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Editor, Journal of Indian Research

Mewar University

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

Phone : 0120-4758300

E-mail: jir@mewaruniversity.org Website : <http://mujournal.mewaruniversity.in>

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CHAIRPERSON'S MESSAGE

We will be celebrating India's 67th Independence Day on 15th August. This national journey must be celebrated with a tremendous sense of pride and accomplishment. We have travelled so far without any major domestic upheaval, in a more or less, peaceful manner. Our peaceful rise through democratic set up is exceptional. But, our share in current global knowledge common is not commensurate with our share of population, merit and intellectual strength. Though, Indians are known for their talents and accomplishments, why are we still poor in innovations or building new paradigms in academic research? The Indian government realized such lacunae and has established the National Innovation Council to spur innovations and prepare a Roadmap for Innovation 2010-2020. We realize how innovation is the engine for the inclusive growth and prosperity. In an open world system, we cannot thrive until and unless we participate in the competition. The government has declared the current decade as the Decade of Innovations with an objective to create an indigenous model of development suited to Indian needs and challenges. How can Indian model be made competitive if we continue to be mesmerized by the western mode of thinking about the world? Though, we fought for political decolonization world across, the decolonization of mind has still not been achieved. Without rethinking over our current thinking paradigms, we may not bring the desired innovation revolution in India.

The current issue renews the journey of synthetic and innovative thinking from the last issue. The inaugural issue of the Journal was well received. The Journal has received high quality contributions from various universities. This is nothing short of remarkable for a journal in infancy. I appreciate the hard work of the Editorial Board of the JIR in bringing out this issue in time. We look forward to receive quality articles for the forthcoming issues of the JIR.

On behalf of the Board of the Journal, its Editor, and those associated with the Journal, I wish to extend congratulations to the people of country on this auspicious event of Independence Day and wish for inclusive growth, peace and perennial prosperity for the nation.



CA Ashok Kumar Gadiya

EDITORIAL

A CALL FOR INTEGRAL THINKING

The Himalayas as a system is Asia's Kamandal. It is the source of water to the Indus, Amu Darya, Ganga, Brahmaputra, Yellow River, Yangtze, Sutlej, Nu/Salween and Mekong. South Asia's four major river systems, the Ganga, Indus, Brahmaputra and Sutlej originate in the Himalayas. Water in a sage's kamandal is considered auspicious and represents the amrita (nectar of life). The Himalaya's water is like an elixir for Indian sub-continent. The combined river basin of the Indus, Ganga and the Brahmaputra rivers constitute 43.8% of India's total surface area. The Himalayas provide 63% of India's fresh water.

The Himalayas act as the site upon which utopias and fantasies are projected. Much of it is still a terra incognita and the geo-imaginative articulation by different Asian communities provide a structurally coherent meaning as well as reflect the centrality of the Himalayas in their practice of topopieté. For an Indian observer, the Himalayas appear as a crescent Moon dotted with fourteen highest mountain peaks (Eight thousanders) as stars on a relief map. The Mount Kailash would appear as the sixteenth digit of the Moon, the dot of immortality in Tantric parlance. The Kailash holds a special place as the axis mundi of the universe, the manifestation of the mythical Meru in the Asian imagination of the sacred landscape. The Himalayas has always been viewed as the abode of immortals. There are various Bon myths about the existence of Dmuthang, the rope to the heaven. Hindus believe in the hidden land of immortals in the Himalayas, siddhashrama, while for the Buddhists there are 108 similar hidden abodes (beyuls) across the Himalayas, Pemako being the most sacred site. From Tibetan side, the Himalayas appear as a rainbow. And it is not a strange coincidence that the rainbow holds highest importance in the Tibetan view of immortality. The rainbow for Tibetans is the body of immortals. There is an ancient tradition of Zhang Zhung where trekchod and togel practices lead one to attain rainbow body of deathlessness in which the master practitioner leaves no flesh behind after death and transforms into rainbow bodies. A 4th-5th century Chinese poet, Tao Qioan wrote about an earthly paradise hidden in the Himalayas. For the Chinese observer, the Himalayas appear as mighty dragon. On the relief map, the range that separates Tibet from India appears like the body and wing of a dragon and the range that curves out from Sichuan to Chiang Mai in Thailand appears as the foreleg and the neck. The curve that extends from Afghanistan to northern Iran appear as the hind leg and the tail of a dragon. In the Chinese mythology, the dragon symbolizes immortality, fertility and creativity. Thus, the Himalayas become the source of life and immortality for sacred imagination across Asia. Though only 0.3% of the planet area, the Himalayas contain 10% of the global biodiversity, many seemingly related with the belief in immortality ranging from jambu fruit, tea, caterpillar mushroom (Buddha mushroom). The Himalayas have transformed into an index of immortality.

