.
- [3] T. Lodderstedt, D. Basin, and J. Doser. “*SecureUML:A UML-Based Modeling Language for Model-Driven Security*”. In Proc. of 5th Int.Conf. on the Unified Modeling Language, Number 2460 in LNCS.Springer, 2002.
- [4] P Clements Bass, R Kazman. “*Software Architecture in Practice*”,Second Edition, SEI Series in Software Engineering.
- [5] http://www.indusintelligence.com/IIP_SecThreats.aspx
- [6] Chenxi Wang, William A. Wulf. “*Towards A Framework For Security Measurement*”, Department of computer science University of Virginia.
- [7] Cristian Oancea , “*Integrating Security Policy Design in the Software Design*”. www.inf.fu-berlin.de/inst/instpub/exposeDok/exposeOancea.pdf,2003 last accessed on 1.12.2012
- [8] Jerry Saltzer and Mike Schroeder. “*The Protection of Information in Computer Systems*”, Proceedings of the IEEE. Vol. 63, No. 9 (September 1975), pp. 1278-1308.
- [9] Collaboration in Secured development process part2. Information Security Bulletin, July 2004.
- [10] Paolo Falcarin and Maurizio Morisio. “*Developing Secure Software and Systems*”, Control and Computer Engineering Dept.Corso Duca degli Abruzzi, 24I-10129.
- [11] ISO/IEC. ISO/IEC 13335: Information Technology- Guidelines for management of IT Security, 2001.
- [12] Jan Jurjens. “*Secure Systems Development with UML*”,2005.
- [13] Tool for automatic J2EE deployment of secure UML, http://www.iosoftware.com/products/data/mda_security_factsheet_020902.pdf
- [14] Ministry of Defence. *Defence Standard 0056 issue 2: Safety Management Requirements for Defence Systems*, 1996.
- [15] Improving Security across SDLC ,Task Force Report 2004
- [16] Computer Knowledge: <http://www.cknow.com/vtutor/SoftwareThreats.html>
- [17] Steven F Burns.*Threat Modeling: A Process To Ensure Application Security*, January 2005,<http://www.sans.org/rr/whitepapers/securecode/1646.php>
- [18] Dr. Daniel Guinier. *Object-oriented software for auditing information systems security following a methodology for IS risk analysis and optimization per level*

- [19] Marianne Swanson. *Security Self-Assessment Guide for Information Technology Systems*. NIST. Nov 2001
- [20] A. S. Sodiya, S. A. Onashoga, and O. B. Ajayi. “*Towards Building Secure Software Systems*” ,University of Agriculture, Abeokuta, Nigeria.
- [21] Erich Gamma, Richard Helm, Ralph Johnson, John Vlissides. “*Design patterns: Elements of Reusable Object oriented Software*”, Addison –Wesley 1995
- [22] Tim Grance, Joan Hash, Marc Stevens. *Recommendations of the National Institute of Standards and Technology*. NIST(National Institute of Standard and Technology)
- [23] *Improving Security Across Software Development Life Cycle*. Task Force Report April 1 2004.
- [24] James H Stock and Mark W. Watson. *Introduction to Econometrics*. Pearson Education, Boston, MA, 2003.

MULTI STAGE SOFTWARE PROJECT EFFORTS ESTIMATION**Chetan Nagar*, Dr Anurag Dixit******ABSTRACT**

The staff resources or effort required for a software project are notoriously difficult to estimate in advance. Accurate effort estimation is essential for the success of a software project. In practice; many industries still use ad hoc methods for efforts estimation. Efforts estimation is an activity performed in analysis phase of software development. All the requirements are not exactly known in this phase, because user exactly does not know what he wants and developer does not know what is to be built. Lot of changes take place in latter phases of development, due to this reason effort estimation failed. Unclear requirement is a measure problem in efforts estimation. This paper aims to suggest a new approach of multistage efforts estimation. We intend to perform efforts estimation in more than one step of software development and check the difference to establish optimal level of manpower required for a project.

Keywords: KLOC (Kilo Line of Code), UCP (Use Case Point), FP (Function Point), . Software Efforts estimation, Person-month, Man-Hours

INTRODUCTION

In examining the assumptions and construction of typical cost estimation methods, two factors are often the major constraints for software project to meet the success criteria, i.e. on time, within budget, and with originally-specified functionalities. Effort estimation in practice usually rely on human domain experts, who offer estimations based on their experiences with similar projects in past, and estimation quality thus depends on personal experiences and subjective judgments, which tend to result in unstable or even poor estimation accuracy[1].

Various methods are followed in SDLC for software development and design with different phases. Braude, J. E., (2010) [8], Conger, Sue. (2008) [9], Sommerville, Ian., (2009) [10], Hoffer et al (2009) [11] had discussed the software development life cycle in detail. But the major phase identified common to all these methods are: Planning, Analyzing, Designing, Testing and Implementing and Maintenance. In analysis phase, the user requirements, system requirements, domain requirements, cost requirements and various other requirements of developing and designing software are studied and analyzed.

METHODS FOR ESTIMATION

In general following methods are more popular for efforts estimation.

- A. COCOMO Model [4][5].
- B. Function Point Based Estimation [5][1].

*Chetan Nagar is Ph.D scholar in Mewar University (Gangrar) Chittodgarh Rajasthan India(e-mail-callchetan_nagar@yahoo.com)

**Dr Anurag Dixit is Dean-Professor (CS/IT) BRCM CET,Bahal Bhiwani (e-mail: anuradixit@gmail.com)

- C. Use Case Point Based Estimation [6][14].
- D. Expert Judgment. [7].
- E. Estimation by Analogy [7].
- F. Parkinson's principle
- G. Software Efforts Estimation using Soft Computing Techniques.
- H. Software efforts estimation using Neural Network Techniques.

There are lot of methods which can be use for efforts estimation, but an industry wants a simple and accurate way of efforts estimation. We must use more calculative method as compare than more predictive approach. COCOMO and Use Case Point are more calculative approach which is covering many factors that may affect the cost. But Expert judgment and Analogy based estimation is more predictive approach, in which much experience is required. A rich set of old data is required for better estimation.

A. COCOMO (Cost Construction Model)

COCOMO is one of the popular and old models of efforts estimation. In this model we have to estimate the line of code. Counting of line of code is one of the difficult tasks when project is complex and new to us. In such situation we have to divide that project in module and divide that module into sub module to make problem less complex. Most senior person of your team should take responsibility to count KLOC, because we need to estimate KLOC before writing it. We can use old data to predict KLOC, but no project will completely same with previous project, so some intelligence and experience will be required for a better estimation. Here we will use advance COCOMO for estimation.

$$\text{Efforts} = a * (\text{KLOC})^b * \text{EAF}$$

Here a and b are complexity factor.

**TABLE I
COMPLEXITY FACTOR**

Model	A	B
Organic (simple in terms of size and complexity)	3.2	1.05
Semi-ditched (average in terms of size and complexity)	3.0	1.12
Embedded (Complex)	2.8	1.20

In Intermediate COCOMO only 17 EAF are used, but in advance COCOMO we are using 22 EAF. Typical values for EAF range from 0.9 to 1.4.

B. Function Point based Estimation

The steps for counting function points are as following:

1. Identify data functions (External Interface files and Internal Logical Files) and rate them.
2. Identify transaction functions (External Input, External Output and External Inquiry) and determine the complexity.

3. Compute unadjusted function points. Number of EI, EO, EQ, ILF and EIF for each complexity level (Simple, Average and Nominal) is obtained and the corresponding weight for each complexity level is multiplied with the count to finally get the unadjusted function point count. Details of function point count are available in appendices.
4. Determine the ratings of 14 general system characteristics.
5. Calculate value adjustment factor (VAF).

$$VAF = (TDI * 0.01) + 0.65$$

Where, TDI = Total Degree of Influence obtained by multiplying the ratings of general system characteristics.

6. Compute function point counts.

C. Use Case Point Approach

It is another popular and efficient method of efforts estimation. Here we will calculate use case and actors

UUCP=Use cases + Actors

Where UUCP stands for Unadjusted Use Case Point Using the following table1 we can calculate Use Case used in a project

TABLE II
USE CASE CALCULATION

Use case type	Description	Quantity	Weight Factor	Sub total
Simple	3 or fewer transaction		1	
Average	5 to 7 transaction		5	
Complex	Greater than7 transaction		10	
TOTAL				

By using the following table2, we can estimate actors used in a project

TABLE III
ACTOR CALCULATION

Use case type	Description	Quantity	Weight Factor	Sub total
Simple	3 or fewer transaction		1	
Average	5 to 7 transaction		2	
Complex	Greater than 7 transaction		3	
TOTAL				

UCP=UUCP*TCF*EF

TCF is Technical Complexity Factor, which is sum of 13 complexity parameters; each factor is range from 1 to 5 and multiplied by weight.

EF is Experience Factor, which is sum of 08 complexity parameters; each factor is range from 1 to 5 and multiplied by weight.

Effort = UCP *ER (Efforts will be in man hours)

Finally, the UCP is multiplied by a historically collected data representing productivity, such as a factor of 20-staff hours per use case point, to arrive at a project estimate. The result is an estimate of the total number of person hours required to complete the project. Karner provided a detailed table describing how each factor was determined and what value was assigned at each step [18].

D. Expert Judgment

This method involves consulting one or more experts. The experts provide estimates using their own methods and experience. Expert-consensus mechanisms such as Delphi technique or PERT will be used to resolve the inconsistencies in the estimates.

E. Estimation by Analogy

This method requires one or more completed projects that are similar to the new project and derives the estimation through reasoning by analogy using the actual costs of previous projects. Estimation by analogy can be done either at the total project level or at subsystem level. The total project level has the advantage that all cost components of the system will be considered while the subsystem level has the advantage of providing a more detailed assessment of the similarities and differences between the new project and the completed projects. The strength of this method is that the estimate is based on actual project experience. However, it is not clear to what extent the previous project is actually representative of the constraints, environment and functions to be performed by the new system

F. Parkinson's Principal

Using Parkinson's principle "work expands to fill the available volume" [3], the cost is determined (not estimated) by the available resources rather than based on an objective assessment. If the software has to be delivered in 12 months and 5 people are available, the efforts estimated to be 60 person-months. Although it sometimes gives good estimation, this method is not recommended as it may provide very unrealistic estimates. Also, this method does not promote good software engineering practice.

MULTISTAGE EFFORTS ESTIMATION

The first step of software development is requirement analysis. In this phase we have to collect the requirements from the user, after completion of requirements analysis we have to estimate the efforts required to build the project. Efforts estimation provides basis for the other software development activities like planning, Scheduling etc .As we know that efforts estimation is not an exact science, it is just a prediction. After completion of project we can exactly determine the efforts were required to build the project. Before that it is just a prediction, but as phases of the developments are passes accuracy of our prediction is increases .In the latter phase of development we can better estimate as compare than early phases of development.

In our approach first time we perform efforts estimation in analysis phase and second time after completion of design and check the difference, if difference is more, than we have to adjust it in remaining development time.

Every phase of software development required some amount of efforts to complete it. CSBSG data analysis shows a waterfall-based phase distribution scheme as: 16.14% for plans and requirements phase, 14.88% for design phase, 40.36% for code phase, 21.57% for test phase, and the other 7.06% for transition phase [13]. In round figure we can write as 16% for plans and requirements phase, 15% for design phase, 40% for code phase, 22% for test phase, and the other 7% for transition phase

Consider an example. We performed efforts estimation for a project A in analysis phase and found 1000 man-hours required to build that project and we have divided it according to CSBSG 160 Man-Hours for plans and requirements phase, 150 Man-Hours for design phase, 400 Man-Hours for code phase, 220 Man-Hours for test phase, and the other 70 Man-Hours for transition phase.

Subsequently, we move for design phase. After completion of design, we again perform efforts estimation and found that 1200 man-hours are required for building that project. At that time, we have completed analysis and design phase. That means, we have spent 372 Man-Hours instead of 310 Man-Hours.

Now we have to accommodate 828 Man-Hours into 690 Man-Hours. We can not increase the main hours because in early estimation we had anticipated for 1000 Man Hours and we quoted the cost according to 1000 Man Hours. Therefore, we have to reduce the loss by compensating 828 Man-Hours into 690 Man Hours.

Logically, it is not possible to accommodate 828 Man-hours into 690 Man-Hours. Following actions can be taken to adjust these man-hours:

1. Increase working time of development team.
2. Increase team size.
3. Outsource some component.

RESULTS

In this paper, we have tried to throw a new concept to test and debate. Although, it is open to criticism that why did we have to perform efforts estimation multiple times, but in works by R S Pressman, it is suggested for better estimation, delay efforts estimation until it is possible. Actually it is not possible, so the multistage efforts estimation can work as a substitute for it. We have applied this concept on some projects of a small software industry. First, we had estimated the effort after requirement analysis and then again estimated after designing and we have found some difference. Company was not ready to display their result, the complete data is not being displayed.

CONCLUSION

Success of project (complete on time within budget) is dependant on various parameters like first clear and complete requirements, Use of a mature process for estimation and some strong monitoring policy.

This paper does not suggest any new model or method for the estimation. We are just giving one concept which can allow professionals to complete the project on the time. Every model or method in the efforts estimation is based on the prediction. As the time goes by and we move towards completion of the project, our prediction becomes more accurate, because now we are familiar with most of the facts. This approach will help us to complete the project on time. Although in this approach we have to perform estimation two times. But multiple time efforts estimation is much better than project slippage or failure.

References:

- [1] Bingchiang Jengi, Dowming Yeh, Deron Wang, Shu-Lan Chu. "A Specific Effort Estimation Method Using Function Point" Journal Of Information Science And Engineering, Vol.27, 1363-1376 (2011)
- [2] Anda, B., Benestad, H.C., Hove, S.E. "A multiple case study of Effort Estimation based on Use Case Points", Empirical Software Engineering, 2005.
- [3] G.N. Parkinson, *Parkinson's Law and Other Studies in Administration*, Houghton-Mifflin, Boston, 1957

- [4] Roger E Masse “*An Analysis of the Evolution of COCOMO and Function Points*”. University of Maryland, July, 1997
- [5] Basavaraj M.J, Dr. K.C Shet “Empirical validation of Software development Effort multipliers of Intermediate COCOMO Model” *Journal of Software*, Vol. 3, No. 5, May 2008.
- [6] Anda, B., Benestad, H.C., Hove, S.E.: “A multiple case study of Effort Estimation based on Use Case Points” *Empirical Software Engineering*, 2005
- [7] <http://www.scribd.com/doc/51198168/45/Expert-Judgment-Method>
- [8] Braude, J. E., *Software Engineering – An Object Oriented Perspective* – Wiley (2010)
- [9] Conger, Sue., *The New Software Engineering – Global Text* (2008)
- [10] Sommerville, Ian., *Software Engineering* – 8e – Pearson Education (2009)
- [11] Hoffer, J. A., George, J. F., Valacich, J.S., – *Modern Systems Analysis and Design* – 5e – Pearson Education (2009)
- [12] As Karner G. “*Metrics for Objectory*”. Diploma thesis, University of Linköping Sweden. No. LiTH-IDA-Ex-9344:21, December 1993
- [13] *Phase Distribution of Software Development Effort*
- [14] Clemmons R.: *Project Estimation With Use Case Points*, *The Journal of Defense Software Engineering*, 2006
- [15] Chetan Nagar and Dr Anurag Dixit, “*Software Project Management with Control Based Monitoring*” *International Journal of Advances in Science & Technology*, volume 3 No 4.October-2011

ESTABLISHING TRUST IN CLOUD COMPUTING

Shweta Agrawal*

ABSTRACT

Cloud computing delivers IT capabilities as services-on-demand. This scalable and plastic model provides advantages like faster time-to-market, no capex and pay-per-use business model. While there are several such benefits, there are challenges in adopting public clouds because of dependency on infrastructure that is not completely controlled internally and rather shared with outsiders. Several enterprises, especially large ones that have already invested in their own infrastructure over the years are looking at setting up private clouds within their organizational boundaries to reap the benefits of cloud computing technologies leveraging such investments. This paper describes the different options available, highlighting the key advantages and challenges posed by each and the approach enterprises should be taking in adopting cloud computing with minimal risk. In this article, we discuss the need for asking critical questions about the security implications of cloud computing. Answers to our questions are not readily apparent, even though viewing computing as a utility, similar to that of providing water or electricity on a for-fee basis, dates back to at least the 1960s.

Keywords:

- DOD - Department of Defence
- DISA RACE - Defense Information Systems Agency's Rapid Access Computing Environment.
- VoIP - Voice over Internet Protocol
- DHS - Department of Homeland Security
- CSA - Cloud Security Alliance

1. INTRODUCTION

In the aptly titled article, "Cloud Assurance Still Missing," Allan Carey wrote, "The security problems that organizations face related to cloud computing are the same as those related to virtualization—but even more so." [1] He goes on to say, "Information assurance practitioners already have most of what is needed to make an informed set of decisions about cloud computing." [2] We would argue that the security problems go well beyond the use of virtualization in distributed systems. In this article, we discuss the need for asking critical questions about the security implications of cloud computing. Answers to our questions are not readily apparent, even though viewing computing as a utility, similar to that of providing water or electricity on a for-fee basis, dates back to at least the 1960s. [3]

A recent technical report published by the University of California, Berkeley, states that there is no commonly agreed upon definition of cloud computing. [5] Instead, a definition is emerging as the various organizations that are developing cloud service evolve their offerings. In addition, there are many shades of cloud computing, each of which can be mapped into a multidimensional space with the dimensions being characteristics, service models, and deployment models. [6]

Cloud computing is a metaphor for giving Internet users a growing collection of computer system resources and associated software architectures to provide application services. [7] The applications include processing and application integration, storage, and communications services. Cloud services are typically available on demand and are charged on a usage basis. Often, what the user sees is an application instead of a particular computer.

The services are commonly described as:

- **PaaS (Platform as a Service)**—the cloud provides hardware resources, typically virtual machines, which can be loaded with the users, operating system and software;
- **IaaS (Infrastructure as a Service)**—the cloud provides an infrastructure including (virtual) platforms, networking, etc. on which applications can be placed;
- **SaaS (Software as a Service)**—the cloud provides software applications.

Amazon’s Elastic Compute Cloud (EC2) is an example of these services. [8] Google also provides enterprise-level integrated application services such as email, appointment calendars, text processing and spreadsheets. [9]

The claimed advantages for an enterprise are that it does not require an investment in computer resources, infrastructure, administration, etc.: the purveyor of the cloud provides these resources. The user or enterprise only pays for the resources “consumed.” In the Department of Defense (DoD), we have seen the introduction of infrastructure services on demand provided by the Defense Information Systems Agency’s Rapid Access Computing Environment (DISA RACE). [10] Where available, the cost of developing and maintaining specialized applications can be shared among the users of that application. In theory, there is an advantage in having large-scale resources shared among a large class of users.

However, this has yet to be borne out. [11] There are, of course, applications that require a large number of resources. Google Search is one such example. It appears that Google, Amazon, and others are attempting to leverage their ability to construct such a system into other environments.

We can argue that it is not a matter of whether cloud computing will become ubiquitous but rather what we can do to improve our ability to provide cloud computing users with assurance that the cloud services and infrastructure provide appropriate security functionality. Cloud computing providers should supply their customers with an appropriate level of security transparency to alleviate customers’ reservations about the security and privacy afforded by the cloud. [12] How much transparency is enough? How do we provide for transparency of cloud resources (i.e. determining the cloud in which customer data resides)? Is there a tipping point at which additional levels of transparency would only serve to help malefactor’s compromise services and data centers?

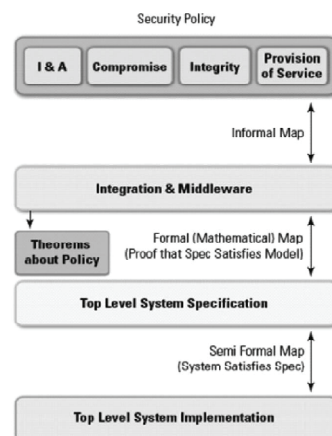


Fig : 1 Process for Integrating Security into the Cloud

In addition, as users and developers find new ways of applying cloud technologies, there will be new expectations about security and privacy. For instance, Twisted Pair Solutions of Seattle proposes to provide cloud computing resources for state and local agencies to link up disparate public safety radio systems (e.g., police, fire, or ambulances)—a novel but difficult-to-predict usage of cloud computing, but also a usage that makes the cloud part of mission- and safety-critical systems. [13] The expectations for security, privacy, reliability, and quality of service and so on will be different in some respects for Voice over Internet Protocol (VoIP) radio systems than for the cloud's social networking aspects. This raises the question: how do we manage risk when we do not fully understand what we are trying to protect or guard against?

The fluid nature of cloud computing makes it a moving target, even when trying to determine the questions we should be asking to improve the security and privacy clouds afford. However, we can ask fundamental questions like: are the current architectures adequate for building trusted clouds? If not, what types of software system architectures do we need? Consider, for instance, the possibility that an organization might opt to fully outsource its computing infrastructure and data center to the cloud, retaining only thin clients within the organization. How do we make the thin client user terminals and the communications infrastructure secure?