Therefore, it came as a rude shock to the pious devotees when a part of the Himalayan region in the Uttrakhand was devastated by what many terms, 'Himalayan tsunami' bringing death and destruction to the seekers of moksha. It is a national calamity in which thousands died, many thousands still missing and the major centers of the pilgrimage in the ShreeKshetra of the Himalayas, lies in ruins. A cloud burst followed by the breaking of the Kedar dome glacier caused a flash flood in the Kedarnath. The ancient holy site has been ravaged beyond recognition. The pilgrims who were standing in queue praying for salvation and prosperity, were swept away callously. The Alaknanda and the Bhagirathi swept away villages and the towns, temples and the sarai, ruthlessly. The environmentalists and the climatologists have been ruminating over the ecological reasons for the catastrophe. But, alternative view about the calamity is spreading fast.

The calamity has reinforced the faith of millions. The devotees claim that the Himalayan Tsunami crisis started only when the guardian deity of Uttrakhand, Ma Dhari Devi (Goddess Kali) was shifted by a hydro-

power construction company on 16th June on the pretext of surging water of Alaknanda that might have inundated the holy idol. The votaries claim that the Dhari Devi had warned the company officials on 2nd September, 2009 in clear terms recorded in writing that if her location was shifted, there would be calamity.

No sooner was the Mahakali's idol shifted, the wrath of the Goddess was brought down in the Himalayas. Mahakali of Dhari is also the Ugratara and the Chhinamastika, the Goddess of the lightening. The clouds burst, the dams burst, and the reservoirs burst. The glaciers broke, the roads collapsed. Buildings and mules, men and vegetation were swept away in the pralaya. It was only when the flood water reached the sanctum sanctorum of Kedarnath and touched the Sivalingam, the wrath stopped suddenly. The goddess Mahakali calmed. It was like the mythical story in which Shiva had to lie down and when Kali's feet touched Shiva, she calmed. In fact, neither the Shivalinga nor the idol of Nandi bull guarding the temple precinct did go under the sludge. The Shiva lingam remained crowned by offerings of belpatra leaves. Votaries argue that Kedarnath Shiva tamed Mahakali of Dhari.

The western press condemns such thinking as bizarre. India's own secularized elite question the narrative and views the same as an exercise in myth-making. But, the believers point out how as soon as the idol was lifted; the lightening began to flash around and the calamity befell the region. Are there non-human agencies in the Universe? Does nature listen? Does our biosphere possess agency? Are we entangled with the natural world at large?

It is a strange coincidence that two day conference on immortality concluded on 16th June in New York. A 32-year old multi-millionaire Russian tech entrepreneur, Dmitri Itskov organized the Global Future 2045 International Congress and it was attended by the best scientific brains like Ray Kurzweil, and Marvin Minsky; the roboticists like Hiroshi Ishiguro of Osaka University who came along with his own mechanical twin, Geminoid. The Conference concluded with the optimism that by 2045, humans will achieve digital immortality by uploading their minds to computers. These transhumanists believe that once "mindclones", the digital versions of humans that can live forever, are created from the "mindware," a kind of software for consciousness; it will no longer be necessary to live through a biological body. The mechanical twin, Geminoid attended his creator's lecture and surprised the audience by speaking that the next time he would make a better presentation than his creator. Itskov is so much emboldened with the advance of technology that he is preparing to launch a company this year that will sell immortality to the rich clients listed in the Forbes.

Did the Himalayas, the imaginary abode of the biological immortals like Babaji and Guru Rinpoche convey to the techno-fundamentalists of 2045 Initiative, its displeasure over tinkering with the biological mortality? Was the conference an irritant for the Himalayas? Is it all connected? The Himalayan tragedy is unfolding like the Rashomon effect with contradictory interpretations from various quarters!

The mechanical and secular world view that arose in the West from Francis Bacon onwards has endangered the diverse pool of cognitive thinking within a short span of time. The matter has been dispossessed of any agency and viewed merely as 'nature' bereft of any presence of spirit, deities, consciousness. But, the development in the frontiers of technology and new sciences is questioning the validity of the dominant western epistemology. Consciousness studies have become a focal point for the finest brains world across. The roboticists are exploring and integrating the effective and simpler way to design robots as social agents that facilitate communication with human.

Human-Robot Interaction (HRI) Studies as a specialized area to explore the robotic solutions for real world problems like aging societies, emergency response, education has emerged. The scientists are building socially-intelligent robots, lifelike robots, robot-team learning, autonomous robots. Human-robot symbiosis

has been achieved by many tech-entrepreneurs. Now, the best teams are vying to build gossiping robots, robots which can lie. Apart from the look-alike, the future robots will behave as natural as human beings with all those imperfections which constitute what is being human. Pentagon is talking about *Robo sapiens*. There are dancing robots, fashion show robots and even female robots (Fembot) in Tokyo for which advertisements are made like, “*A Female Android looking For A Valentine Date in Tokyo.*”

Neuroscientists from the ATR Computational Neuroscience Laboratories in Kyoto have unlocked the surreal world of dreams with 60% accuracy. By using the technology, the future robots might be built that could dream. Philip K. Dick’s vision in his bestselling 1996 novel ‘*Do Androids Dream of Electric Sheep?*’ which describe about androids and synthetic animals being almost indistinguishable from human beings and real animals appear close on the horizon. If machines can start dreaming, they can become creative and equal co-creator of the Universe just as we have come to claim that position. Though, the science and technology rooted in western epistemology secularized the Reality and made ‘consciousness’ purely human phenomena; the technology is now imbuing ‘consciousness’ in inert matter of machines!

Frédérique Apffel-Marglin, Professor Emeritus of Anthropology at Smith College and a friend of mine, have come out with a strong critique of the western scientific tradition and abject materialism of the western world-view in her recent work, ‘Subversive Spiritualities: How Rituals Enact the World’ (2012). She rather pities the modern, cosmopolitan world view which lies abandoned by a multitude of ‘*other-than-human*’ communities. She lambasts with following statement, “*We modern cosmopolitans, heirs to the scientific revolution and to the enlightenment, are like abandoned children. We have lost the safety net of a web of extended relations and human communities and find ourselves increasingly on our own, competing with others like us for the social space and the rewards that makes us feel that we really belong, really exist, really matter. ... Before the triumph of modernity, sealed in Western Europe of the seventeenth century by the advent of the scientific revolution—people lived in a constant interaction with host of beings, powers and spirits, who tricked us, protested us, punished us and conversed with us. We were wealthy in our human and other-than-human communities. There was an abundance of beings to accompany us in our earthly journey. .. With Descartes’ cogito, the mind also departed from matter, transmuting the body into soulless mechanisms, transforming us into only observer of an inert material reality, alone among ourselves, abandoned by all the other beings of the world.*” (Apffel-Marglin, 2012, pp.3-4)

The paradigm that consciousness exists only in the human beings and matter is inert and hence does not have agency is coming under serious interrogation from multiple directions.

Consciousness is not merely limited to ‘western’ human beings. In such a situation, the likelihood of communication between human beings and other than human beings (plants, spirits, rocks, ghosts, and god) cannot be discarded anymore. Astrophysicists compete to discover ‘dark matter’ and ‘black holes’! Transference of consciousness, or *phowa* in Tibetan Buddhism, has been proved consistently in laboratory conditions. The existence of non-locality (instantaneous communication) has dazzled scientists and the presence of a primordial consciousness (unity of consciousness) is becoming the logical correlate. Surprisingly, dematerialization of matter is found to be taking place in the quantum world.

The scientific paradigm dominant since Galileo and Newton’s work is now shattered. The western notion of modern knowledge depends on binarisation, dichotomy and dominance. The empirical observation that characterizes this scientific tradition depends upon the practice of separating the ‘knower’ from the ‘known’ and to create a relation of externality to the natural world. Only objectivity guarantees the possibility of deciphering the immutable laws of an inert natural world. Boundaries were discursively created between human-non-human, nature-culture, internal-external, epistemology-ontology, science-sacred.