2. DOD ENTERPRISE COMPUTING

What is our motivation for jumping feet first into asking hard questions about cloud computing? The growing importance of cloud computing makes it increasingly imperative that security, privacy, reliability, and safety communities grapple with the meaning of trust in the cloud and how the customer, provider, and society in general gain that trust. Consider the initiative of the DoD Enterprise Services & Integration Directorate to make the DoD Storefront Project a reality. The Storefront consists of a cloud-based set of core and specialized applications that users can discover through an application marketplace and which share an identity management framework. How will DoD provide security for the Storefront? It is more than a matter of having an identity management framework. The obvious security concerns include data integrity, data availability, and protection of personally identifiable information, data protection, data destruction, and communications security.

Moving beyond the Storefront concept, as the federal government migrates its data and applications to the cloud, issues regarding cross-domain resource sharing will arise within the cloud. For instance, how will DoD link its clouds to those of other agencies? Will a DoD user, authenticated to enter the DoD cloud sphere, be trusted to access services owned by the Department of Homeland Security (DHS)? Is there a need for a federal-wide cloud infrastructure and common set of security services? How will data be shared among the various different types of cloud?

3. INFORMATION ASSURANCE

At the Naval Postgraduate School, a major thrust of research on cloud computing is to investigate the security policies, models, and appropriate architectures to provide security for entities/users of cloud computing resources. Although cloud computing may appear to provide reasonably well understood operating system and application resources, cloud resources are distributed in space, time, and scale in ways that were never envisioned in the operating-system world. The current architectural approaches, especially those concerning security, may not scale to the much larger cloud computing approaches. In addition, the approaches for assuring operating system security functionality are not necessarily appropriate. It is unclear whether the current set of services is sufficiently secure and reliable for use in sensitive government environments. Current security claims are somewhat limited.

One of the fundamental problems with adopting cloud computing is providing not only security resources but also assurances that those resources are correctly implemented and maintained within the cloud. Several vendors have formed the Cloud Security Alliance (CSA). [14]

In the report titled *Security Guidance for Critical Areas of Focus in Cloud Computing V2.1*, CSA provides its take on some of the security issues related to cloud computing. [15] In the report, security properties are described as essentially the same set of properties that a user expects to see with a self-hosted system. These include the usual:

- Identification
- Authentication
- Privacy
- Integrity
- Provision of Service.

They view assurance as an audit of the function's implementation, that is, the cloud systems' administrators and implementers have used 'best practices'. Other than the notion that encryption is used to protect the data, there is little information that defines 'best practices.' There is, however, some form of key management included that provides potentially strong identification/authentication, as well as some form of data integrity/recovery facility.

The security architecture proposed is essentially a layered operating system application. It consists of a network layer interposed between application programming interfaces (APIs) and the underlying operating system infrastructures. 'Trusted computing' is only mentioned at the hardware/operating system level. Additionally, the CSA paper enumerates several security issues that should be addressed by the cloud-style service provider, but does not provide any insight on security policies/models, interfaces or potential solutions.

To provide an example of some of the potential issues, Google supports "Google Apps." [16] Google Apps applies the usual discretionary access controls to the resources it provides – files, calendars, address lists, *etc.* To make life easier, Google provides tools that integrate their identification and authentication systems into the enterprise providing single sign-on; the enterprise user need only log onto their home system. Once logged on, the enterprise user can automatically access the users' files and services on Google without an additional login. Although convenient, this functionality increases the security exposure to not only the weakness of the enterprise system, but also to the weakness of Google's infrastructure. If, for example, Google's infrastructure has a security flaw, then it may be possible for someone in one enterprise to access accounts from another enterprise.

On the other hand, security flaws in the enterprise system may lead to weaknesses in the access controls of the information managed by Google Apps. Additionally, connected applications may provide unintended connections among users, as was demonstrated with the introduction of Google Buzz. [17]

When each enterprise maintains its own infrastructure, a failure in one enterprise may cause failures across the cloud. Unless an enterprise uses a single cloud from a single vendor, integrating the various applications, infrastructures, and policies among many different clouds and cloud vendors will be a significant challenge. In fact, it will be a challenge to ensure that the different policies do not contradict and potentially permit access that should not be allowed at the system level.

Ultimately, the proof is in the pudding. Will the cloud vendors be willing to stand behind the security of their systems? In the case of Amazon's EC2 and Simple Storage Services (S3) services, Amazon suggests that their EC2 and S3 infrastructure not be used for systems that must satisfy the Payment Card Industry Security Standards [18], although it has published a paper on how Amazon Web Services can be used in a Health Insurance Portability and Accountability Act (HIPAA) compliant environment. [19]

In the HIPAA paper, Amazon essentially places almost all the requirements on the “user/enterprise” to encrypt all the data stored and to manage its keys. Amazon provides services to log safely into its systems and provide some data recovery and integrity.

In the realm of reliability, prior to the breakup, AT&T was required to build systems that had an up-time reliability of “five nines” (about 5.2 min/yr downtime). Part of the reason for this was to ensure services in case of national emergency. Current cloud based systems are advertised as providing “three nines” (almost 9 hrs/yr downtime). [20]

4. DETERMINING WHERE TRUST SHOULD BE PLACED

Clearly, there are many challenging security issues related to cloud computing. In our research, we are working on a formal, structured, possibly mathematical approach that will give users and cloud-developers deeper insight into what should be done, how it might be achieved, and where the trust should be placed. This research includes the investigation of implementation structures and assurance provisions for “security” in cloud-based systems. To do this, we will attempt to provide security architectures and models that satisfy the following: Awareness of the amorphous nature and scale of the cloud computing paradigm, inclusion of mathematical models of the security properties that can be used to help analyze those properties, provision of the underpinnings on which applications/enterprise/user level security policies/properties can be implemented, and provision of the foundations on which the implementation assurances can be ascertained.

Our hope is that the results of the research will provide a framework that can be at least partially applied to the current cloud architectures and may lead to new architectures with better defined, more assured security.

Over the past 30-plus years in the operating system security world, a lot of work has been done to provide highly assured components with trustworthy systems. Unfortunately, the commercial world has ignored a lot of this work. Recent efforts have focused on the use of separation kernels. For example, Green Hills has recently received a National Information Assurance Partnership (NIAP) certificate for its Integrity 178B Separation Kernel. [21] Separation kernels provide a minimal set of operating system services on which other trusted services and applications could be built. These may be thought of as slightly more functional than a Virtual Machine Monitor (VMM), although Green Hills and others are looking to implement high assurance VMMs using their technology.

Our approach to the problem involves separation of ‘virtual’ resources. This approach constructs an infrastructure that establishes (or reconstructs where appropriate) resources, identifies and authenticates users, and then controls access to the resources. Our focus is to provide a model and a security architecture that provides the infrastructure that will accomplish these goals.

4.1 An Example

For instance, consider PaaS. An enterprise might wish to run its own applications. These applications may only run on an intermittent basis and/or require a large number of resources. One way to achieve this is to use a cloud PaaS.

We use the term ‘enterprise’ to describe the organization requiring the platform and ‘provider’ for the organization providing the cloud platform resources. The PaaS provider would provide ‘platforms,’ either ‘real’ as part of a virtual environment (a means for downloading an operating system and for managing the platforms), or as a possible network interface(s) on the platform(s). The enterprise loads operating systems, applications, etc., onto the platform(s) and manages all the interfaces and resources provided. The example below assumes that multiple platforms will be used.

The security policy visible to the user includes:

- **Identification**—A set of platform names issued by the provider (unique to the enterprise)

- **Authentication**—A secure channel that can be used to load the operating system(s) onto the platforms—the provider is trusted to ensure that the only communication with the platforms is from or to the enterprise.
- **Integrity**— The provider should guarantee that the resources are “empty” on first use and that none of the platform resources are modifiable by any party other than the enterprise. This includes any management functions; it is up to the enterprise to ensure that any network interfaces are appropriately protected.
- **Privacy**—The provider should guarantee that there is no third party access to the platform processor, memory, and/or disk files.
- **Provision of Service**—The provider should provide access to the resources on demand, per any service level agreements between the enterprise and the provider.

4.2 With at least two models of this kind of service

1. Resources are provided on an ad hoc, intermittent basis. In this version, there is no connection between consecutive uses of the resources. The enterprise uses the resources once. During subsequent uses, the enterprise assumes that all the previous data does not exist or has been erased by the provider. The only connection between the two usages is that the enterprise uses the “same identifiers” to access new instances of the resources. There is no guarantee that the same physical resources will be used for each run of the platform(s).
2. The enterprise ‘turns off’ the platform, but in subsequent use after turning it back on, finds the platform resources in the same state they were in after being turned off. As expected, the enterprise might pay more for this service. In this case, the provider must protect the information in the resources between runs from both modification and access by third parties. There is no guarantee that the same physical resources will be used in each run of the platform.

(Note that in both cases, the provider provides access to platforms and associated data. The platforms are available to others when the enterprise is not using them. Any provider configuration data about the platforms must be protected from modification and, in the second case above, any enterprise information that will be reused must also be protected)

Informally, a portion of the model might then take the form of:

- **VPlatform**—The set of names of virtual platforms that will be provided to enterprises
- **VPlatformType**—Whether the VPlatform resources are persistent (type 2 above) or not
- **VPlatformResource**—The set of resources associated with a VPlatform
- **Enterprise**—The set of enterprises that use VPlatforms
- **Allocation**—An association of an Enterprise with a Platform, VPlatformType and VPlatformResources. The same Enterprise may have multiple VPlatforms, and VPlatformResources associated with it
- **PlatformCloud**—A sequence of sets of Allocations.

The security properties then become statements about the resources and platforms.

For example:

No pair of allocations shares any common VPlatforms or VPlatform Resources. As depicted in Figure 1, the security properties can be modeled on a collection of the statements above. Each of the statements should map back to some aspect of the system’s user-visible security property. We could use our statements about the relationships of the entities (sets) we describe to prove additional properties of the system.

Following the security model's construction, a high-level execution model should be constructed and validated mathematically to determine that it satisfies our security model. Next, it is necessary to map our high-level model to varied cloud aspect implementations as documented by the vendors.

5. CONCLUSION

Cloud security is an ill-defined, little-understood area of distributed computing. However, we believe that progress can be made to provide a level of assurance that accommodates the resources needed to support government's information processing requirements.

6. References

1. IA Newsletter, vol. 13, no. 1, winter 2010, p. 34.
2. Ibid.
3. M. Campbell-Kelly. "The Rise, Fall, and Resurrection of Software as a Service: A Look at the Volatile History of Remote Computing and Online Software," *Communications of the ACM*, vol. 52, no. 5, pp. 28–30, May 2009.
4. B. Michael. "In Clouds Shall We Trust," *IEEE Security & Privacy*, vol. 7, no. 5, p. 3, September/October 2009.
5. M. Armbrust, A. Fox, R. Griffith, A. D. Joseph, R. H. Katz, A. Konwinski, G. Lee, D. A. Patterson, A. Rabkin, I. Stoica, and M. Zaharia. "Above the Clouds: A Berkeley View of Cloud Computing," EECS Department California, Berkeley. Technical University.
6. P. Mell and T. Grance, "The NIST Definition of Cloud Computing," Version 15, 7 October 2009, <http://csrc.nist.gov/groups/SNS/cloud-computing/cloud-def-v15.doc>.
7. http://en.wikipedia.org/wiki/Cloud_computing.
8. <http://aws.amazon.com>.
9. <http://docs.google.com>.
10. <http://www.disa.mil/race>.
11. H. G. Miller and J. Veiga. "Cloud Computing: Will Commodity Services Benefit Users Long Term?" *IEEE ITPro*, vol. 11, no. 6, p. 67-69, November/December 2009.
12. <http://www.opencloudmanifesto.org>.
13. <http://www.fcw.com/Articles/2009/04/16/Cloud-computing-moving-into-public-safety-realm.aspx>.
14. <http://www.cloudsecurityalliance.org>.
15. <http://www.cloudsecurityalliance.org/csaguide.pdf>.
16. <http://www.google.com/apps>.
17. <http://www.nytimes.com/2010/02/15/technology/internet/15google.html>.
18. <http://www.mckey.net/2009/08/14/cannot-achieve-pci-compliance-with-amazon-ec2s3>.
19. http://awsmedia.s3.amazonaws.com/AWS_HIPAA_Whitepaper_Final.pdf.
20. http://www.google.com/apps/intl/en/business/infrastructure_security.html.
21. <http://www.niap-cc-evs.org/cc-scheme/st/vid10119/maint200>

PARENTING AND ADOLESCENT BEHAVIOUR : FEEDBACK FROM THE CLASSROOM

Dr. Raju Narayana Swamy*

ABSTRACT

The foremost task of parenting is adequate socialization of children. The functions of parenting greatly control how children grow up and mature. This task requires parental expectations and guidance that change with the development of the child to support positive child outcomes. Among the most powerful predictors of mental health problems among adolescents are poor family relationships. Since the early nineties, quantitative empirical studies have been performed to assess the level of parents' involvement. Knowing what motivates some children with behaviour problems in the classrooms can help educators and parents deal with the situation and move towards a positive outcome. This study uses qualitative measures for parent involvement analysis. In general, the results of the current study did not support that the authoritative parenting style would be negatively related to children's intrinsic motivation. Adolescents from disengaged homes were less interested in studies and less successful in school.

Keywords: parenting, mental health, children, adolescent, behavioural problems

INTRODUCTION

Parents are defined here broadly to encompass all those adults vested with the responsibility of raising children, whatever be their biological relationships to the children, including immediate and extended family members or kin, step-parents, guardians, foster parents and tribe and clan members (*Simpson, Rae, 2001*). There is considerable steadiness across studies about the basic correlation between parent-child relationship quality and child outcomes. Meta analysis and conceptual reviews of the literature have reached a similar view. There are indications that certain dimensions may play an especially important role in some outcomes, such as over protective parenting for anxiety or monitoring/control for misbehaviour (*O' Connor Thomas G, & Stephen B.C. Scott (2007)*). Parent-child relationship quality is related with a striking assortment of different child outcomes. Behavioural/Emotional outcomes have attracted much of the attention, but there is also strong evidence concerning multiple aspects of psychological, social, educational, intellectual and physical health. It is profitable for basic and applied research to undertake the assessment of the variety of outcomes among the children.

PARENTING

Parenting is a multifaceted activity that includes many specific behaviours that work individually and jointly to influence child outcomes. The primary role of all parents is to influence, teach and control their children. Parenting style is meant to describe ordinary variations in parenting. For most children aged 10 to 16 years, the family remains the proximal background of development inspite of the increased salience of schools, peers and communities. They want to feel accepted by their parents and to be able to share with them the problems and issues in their lives (*Richardson, A. Rhonda, 2004*). There are several parenting techniques

* Dr. Raju Narayana Swamy is an IAS officer from Kerala cadre. He is the winner of the Kerala Sahitya Akademi award for his travelogue, *Santhimantram Muzhangunna Thazvarayi*.

that have a greater impact on a child's behaviour. The largest is parental support. In multiple studies, it has been found that the support from parents bonds the adolescents with institutions and builds their self-control (Baenes et al 2006)

CONSEQUENCES FOR CHILDREN

Adolescence is a special developmental period that is considered more difficult for both parents and adolescents due to multiple changes (Arnett, 1999). During this period, children experience biological, cognitive, social, and school changes, in addition to the relational changes between parents and adolescents (Xiong, Zha Blong & others, 2008). Parenting style has been found to predict children's well-being in the domains of social competence, academic performance, psychosocial development and problem behaviours. A major issue concerning adolescence is the influence of parents on their development. The research based on parent interviews, child reports and parent observations consistently finds:

- Children and adolescents, whose parents are authoritative, rate themselves and are rated by objective measures as more socially and instrumentally competent than those whose parents are non-authoritative.
- Children and adolescents, whose parents are uninvolved, perform most poorly in all domains (Darling, Nancy).

In general, parental response predicts social competence and psycho-social functioning, while parental demanding is associated with instrumental competence and behavioural control (i.e., academic performance and deviance). The above findings indicate: "*Children and adolescents from authoritarian families are more likely to be involved in problem behaviour and perform less well in schools.*" Adolescence problem behaviours are associated with a host of negative social outcomes. Poor social skills, academic under-achievement, lack of parental guidance have been identified as risk factors for problem behaviour (Hawkins and Weis, 1985; Steiberg, 1990). Adolescents, whose parents are involved and supportive, are at a lower risk of engaging in problem behaviour than adolescents whose parents are uninvolved and unsupportive (Baumrind, 1991; Steinberg, 1990).

Odebumi's (2007) study has shown that a large percentage of problem behaviour come from homes that lacked normal parental love and care. Attention, love and warmth go a long way in assisting the child's emotional development and adjustment. Children at adolescence need parental love, care, affection and serious consideration to adjust sufficiently, in the environment in which he/she lives. Parents have foremost roles to play in the tuning process of a teenager. The behavioural problems are mostly rooted in their homes (Onyechi and Okere, 2007). Otuadah (2006) found that when the relationship between the parents and the adolescent is tepid, it creates a strong background for the progress of children. The ignored adolescent slowly becomes a hardened criminal, violent, agitated, or a cultist. Ukoha (2003), Onyewadume (2004) and Otuadah (2006) observe that parents spend little or no time at home to assist in the upbringing of the children. The children invariably fall into evil associations.

METHOD AND PROCEDURE

Since the early nineties, quantitative empirical studies have been conducted to assess the level of parents' involvement. The main objective of this study is to determine the relationship between parenting and adolescents' problem behaviour in schools. The hypotheses tested includes "*Of the different variables like negative parenting, peer group influence and school atmosphere, child problem behaviour is an outcome of neglect from parents and poor performance of teachers in the class rooms*" and "*Children from poor parenting families show problem behaviours in schools*". The above study uses qualitative measures for parent involvement analysis. The sample of the study consisted of 100 teachers who were drawn from three

schools (CBSE) from Thiruvananthapuram district, Kerala. The teachers are teaching in higher secondary classes. Data collection was done through simple random sampling technique. The Behaviour Problem Questionnaire was developed by the researcher for data collection. Personal data of the students were collected from concerned class teachers. The items of the questionnaire were generated through review of some studies on behaviour problems and pilot study. Interviews of students on behaviour problems of children were also included.

DATA COLLECTION

Copies of the questionnaire were distributed for completion. Analyses were carried out by scoring 4,3,2,1 for “*Strongly agree*”, “*Somewhat agree*”, “*Somewhat disagree*” and “*Strongly disagree*”, respectively. The focus of most contemporary developmental researchers, however, is on how parents and peers jointly influence adolescents. In this study, we examined how parenting is related to behavioural problems among adolescents. Children in classrooms can misbehave in many ways, with common outbursts involving unnecessary noise making, fighting or using abusive languages against others. Such behaviours disturb smooth learning, which reduces the gain from classrooms. Serious signs of behaviour problems in the classroom include destructiveness, lack of understanding or accountability, and disregard for classroom rules. These signs may point to behavioural chaos that requires association of both the parent and the teacher to add to the remedial process to hold up and direct the child.

Table 1: Behavioural problems of children identified

Sl. Response	Strongly agree	Somewhat agree	Somewhat disagree	Strongly disagree	Total
No.	(Value-4)	(Value-3)	(Value-2)	(Value-1)	
1. Noise making					
Frequencies	83	7	10	0	100
Mean	3.73				
2. Fighting/using abusive languages in Schools					
Frequencies	10	22	60	8	100
Mean	2.56				
3. Lateness to school					
Frequencies	7	3	81	9	100
Mean	3.57				
4. Lying					
Frequencies	80	7	10	3	100
Mean	3.64				
5. Using low-rise trouser					
Frequencies	83	10	7	0	100
Mean	3.76				
6. Absenteeism					
Frequencies	13	27	60	0	100

Mean	2.53				
7. Changing of exam marks					
Frequencies	73	27	0	0	100
Mean	3.73				
8. Changing of seats while teaching					
Frequencies	73	27	0	0	100
Mean	3.73				
9. Disobedience to teachers					
Frequencies	93	7	0	0	100
Mean	3.93				
10. Using cigar/pan/liquor					
Frequencies	37	12	51	0	100
Mean	2.86				
11. Wilful disturbance in class/school assembly					
Frequencies	79	21	0	0	100
Mean	3.79				
12. Sex-related issues					
Frequencies	22	7	71	0	100
Mean	2.51				

Source: Field Survey N=100

Hirschi's social bonding theory examined attachment to parents and to peers, finding inverse relationships between both measures and misbehaviour. If the weakening of the bond is seen as a releasing mechanism allowing for deviant behaviour, Hirschi (1969) indicated that those adolescents with affective ties to healthy peers as well as parents should be less likely to commit deviant acts. From **Table 1**, those issues with mean value >3 were identified as serious behavioural problems. The most frequently occurring issues are changing of seats while teaching, changing of exam marks, noise making and low waist trouser. One of the problems that school officials have with boys is that of exposure due to wearing low-rise pants. There is no way to sit down when wearing deeply dipping pants, which will not expose the derriere almost entirely. Boys sitting in class with exposed backsides are certainly a distraction for other students - especially girls. Problems can also occur when a boy bends down to pick something up off the floor or even to tie a shoe. These pants also have a tendency to slide down and must frequently be pulled up. All in all, they are not comfortable to wear. The school authorities have strictly indicated that no one will be allowed to wear pants that expose underwear. But our study reveals that a low-rise pant is one of the serious behavioural problems shown by the boys.

The finding, such as noise-making/changing seats while teaching was rated the highest, among the 12 behaviour problems. It suggests that students may either not be adequately engaged in both curricular and extra-curricular activities in school or that they lack interest in class work. Teachers should be adequately trained and motivated to meet the challenges posed by the education of students at the higher secondary level. From the above analysis, the first hypothesis: "*Of the different variables like negative parenting, peer group influence and school atmosphere, child problem behaviour is an outcome of neglect from parents and poor performance of teachers in the class rooms*" is accepted.

The behavioural problems perceived by teachers as “not frequently” occurring include sex-related issues, absenteeism, using cigar/pan/liquor, fights in schools, etc. There is a strong and well-established link between adolescent’s association with deviant peers and externalising problems such as drug use and delinquency (Galambos, L., Nancy & others, 2003). The mean value for bad peer influence as rated by the teachers in **Table 2** strongly agrees with the above. Without a strong attachment with parents, an adolescent will begin to associate in deviant peers. Such peers pressure the adolescents to begin or continue involving in deviant activities.

The perceived causes of behaviour problems among children were also identified from the teachers. Most of the issues highlighted include broken home, bad peer influence; neglect by parents, over-caring and neglects of bad behaviour of their children (**Table 2**). The mean responses of the teachers ranged from 2.21 to 3.93. The ranking of the perceived causes of behaviour problems revealed that broken home, neglect by parents and bad peer influence are among the most common perceived causes of behavioural problems.

Table 2: Problems identified by the teachers

Sl. Response No.	Strongly agree (Value-4)	Somewhat agree (Value-3)	Somewhat disagree (Value-2)	Strongly disagree (Value-1)	Total
1. Broken home					
Frequencies	83	12	5	0	100
Mean	3.78				
2. Bad Peer influence					
Frequencies	80	7	10	3	100
Mean	3.64				
3. Neglect by parents					
Frequencies	93	7	0	0	100
Mean	3.93				
4. Neglecting the issues created by children					
Frequencies	74	12	4	10	100
Mean	3.5				
5. Non-cooperative attitude of parents					
Frequencies	60	23	7	10	100
Mean	3.73				
6. Poor school environment					
Frequencies	23	7	38	32	100
Mean	2.21				

Source: Field Survey N=100

From the above analysis, we find that teachers and parents play complementary roles. Parents should be regularly reminded of their role in the development of their children. Parental monitoring has proven one of the strongest deterrents to adolescent association in almost any problem behaviour. The quality of parenting and family relationships was strongly associated with children’s behaviour. Indifferent parenting reduces the

availability of parental values to adolescents because it provides no clear standards and expectations from which to infer parental values (Knefo, Ariel, & Shalom, H. Schwartz, 2003). Hence we could say that indifferent parenting underlines accurate perception. From the above analysis in **Table 2**, the second hypothesis which states that “*Children from poor parenting families show problem behaviours in schools*” appears true. To prevent problem behaviour from appearing, parents must use effective discipline, monitoring and problem solving techniques. Parents, who do not support positive behaviour and punish problem behaviour, are more likely to experience weak bonds with their children.

CONCLUSION

The findings of the present study highlight significant relationships between parenting styles and children’s behavioural problems. The present study supports the findings of various researchers which have shown the relationship between parenting and children’s behavioural problems. Parents affect their adolescent’s problem behaviours. Two factors have been identified that have the ability to aid in decreasing the problem behaviour rates. These include family/parents at one end of the spectrum and the school on the other, with an overall factor of parenting. When there is no proper monitoring and adequate support from family, adolescents are more likely to fall into behavioural problem. It can be deduced from the study that we need to re-examine behavioural problems of children and develop proper approaches for their management. The parents should encourage and support the schools in maintaining the requisite discipline for effective learning. Much is required to be done at home as well as the school if we want adolescents to be sufficient in being self-controlled and properly accustomed in the social milieu.

References

- Ariel, Knefo, & Shalom, H. Schwartz, (2003), ‘Parenting and Adolescents Accuracy in Perceiving Parental Values’, *Blackwell Publishing and Society for Research in Child Development*, 74(2).
- Arnett, J.J. (1999), ‘Adolescent Storm and Stress, reconsidered’, *American Psychologists*, 54(5)
- Baenes, Grace M. & others (2006), ‘Effects of Parental Monitoring and Peer Deviance on Substance Use and Delinquency’, *Journal of Marriage and Family*, 68(4).
- Baumrind, D. (1991) ‘Effective parenting during the early adolescent transition’, in Cowan, P. E. and Hetherington, E. M. (eds), *Advances in Family Research*. Erlbaum, Hillsdale, NJ, pp. 111–163.
- Hawkins, J. D. and Weis, J. G. (1985), ‘The social development model: an integrated approach to delinquency prevention’, *Journal of Primary Prevention*, 6.
- Nancy, Darling, ‘Parenting Style and its Correlates’, www.kidneeds.com, Accessed on September 23rd 2012.
- Nancy, Galambos, L., & others, (2003), ‘Parents Do Mater: Trajectories of Change in Externalizing and Internalizing Problems in Early Adolescence’, *Child Development*, 74(2).
- Odebunmi, A. (2007), ‘Parenting: A Cross-Cultural and Psychological Perspective’, Abuja, (Afabunmi Nigeria Limited)
- Onyewadime, M. A (2004), ‘Parents, Involvement of Housemaid in Home Reading in an African Setting: Current Trends and Implications’ I.A. Nwazuoke, O. Bamgbose & O. A. Morokola (eds.), Ibadan Omoade Printing Press.
- Otuadah, C. E. (2006), ‘Parental Behaviour and Peer Group Influence as Correlates of Delinquent Behaviour among Secondary School Students in Warri Metropolis’. Unpublished M.Ed Thesis of *Delsu*, Abraka.

Rae, Simpson, (2001), 'Raising Teens', *Centre for Health Communications*, Harvard School of Public Health.

Rhonda, Richardson, A. (2004), 'Early Adolescence Talking Points: Questions That Middle School Students Want to Ask: Their Parents', *Family Relations*, 53(1).

Steinberg, L. (1990), 'Autonomy, conflicts, and harmony in the family relationship', in *Feldman, S. S. and Elliot, G. R. (eds), At the Threshold: The Developing Adolescent*. Harvard University Press, Cambridge, pp. 431–456.

Thomas G. O' Connor & Stephen B.C. Scott (2007), 'Parenting and Outcomes for Children', *Joseph Rowntree Foundation*, York Publishing Services Ltd.

Zha Blong, Xiong, & others, (2008), 'Adolescents' Problem Behaviors and Parent-Adolescent Conflicts in Hmong Immigrant Families', *Hmong Studies Journal*, Vol. 9.

**PEDAGOGY OF MATHEMATICS:
ROLE OF TECHNOLOGY IN TEACHING-LEARNING MATHEMATICS**

Dr. Neetu Chawla*, Ashish Kumar Mittal**

ABSTRACT

Technology has become an essential tool for doing mathematics in today's world. It can be used in a variety of ways to improve and enhance the learning of mathematics. As National Council of Teachers of Mathematics (NCTM) (2000) highlights in its standards, technology can facilitate mathematical problem- solving, communication, reasoning and proof; moreover technology can provide students with opportunities to explore different representations of mathematical ideas and support them in making connections both within and outside of mathematics (NRC, 2000). What kind of technologies can be used as tools for learning and communicating mathematics? The use of technology when studying mathematics is not a new issue, since humankind always has been looking for solutions to avoid time consuming routine work. Maybe the definition of routine work has changed, since the implementation of modern computers. Today we can not only get help with long and complicated calculations, we can also use computers and modern software to simulate and model complex situations described by mathematical structures. Preparing teachers to teach mathematics is highlighted by its complexities. What technologies are adequate tools for learning mathematics? What about teacher attitudes and beliefs about teaching mathematics with technology? What are the barriers? These questions pose a challenge for the development of a research agenda for mathematics education that is directed toward assuring that all teachers and teacher candidates have opportunities to acquire the knowledge and experiences needed to incorporate technology in the context of teaching and learning mathematics.

Key Words: *Technology in Mathematics, Attitude Of Teachers , Role Of Technology In Mathematics, Technology In Classroom, Barriers in The Way Of Mathematics.*

INTRODUCTION

Circa. September 1, 2056. Imagine the school atmosphere. And if one is entrusted with the responsibility to investigate the status of mathematics instruction in elementary, middle and high schools. What would one find? What kind of mathematics would be taught? How would be teachers teaching? How would students learn? Would the mathematical knowledge and skills imparted to students turn them into becoming mathematically more proficient? Can one estimate how much the National Council of Teachers of Mathematics' (NCTM) vision for school mathematics has been realized?

Imagine a classroom, a school, or a school district where all students have access to high-quality, engaging mathematics instruction. There are ambitious expectations for all, with accommodation for those who need it. Knowledgeable teachers have adequate resources to support their work and are

* **Dr. Neetu Chawla** [M.Sc., M.C.A., M.Ed., Ph.D.], Head, Department of Education, R.C.C.V. Girls Degree College, Ghaziabad.

****Ashish Kumar Mittal** ,Head, Department of Mathematics, Indirapuram Public School, Indirapuram, Ghaziabad

continually growing as professionals. The curriculum is mathematically rich, offering students opportunities to learn important mathematical concepts and procedures with understanding. Technology is an essential component of the environment. (NCTM, 2000, p.3)

Can this vision of the National Research Council (NRC, 2001) be implemented so that all students can become mathematically proficient, a proficiency that involves an integration and balanced development of five key strands: *conceptual understanding, procedural fluency, strategic competence, adaptive reasoning, and productive disposition*? Can technology play a part in the development of mathematical proficiency? The National Education Technology Standards for Students (*International Society for Technology in Education, ISTE, 2000*) has observed that the technology is an integral component or tool for learning and communication within the context of mathematics. The students may be exposed to learning about various technologies once they learn begin to mathematics through the usage of technologies. Once students get actively engaged in mathematics using technologies, there may be quantum jump in productivity, communication, research and problem-solving and decision-making tools.

The challenge at hand is to make things happen to realize these visions by 2056. Perhaps one of the most critical respondents for actualizing this vision is the mathematics teacher. What will these teachers need to know and be able to do? As of now, most teachers have not learned mathematics using technology tools. The objective herein is to identify “what” and “how” to prepare mathematics teachers to teach in the 21st century. What do teachers need to know and be able to do and how do they need to develop this knowledge for teaching mathematics?

Technology: Pedagogical Content Knowledge

In 1986, Shulman proposed a more in-depth look at what teachers must know in order to teach, highlighting that future teachers need to be prepared to be able to transform that subject matter content through teaching strategies to make that knowledge accessible to learners. To teach, teachers need to have developed an integrated knowledge structure that incorporates knowledge about subject matter, learners, pedagogy, curriculum, and schools; they need to have developed a pedagogical content knowledge or PCK for teaching their subjects. But for technology to become an integral component or tool for learning the subject, teachers must also develop “*an overarching conception of their subject matter with respect to technology and what it means to teach with technology – technology pedagogical content knowledge (TPCK)*” (Niess, 2005, p. 510). To be prepared to teach mathematics then, teachers need an in-depth understanding of mathematics (the content), teaching and learning (the pedagogy), and technology. More importantly, however, they need an integrated knowledge of these different knowledge domains, the overlap and integration of these domains. TPCK for teaching with technology means that as they think about particular mathematics concepts, they are concurrently considering how they might teach the important ideas embodied in the mathematical concepts in such a way that the technology places the concept in a form understandable by their students. The challenge is to identify teacher preparation programs that lead toward the development of TPCK for teaching mathematics. Grossman (1989, 1991) developed four central components as a means of thinking about PCK; Niess (2005) extended these components as a means of clarifying TPCK development for teacher preparation programs:

- (a) an overarching conception of what it means to teach a particular subject such as mathematics **integrating technology** in the learning;
- (b) knowledge of instructional strategies and representations for teaching particular mathematical topics **with technology**;
- (c) knowledge of students’ understandings, thinking, and learning **with technology** in a subject such as mathematics;
- (d) knowledge of curriculum and curriculum materials that **integrates technology with learning mathematics**.

The availability of technology has changed enormously during the last 20-30 years. From the large and clumsy desk calculators of the 1970's over to the functional calculators in the 1980's and during the last two decades, we have got graphing calculators as well as symbolic calculators. There are also calculators which include software for geometrical constructions. If we shift to computers, the availability of software for all kinds of undergraduate mathematics is enormous, both commercial and freeware is easy to get. This significant change in availability naturally raise questions concerning mathematics education at all different levels, questions concerning content, teaching & learning, and assessment. Most curricula around the world probably include technology at different levels in some way. Here are some excerpts from the Swedish compulsory school:

The teaching of mathematics should strive for that students with familiarity and sound judgment can see and use the potentials of calculators and computers. Students should develop their knowledge about how mathematics is used within information technology, as well as how technology can be used in problem solving, in visualizing, and when investigating mathematical models.

The use of technology in mathematics teaching at the college and university level today is harder to describe. Most university students at Gothenburg University seem to have calculators from their upper secondary studies, as well as easy access to computers and Internet both at campus and in their private environment. Many study halls at the universities include the possibility to make wireless network connections and since many students carry laptops with them in school, it is almost as if these students have instant access to tools for calculations and visualization. This is probably true for most university students in Sweden and in the Nordic countries.

Technology in the mathematics classroom

The use of technology when studying mathematics is not a new issue, since humankind always has been looking for solutions to avoid time consuming routine work. Today we not only get support of technology in long and complicated calculations, we can also use computers and modern software to simulate and model complex situations described by mathematical structures. The views on how information and communication technology can be used to support learning of mathematics have changed over time. When the new curriculum for the Swedish compulsory school was implemented in 1980, there was a new subject introduced called computer science. Mainly teachers of mathematics, Swedish and social science were involved in this work. Since the 1980's, the importance of computer support in the teaching and learning of mathematics has been emphasized more and more. It can be seen in the steering document for the curriculum for the present Swedish compulsory school. The view on how technology should be used in the mathematical classroom is also affected by other forces, as for instance strong expectations that present schools should mirror what goes on in the surrounding society in this respect.

In this context it is highly relevant to ask the question about how the teaching and learning of mathematics may be affected when modern technology is available. When it comes to computer support, Samuelsson (2003) addressed the role of the computer as an agent of change and focused on the following issues:

1. What new methods will be used by the teachers because of the technology?

- a. When teachers use technology to introduce the concept of the equation of a straight line ($y = kx + m$), the teaching will be different compared to an ordinary introduction. The students will be able to easily investigate how different values for the parameters will affect the graph of the function.
- b. The students learn more mathematics through visualization and models in the computer.
- c. The students will learn effective procedures that help them to solve problems more efficiently, mainly due to the element of game and competition offered by the computer.

2. What new goals/results will be in focus for the teacher thanks to the possibilities offered by technology?

- d. The students will be able to learn to handle technology in different mathematical situations.
- e. Different aspects of knowledge can be acknowledged, for instance in statistics and algebra, if technology is used when students solve mathematical problems.

3. What in the everyday technology-enriched teaching of mathematics supports the overall visions that exist for school mathematics?

- f. The student's views of mathematics may be affected in a positive way if the teaching is pursued with technology
- g. Learning oriented teaching with utility programs seems to support the vision that the teacher should focus more on conceptual learning and less on the learning of skills and procedures.
- h. See answers a, d, and e.

4. What kind of everyday technology-enriched teaching of mathematics interfere with the overall visions that exist for school mathematics?

- i. To work with drill and practice software supports an old form of teaching mathematics, which the modern school is leaving behind. The technology could thus be assimilated into old traditions.
- j. The students' possibilities to reflect over the content in the problems are reduced by the element of game and competition offered by the computer.
- k. Technology offers a variety of different distractions, which results in students doing other things than mathematics in the classroom, surfing on the web, checking e-mail, and so forth. Technology becomes amusement.

What about Teacher Attitudes and Beliefs about Teaching Mathematics With Technology?

These technologies are only examples. What other technologies are available or are emerging that might support learning mathematics? Teachers need to be prepared for exploring the current and emerging possibilities. They need to develop a professional attitude of evaluation and reflection about tools for teaching mathematics – a profound envisioning that investigates and considers the impact of the tools for teaching mathematics. Niess, Lee and Kajder identified six important areas of questions that teachers must be prepared for:

- 1. Curricular needs in mathematics in the 21st century.** Can the technology be used as a productivity, communication, research and or problem-solving and decision-making tool for learning in the subject area? Does the technology offer the capabilities to facilitate technology-enhanced experiences that address subject matter content standards and student technology standards? Does the technology offer capabilities that challenge the accepted standards, opening the possibility for a shift in what students need to know to be productive citizens in the 21st century?
- 2. Instructional needs in mathematics in the 21st century.** Can the technology support learner-center strategies for learning the subject? Can use of the technology as a learning tool help students develop a more robust understanding of the content? Can the technology address the diverse needs of students in learning the subject? How must the instruction be scaffolded to guide student learning with and about the technology?
- 3. Student learning in the 21st century.** Can the technology engage students in important experiences that support their learning? Can the technology provide multiple perspectives for the students to view of mathematics? Can the technology be applied to developing students' higher order thinking and reasoning skills? Can the technology maximize student learning?

4. **Unique capabilities of the new tool.** What are the capabilities of the tool? How are these capabilities useful in accomplishing 21st century skills? Do the capabilities challenge accepted ways of knowing and doing? What must be learned before incorporation of the tool as a learning tool?
5. **Student knowledge, access and management concerns.** Will inclusion of the new tool create student access issues? What preparation must be provided for students working with the technology as a tool for learning? What management issues need consideration if the tool is incorporated in the classroom situation?
6. **Assessment and evaluation with the new tool.** How will assessment of students' learning of mathematics be affected by the incorporation of the new tool? Will performance assessments be important to demonstrate students' knowledge of the content with use of the new tool?

What are the Barriers?

While billions of dollars have been spent on technologies for schools, access continues to be labeled a major barrier. Many studies have documented this barrier, but, on the other hand, in some situations where technology is readily available, some teachers do not know how to take advantage of it, and still others are against it. The lack of knowledge of integration acts as the barrier and the teachers' beliefs about how mathematics is to be learned becomes a pertinent issue. *Norton, McRobbie and Cooper (2000)* investigated this question by studying upon a mathematics staff in a technology – rich secondary school where the technology was rarely used in teaching mathematics. Their results suggested that these teachers' resistance was related to their beliefs about mathematics teaching and learning and their existing pedagogies. In essence, knowledge and beliefs may be the actual barriers. Perhaps these teachers are either uncomfortable with technology, or unsure about how to incorporate technology into their curricula, or have not seen examples of effective use. The result challenges teacher educators as they identify requirements to support the development of TPACK through the student teachers' program. While some programs simply make the requirement and provide access through classroom sets to be used during student teaching, others are more carefully investigating the classroom barriers. *Garafalo and Bell (2005)* at the University of Virginia provided their secondary mathematics and science student teachers with a laptop, projector and Smartboard for use during field practice with actual students. They studied the role of student teachers' beliefs and TPACK on classroom use of technology, when access is less of an issue. Continued research needs to be undertaken to expose real barriers so that the teacher preparation and professional development programs are able to deal with the issues.

Mathematics anxiety is certainly an issue in mathematics education. Does mathematics anxiety extend to technology anxiety? What about the discontinuity in the mathematics curriculum from pre-college to college level? Students at the precollege level have relatively few opportunities to use technology in learning mathematics. But, when they enter college, they are confronted with a ubiquitous incorporation of technology in learning mathematics. Calculators are expected. Students need to be able to readily use MATLAB as a tool for developing mathematical models for solving problems. But , students' mathematics technological toolkit cannot develop if teachers in the pre-college level are resistant to teaching mathematics with technology.

Another barrier that has been frequently pointed out is the knowledge base about how students learn and to design the curriculum that supports students in learning mathematics with technology. *Everett Rogers (1995)* explains how teachers need to progress through a five-step process in the process of facing the ultimate decision as to whether to accept or reject a particular innovation for teaching mathematics with technology:

1. **Knowledge** where teachers become aware of integrating technology with learning mathematics and has some idea of how it functions;
2. **Persuasion** where teachers form a favorable or unfavorable attitude toward teaching and learning mathematics with technology;
3. **Decision** where teachers engage in activities that lead to a choice to adopt or reject teaching and learning mathematics with technology;

4. **Implementation** where teachers actively integrate teaching and learning with technology;
5. **Confirmation** where teachers evaluate the results of the decision to integrate teaching and learning with technology.

Thus, as more and more teachers teach mathematics with technology as a tool, the shift must be towards the evolving issues more directly focused on student learning of mathematics – evaluating the results of the decision and its impact on the mathematics curriculum and instructional strategies needed so that all students are able to learn mathematics. Ultimately, if technology is used to improve the learning of mathematics at all levels, students will be better prepared to use technology appropriately, fluently, and efficiently to do mathematics in techno-rich environments in which they will study and work in the future. This might result in effective instructions in the mathematics classroom Circa. 2056!

References:

- Association of Mathematics Teacher Educators' Technology Committee. (2005). *Draft position statement titled Preparing Teacher to Use Technology to Enhance the Learning of Mathematics*.
- Beck, J. A. & Wynn, H. C. (1998). *Technology in teacher education: Progress along the continuum*. ERIC Document Reproduction No. ED 424 212.
- Björk, L-E. & Brodin, H. (1995). *Using new technology as a tool to increase student understanding of calculus*. Proceedings of the International Conference on Technology in Mathematics Teaching, Edinburgh.
- Grossman, P. L. (1989). *A study in contrast: Sources of pedagogical content knowledge for secondary English*. Journal of Teachers Education, 40(5), 24-31.
- Grossman, P. L. (1991). *Overcoming the apprenticeship of observation in teacher education coursework*. Teaching and Teacher Education, 7, 245-257.
- International Society for Technology in Education. (2000). *National educational technology standards for students: Connecting curriculum and technology*. Eugene, OR: ISTE.
- International Society for Technology in Education. (2002). *National educational technology standards for teachers: Preparing teachers to use technology*. Eugene, OR: ISTE.
- Margerum-Leys, J. & Marx, R. W. (2002). *Teacher knowledge of educational technology: A study of student teacher/mentor teacher pairs*. Journal of Educational Computing Research, 26(4), 427-462.
- National Council of Teachers of Mathematics (2000). *Principles and standards for school mathematics*, Reston, VA: NCTM.
- National Research Council, (2000). *How people learn*. Washington D. C.: National Academy Press.
- National Research Council, (2001). *Adding it up: Helping children learn mathematics*. Washington D. C.: National Academy Press.
- Niess, M. L. (2005). *Preparing teachers to teach science and mathematics with technology: Developing a technology pedagogical content knowledge*, Teaching and Teacher Education, 21, 509-523.
- Utbildningsdepartementet. (2000). *Kursplaner för grundskolan*. Stockholm, Fritzes.
- Zhao, Y. (Ed) (2003). *What teachers should now about technology: Perspectives and practices*. Greenwich, Ct: Information Age Publishing.

REVAMPING TEACHER EDUCATION: CURRICULUM IN THE CONTEXT OF INCLUSIVE EDUCATION

Dr. Satveer .S. Barwal*

Seema Sharma**

ABSTRACT

Inclusion in education involves the process of increasing the participation of students in and reducing their exclusion from the cultures, curricula and communities of local schools. It involves restructuring the cultures, policies and practices in schools so that they respond to the diversity of students in their locality. Inclusion is a dynamic process that is constantly evolving as it accommodates all children regardless of their physical, intellectual, social, emotional, linguistic or other conditions and these challenges have to be met by creating the child centred pedagogy capable of successfully educating all children. For empowering the pupil teachers, restructuring the curriculum of teacher education will be the stepping stone for inclusive education. Under this context the present paper attempts to establish a framework for the knowledge, understanding and skills required by teachers to support and ensure educational inclusion.

Keyword: Social Darwinism, Disability, Inclusive Education.

Introduction

“All children and young people of the world, with their individual strengths and weaknesses, with their hopes and expectations, have the right to education. It is not our education system that have a right to a certain type of children. Therefore, it is the school system of a country that must be adjusted to meet the needs of all children.”

B. Lindqvist, UN-Rapporteur, 1994

Education is a lifelong process involving many planned and unplanned experiences that enable children and adults alike to develop and learn through interaction with the society and culture in which they live. It involves experiences at all stages of life, from infancy to old age. Education also involves adaptations to society and culture. With all the combinations of life events, adaptation will mean that each person is subjected to unique set of learning and problem solving experiences that constitute an understanding of the world and the events that take place in it. There are some children who, for some reason, are unable to take full advantage of education as it is normally offered. These are the children with special need. When we go in the history of education of special need children, there were no provisions of education. In fact, development is a plant with slow growth. Similarly the plant of special education has been nourished to foster a long gradual change in interests, attitude and behaviour of people which made education essential, accessible and advantageous for people with different disabilities.

Historical Perspectives

In the earlier times, the disabled was protected with the parental instinct and also made able to cope with disability. All these were through the informal education. In course of time there was a significant change in

*Dr. Satveer S. Barwal is Asst. Prof., D.U.

**Seema Sharma is Research Scholar, Mewar University

the people's attitude and they viewed the disability as a punishment of God . It was based on the '**Sin Theory**'; therefore the result was the expulsion of such people from the society. It was the '**Social Darwinism**' phase. The modern period of special education emanated from the '**Educational Darwinism**', which meant for attitudinal change in '**Social Darwinism**' into education for disabled. But there was no such provision of education for them rather the attitude was full of sympathy. This period laid the foundation of organized care and education with the emergence of humanity and charitable organizations of people in many corners of the world.

Development in Modern India

In course of time in first 3 decades of 19th century, global change in society led to development in modern education and special education to much extent. Asylums were opened and training centres were established.

The outset of the constitutional obligations regarding the special education of universalisation of education in the age group of 6-14 years under Article(41) also envisages that the state shall 'within the limits of its economic capacity and development, make effective provisions for the special child, as far as possible in the normal schools. The National Policy on Education (NPE) of India came into existence in 1968 but it became ineffective as regard to its formulation and lacking adequate financial and organizational support. After Nationwide discussion, the New National Policy on Education (NPE) was formulated in 1986. The main aim of this policy was to integrate the differently abled children with the general community as equal partners and to prepare them to face the life with certitude and fortitude.

Inclusive Education: Policy and Legislative Frameworks

According to NCF 2005

*"A policy of inclusion needs to be implemented in all schools and throughout our education system. The participation of all children needs to be ensured in all spheres of their life in and outside the school. Schools need to become centres that prepare children for life and ensure that all children, especially the differently abled, children from marginalised sections, and children in difficult circumstances get the maximum benefit of this critical area of education".**

Inclusion is a quite broader term which is not just about providing students with disabilities access to regular classrooms rather it means providing all children regardless of race, language, class and disability, equitable and effective education that responds to their needs as learners. At the core of inclusive education is the basic right to education which is rooted in human rights treaties. Inclusive education brings all students together in one classroom and community, regardless of their strengths or weaknesses in any area, and seek to maximize the potential of all

students. Inclusion is an effort to make sure that diverse learners – those with disabilities, different languages and cultures, different homes and family lives, different interests and ways of learning – are exposed to teaching strategies that reach them as individual learners.

The PWD ACT, 1995 The Person with Disabilities

The Persons with Disabilities Act, 1995 provides for access to free education in an appropriate environment for children with disabilities till they attain the age of 18 years. The educational needs of disabled persons between the ages of 14 and 18 will be covered through a range of interventions including a Revised Plan for Inclusive Education of Children and Youth with Disabilities (IECYD) at an enhanced outlay of Rs. 1,000 Crores. Whereas under the Scheme of Integrated Education for the Disabled Children (IEDC) as it stands at present, children with disabilities are placed in a regular school without making any changes in the school to accommodate and support diverse needs, the revised IECYD will, in contrast, modify the existing physical

infrastructure and teaching methodologies to meet the needs of all children including Children with Special Needs.

The Persons with Disabilities Act, 1995 further provides 3 % reservation in all institutions receiving funds from Government for persons with disabilities. The implementation of these provisions in educational institutions will be taken up as a priority activity under the Action Plan. The fulfilment of the reservation in schools admissions will however not be a criterion for denial of admission of other children with disabilities.

All the schools in the country will be made disabled friendly by 2020 and all educational institutions including hostels, libraries, laboratories and buildings will have barrier free access for the disabled. Special attention will be given for the availability of Study material for the disabled and Talking Text Books, Reading Machines and computers with speech software will be introduced progressively in addition to an adequate number of Braille books. An adequate number of sign language interpreters, transcription services and a loop induction system will be introduced for the hearing handicapped students. Taking into account the special transportation needs of disabled college students, Universities will be encouraged to introduce Special shuttle services for the disabled.

The Right To Education Act - 2009

Right to Education Act 2009 is developed to move a step ahead in the direction of 100% literacy in India. It is a concept which incorporates free elementary education to every child of the age of six to fourteen years and ensures that the child belonging to weaker section and the child belonging to disadvantaged group are not discriminated against and prevented from pursuing and completing elementary education on any grounds. The Act has to be implemented by 2015.

There are three basic predominating issues in current educational scenario-

- Issue of access to education by all the children,
- Retention and guarantee for their success and
- Quality in education

Role of Teacher in Inclusive Set up of Education

Students in inclusive classrooms have wide range of diversified needs as they are different in terms of abilities and backgrounds. It creates a wide range of diversity in the classroom and demands different inputs, such as

- Each student requires individual attention and continuous support of the teacher.
- Inclusive classrooms demands flexible learning as each student has a different pace and style of learning.
- Teacher has to be multifunctional in the classroom – they perform the role of teacher, a counsellor, a guide, a friend, a researcher, a resource person, an information provider and above all a continuous learner who all the times keep on updating his/her knowledge.

Some interesting data and facts revealed by the recent study of SSA throw light on the crucial issues for strategic interventions:

- More than 3 million children with disabilities have been enrolled in general schools and this constitutes around 78% children of school going population and therefore nearly 22% of children with disabilities are yet to be enrolled.
- Though general teachers are important stakeholders in the process of inclusion, their knowledge about the disability is not adequate to handle children with disability. Even if a Special Educator is there in a school

he is trained in single disability where as we are talking of inclusive classrooms of children which may have several disabilities.

- Exclusion of Special Teachers form the general system of education in most States of India has made it difficult rather impossible for their absorption in mainstream. Special Teachers continue to be a project mode and draw consolidated salaries from the Central Government.
- Poor linkages at all levels i.e. Administrators, Special Educators, Disability Cells, EVGCs, State and District Coordinators, NCERT, SCERT, Special Schools and NGOs etc.
- UNESCO indicates that there are nearly 77 million children who are out of school system and one-third of them are expected to be children with disabilities. Recent initiatives and policy decision under RTE Act has made a breakthrough in this context by making provision for two Special Educators in each school as compulsory and imparting training to General Teachers in Inclusive Education for developing an understanding towards inclusive classrooms in mainstream.
- Here the role of Teacher Training Institutes for mass training of teachers' gains utmost importance and at the same time poses a challenge to fill this Training Gap. Though Inclusion emerges as the Cost-effective Model, there are local specific factors which determine a particular approach to inclusion and therefore, factors such as accessibility, availability of trained human resource, parental support, peer-group support etc. should be taken in to account for achieving goals of EFA.

PROFILE OF DISTRICT SOUTH- AT A GLANCE

S.No.	Particulars	Delhi	District South
1	Tehsil	27	1. Defence Colony 2. Haus Khas 3. Kalkaji
2	Area (Sq. Km.)	1483	250(16.86% of Delhi)
3	Population (2011)		
	Total	1,67,53,235	27,33,752
	Male	89,76,410	14,70,288
	Female	77,76,825	12,63,464
	Population of District South is 16.3% of Delhi		
4	Density (per Sq. Km.)	11,297	10,935{362 people (per Sq. Km.) less than Delhi}
5	Decadal Population Growth Rate		
	(1991-2001)	47.2 %	50.92%(3.90% larger than Delhi)
	(2001-2011)	21.00%	20.59%(0.41% less than Delhi)

In 2001-11 decadal population growth rate reduced to less than half of previous growth rate. Previous decadal growth rate of District South was larger than Delhi but in 2001-2011 it has been lesser than Delhi.

6 Sex Ratio (per 1000)

2011	866 (per 1000)	859 {7 Females (per 1000 males) less than Delhi}
2001	821(per 1000)	797{24 Females (per 1000 males) less than Delhi}

In 2011 sex ratio increased in District South as well as Delhi. In District South, 62 females (per 1000 male) are more than last decade.

7 Literacy Rate (2011)

Total	86.34%	87.03%(0.69% larger than Delhi)
Male	91.03%	92.20%(1.17% larger than Delhi)
Female	80.93%	80.99%(0.06% larger than Delhi)

8 No. of Schools

DOE	934	142
DOE Aided	209	17
DOE Unaided	1236	117
KVS	41	06
MCD	1726	273
MCD Aided	44	08
MCD Unaided	753	143
NDMC	87	Nil
NDMC Aided	03	Nil
NDMC Unaided	04	Nil
DCB	06	Nil
JNV	02	Nil
Total	5045	706(13.99% of Delhi)

9 No. of Children With Special Need (CWSN)

Blind	196	38(19.39% of Delhi)
Visually Impaired	45	02(00.04% of Delhi)
Low vision	3,320	277(08.34% of Delhi)
Hearing Impaired	499	63(12.63% of Delhi)
Ortho Handicaps	4,222	652(15.44% of Delhi)

Mental Retardation	270	65(24.07% of Delhi)
Mental Illness	31	04(12.90% of Delhi)
Slow Learner	3,464	401(11.58% of Delhi)
Autism	12	05(41.67% of Delhi)
Cerebral Palsy	69	13(18.84% of Delhi)
Speech Impaired	498	68(13.65% of Delhi)
<i>Learning Disability</i>	418	157(37.56% of Delhi)
Multiple Disability	244	33(13.52% of Delhi)
Leprosy cured	08	Nil

Total (DOE + MCD)	13,296	1,778(13.37% of Delhi)
--------------------------	---------------	-------------------------------

Source:

1. Census of India, 2001 & 2011
2. Directorate of Economics and Statistics, Office of Chief Registrar, Delhi
3. IEDSS, Lajpat Nagar, Delhi
4. DURC, Moti Bagh

From table it can be seen that :

Population of District South is 16.3% of Delhi.

In 2001-11 decadal population growth rate reduced to less than half of previous growth rate. Previous decadal growth rate of District South was larger than Delhi but in 2001-2011 it has been lesser than Delhi.

In 2011 sex ratio increased in District South as well as Delhi.

In District South, 62 females (per 1000 male) are more than last decade.

13.99% of schools of Delhi are in South District. CWSN (blind 19.39% , Visually Impaired 00.04%, children with Low Vision 08.34%, Hearing Impaired 12.63%,Mentally Retarded24.07%, Mentally ill 12.90%, Slow Learners 11.58%, Autistic 41.67% ,Cerebral Palsy 18.84%, Speech Impaired13.65%, Learning Disable 37.56%, Multiple disabled13.52%, Leprosy Cured Nil) in District South are 13.37% of Delhi.

Teacher Education and Implementation of Inclusive Education:

In India, secondary teachers are prepared through Pre Service Teacher Education Programmes, one year Bachelor of Education (B.Ed) programme. The course is being run largely by more than ten thousands teacher training institutions and universities where as the primary teachers are trained under two years diploma course which are run by Government and private DIETs (District Institute of Education and Training) under State Council of Educational Research and Training (SCERT). In India, National Council of Teacher Education (NCTE), University Grant Commission (UGC) and National Council of Educational Research and Training (NCERT) are responsible for preparing B.Ed curriculum. The curriculum was revised during 1998, 2002,2005 and 2009. The B.Ed and DIET programmes have the **Special Education** paper as optional. Thus this intergroup choice leaves little scope for the paper to be chosen by the pupil teachers as their elective option. Besides this the teacher educators have reported that pupil teacher do not opt for the paper: reasons are many

like- absence of experts in the teaching faculty to teach this paper, comprehensive coverage of this paper as the teacher educators generally do not feel comfortable due to their limited orientation in the field of disability. Another potent reason as indicated by them is that special children are rarely present in regular stream: so why to add to the work load of pupil teachers. This notion is common among the teacher educator as well as the pupil teacher. Thus the issues again question marks the adequacy, appropriateness and sufficiency of PSTE curriculum under consideration for preparing teachers to fulfil the requirement of inclusive set up of education. In our country all professionals like doctors advocates are trained on those skills which are required by their profession, but the plinth of human development, education, is being left with untrained teachers. There is an urgent need to renovate teacher education curriculum regarding pedagogy and updated learning methodologies. Teachers in inclusive classroom are asked to vary their teaching strategies according to the need of the child but in reality this curriculum is not empowering the pupil teachers to handle even the conventional classrooms. The curriculum of teacher education must focus on practical education; life skills and methodologies to satisfy each and every learner irrespective of his/her diversities.

Conclusion

Thus the data reveals that there is a dire necessity and immediate need of restructuring and reorganising the pre-service teacher education curriculum. The present form of Pre Service Teacher Education programme and the curriculum help teachers least to deal with the challenges of actual working conditions. The training programmes should contain more application based approaches and based on the various learning styles already researched, tested and adopted.

References

- Adam, P.R. (1987). *A Review and Synthesis of teacher Competencies Necessary for Effective Mainstreaming*;
- Chadda, A. (2003). *Perspective in Special Education in India: Community Based Primary Education Forum*
- Julka, A. (2006) *Including Children and Youth With Disabilities in Education: A Guide Practitioners* ; Department of Education of Groups With Special Need
- Julka. A. (2007) *Meeting Special Needs in School*, NCERT
- NCERT (2011) Indian Educational Review
- National Curriculum Framework for Quality Teacher Education (1998)
- National Curriculum Framework for Teacher Education(2005) Draft, NCERT

**THE RIGHT OF CHILDREN TO FREE AND COMPULSORY EDUCATION ACT, 2009:
AN EXPLORATORY STUDY**

Dr. Virendra Pratap Singh*

ABSTRACT

The major objective of this study was to find out the status of implementation of RTE Act, 2009 in States and Union Territories of India. For this purpose, a questionnaire was prepared, and administered in all the 29 States and 5 UTs of India. The information was obtained from the State Project Directors (SPDs) of the respective States / UTs about the steps taken for the implementation of the RTE Act. The responses were obtained from 24 States (Andhra Pradesh, Assam, Chhattisgarh, Delhi, Goa, Gujarat, Haryana, Himachal Pradesh, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Manipur, Meghalaya, Mizoram, Odisha, Punjab, Rajasthan, Sikkim, Tamilnadu, Tripura, Uttar Pradesh, Uttarakhand, West Bengal) and 4 UTs (A & N Islands, Chandigarh, Daman & Diu, Lakshadweep, excluding Dadra and Nagar Haveli). Five States viz. Arunachal Pradesh, Bihar, Nagaland, Maharashtra and Puducherry and one UT i.e. Dadra & Nagar Haveli did not provide any response.

Keywords: *Right to Education, School Management, Anganwadis, State Advisory Council (SAC), shiksha mitras, Teachers' Eligibility Test (TET), Right to Education Protection Authority (REPA), Pupil Teacher Ratio (PTR), RTE Act*

INTRODUCTION

The Right of Children to Free and Compulsory Education Act, 2009 (RTE Act, 2009) has envisaged free and compulsory education to all children of the age of six to fourteen years, till completion of elementary stage, in a neighbourhood school. The RTE Act has provisions for every child who is above six years of age and has not yet been admitted to any school or could not complete his/ her elementary education due to any reason to be admitted in a class appropriate to his or her age. In order to be at par with other children of the class, the child has a right to receive special training or additional instructions. There is an important concern over implementation of RTE Act in the school system with reference to special training or instructions, its modalities and execution. The States/UTs are expected to respond to the situation arising out of the implementation of RTE Act. The States/ UTs are also required to pay special attention to cope with the situation in terms of appointment of qualified teachers, development of special training programmes for out-of-school children admitted to age appropriate classes, and preparation of relevant teaching learning materials. The various important provisions in the RTE Act are:

- Right of disabled child to receive free and compulsory education in a neighbourhood school,
- Completion of elementary education even after fourteen years of age,
- Right of child to seek transfer to any other school,
- Prohibition of holding back and expulsion of child,

* Dr. Virendra Pratap Singh is Associate Professor ,Department of Elementary Education,National Council of Educational Research and Training,Sri Aurobindo Marg, New Delhi- 110016.He can be contacted at vpsncert@gmail.com,

- No child is denied admission because of lack of proof of age,
- Formulating standards and norms for school management committees,
- Qualification, terms and conditions of services of teachers,
- Filling of vacancies of teachers,
- Pre-school education (States/UTs may provide for this),
- Duties of teachers, and redressal of their grievances,
- Duties of parents/guardians,
- Prohibition of deployment of teachers for non-educational purposes,
- Maintaining pupil teacher ratio as specified,
- Prohibition of capitation fee and screening procedures,
- Prohibition of physical punishment and mental harassment,
- Norms and standards for schools,
- Preparation of school development plan,
- Laying down the curriculum and evaluation procedures,
- Monitoring child's rights to education, and
- Constitution of State Advisory Council, among other aspects.

The present study has been designed with an objective to know the status of implementation of various provisions of RTE Act in States/ UTs, and also their concerns and problems to implement the same. As the RTE Act has been implemented from April 2010, the States/UTs need to take up lot of preparatory activities in this regard. The study would explore what steps they have been able to take so far and what further is needed to be done. It would be important to assess the level of preparedness of States/UTs to be able to take effective steps for the implementation of RTE Act at various levels. It would also be important to know how far they are ready to take steps forward in regard to the implementation of RTE Act. The readiness of States/UTs would mean awareness of various stakeholders to take advantage of the RTE Act. The present study is, therefore, exploratory in nature, and initiated with an objective to find out the status of provisions of RTE Act and implementation thereof in the 34 States/UTs (except Jammu and Kashmir).

Materials and Methods

It is proposed to approach the Secretaries (Elementary Education)/State Project Directors (SSA Mission) of 34 States/UTs (except Jammu & Kashmir) for collection of information/ data on the initiatives taken or being taken on the various provisions of RTE Act to ensure the child's right to education. A questionnaire was developed by the Department of Elementary Education (DEE), NCERT to seek information from the States/UTs about the steps taken so far to implement provisions of RTE Act including availability of training materials, and its suitability in the context of RTE Act. The questionnaire includes data items for assessing the status of implementation of RTE Act, 2009 in the States/ UTs as listed below.

1. Whether RTE has been implemented in different categories of schools?
2. Whether model rules for RTE have been framed, and if framed whether it has been approved?
3. What strategic plan has been prepared for providing free and compulsory elementary education in the State with regard to age appropriate admission of children, availability of neighbourhood schools, and provision for child belonging to weaker section/ marginalized and disadvantaged sections of the society.
4. Whether curriculum/syllabi have been reviewed in conformity with constitutional values.

5. Whether curriculum/ syllabi have been reviewed in the light of all-round development of the child, building up child's knowledge, potentiality and talent, and development of physical and mental abilities to the fullest extent.
6. What steps have been taken to create awareness about RTE among teachers, parents and community?
7. What necessary arrangements are being made for providing free pre-school education to children below six years?
8. What steps have been taken in teaching learning process in the classroom to ensure learning through activities, discovery and exploration in a child centred and child friendly manner, comprehensive and continuous evaluation (CCE)/ assessment of ability to understand and apply knowledge, making child free from fear, trauma and anxiety, providing opportunity to the child to express freely, and that no child shall be subjected to physical punishment or mental harassment?
9. What special measures have been initiated for creating child friendly learning environment in classrooms?
10. Are there any training package/ module being developed for capacity building of teachers keeping in view the admission of out-of-school children in their age appropriate grade? If yes, details thereof.
11. What plan has been made to identify children who are out of school?
12. Whether any package of teaching-learning material or Bridge Course material has been prepared for special training for out-of-school children (non-enrolled or drop-outs)? If yes, details thereof.
13. What special training has been planned for the children who have been directly admitted to class appropriate to his/ her age?
14. Whether School Management Committees have been formed? If yes, details thereof.
15. Whether any initiative has been taken for preparing school development plan? If yes, details thereof.
16. What major interventions have been initiated since inception of RTE, especially for children with special needs?
17. What special arrangement has been made to accommodate children of transfer cases?
18. What steps have been take to recruit teachers as per RTE norms?
19. What steps have been taken to train untrained in service teachers?
20. What steps have been planned to redress the grievances of teachers?
21. Have you formed any State Advisory Council for proper implementation of RTE? If yes, details thereof.
22. What steps have been taken for monitoring of child's right to education by State Commission for Protection of Child's Right?
23. What steps are being taken by your state to meet the requirement of PTR 1:30?
24. What steps have been taken for rationalization of teachers' posts?
25. Whether any guidelines and/ or action points have been prepared for ensuring 25% admission in neighbourhood schools from the weaker and marginalized sections of the society?
26. Any other important issue/ information related to the RTE Act, 2009.

The quantitative and qualitative data obtained from the above listed items of interest for assessing the status of implementation of RTE Act 2009 in the States/ UTs shall be subjected to the mixed analysis (qualitative and quantitative) for drawing objective based question-wise findings using simple statistical analysis approach.

Major Findings

The historic move for universalisation of Elementary Education (UEE) has resulted in development of the Right of Children to Free and Compulsory Education Act, 2009 (RTE Act, 2009) adopted by Government of India on 27th August, 2009 (The Gazette of India 2009). The major thrust of this Act is to provide free and compulsory education to all children of the age-group of 6-14 years. As per the provisions all the States and Union Territories (UTs) in the Union of India have to mandatorily implement this Act w.e.f. 1st April, 2010. Therefore, this exploratory study of the implementation of RTE Act, 2009 in States / UTs was undertaken with the sole objective of finding the status of implementation of RTE Act, 2009 in the 29 States (excluding J & K) and 5 UTs (**Appendix-I**).

The data obtained from all the responding States and UTs upto February 2012 were subjected to mixed analysis (qualitative and quantitative). Following are the major findings drawn on the basis of objective based question-wise data analysis:

1. The RTE Act has been implemented in 21 States and 4 UTs. In two States i.e. Karnataka and Tamilnadu it is “being implemented in phases”. The State of Assam has negatively responded, however on the basis of subsequent observations RTE Act is in process of implementation there.
2. (a) On the basis of the responses of other questions it can be summarised that 23 States and one UT (Daman & Diu) have framed model rules for RTE Act. The framing of model rules is in the process in the state of Tamilnadu (not yet framed) and the Union Territory of Lakshadweep. Two UTs (A & N Islands and Chandigarh) have adopted the central government rules.
 - (b) Framed model rules for RTE Act have been approved by 17 States and one UT (Daman & Diu). These have not been approved by four States viz. Assam, Punjab, West Bengal and Delhi and 3 UTs (A & N Islands, Lakshadweep, Chandigarh). The approval is under process in case of Tamilnadu whereas the status has not been reported by Meghalaya.
3. Strategic plan for free and compulsory Elementary Education:
 - (a) *Age appropriate admission of children*: Notifications with regard to age appropriate admission of children have been issued in different modes by the competent authority related to the schools in all responding 24 States and four UTs.
 - (b) *Availability of neighbourhood schools*: The norms for availability of neighbourhood schools have been framed by 3 UTs viz. A & N Islands, Lakshadweep and Daman & Diu whereas no response in this regard has been obtained from Chandigarh. These norms have not yet been defined by 3 States viz. Manipur, Sikkim and Assam, whereas as per response there is no such requirement in the State of Gujarat. The other 20 States have either identified norms or have neighbourhood schools in different localities.
 - (c) *Provision for child belonging to weaker section and disadvantaged section of the society*: Out of all the responding States and UTs, 21 States and 4 UTs have issued the circular to reserve 25% seats for children belonging to weaker / marginalized sections of the society and to admit them in the neighbourhood school in age appropriate classes. Three States viz. Sikkim, Himachal Pradesh and Manipur have not given any specific response.
4. Out of the responding States, 19 have revised curriculum/syllabi in conformity with constitutional values whereas 4 States have given negative response. Further, the State of Kerala has stated that revision of curriculum/syllabi in conformity with constitutional values will be done by the SCERT. All the 4 UTs either have revised the syllabi or it is in the process.
5. Out of 24 States, 16 have revised curriculum / syllabi in light of all-round development of the child. Fifteen States have responded that their curriculum/syllabi has been reviewed in light of building up child’s

knowledge, potentiality and talent, and development of physical and mental abilities to the fullest extent. Chhattisgarh and Meghalaya have not given any specific response and the State of Kerala and Tamilnadu have left the task to their respective State bodies i.e. SCERT (Kerala) and DTERT (Tamilnadu). Only the State of Jharkhand has given a negative response for the curriculum revision. In the case of UTs, Daman & Diu has not given any specific response regarding curriculum revision.

6. Various types of activities that include seminars (6 States & one UT), awareness programmes through websites, newspapers etc. (14 States & 2 UTs), workshops (14 States), training programmes (14 States & 2 UTs), community programmes (6 States & 2 UTs), translational act (2 States), leaflet / pamphlet distribution (8 States) and other activities like *nukkad natak*, dance / drama, radio and TV shows on RTE (3 States) have been carried out to create awareness about RTE Act among teachers, parents and community members. No specific response had been received from Delhi.
7. Out of 24 States, 16 are providing free pre-school education to children below 6 years through '*Anganwadi*'. ECC centres are functioning to provide this facility in 4 States viz. Mizoram, Meghalaya, Gujarat and Tamilnadu. In West Bengal, ICDS Centre is facilitating pre-school education. No details were obtained from the States of Haryana, Jharkhand and Delhi regarding provisions on pre-school education. Further, it is noted that Assam has provision of *Ka-sreni* (pre-primary section attached to primary school) in addition to '*Anganwadis*'. In Goa, '*Balwadis*' and '*Kindergartens*' are also in function and registration of each pre-school institution with the Directorate of Education has been made mandatory. For UTs, it has been observed that Chandigarh has pre-primary classes attached to all the Government schools and no fee is charged from students. Lakshadweep has Government pre-school institutions. Similarly, Directorate of Education is running pre-primary classes in A & N islands whereas in Daman & Diu it is being imparted through ICDS.
8. Steps taken in teaching learning process in the classroom:
 - (a) Learning through activities, discovery and exploration in a child centred and child friendly manner has been adopted in practice by all the responding States and UTs in different modes. Specifically some interesting programmes like Kanjapuri Active Group of Learning (KAGL in Uttarakhand), *Nali-Kali* (Karnataka), *Samadhan* and *Sanjog* (Odisha), Activity Based Learning & Activity Learning Material (ABL & ALM in Madhya Pradesh), Learning Enhancement Activities (LEHAR in Rajasthan), ABL (Tripura), Project Based Learning (Haryana), Experience-Reflection-Application-Consolidation and *Pragna* (Gujarat), Learning through story books and print rich classroom (Chandigarh) etc. have been introduced.
 - (b) With regard to Comprehensive and Continuous Evaluation (CCE) / assessment of ability to understand and apply knowledge, out of 24 States, 22 have already implemented it whereas Kerala and Gujarat are in process of its implementation. Out of 4 UTs, 3 have implemented the concept of CCE whereas in Daman & Diu necessary steps have been taken to initiate CCE implementation.
 - (c) All the 24 responding States and 4 UTs have taken different initiatives to make children free from fear, trauma and anxiety. Some interesting initiatives such as reduction of number of paper-pen test (A & N Islands), ban on screening test (Uttarakhand), ban on corporal punishment & expulsion (Uttarakhand, Chhattisgarh, West Bengal, Manipur, Punjab, Delhi, Tripura, Uttar Pradesh), awareness programme for teachers (Mizoram, Andhra Pradesh), no-detention policy (Sikkim, West Bengal, Tamilnadu, Uttar Pradesh), *Ama Vidyalaya* (Odisha), LEHAR Room (Rajasthan), Group Work and Peer Activity (Madhya Pradesh), Peer sensitisation and appointment of counsellors (Chandigarh), Joyful Learning (Delhi) etc. have been introduced.

- (d) Regarding provision of opportunities to the children for free expression, it was found that the children in the 4 UTs are encouraged to participate in group discussions, extempore, debates etc. All the 24 responding States, are carrying out various activities like ‘*Srijan Vaadan*’, Metric Mela, ‘*Baal Shodh*’, ‘*Sapno Ki Udaan*’ (Uttarakhand); *Pratibha Karanji Programme* and Metric Melas (Karnataka); ‘*Baal Sabha*’, ‘*Akkad Bakkad Magazine*’ (Himachal Pradesh); School Cabinets, ‘*Meena Manch*’, Child reporters & child representatives (Odisha); LEHAR Programme (Rajasthan); ‘*Aale Bhole Magazine*’ (Punjab); ‘*Baal Sabha*’, Child Committees (Uttar Pradesh).
- (e) Corporal punishment has been banned in all the responding States and UTs. The teachers of various States have been imparted training for not resorting to physical punishment and mental harassment. Advocacy of child friendly classroom activities have been initiated in the State of Tamilnadu. Karnataka has introduced Child Protection Cell. In Odisha, toll-free school student’s helpline number has been introduced along with the provision of Grievance Redressal Cell. In Goa, SCPCR conducts school level training programme for teachers in collaboration with NGOs.
9. In all the responding States and UTs different measures have been initiated for creating child friendly learning environment in the classrooms. Some noteworthy measures adopted by some of the States are presented in Table 1.

Table 1: Measures Initiated for Creating Child Friendly Learning Environment in Class-rooms by States / UTs

S.No.	Measures initiated for creating child friendly learning environment in class-rooms	States/UTs
1.	<ul style="list-style-type: none"> Activity based learning 	Mizoram, Karnataka, Sikkim, Odisha, West Bengal, Tamilnadu, Goa, Manipur
2.	<ul style="list-style-type: none"> Use of learning corners, TLM, Interactive learning material, Srijan Vaadan, Child friendly assessment, KAGL, ABL. Use of Library, reading kits by Pratham and Room-To-Read etc. 	Uttarakhand
3.	<ul style="list-style-type: none"> TLM, display of maps in the class room. Good thoughts, proverbs, beautiful drawings were painted on the walls. Project based learning. 	Karnataka
4.	<ul style="list-style-type: none"> Involving the children in the preparation of TLM. Personal interaction with students. 	Andhra Pradesh, Tamilnadu
5.	<ul style="list-style-type: none"> Training on creation of child friendly learning environment in the class rooms. Demonstration of classroom management techniques. 	Chhattisgarh, Himachal Pradesh, Meghalaya, Gujarat, Delhi
6.	<ul style="list-style-type: none"> Giving small prizes to children, home visits by the teachers. Promotion of questioning spirit of the children 	Himachal Pradesh

	• Organisation of Bal Melas, Sports activities etc. by children	
7.	• ‘Ama Vidyalaya’: A drive for beautification of school.	Odisha
8.	• Implementation of BaLA	West Bengal, Tripura, Chandigarh
9.	• Interacting with parents, children and teachers to curb corporal punish\	Tamil Nadu
10.	• Introduction of LEHAR room as an attractive “Bal-mitra” room.	Rajasthan
11.	• Promotion of reading corners.	Uttar Pradesh
12.	• Introduction of rotational sitting system in class rooms	Tripura
13.	• Project based learning	Haryana
14.	• Implementation of Pragna	Gujarat
15.	• ADEPTS Programme	Daman & Diu

10. Out of 24 responding States 19 States and 2 UTs have taken initiatives for development of training package / module for capacity building of teachers keeping in view the admission of out-of-school children in their age appropriate grades. Among the States 3 have taken initiatives for capacity building programmes for teachers through bridge course and 10 have developed special training packages whereas only 1 UT (Chandigarh) has developed capacity building programme and 1 UT (A & N Islands) has allocated extra teaching hours. On the other hand, 3 States (Jharkhand, Tripura, Meghalaya) and 2 UTs (Lakshadweep, Daman & Diu) have not taken any initiatives.

11. The major strategies adopted to identify the out-of-school children (OoSC) are Household Survey (HHS) and Child Tracking System (CTS). Out of the responding States, 16 States along with 3 UTs have adopted HHS; 3 States have adopted Child Tracking System to identify the OoSC. Apart from these 5 States and 1 UT have adopted other strategies like Village Education Register (VER), Comprehensive Survey (CS) for the same.

12. Nineteen States and 2 UTs have initiated the preparation of teaching learning materials of Bridge course for special training of OoSC. Three States (Odisha, Meghalaya, West Bengal) and 2 UTs (Daman & Diu, Lakshadweep) have not taken initiative. The specific details of some of the important initiatives provided by the responding States and UTs have been summarised as follows in Table 2.

Table 2: Preparation of Teaching Learning Materials for Bridge Course by States / UTs

S.No.	Specific Initiatives	States / UTs
1.	Development of course materials	A & N Islands (Languages and EVS), Madhya Pradesh (Subject-wise), Mizoram
2.	Standard-wise breakup of training module	Uttarakhand, Assam, Chandigarh, Uttar Pradesh
3.	Chinnara and Angala Teacher’s book, Chinnara Angala workbooks	Karnataka
4.	Special reading materials	Chhattisgarh
5.	Individual Education Plan (IEP)	Tamilnadu

- | | |
|--------------------------------|---|
| 6. Condensed course | Rajasthan, Tamilnadu, Assam, Tripura, Uttar Pradesh |
| 7. PYAS (Text + Exercise book) | Jharkhand |

13. Two States (Uttarakhand & Assam) and 2 UTs (Lakshadweep, Daman & Diu) have not planned for imparting special training for directly admitted children to age-appropriate class. The details of Special Training Programmes (STPs) in different States are given Table 3.

Table 3: Planning of Special Training for Directly Admitted Children to Age Appropriate Class by States / UTs

S.No.	Special Training Programmes Planned	States / UTs
1.	Residential Special Training Centres (RSTCs) and Non-Residential Special Training Centres (NRSTCs)	Mizoram, Karnataka, Andhra Pradesh, Chhattisgarh, Kerala, Tripura, Manipur (NRSTCs), Uttar Pradesh, Goa, Gujarat, A & N Islands, Chandigarh, Odisha
2.	Residential Bridge Courses (RBCs) and Non-Residential Bridge Courses (NRBCs)	Mizoram, Himachal Pradesh, Madhya Pradesh, Rajasthan, Jharkhand, Punjab
3.	Preparation of Teaching Learning Materials (TLMs)	Mizoram, Meghalaya, Himachal Pradesh, Kerala (age-appropriate TLMs)
4.	Activity Based Learning (ABL)	Sikkim
5.	Field visits, discussion, linkages with local knowledge	Himachal Pradesh
6.	Assessment sheets based evaluation	Jharkhand (Buniyad & Buniyad plus)
7.	Condensed curriculum	Uttar Pradesh

14. SMCs have been formed in 17 States and all the 4 UTs. Three States i.e. Delhi, Punjab and Tamilnadu have not yet formed SMCs, other two States viz. Kerala and Chhattisgarh are in the process of formation of SMCs whereas two States viz. Goa and Manipur have not responded.

15. Fifteen States have formulated the School Development Plan (SDP) whereas 6 States are in the process. Three States (Manipur, Sikkim, Meghalaya) have not taken any initiative for development of school plan. In case of UTs, three have developed the plan. One UT i.e. Chandigarh has started the process and training to the members of SMCs for preparation of School Development Plan (SDP) has been imparted. Some of the specific initiatives related to SDP preparation are mentioned in Table 4.

Table 4: Initiatives for Preparing School Development Plan by States / UTs

S.No.	Details of Initiatives for preparation of School Development Plan	States / UTs
1.	Training on SDP preparation	Daman & Diu, Odisha (Sahajog), West Bengal, Chandigarh, Tamilnadu, Rajasthan, Assam, Uttar Pradesh, Goa
2.	Community mobilisation	Chhattisgarh, Odisha,
3.	Issue of directions / guidelines on SDP	Himachal Pradesh, Kerala, Uttarakhand
4.	Orientation Programme	Odisha, Madhya Pradesh, Uttar Pradesh
5.	Workshop	Tripura

16. Out of 28 responding States and UTs, 4 States (Delhi, Karnataka, Kerala, Haryana) and 1 UT (Lakshadweep) did not furnish information regarding interventions for Children With Special Needs (CWSN) since introduction of RTE Act. On the basis of data received from different States and UTs, the interventions have been initiated for CWSN as described in Table 5.

Table 5: Intervention Initiatives for Children With Special Needs by States / UTs

S.No.	Interventions initiated for CWSN	States / UTs
1.	Barrier free access	A & N Islands, Andhra Pradesh, Uttarakhand, Odisha, Tamilnadu, Madhya Pradesh, Rajasthan, Assam, Punjab, Uttar Pradesh, Tripura, Gujarat
2.	Inclusion in normal school	A & N Islands, Tamilnadu, Tripura, Gujarat
3.	Scholarships	A & N Islands
4.	Health Camps/Assessment and Screening camps	Daman & Diu, Uttarakhand, Andhra Pradesh, Sikkim, Madhya Pradesh, Rajasthan, Tripura, Manipur
5.	Training Programme for Teachers	Daman & Diu, Uttarakhand (PGPD for in-service teachers), Andhra Pradesh, Chhattisgarh, Himachal Pradesh & Uttar Pradesh (Foundation course), West Bengal, Madhya Pradesh, Rajasthan, Assam, Jharkhand, Tripura
6.	Distribution of Aids and Appliances	Daman & Diu, Mizoram, Uttarakhand, Odisha, West Bengal, Madhya Pradesh, Assam, Uttar Pradesh, Tripura
7.	Identification and personal profile preparation, Development of separate database, Pre-integration camps for CWSN	Uttarakhand, Uttar Pradesh
8.	Resource teacher appointments	Uttarakhand, Andhra Pradesh, Sikkim (Inclusive Education volunteers), Himachal Pradesh (Special educators), Odisha, West Bengal, Rajasthan, Meghalaya & Manipur (I.E volunteers), Chandigarh
9.	Home based education	Uttarakhand, Andhra Pradesh, Sikkim, Chhattisgarh, Madhya Pradesh, Assam, Jharkhand, Tripura, Chandigarh, Manipur
10.	Transport and Escort facility	Uttarakhand, Chandigarh, Odisha, Madhya Pradesh, Rajasthan, Chandigarh
11.	Enrolment in neighbourhood schools	Sikkim
12.	Parent counselling	Sikkim, Assam, Manipur
13.	Provision of Resource Room	Chhattisgarh, Himachal Pradesh, West Bengal, Madhya Pradesh, Jharkhand, Uttar Pradesh (Resource Centres), Tripura
14.	Mobile resource consultants	Chhattisgarh, Madhya Pradesh, Uttar Pradesh (itinerant teachers)
15.	School Readiness Programme	Chandigarh

17. Admission to the children of transfer cases is given throughout the year in 21 States and 3 UTs. However, 3 States i.e., Uttarakhand, Punjab, Meghalaya and Lakshadweep UT have no such provisions to accommodate such students.
18. The scenario of recruitment of teachers as per RTE norms is not so encouraging among the responding States and UTs. Out of the responding States, in 10 States, the recruitment procedure is still under way along with one UT. The States of Chhattisgarh, Odisha and UP have taken permission from MHRD/ NCTE in connection to the recruitment of teachers as per RTE norms. The States of Haryana, Gujarat and Punjab have shown appreciative gestures and already completed Teachers' Eligibility Test (TET). In the States of West Bengal, Madhya Pradesh, Rajasthan, Gujarat and in UTs of A & N Islands and Lakshadweep, recruitment rules of teachers have been amended as per RTE norms. The remaining 4 States have not provided specific information in this regard.
19. Almost all the responding States and UTs either did not have untrained teachers or steps have been taken to train untrained teachers. The States, Karnataka, Andhra Pradesh, Rajasthan, Goa, Haryana, Gujarat and Delhi have not appointed any untrained teacher. Similarly in all the 4 UTs all appointed teachers are trained. Training to the in-service teachers is being provided through CTEs / DIETs / IGNOU (DPE) / NIOS with State Boards / DPEP / TTIs / SCERTs / Directorate of Teacher Education / Distance Education Programme particularly in the States of Mizoram, Uttarakhand, Sikkim, Chhattisgarh, Odisha, West Bengal, Jharkhand, Tripura, Uttar Pradesh and Manipur.
20. Provisions have been made in the RTE rules adopted by the States to redress the grievances of the teachers. These provisions, as adopted by various States, include - constitution of Grievance Redressal Committee / Forum, functioning of RTI cell, online Redressal mechanism, monitoring committees at block / district / State level, State Administrative Tribunal, RTE Appellate Authority, meetings of teacher unions under the chairmanship of Education ministers, School Managing Committee and posting of grievances to Directorate of Education through proper channel. In UT, Daman & Diu 'Complaint/Suggestion box' are kept in the schools and toll free number has been introduced in the education office for redressing the grievances of the teachers.
21. The State Advisory Council (SAC), for implementation of RTE, has been formed in five States namely Karnataka, Punjab, Mizoram, Tripura and Goa. Twelve States viz. Uttarakhand, Andhra Pradesh, Sikkim, Chhattisgarh, Kerala, Madhya Pradesh, Odisha, Rajasthan, Tamilnadu, Meghalaya, Delhi and Manipur have not formed SAC. Six States viz. Himachal Pradesh, West Bengal, Assam, UP, Haryana and Gujarat and UT Lakshadweep are under the process of forming SAC. The State of Jharkhand has not responded in this regard. In case of UTs, SAC has been constituted only in A & N Islands. Daman & Diu and Chandigarh have not constituted SAC.
22. Right to Education Protection Authority (REPA) has been constituted in the States of Mizoram and Haryana whereas it is in the process of constitution in Tripura and Tamilnadu. On the other hand, State Commission for Protection of Child Rights (SCPCR) has been constituted in 8 States viz. Karnataka, Chhattisgarh, Madhya Pradesh, Assam, Jharkhand, Goa, Gujarat and Manipur. In Goa, SCPCR with the NGOs conducts school level training programme to create awareness among the teachers and children on the Child Rights Act and also on the provisions against the physical punishment and mental harassment of children in the schools. In case of UTs, REPA has been constituted only in A & N Islands whereas SCPCR is under the process of constitution in Chandigarh.
23. The provision of Pupil Teacher Ratio (PTR) 1:30, as prescribed by RTE Act, in 6 States (Mizoram, Karnataka, Uttarakhand, Goa, Tripura and Meghalaya) and 1 UT (A & N Islands), it is below the prescribed ratio. Further in 9 States i.e. Andhra Pradesh, Sikkim, Chhattisgarh, Tamilnadu, Madhya

Pradesh, Rajasthan, Assam, Punjab, UP and in one UT i.e. Chandigarh the process is underway to achieve the prescribed PTR. In four States i.e. West Bengal, Haryana, Gujarat, Himachal Pradesh and two UTs i.e. Lakshadweep and Daman & Diu, the PTR of 1:30 has been achieved after the implementation of RTE Act. States of Manipur, Delhi, Jharkhand, Kerala and Odisha did not provide any specific information regarding PTR.

24. Rationalization of teachers' posts after implementation of RTE Act, has already been carried out in 7 States (Karnataka, Andhra Pradesh, Himachal Pradesh, Madhya Pradesh, Punjab, Tripura and Gujarat) and in one UT (Lakshadweep). It is under the process in 9 States (Mizoram, Uttarakhand, Chhattisgarh, Odisha, West Bengal, Tamilnadu, Assam, Uttar Pradesh and Haryana) and in 3 UTs (Daman & Diu, A & N Islands and Chandigarh). The remaining 7 States did not provide any specific information regarding this.
25. Eleven States viz. Uttarakhand, Andhra Pradesh, Chhattisgarh, Kerala, Odisha, West Bengal, Madhya Pradesh, Rajasthan, Punjab, Uttar Pradesh and Haryana have prepared the guidelines for ensuring 25% admission in neighbourhood schools. The States of Sikkim, Jharkhand, Manipur and Tamilnadu have not prepared the guidelines. Remaining 6 States viz. Karnataka, Himachal Pradesh, Assam, Tripura, Meghalaya and Gujarat, the guidelines are under the process of preparation. In case of Mizoram and Goa, preparation of such guidelines has not been perceived as a necessity and in the State of Delhi, no specific information was obtained. In case of UTs guidelines have been issued in A & N Islands and Chandigarh whereas in Daman & Diu they are under the process of preparation. In case of Lakshadweep, administration ensured the availability of school facility to all sections therefore no such guidelines have been framed.
26. Some of the States and UTs have also undertaken some important additional steps regarding implementation of RTE Act, 2009. The important ones have been summarised in Table 6.

Table 6: Additional Steps Regarding Implementation of RTE Act, 2009 by States/UTs

S.No.	Additional Steps Related to RTE Act, 2009	States/UTs
1.	• The State Council of Educational Research and Training, Uttarakhand has been notified as Academic Authority.	Uttarakhand
2.	• Residential Schools have been established for urban deprived children at Hyderabad, Vijayawada, Visakhapatnam and Khammam.	Andhra Pradesh
3.	• Web blog has been created to obtain more information on the initiatives and programmes under RTE in Odisha i.e. http://rteodisha.blogspot.com .	Odisha
4.	• State has issued guideline to ensure 25% admission in neighbourhood schools for the weaker and marginalised sections of the society. State has also organised several meetings with private school management and Principals in this regard to ensure admission from 2011-12 onwards.	Jharkhand
5.	• State has issued various notifications to implement of RTE Act, 2009 and a cell has been created at State level and District level.	Punjab
6.	• The training of first batch of 62000 graduate <i>shiksha mitras</i> already scheduled at 880 Block Resource Centre and will be completed by June, 2013. The training of remaining <i>shiksha mitras</i> will be started in July, 2013 and will be completed by June, 2015.	Uttar Pradesh
	• Thus, as required by the Act, all the untrained teachers will be given	

The above findings related to this exploratory study of the implementation of RTE Act, 2009 in States / UTs are based on the information obtained from State Project Directors (SPDs) of respective States & UTs. Finally, the findings have been drawn from the analysis provided in Chapter III under this report. Further, an executive summary based on these findings have been given in the beginning of this report.

Conclusion

Based on the question-wise analysis and the respective findings of this study presented in the previous sections of this report, following are the major conclusions:

- RTE Act, 2009 has been implemented in 21 States (Andhra Pradesh, Chhattisgarh, Delhi, Goa, Gujarat, Haryana, Himachal Pradesh, Jharkhand, Kerala, Madhya Pradesh, Manipur, Meghalaya, Mizoram, Odisha, Punjab, Rajasthan, Sikkim, Tripura, Uttar Pradesh, Uttarakhand, West Bengal), and 4 UTs (A & N Islands, Chandigarh, Daman & Diu, Lakshadweep). In the States of Karnataka, Tamilnadu and Assam, it is in the process.
- Model rules for RTE Act, 2009 have been framed by 23 States (Andhra Pradesh, Assam, Chhattisgarh, Delhi, Goa, Gujarat, Haryana, Himachal Pradesh, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Manipur, Meghalaya, Mizoram, Odisha, Punjab, Rajasthan, Sikkim, Tripura, Uttar Pradesh, Uttarakhand, West Bengal), and 2 UTs (A & N Islands, Chandigarh). Eighteen States and 1 UT have approved these rules.
- Notifications with regard to age appropriate admission of children have been issued by all the responding 24 States and 4 UTs. Twenty States except Manipur, Sikkim, Assam and Gujarat and 3 UTs except Chandigarh have framed norms for availability of neighbourhood schools. Twenty-one States except Sikkim, Himachal Pradesh, Manipur and 4 UTs have provisions for children belonging to weaker sections and disadvantaged sections of the society.
- Nineteen States and 3 UTs have revised their curriculum / syllabi. Revisions have been done with respect to all round development of the child (16 States and 3 UTs), building up child's knowledge, potentiality and talent (15 States and 3 UTs) and development of physical and mental abilities to the fullest extent (15 States and 3 UTs).
- Various types of activities like seminars (6 States and one UT), awareness programmes through websites, newspapers etc. (14 States and 2 UTs), workshops (14 States), training programmes (14 States and 2 UTs), community programmes (6 States and 2 UTs), translational act (2 States), leaflet / pamphlet distribution (8 States) and other activities like *mukkad natak*, dance / drama, radio and TV shows on RTE etc. (3 States) have been carried out to create awareness about RTE Act among teachers, parents and community members.
- Out of 24 States, 16 are providing free pre-school education to children below 6 years through '*Anganwadi*'. ECC centres are functioning to provide this facility in 4 States viz. Mizoram, Meghalaya, Gujarat and Tamilnadu. In West Bengal, ICDS Centre is facilitating pre-school education. The States of Haryana, Jharkhand and Delhi could not provide information on provisions of pre-school education. Assam has provision of *Ka-sreni* (pre-primary section) in addition to '*Anganwadis*', Goa has '*Balwadis*' and '*Kindergartens*'. All the 4 UTs have made provisions for pre-school education to children.
- As per RTE provisions, actions have been taken for ensuring learning through activities, discovery and exploration in a child centred and child friendly manner by all responding States and UTs in different modes. Specifically some interesting programmes like Kanjapuri Active Group of Learning (KAGL in Uttarakhand), *Nali-Kali* (Karnataka), *Samadhan* and *Sanjog* (Odisha), Activity Based Learning (ABL) & Activity Learning Material (ALM) (Madhya Pradesh), LEHAR (Learning Enhancement Activities in

Rajasthan), ABL (Tripura), Project Based Learning (Haryana), Experience-Reflection-Application-Consolidation and *Pragna* (Gujarat), Learning through story books and print rich classroom (Chandigarh) etc. have been introduced. Similarly, action has been taken with regard to Comprehensive and Continuous Evaluation (CCE) / assessment of ability to understand and apply knowledge and 22 States (except Kerala and Gujarat) and 3 UTs (except Daman & Diu) have already implemented it. All the 24 responding States and 4 UTs have taken interesting initiatives such as reduction of number of paper-pen test (A & N Islands), ban on screening test (Uttarakhand), corporal punishment, expulsion (Uttarakhand, Chhattisgarh, West Bengal, Manipur, Punjab, Delhi, Tripura, Uttar Pradesh), awareness programme for teachers (Mizoram, Andhra Pradesh), no detention policy (Sikkim, West Bengal, Tamilnadu, Uttar Pradesh), *Ama Vidyalaya* (Odisha), LEHAR Room (Rajasthan), Group Work and Peer Activity (Madhya Pradesh), Peer sensitisation and appointment of counsellors (Chandigarh), Joyful Learning (Delhi) etc. to make children free from fear, trauma and anxiety. Further practical action has also been taken by 24 States and 4 UTs for providing opportunity of free expression to children through participation in group discussions, extempore, debate, organisation of activities like ‘*Srijan Vaadan*’, Metric Mela, ‘*Baal Shodh*’, ‘*Sapno Ki Udaan*’ (Uttarakhand); *Pratibha Karanji Programme* and Metric Melas (Karnataka); ‘*Baal Sabha*’, ‘*Akkad Bakkad Magazine*’ (Himachal Pradesh); School cabinets, ‘*Meena Manch*’, Child reporters & child representatives (Odisha); LEHAR Programme (Rajasthan); ‘*Aale Bhole Magazine*’ (Punjab); ‘*Baal Sabha*’, Child Committees (Uttar Pradesh). Corporal punishment has been banned in all the responding States and UTs. The teachers of various States have been imparted training for not using physical punishment and mental harassment. In Odisha, toll-free school students’ helpline number has been introduced.

- Schools in various States have initiated various measures for creation of child friendly learning environment. Some important initiatives are such as– Activity based learning (Mizoram, Karnataka, Sikkim, Odisha, West Bengal, Tamilnadu, Goa, Manipur), Use of learning, corners, TLM, Interactive learning material, Srijan Vaadan, Child friendly assessment, KAGL, ABL. and use of Library, reading kits by Pratham and Room-to-Read etc. (Uttarakhand), TLM, maps displayed in the class room, good thoughts, proverbs, beautiful drawings were painted on the walls and project based learning (Karnataka) and involving the children in the preparation of TLM and personal interaction with students (Andhra Pradesh, Tamilnadu), Training on creation of child friendly learning environment in the class rooms and demonstration of classroom management techniques (Chhattisgarh, Himachal Pradesh, Meghalaya, Gujarat, Delhi), giving small prizes to children, home visits by the teachers, specific books would be designed for promoting the questioning spirit of the children and organisation of Bal Melas, Sports activities etc. by children (Himachal Pradesh), ‘**Ama Vidyalaya**’: A drive for beautification of school (Odisha), implementation of BaLA (West Bengal, Tripura, Chandigarh), interacting with parents, children and teachers to curb corporal punishment and mental harassment to children (Tamilnadu), introduction of LEHAR room as an attractive “Bal-mitra” room (Rajasthan), promotion of reading corners (Uttar Pradesh), introduction of rotational sitting system in class rooms (Tripura), project based learning (Haryana), implementation of Pragna (Gujarat), ADEPTS Programme (Daman & Diu).
- Some significant strategies adopted to identify the out-of-school children (OoSC) by States and UTs are Household Survey (HHS – 16 States and 3 UTs) and Child Tracking System (CTS – 3 States) and Village Education Register (VER) and Comprehensive Survey (CS – 5 States and 1 UT). It is quite motivating to find that 19 States and 2 UTs have taken initiatives for development of training package / module for capacity building of teachers keeping in view the admission of out-of-school children in their age appropriate grades. Bridge course, special training package allocating extra teaching hours are some important programmes for capacity building adopted by some States and UTs.
- Nineteen States and 2 UTs have taken initiatives for preparation of teaching learning materials of Bridge course for special training of out-of-school children (OoSC). The specific initiatives are: development of

course materials [A & N Islands (Languages and EVS), Madhya Pradesh (Subject-wise), Mizoram], standard-wise breakup of training module (Uttarakhand, Assam, Chandigarh, Uttar Pradesh), Chinnara and Angala teacher's book, Chinnara Angala workbooks (Karnataka), special reading materials (Chhattisgarh), Individual Education Plan (IEP) (Tamilnadu), condensed course (Rajasthan, Tamilnadu, Assam, Tripura, Uttar Pradesh), PYAS [Jharkhand (Text + Exercise book)].

- Some important provisions have been made by the States and UTs regarding planning of Special Training for directly admitted children to age appropriate class such as: Residential Special Training Centres (RSTCs) and Non-Residential Special Training Centres (NRSTCs) (Mizoram, Karnataka, Andhra Pradesh, Chhattisgarh, Kerala, Tripura, Manipur (NRSTCs), Uttar Pradesh, Goa, Gujarat, A & N Islands, Chandigarh, Odisha), Residential Bridge Courses (RBCs) and Non-Residential Bridge Courses (NRBCs) (Mizoram, Himachal Pradesh, Madhya Pradesh, Rajasthan, Jharkhand, Punjab), Preparation of Teaching Learning Materials (TLMs) [Mizoram, Meghalaya, Himachal Pradesh, Kerala (age-appropriate TLMs)], Activity Based Learning (ABL) (Sikkim), field visits, discussion, linkages with local knowledge (Himachal Pradesh), Assessment sheets based evaluation [Jharkhand (Buniyad & Buniyad plus)], Condensed curriculum (Uttar Pradesh).
- School Management Committees (SMCs) have been constituted in 17 States and 4 UTs. Three States i.e. Delhi, Punjab and Tamilnadu have not yet formed SMCs, other 2 States *viz.* Kerala and Chhattisgarh are in the process of formation of SMCs whereas 2 States *viz.* Goa and Manipur did not respond.
- School Development Plan (SDP) has been formulated in 15 States and 3 UTs. Some specific initiatives related to SDP preparation by different States are such as: training on SDP preparation [Daman & Diu, Odisha (Sahajog), West Bengal, Chandigarh, Tamilnadu, Rajasthan, Assam, Uttar Pradesh, Goa], community mobilisation (Chhattisgarh, Odisha), issuance of directions / guidelines on SDP (Himachal Pradesh, Kerala, Uttarakhand), orientation programmes (Odisha, Madhya Pradesh, Uttar Pradesh), workshops (Tripura).
- Some important interventions for Children With Special Needs (CWSN) as adopted by different States / UTs are: barrier free access (A & N Islands, Andhra Pradesh, Uttarakhand, Odisha, Tamilnadu, Madhya Pradesh, Rajasthan, Assam, Punjab, Uttar Pradesh, Tripura, Gujarat), inclusion in normal schools (A & N Islands, Tamilnadu, Tripura, Gujarat), scholarships (A & N Islands), health camps/ assessment and screening camps (Daman & Diu, Uttarakhand, Andhra Pradesh, Sikkim, Madhya Pradesh, Rajasthan, Tripura, Manipur), training programme for teachers [Daman & Diu, Uttarakhand (PGPD for in-service teachers), Foundation course (Andhra Pradesh), Chhattisgarh, Himachal Pradesh & Uttar Pradesh, West Bengal, Madhya Pradesh, Rajasthan, Assam, Jharkhand, Tripura], distribution of aids and appliances (Daman & Diu, Mizoram, Uttarakhand, Odisha, West Bengal, Madhya Pradesh, Assam, Uttar Pradesh, Tripura), identification and personal profile preparation (Uttarakhand), Resource teacher appointments [Uttarakhand, Andhra Pradesh, Sikkim (Inclusive Education Volunteers), Special educators (Himachal Pradesh), Odisha, West Bengal, Rajasthan, Meghalaya & Manipur (I.E volunteers), Chandigarh], home-based education (Uttarakhand, Andhra Pradesh, Sikkim, Chhattisgarh, Madhya Pradesh, Assam, Jharkhand, Tripura, Chandigarh, Manipur), transport and escort facility (Uttarakhand, Chandigarh, Odisha, Madhya Pradesh, Rajasthan, Chandigarh), enrolment in neighbourhood schools (Sikkim), parent counselling (Sikkim, Assam, Manipur), provision of Resource Room [Chhattisgarh, Himachal Pradesh, West Bengal, Madhya Pradesh, Jharkhand, Resource Centres, itinerant teachers (Uttar Pradesh), Tripura], Mobile resource consultants [Chhattisgarh, Madhya Pradesh], development of separate database (Uttar Pradesh), pre-integration camps for CWSN (Uttar Pradesh), school readiness programme (Chandigarh).
- Admission to the children of transfer cases is given throughout the year in 21 States and 3 UTs. However, 3 States i.e., Uttarakhand, Punjab, Meghalaya and 1 UT Lakshadweep have no such provisions to accommodate such students.

- The scenario of recruitment of teachers as per RTE norms is not so encouraging among the responding States and UTs. In 10 States and 1 UT the recruitment procedure is still in the process. The States of Chhattisgarh, Odisha and UP have taken permission from MHRD/ NCTE in connection to the recruitment of teachers as per RTE norms. The States of Haryana, Gujarat and Punjab have shown appreciative gestures and already completed Teachers' Eligibility Test (TET). In the States of West Bengal, Madhya Pradesh, Rajasthan, Gujarat and in UTs of A & N Islands and Lakshadweep, recruitment rules of teachers have been amended as per RTE norms.
- All the four UTs and the States of Karnataka, Andhra Pradesh, Rajasthan, Goa, Haryana, Gujarat and Delhi have not appointed any untrained teacher. In the remaining States training to the in-service teachers is being provided through these institutions: CTEs / DIETs / IGNOU (DPE) / NIOS with State Boards / DPEP / TTIs / SCERTs / Directorate of Teacher Education / Distance Education Programme.
- Provisions regarding redressal of the grievances of the teachers adopted by various States, include - constitution of Grievance Redressal Committee/Forum, functioning of RTI cell, online Redressal mechanism, monitoring committees at block/district/ State level, State Administrative Tribunal, RTE Appellate Authority, meetings of teacher unions under the chairmanship of Education ministers, School Managing Committee and posting of grievances to Directorate of Education through proper channel. In UT, Daman & Diu 'Complaint/Suggestion box' are kept in the schools and toll free number has been introduced in the education office for the redressal.
- The State Advisory Council (SAC), for implementation of RTE, has been constituted in one UT (A & N Islands) and 5 States viz. Karnataka, Punjab, Mizoram, Tripura and Goa. Twelve States viz. Uttarakhand, Andhra Pradesh, Sikkim, Chhattisgarh, Kerala, Madhya Pradesh, Odisha, Rajasthan, Tamilnadu, Meghalaya, Delhi and Manipur have not formed SAC. Other 6 States viz. Himachal Pradesh, West Bengal, Assam, Uttar Pradesh, Haryana and Gujarat and UT Lakshadweep are under the process of forming SAC.
- Monitoring of Child's Right to Education is being done by Right to Education Protection Authority (REPA) in the UT A & N Islands & States of Mizoram and Haryana. It is under the process in Tripura and Tamilnadu. In 8 States viz. Karnataka, Chhattisgarh, Madhya Pradesh, Assam, Jharkhand, Goa, Gujarat and Manipur the State Commission for Protection of Child Rights (SCPCR) is acting as monitoring agency.
- Six States viz. Mizoram, Karnataka, Uttarakhand, Goa, Tripura and Meghalaya and one UT A & N Islands have Pupil Teacher Ratio below the prescribed norm. Other 9 States i.e. Andhra Pradesh, Sikkim, Chhattisgarh, Tamilnadu, Madhya Pradesh, Rajasthan, Assam, Punjab, UP and one UT i.e. Chandigarh also lie below the norm but are striving to achieve the target. Remaining 4 States i.e. West Bengal, Haryana, Gujarat, Himachal Pradesh and 2 UTs i.e. Lakshadweep and Daman & Diu have achieved the prescribed ratio. Further, it has also been found that rationalization of teachers' posts after implementation of RTE Act, has already been carried out in 7 States (Karnataka, Andhra Pradesh, Himachal Pradesh, Madhya Pradesh, Punjab, Tripura and Gujarat) and in one UT (Lakshadweep). It is under the process in 9 States viz. Mizoram, Uttarakhand, Chhattisgarh, Odisha, West Bengal, Tamilnadu, Assam, Uttar Pradesh and Haryana and in 3 UTs viz. Daman & Diu, A & N Islands and Chandigarh.
- The guidelines for ensuring 25% admission in neighbourhood schools have been prepared by 11 States viz. Uttarakhand, Andhra Pradesh, Chhattisgarh, Kerala, Odisha, West Bengal, Madhya Pradesh, Rajasthan, Punjab, Uttar Pradesh and Haryana. The States of Sikkim, Jharkhand, Manipur and Tamilnadu have not prepared the guidelines. Remaining 6 States viz. Karnataka, Himachal Pradesh, Assam, Tripura, Meghalaya and Gujarat, the guidelines are under the process of preparation. In case of Mizoram and Goa, preparation of such guidelines has not been perceived as a necessity and in the State of Delhi, no specific information was obtained. In case of UTs guidelines have been issued in A & N Islands and Chandigarh whereas in

Daman & Diu they are under the process of preparation. In case of Lakshadweep, administration has ensured the availability of school facility to all sections therefore no such guidelines have been framed.

- Some of the States and UTs have also undertaken some important additional steps regarding implementation of RTE Act, 2009. The important ones are: Notification of SCERT as academic authority in Uttarakhand, establishment of residential schools for urban deprived children in Andhra Pradesh, creation of Web blog on RTE in Odisha, issuance of guidelines for ensuring 25% admission of children from weaker / marginalised sections of the society, organisation of several meetings with private school managements and principals in Jharkhand, setting up of District and State level cells in Punjab, training of 62,000 graduate *shiksha mitras* in Uttar Pradesh.

On the whole, the conclusions in the above section have been derived on the basis of information obtained from the SPDs of different States/UTs. The conclusions clearly reflect a positive and motivating picture about the status of implementation of RTE Act, 2009. However, for attaining Universalization of Elementary Education and goals of RTE Act, 2009, more stringent measures should be taken uniformly by all the States / UTs, especially those lagging behind must take inspiration from the others.

Acknowledgment

The author is thankful to the Head, DEE, NCERT, New Delhi for her constant encouragement and support at every stage of the study. The States/UTs Project Offices on SSA Mission and their Officers deserve the special thanks for providing information/data in bringing out this study. The author is also thankful to the Director, NCERT and Joint Director, NCERT including the Faculty Members of DEE as well as others who are directly and indirectly associated and involved in providing valuable support during this study.

Reference:

1. GOI (2010). Report of the Committee on implementation of the Right of Children to Free & Compulsory Education Act, 2009 and the Resultant Revamp of Sarva Shiksha Abhiyan. Ministry of Human Resources Development, Department of School Education & Literacy, New Delhi.
2. GOI (2011). Sarva Shiksha Abhiyan – Framework for Implementation (Based on the Right of Children to Free and Compulsory Education Act, 2009). Ministry of Human Resource Development, Department of School Education and Literacy, New Delhi.

Appendix I

List of States/UTs which were Included in the Study of Implementation of RTE Act, 2009 and Date of Receipt of Response from the States/UTs

<i>S.No.</i>	<i>States / UTs</i>	<i>Date of Receipt of Response</i>
1.	A & N Islands	16.05.2011
2.	Chandigarh	04.10.2011
3.	Daman & Diu	11.05.2011
4.	Lakshadweep	25.04.2011
5.	Andhra Pradesh	09.05.2011
6.	Assam	19.07.2011
7.	Chhattisgarh	28.06.2011
8.	Delhi	15.11.2011

9.	GOA	14.10.2011
10.	Gujarat	05.10.2011
11.	Haryana	27.09.2011
12.	Himachal Pradesh	01.07.2011
13.	Jharkhand	12.07.2011
14.	Karnataka	07.06.2011
15.	Kerala	Not Available
16.	Madhya Pradesh	20.09.2011
17.	Manipur	27.01.2012
18.	Meghalaya	21.09.2011
19.	Mizoram	10.06.2011
20.	Orissa	Not Available
21.	Punjab	18.08.2011
22.	Rajasthan	11.07.2011
23.	Sikkim	14.06.2011
24.	Tamil Nadu	12.07.2011
25.	Tripura	12.09.2011
26.	Uttar Pradesh	20.09.2011
27.	Uttarakhand	31.05.2011
28.	West Bengal	22.07.2011

List of Acronyms

ABL	Activity Based Learning
ALM	Activity Learning Material
BaLA	Building As Learning Aid
BRC	Block level Resource Person
BRT	Block Resource Teacher
CBSE	Central Board of Secondary Education
CCE	Comprehensive and Continuous Evaluation
CPC	Circle Project Coordinator
CRP	Cluster level Resource Person
CS	Comprehensive Survey
CTE	College of Teachers Education
CTS	Child Tracking System
CWSN	Children With Special Needs
DEE	Department of Elementary Education

DEP	Distance Education Programme
DIET	District Institute of Education Training
HHS	Household Survey
IEP	Individual Education Plan
IEP	Individual Education Plan
IGNOU	Indira Gandhi National Open University
KAGL	Kanjapuri Active Group of Learning
KRPF	Key Resource Person of Family
LEHAR	Learning Enhancement Activities
NCERT	National Council of Educational Research and Training
NCTE	National Council of Teacher Education
NIOS	National Institute of Open Schooling
NRBC	Non-Residential Bridge Course
NRSTC	Non-Residential Special Training Centre
OoSC	Out-of-School Children
PTR	Pupil Teacher Ratio
RBC	Residential Bridge Course
REPA	Right to Education Protection Authority
RSTC	Residential Special Training Centre
RTE Act, 2009	Right of Children to Free and Compulsory Education Act, 2009
SAC	State Advisory Council
SCERT	State Council of Educational Research and Training
SCPCR	State Commission for Protection of Child Rights
SDP	School Development Plan
SMC	School Management Committee
SPD	State Project Director
SSA	Sarva Shiksha Abhiyan
STP	Special Training Programme
STR	Special Training
TE	Teacher Education
TET	Teachers' Eligibility Test
TLM	Teaching Learning Material
TTI	Teacher Training Institute
UEE	Universalisation of Elementary Education
UT	Union Territory
VER	Village Education Register

HINDU FESTIVALS: HAZARDS TO ENVIRONMENT AND ECOLOGY

V. S.Khan*

ABSTRACT

India is known for religious festivities. The Hindu religion is polycentric allowing multiple sects and innumerable gods to co-exist. These gods are ritually consecrated and the cycle renewed through annually held festival. Since, Hindu belief system posit for endless flow of matter, energy and symbolism; much of the festivals involve the act of visarjana(immersion). Just like the Universe which is bound under the cycle of creation, maintenance and dissolution for renewal afresh, the immersion of idols and the accompanying celebration through fire crackers or colours, does cause ecological overload in the water bodies, particularly the rivers . River bank is the 'tira', the point of crossing over into transcendental time.Idols cross over into another time through dissolution in river water. Henceforth, rivers are getting inundated with the high pollutants . The paper examines the hazards caused to the ecology due to the increasing usage of non-bio-degradable substances during Hindu festivities.

KEY WORDS: *Pollution, Festivals, Hinduism, Pandal, Idol, Environment*

India is described as a land of many religions and festivals. It's a multi-ethnic, multi-lingual and multi-religious country. In India, festivals are spread throughout the year and people find resource and time to celebrate these festivals with great enthusiasm. Besides main festivals, there are many local festivals. These festivals involve rituals and expenses. With increased culture of consumerism, these are often sponsored by the corporate for publicity. Behind the pomp and show of great celebration hides the painful tales of impending environmental hazards. The deadly impacts of such celebrations are the main postulates of this research article. Certain measures have been suggested to overcome this problem.

The environment pollution affects the health of more than hundred millions of people all over the world. Pollution is injected into a natural environment usually by humans. When foreign bodies like oxides of nitrogen and sulphur or lead containing fumes and fluids are added in significant quantities it becomes harmful to plants animals and human beings directly or through food chain. India is one of the worst performer in causing ecological degradation. Added to this story are various reasons deeply rooted in its traditions, customs, religions and practices. Festivals are celebrated at regular interval throughout the year. No one gives thought to the effects of such festivals upon the flora and fauna of this country. Among the Hindus, the biggest festivals are Durga Pooja, Ganesh Chaturthi, Deepawali, Holi etc.

Durga Pooja is one of the biggest festivals of Hindus particularly those living in the Eastern parts of India. In places like Kolkata, it becomes an all-out affair with thousands of pandal or temporary temple structures set up all over the city and its outskirts to worship Goddess Durga. Besides loud live music, musical performances and feasting create lot of problem for the environmentally conscious people. People from all corners travel into the city and visit the Pooja Pandal to participate in the festivals. This causes serious traffic problems and air pollution. The month long festivities end by the immersions of richly decorated figures of the Goddess Durga with huge processions, in the river.

*V.S.Khan is Research Scholar in History, Mewar University Rajasthan

However, the immersions of thousands of statues every year into the Indian rivers, lagoons and lakes during festivals such as Durga Pooja and Ganesh Chaturthi, cause a potential hazard to environment. The Indian environmentalists have always raised serious questions about the dangerous level of toxic contents of these statues. The campaigners for Green Peace India have also raised a question mark on the bigger and brighter idols for which toxic material such as colour coats are used. Traditionally, the idols were made from clay, mud and vegetable based dyes, but with the commercialization of these festivals and increased interest of corporate houses, who sponsor the Idols for their own gain and publicity; more and more harmful paints and colour are used. Materials such as plastic, plaster of paris are used which do not dissolve in water, consequently lowering oxygen to a level that is harmful to aquatic bodies. Aquatic pollution happens because of the presence of undesirable foreign materials either dissolved or suspended which are harmful to living things. Carcinogenic heavy metals like lead, mercury and chromium are present in the paints used to decorate the sculptures. These contaminate water affecting the life cycle. The need of the hour is to issue strict guidelines for the organizers of these festivals not to use toxic materials and use of eco-friendly raw materials. This must be encouraged to check this ever increasing social menace. Sujoy Chatterjee and Dr. Prashant Mehta in their study titled “Festivals: A Time of Celebration or Impending Environmental Disaster”¹ have pointed out various types of pollutions generated in large amount all over the country during the time of celebration. They have also raised the question on the sustainability of other creatures living in water. They have shown the impact of various materials on aquatic environment during the Idol immersion. Similarly, P.K. Goel and K.P. Sharma have enumerated the impact of immersion of idols in water bodies in their voluminous study *Environmental Guidelines and Standards in India*(1996). The result of their study is reproduced herein as Table 1.

Table 1: Changes in Concentration (mg/l) of some chemical pollutants after idol immersion in water bodies²

Chemical Pollutants	Mean Concentration In Water	Concentration before Immersion of Idols	Concentration after Immersion of Idols
Calcium	25.14	43.77	68.4*
Magnesium	7.785	6.590	10.02*
Molybdenum	0.090	0.149	0.534*
Silicon	3.537	2.954	3.826**
Arsenic	0.124	0.121	0.497
Iron	0.212	0.125	0.22**
Lead	0.289	0.351	0.45**
Mercury	0.689	0.553	0.778**

Threshold Limit Value (TLV): *TLV = 0.01; **TLV=0.05

(TLV is the permissible level of a toxic pollutant to which a healthy person is exposed during an eight hour day without any adverse effect).

The study reflect how the polluted water includes a list of decoration materials such as cloth, polish, paint, ornaments, cosmetic items, flowers, garlands, oily substances besides bamboo sticks, polythene bags and other plastic items. The impact of these materials on the aquatic body is very hazardous. The chemicals and non-degradable substances affect various species living in water. These water creatures further contaminate the food chain consumed by human beings.

Another Indian festival of importance is Ganesh Chaturthi usually celebrated in Maharashtra and some parts of Northern India. The practice of immersion of Ganesh Idols after the Ganesh Festival in various cities is also causing great danger to the aquatic bodies which leads to the death of tons of fish and other precious water inhabitants. Repeated warnings and cautions sounded by the ecologists and environmental scientists towards the possible hazard inflicted by Plaster of Paris are mostly ignored both by the idol makers and its buyers. The chemical dyes and colours being used to dye the idols contains poisonous elements particularly red, blue, orange and green colours containing Mercury, Zinc oxide chromium and lead, the potential causes for the development of cancer. Let us see the magnitude of this hazard in terms of figure. More than 7500 Idols of Ganesh weighing more than 20 tons are immersed every year in Mumbai alone. According to a rough estimate about 1.5 lakh idols are immersed in Mumbai seashore every year. Chemicals from the paints, polish and POP have posed a serious threat to the existence of aquatic bodies. Reckless conduct of festivals like Durga Pooja and Ganesh Chaturthi have become a major threat to human beings who depend on water and fish of these water bodies as the same river, pond and lake water is also used by millions for bathing, working and drinking purposes. High levels of lead can damage heart, liver and kidney. It can also affect circulatory and central nervous system.

Holi is a festival of vibrant colours that brings with it a variety of colours harmful to human beings. Nowadays, the colours used are synthetic and toxic because of the presence of cheap materials like mica, acids alkaline and pieces of glass. These harmful chemicals cause skin disorder like irritation and itching. These can also impair vision and cause respiratory problems and even cancer. In the joy of celebration nobody pays attention to these fatal hazards. Every year school children and younger ones develop skin disorders immediately after celebration of festival especially Holi. Environmentalists have always warned people against use of such hazardous materials. People should rather use natural colours and vegetable based dyes for making colours.

Deepawali is celebrated with utmost pomp and show all over India. This is a festival which has got the dubious distinction of causing noise and air pollution of the environment . One of the greatest sources of pollution during this festival is the crackers being used by the children and young alike. Noise pollution from Deepawali jumps between 67.7 db and 88.3 db. which is higher than the prescribed level of 50 db. Studies by the Centre for Science and Environment (CSE) around Delhi conclude that in 2008, RSPM levels during Diwali doubled compared to 2006. Various study suggests that in the case of metros, noise pollution may reach upto 100 db. Crackers are manufactured using barium sulphate, sodium nitrate, sulphur and potassium chloride and when burnt emit gasses such as Sulphur dioxide, oxides of nitrogen, oxides of heavy metals and pollution in the air. These chemicals also cause eye irritation, respiratory disorder and other allergies. Deepawali is a festival which celebrate the Goddess of prosperity but people unknowingly make their surrounding polluted in spite of warnings given by the Government and environment conscious organizations. Even strict warnings are given to public to refrain from bursting crackers named interestingly for its ferocity as an environmental pollutant like atom bombs, hydrogen bomb and bullet bombs. But nothing seems to work with the fest- intoxicated people. There is a need for change of attitude and taking the social responsibility for discouraging people from bursting such lethal crackers. There are many colonies where people collectively arrange fireworks and bursting of crackers. These shows not only cause noise pollution and disturbance in the civic life of that locality but also cause various respiratory and eye disorders in the aftermath of festivals.

Table 2: Comparison of Ambient Air Quality on Diwali during 2006 & 2008³

Parameter (ug/m3)	Recording in 2006	Recording in 2008	Normal residential standard
SPM	246	243	200
RPM	133	129	100

Not only festival, but even growth in pilgrimage has left the pilgrim places teething under massive ecological degradation. Kiran A. Shinde⁴ has examined environmental change at the Hindu pilgrimage site of Vrindavan in Uttar Pradesh. Vrindavan is home to more than 5000 temples and receives more than 6 million visitors every year. Shinde interviewed various social groups, including religious gurus, priests, visitors, government officials, local residents, and community leaders, and discovered tetra-layered response to the ecological crisis in Vrindavan- denial, indifference, helplessness, and stewardship. “Denial” and “indifference” are common with those engaged in the pilgrimage rituals as they use the language of transcendence framed through myths, religious ideologies, and ritual practices. Those outside economy of religious ritual recognize environmental impacts but feel “helpless”. Only a handful of the residents demonstrate environmental stewardship.

Kelly D Alley has done extensive work on the water pollution of the Ganges caused by the pilgrimage. In an ethnographic study, *“On the Banks of the Ganga: When Wastewater Meets a Sacred River”*,⁵ Alley provides an overview of the Ganges in terms of waste disposal, and its impact on the sacred river. Alley also examines the arguments defending both the sacred purity and pollution of the Ganga river put forth by the government authorities and religious people.⁶ She uses Benaras as an example, and find how each group views this age as a degenerate one(kaliyuga), but they differ on the loci of degeneracy. The government cites population growth, urbanization, industrialization, and technological development as the source of the degeneracy, while religious people focus on moral degeneracy. Interestingly, it may appear but Alley found how the people continue to look to the government for infrastructural improvements in sewage treatment and management although they clearly assess the problems through different prism. She further defines waste as “a social construct or problem,”⁷ and examines various interpretations and “ideologies” of pollution and waste by differently situated Hindu residents of Benares in order to analyze the ways in which theories of purity and pollution influence public debates and governmental policies about the uses and condition of the Ganges.

Purushottama Bilimoria have studied environment ethics of various Indian religious traditions. He does discover traditional approaches to the issue of environment. In an essay, “Environmental Ethics of Indian Religious Traditions”(1998)⁸, he states:

“The Indian religious traditions are intertwined with equally disparate cultural, social, linguistic, philosophical and ethical systems that have developed over a vast history, compounded with movement of peoples, foreign interventions, and internal transformations in structures and identities experienced over time. How does one then begin to talk about environmental values and concerns in the Indian religious traditions? Well one can, albeit, randomly and selectively; and so this essay will be confined to tracing the contours of certain highlights and tensions in the traditional approaches to the question of the environment”

He concluded in his essay that traditional wisdom for environment regeneration is available and there is need to rethink over traditional resources for course-correction over growing degradation of our ecology. Bilimoria writes:

“The suggestion is that there are indeed resources within the traditional systems - Yoga, Jaina, Buddhist, Hindu, Sikh, Islamic, Christian, Gandhian, all of which have helped give shape to a modern, secular India - to increase awareness of environmental concerns and to instigate the extension of ecological values and modal practices to the plethora of environmental problems facing Indians, as they do most human beings in other parts of the world.”⁹

Festivals are celebrated for happiness and celebration of life. If a festival becomes a threat to life, one has to be alerted about its celebrations. The new trend make it apparent that money is wasted in the name of festivals and ultimately this become vicious trap for the commoner. There is a need to rethink the entire modes of celebrations so that the festivals do not become hazards to our life. Hence some plausible solutions have been suggested.

Community Celebration in place of individual celebration should be preferred and encouraged. This will not only reduce the cost of the celebration but reduce the use of materials causing pollution. Thus there would be less noise, water and air pollution. The celebration should be time framed extending maximum upto 3 to 5 hrs. Instead of buying chemically prepared fast colours, vegetable based, eco- friendly colours should be used during Holi. Eco- friendly Diwali crackers can be made by using recycled papers that will help to reduce the decibel level. In decorating the houses, instead of electrical decoration, the traditional lighting of earthen lamps should be preferred. This will not only enhance the beauty of the house but cut down the enormous electric consumption. The earthen lamps use less quantity of oil and it could light up for three to four hours. The tendency to show off should be avoided. This is because it leads to unbridled consumerism exploiting the natural resources. During Deepawali, we dispose off old garments, old glass items and other plastic decorative materials which are unused or unwanted. Some of these remain in nearby dump post causing pollution and damage to the environment. It is therefore, advised to identify needy people who could find some of these items useful to them. In Durga Pooja and Ganesh Chaturthi the idols should be painted with herbal colours. The ornaments should be eco-friendly. Above all there is a need to be more environment conscious so that we do not sacrifice our long term interest for small short term gains and pleasures. There is also a need to change the mindset of the people.

Let us be responsible, identify the crisis before it is too late. We are answerable to the generations to come for being so reckless and irresponsible. Stop burning crackers and use of synthetic colour, stop polluting the rivers and water-bodies, and exercise our wisdom, else we would be compelled to welcome a generation of crippled off-springs for no fault of theirs. The swelling number of disabled people-both mentally and physically- is a testimony of our failure to check avoidable manmade disasters resulting out of generous loopholes available in the existing systems of governance. Stringent punishment of highest order should be implemented and invoked against those who violate norms to check the growth of defaulters who wilfully pollute the nature, eco-system and its water bodies. Advent of globalization and free market economy has played havoc with the lives of Indian masses. Sudden availability of cheap goods which contains pollutants, in the market has taken over the otherwise traditional forms of material available in the Indian market. Traditional mode of celebration was more indigenous and eco-friendly. The globalization of economy has left its impact all over the world including India. Strong political will coupled with support from judiciary and community leaders can certainly make a difference in the lives of people, protection of environment, its ecology and precious water bodies and creation of a better world to live in.

Footnotes & References:

1. Sujoy Chatterjee and Dr. Prashant Mehta. *Festivals: A Time of Celebration or Impending Environmental Disaster-A Comprehensive Analysis on Degradation of Indian Environment* available on <http://www.slideshare.net/prashantmehta371/festivals-a-time-of-celebration-or-impending-environmental-disaster>
2. Goel, P.K. and Sharma, K.P., *Environmental Guidelines and Standards in India*, Technoscience Publications, Jaipur,1996
3. *ibid.*
4. Kiran A. Shinde, "This Is Religious Environment" *Sacred Space, Environmental Discourses, and Environmental Behavior at a Hindu Pilgrimage Site in India*. *Space and Culture* November 2011vol. 14 (4),pp. 448-463
5. Alley, Kelly D. *On the Banks of the Ganga: When Wastewater Meets a Sacred River*. Ann Arbor: University of Michigan Press, 2002.

6. Alley, Kelly D. “*Idioms of Degeneracy: Assessing Ganga’s Purity and Pollution.*” In *Purifying the Earthly Body of God: Religion and Ecology in Hindu India*, ed. Lance E. Nelson, 297–329. Albany, N.Y.: State University of New York Press, 1998.
7. Alley, Kelly D. “*Ganga and Gandagi: Interpretations of Pollution and Waste in Banaras.*” *Ethnology* 33, no. 2 (spring 1994): 127–45.
8. Purushottama Bilimoria , *Environmental Ethics of Indian Religious Traditions*
http://home.cogeco.ca/~drheault/ee_readings/East/Suggested/Bilimoria.pdf
Abridged version appeared as ‘*Indian Religious Traditions*’. In David E Cooper and Joy A Palmer (eds.) *Spirit of the Environment, Religion, Value and Environmental Concern*. London and New York: Routledge, 1998, pp. 1-14
9. *ibid.*

SENSUALITY – A CATALYST IN *THE GOD OF SMALL THINGS*

Rakhi Sharma *,Dr. Pradeep Kumar Talan**

ABSTRACT

Arundhati Roy's sensational novel, The God of Small Things, which won the Booker Prize(1997), revolves around sensuality. The whole universe appears to fulfill the role of gratification of senses. Sensuality mainly serves as a stimulus to sexuality, the carnal desire of a human being. For Roy, sensuality is an art. She employs it very skillfully and keeps it away from vulgarity. A comparison has been made between John Keats expression of sensuality vis-a-vis Roy's expressions. The paper examines the two writers upon this vital aspect of expression meant to generate aesthetic savouring among readers.

Keywords: *Sensuality, goosebump, sexual perk, Ammu, Velutha, metaphor*

“Sensuality, my lovelies, is much more encompassing than just a mere sexual perk. To be sensual means to be acutely aware of your surroundings. It's the joyous preoccupation with what you smell, touch, hear, taste and see. With the right state of mind, you can make anything a sensual experience—eating, walking, dancing, gardening, laundry—you name it.” *L. B. Woolridge*

The moment we hear the term ‘sensuality’, the very first word that pops into our mind is often ‘sex’. If it is so, we are not wrong; we are not much close to the polysemy characteristics of the term. Most of us think sensuality and sexuality are synonymous. Our minds are trained that way. The former is an ingredient of the latter. The first is a free agent that influences the process of sexuality and remains unaffected all through the reaction. Sexuality is not possible without sensuality. To be sensual is not necessarily to be sexual. But it is a necessary condition for a sexual person first to be sensual. So only a sensual person can be sexual. Sensuality works like a catalyst in the process of sense gratification. It is “a key ingredient in achieving a richer, more satisfying sexual experience”(Woolridge). It's not a sexual experience in itself, while it catalyses the human senses. As per Merriam- Webster's Collegiate Dictionary, “sensuality” pertains to “senses” and “sensual” explicitly implies “preoccupied with senses” or “devoted to senses”. Thus a sensual person is caught up in his all five senses and enthralled by them. What he does is credited to the satisfaction of the senses. For an instance, a person is proclaimed to be a sensualist, if he is fascinated by the beauty of a wild rose, is enchanted by its sweet fragrance and exalted to extreme bliss by its soft touch on the cheeks, on the breasts and on other sensitive organs of the body. The objects which gratify the senses are named as sensuous and the persons gratified are called sensual. Woolridge adds: “Sensual people savor the world around them, not simply observe it. They experience each task rather than rush through it to get at some imagined end, and in so doing, live a more passionate and appreciative existence”(Woolridge). The moment one starts living sensually one begins to experience the world in all hues and hilarity.

* **Rakhi Sharma** is Assistant Professor, English, Department of Applied Sciences & Humanities ITS, Engineering College, Greater Noida and research scholar, Mewar University.

** Dr. **Pradeep Kumar Talan** is Professor of English

Roy has adeptly dealt with “sensuality” in the captioned novel *The God of Small Things* (for which she was conferred with the Booker Prize circa 1997). If a person, who has read the novel, would call her ‘the queen of sensuality’, it is not a hyperbole. She confirms everyone is sensual more or less, only degree matters. To be sensual is to be an epitome of leading fulsome life. In the novel, sensuality mainly serves as a stimulus to sexuality, the carnal desire of a human being. It aids to satisfy genital hunger of Ammu and Velutha. For Roy, sensuality is an art. She employs it very skillfully and keeps away it from vulgarity. She doesn’t allow her man and woman to make love openly. They are never seen making love. They make love either in the dream or imagination of one another. Thus sensuality is not in the activities of the characters-in-chief but lies in their thoughts and dreams as well. It is in the dream of Ammu or in her melancholy speculation. It is in the contempt of Mammachi for her daughter and in her bitter disdain for the Paravan. It is in the interrogation of SHO Thomas Mathew. It lives in the thoughts of Velutha and in his impatient waiting for his beloved Ammu. In the chapter “The God of Small Things”, the novelist paints on canvas, Ammu’s sensual images nude. The lady sensual is described walking by the light of the oil lamp towards the riverside cottage of her subaltern lover. She approaches the place and crouches with her lover, not in actual but in her feel and imagination. Roy beautifully paints her trying to touch the lover and never touching him. Her desire is ever young. The scene reminds us “Ode on A Grecian Urn” wherein the “Bold Lover, never, never canst thou kiss” (Keats). Ammu sits there on the river bank and envisages her man with “chocolate ridges” and “strength in the arms”. She touches his body “lightly with her fingers” and his ebony skin turns to all goosebumps. She relishes on how her man sighs and responds to her every twist and turn. She slides her seductive fingers on the “chocolate ridges” to “the base of his stomach”. As she moves on, she experiences the “trails of bumpy gooseflesh on his body, like flat chalk on a black board, like a swathe of breeze in a paddy-field, like jet streaks in a blue church-sky” (Roy). The lady envisages him and touches his sensitive organs; she feels her body shudder. As if a sweet shivering seeps through the fingers to her brain. In another scene, Ammu sips “the last of the river from the hollow of his navel” (Roy). She calls up the happy days enjoyed with Velutha. She feels totally desperate and ignored by all. She feels alone and unsafe without her man in “mundu” and with “might”. Velutha is brutally killed and departs from her life forever. Ammu conjures her “God of small things” – Velutha who used to give her small things like reed toys and other tiny things made of wood when she was a small girl and he also a small boy –and is sensualized by his presence. She finds her twins who she used to call “millstones” no more burdens but calls them “twin midwives”. They come forth to assist her mother in her sublime deed. They appear to “prepare the ground for them” for their love making. Velutha collects her hair and makes a hide for the safe play. He touches on and around her swanlike neck and goes all crazy. The lady is mesmerized and finds herself “naked” and “crouches over him” slowly and urgently. She slides further down and force introduces herself to “the rest of him”. As a true sensual, she revels in every part of him and enjoys his every ‘coil and curve’ in the darkness beyond “the oil lamp”. Then she tastes him “salty in the mouth”. She lick-cools down his sensual fire and experiences the bliss in the act.

As in the novel, it seems that Roy herself has experienced the world around from “a sensual perspective”. She doesn’t seem to take “sensuality” as “a sexual perk”, but enjoys it all the time in its every aspect and spec. We find it in the way Ammu serves herself to her “luminous man”. It lies in the metaphors, the novelist uses to depict the seductive images of the lovers. Ammu feels herself as ‘a wide and deep river’ and her lover as ‘a rower of the deep waters’. She envisages her man with “chocolate chest” sailing on her waters. He sails forth and back, sideways and across Ammu, the deep and silent river. She enjoys the moments the sailor dives deep, deeper and the deepest, and exhausts his all strength to fathom her depth. The farther she lets him delve and dive, more she enjoys him rowing upon herself. The farther he sails on her the more she gets wayward and sot. They perform foreplay under the deep waters. How much sensuous is to imagine about the water foreplay! She lies against him on the sandy bank of the river. He gently but “urgently” turns her over the back. Then he “wipes the sweat and grit from her” (Roy). The lover shows his prudence during the play while to do that is a tough job. He proves himself a man of senses, not as of animal instincts. He handles his beloved very

carefully and holds up her softly on his arms and softly but “urgently” gets into her. Ammu as the river is bottomless and Velutha as the rower has his limits –of skill and strength. The moment he touches “the deepest of her”; he is all tired of the excursion. Yet he regrets over his failure not to touch the bottom of the river. He knows that none could gauge the depth of the lady river and none can ever do, yet like a fly around the flame he goes deeper and much deeper, and finally drowns and dies.

Dance is a sense- triggering and tension -exorcising exercise. It is an art to arouse sexual desire at spur. Roy has beautifully employed “dance” in this book. Ammu dances for her lover. One dances to display one’s strong passion of grief, gaiety, love, hatred etc. Kunti (of The Mahabharata) dances for expressing her ‘utter humiliation’ and ‘penitence’ she committed having let her first son live life of a waif. Ammu dances here to express her passionate love for the sailor. She dances and involves the lover in her dance and pulls him to dance with her. She dancingly drags in and bends him to suck joy from “the innermost part of her” (Roy). He drinks “long and deep from the bowl of her” (Roy).She lived “seven years of oblivion”(Roy)at the sublime moment and cried with pleasure and laughed insanely. She reached the apex of the bliss from where she couldn’t go ahead anymore and similarly was impossible for her to come down too. Thus Ammu and her man enjoyed to the fullest, the eternity of the “five minutes”. But this carnal journey leads to “Age and Death”. It provided the lovers five immortal minutes to live whole life and ultimately took Velutha to his tragic end. It was very late when he realized the act anti-social and felt himself guilty: “Slowly, felt he, the terror seeped back into him. At what he had done. At what he knew he would do again” (Roy).Despite the man finds himself in the clutch of sensuality. He is aware of the deed but finds helpless to do it again and again. Because he can’t run away from his nature and that is his Ammu. He confesses his guilt and also foresees its deadly consequence; but can’t stop to rethink of it. She is the source of energy, as he confirms, to recharge him every night. He believes he can not live another round the clock if she doesn’t let him suck the revival juice from “the innermost part of her”. The lady is also aware of her illicit relation with a low caste Paravan and its fatal consequence. So she seems a bit worried about her safety and social image. But simultaneously she cannot keep away from sensual bliss. She feels unsafe everywhere in “the old house” and in the society for where she is mentally and physically tortured by her own kiths and outsiders too. That’s why she finds relatively safe in the arms of her lover.

Velutha wants to nibble on the bait but fears the hook at the same time. A person, who eats the dish, can’t spare it. If the man wishes to eye-drink “the seductive nudity” of the lady, he can’ be deprived of being sensualized. As Velutha dares enjoy the scene, terror seeps into his veins: *I could lose everything, My job. My family. My livelihood, Everything* (Roy).Sensation subjugates reason. He is tempted to touch her, feel her shuddering and her “aching desire”. He is required urgently to take “the bait”. He wants to feed on her urgently without caring for his brutal end. Her “brownness” against his “blackness” electrified desire. Her “softness” against his “hardness” made him more careful and considerate towards her. Her “slant gaze” across the succinct breast made him rock from inside out. The vista served a sensuous dinner to his sensual eyes. He listens to the throbs of her heart fast and faster. She likes “smooth ebony chest” and relishes unto the core and savors the saltiness of the river on him. She savors his “particular smell”; the same which was disgusted by Baby Kochamma, her aunt. Ammu puts her tongue and tastes it in “the hollow of his throat” and on “the lobe of his ear”. She gathers him into her, pulls his head and drinks his salty lips. Unlike Rahel, her daughter, she demands “a kiss-back”. Rahel, as a child kissed Velutha several times for the small things he gave her and her brother Estha; but she never demanded “a kiss-back” from him. Velutha returns it (to Ammu) “First cautiously and Then urgently” (Roy).He remains careful how to avoid any hurts during the play. A rough and black Paravan should ever be cautious against a soft brownish Syrian Christian. To give any hurt to a high born tender and tidy girl is a more serious crime than the deed. It will rather deeply stain his soul, which can never be blotted away. So he is all considerate for her, her beloved. She also cannot imagine her existence without him. She experienced herself alive only in those parts which he sensually touched –and “the

rest was smoke". In another tryst the lovers are envisaged coiled and lip-locked. The view flows thrill in the onlookers too. Velutha touches her on "haunches" and "shudder" flows into her body. She falls into the "strength of his arms" and feels her lips automatically pulled unto his. Then she thinks to know how much he wants her and measures her fidelity towards him.

Keats is studied as the gratifier of five human senses –touch, taste, smell, sight and hearing. The poet ever intends to sensualize the readers on the sensuous objects in his works. Roy sensually portrays the seductive images of Ammu; similarly Keats also beautifully draws bewitching poses of Madeline (of *The Eve of St. Agnes*). Like Ammu, Madeline undresses herself and electrifies sensuality in her lover Porphyro. Keats inspires 'senses' gradually and steadily while Roy seems impatient; so she ever gets ready to gratify them "urgently". Mammachi's rage at "the old one eyed Paravan" displays her cold contempt for her daughter and bitter disgust for her lover. The old lady also envisages her daughter untying her top and letting the lover creep 'rustling to the knees'; and then coupling "in the mud with a man who was nothing but a filthy coolie"(Roy). The man was "filthy" only for the old lady; but for Ammu a man with "chocolate ridges" and "the carpenter's arms". The more the old lady depicts her contempt the more Ammu rejoices in. The former further imagines grope for "a Paravan's coarse black hand on her daughter's breast" (Roy).

Hence Roy is discovered as a lady of quick senses and the queen of sensuality as well. Unlike Roy, Keats who suggests his people relish on sensuous things gradually and steadily is a man of slow and steady senses. Apart from, one thing is common: both are the great dealers of sensual pleasure and both are preoccupied with and devoted to the five human senses. Thus Roy has successfully employed 'sensuality' as a catalyst in the process of 'sense gratification' and especially in 'genital satiation'. So a sensual person can be sexual but it is not a necessary condition for a sexual person to be sensual. Really the world is awesome if we experience it from "a sensual perspective".

References:

Woolridge, L Bryant. *Weapons of Mass Seduction*. United States: Broadway, 2007.

Ramji Lal.ed. John Keats, *Studies in Poets: An Evaluation of His Poetry*. New Delhi: Rama Brothers, 1998.

Roy, Arundhati. *The God of Small Things*. New Delhi: Penguin Books, 2002.

(All citations in the text are from the same book)

BOOK REVIEW

SCHOOL EDUCATION, PLURALISM AND MARGINALITY: COMPARATIVE PERSPECTIVES

Edited by Christine Sleeter, Shashi Bhushan Upadhyay, Arvind K. Mishra and Sanjay Kumar
Orient Blackswan, New Delhi, 2012, pp. 480, Price not mentioned

Review by Pankaj K Deo

Multiculturalism and plurality have emerged as major challenges for the policy planners associated with school education and curriculum. This book, which is the outcome of an international conference on *School Education, Pluralism and Marginality: Comparative Perspectives*, tries to bring into focus issues of pluralism and marginality related to school education. The articles in the book present a cornucopia of critical theories and opinions from a global perspective on pedagogical complexities involved in the delivery of education in a multicultural society. The introduction in the book puts the entire issue succinctly, "Large scale migrations, in the wake of expanding global capitalism, are repopulating schools and communities on a grand scale." Societies are perforce becoming multicultural the world over and presenting a plethora of pedagogical perplexities for curriculum designers. Christine Sleeter in her essay explains, "Since textbooks in the USA today appear multicultural on the surface, many teachers see no need for further work on curriculum." Sleeter cites the example of a white teacher named Kelly who found that students' engagement went up considerably in a class having students from multicultural backgrounds once she revamped her lesson plan with historical material representing Native Americans, African Americans, and Mexican Americans.

The problem of bringing subjugated knowledge into the curriculum and handling it pedagogically is far more challenging in India which has been a multicultural society for centuries. The articles by prominent Indian authors in the book mainly explore the problems of pedagogy and the challenges of developing a curriculum that will have an inclusive approach towards the diverse strands of Indian population. While discussing the education system in India, the book does acquire a discursive framework through the viewpoints of prominent practitioners of pedagogy and discuss threadbare the issues of hegemony and empowerment related to education system. Alternative viewpoints and pedagogical practices from countries like the USA, the UK, Europe, South Africa and South Asia have been presented cogently in the book.

Many of the papers included in the book deal with how students learn within the framework of an education system wherein dominant pedagogical practices seem to prevail and marginalization in plural context is considered nearly inevitable. In such an education scenario, the essays within the book seem to challenge marginalization by offering insights into the role played by culture, power and pedagogy in the delivery of education. The book questions the notion propagated by certain power groups that have historically subjugated certain pockets of population that these groups or pockets suffer from certain inherent deficiencies. The book analyzes at micro and macro levels how dominant power structure has ensured that such marginalized groups are represented negatively. Different chapters of the book offer multifarious ways of addressing school education in plural contexts.

What we fail to get from this book as a whole is a single comprehensive framework for a nationalistic/pluralistic system of multicultural education that can be applicable to India/South Asia. However, it is a treasure trove of perspectives for those engaged in designing inclusive and critical multicultural/plural curriculum. The book is comprised of four sections; however, these sections are not coherently clubbed as the chapters/papers have near similar themes running across though with different 'texts' and 'contexts'. The Introduction also falls short of giving a comprehensive account of the discourses which interweave various strands of the debate and point out trends and paradigm shifts taking place in this arena.



Journal of Indian Research

Journal of Indian Research

Volume 1

Number 1

January-March 2013



Mewar University
Knowledge to wisdom