Thinking is always influenced by the dominant technology of the age. The accuracy of the pendulum clock influenced Descartes, Newton and Galileo. The clock became the metaphor for “nature”. Descartes separated matter from consciousness and this external natural universe was reduced to a mute and inert world possessing no agency of its own.

The early twentieth century witnessed the advent of the theory of relativity and quantum mechanics. Werner Heisenberg propounded the principle of uncertainty i.e. simultaneous observation of a particle's location and characteristics is not feasible. Physicist Niels Bohr, who won the Nobel Prize for his model of the atom, and his Copenhagen school put a radical challenge to Newtonian physics and Descartes' schemata by proposing that ‘things’ do not have inherent determinate boundaries and properties and put into question the dominant Cartesian paradigm of distinguishing between subject and object, knower and known. He proposed ‘phenomena’ as the primary unity of knowledge, i.e., relations without pre-existing objects. For him, reality exists as things in phenomena. His contemporary quantum theorist, Erwin Schrödinger called this ‘entanglement’ and first used the term in 1935.

Recent researches confirm ‘entanglement’ is a pervasive phenomenon. In a quantum world, two particles remain connected without any conventional communication, long after their initial interaction is over. Entanglement is not merely the correlation of certain observable physical parameters in the process of measurement but genuine interconnectedness and inseparableness of once interacting quantum entities. This instantaneous influence is often termed as ‘non-locality’ in popular parlance.

Whether quantum entanglement manifests itself macroscopically in the visible world? If so, can that influence chemical, biochemical and other physical processes? Whether the observations and anomalies that are marginalized in any study are caused by the entanglement phenomena? Can one explain the sensing of what is happening to our loved ones thousands of miles away as entanglement at a macro-level? Whether psychic phenomena like telepathy, clairvoyance, collective premonitions really exist? Why do most of us find that some of our lucid dreams come true? Postmodern science is at an early stage of engaging with the phenomena of entanglement. The idea of the universe as an interconnected whole is emerging as the new world view. The Eastern concept of ‘reality’ as an entanglement of purusha (universal consciousness) and prakriti (nature) appears to be much closer to understand Reality.

Holberg Prize for the year 2013 has been conferred to the French anthropologist and sociologist, Bruno Latour. Latour conducted an analysis and reinterpretation of modernity for last three decades and has destabilized the western notions. He has reinterpreted the distinction made between modern and pre-modern, nature and society, human and non-human. While conducting fieldwork in Brazil, he was captivated by unique phenomena. In the town of Boa Vista of the province of Roraima, the research team discovered a species of fire-resistant trees that usually grow only in the grassland (savanna). But, the tree of this same species was found along the edge of the Amazonian forest, where the forest meets the savanna. In the grassland, the tree is surrounded by small seedlings but at the edge of the forest, this does not shade any smaller plant. Some trees did grow ten metres into the forest, where they tended to die. What perplexed botanists were whether the forest was advancing or retreating? Whether the large tree on the edge of the forest may be counted as a scout sent by the forest as an advance guard, or perhaps a rear guard, sacrificed by the retreating forest to the merciless encroachment of the savanna? (Latour, Pandora's Hope, 1999). Do forest and grasslands think as a system? Is nature conscious? And if nature is conscious, does it possess agency?

The physicist David Bohm formulated an interpretation of quantum mechanics based on an understanding of the entire universe as an undivided whole. Bohm stipulated the presence of an informational field that does not carry energy at a subatomic level and necessitated a kind of intelligence on behalf of the particles such as

the electron. He even thought that the electrons were alive. If this is so, can we have a better understanding of the inter-connected world?

Emerging studies on the biosphere also provide evidence that our entire ecosystem acts as if it is intelligent. The earth is a living earth. It is the Gaia. We cannot understand the ecosystem without affecting a radical epistemological shift. Our collective dread about the doomsday in 2012 that originated with the claim that Nibiru, a supposed planet discovered by the Sumerians, is headed toward Earth was lampooned by the secularized class. On 15th February 2013, a small asteroid entered Earth's atmosphere over Russia that took astronomers by surprise and it exploded just a few miles above Chelyabinsk in Russia, saving a part of the earth from the catastrophe. The cosmos responded to our collective fantasies. There appears to be genuine inseparability of mind and cosmos as if all the entities, human and non-human, are woven into Indra's heavenly net.

Another significant shift is taking place in the type of organization. We are in a network society. The social media is part of our Reality. The twitter and Facebook mobilize people out of virtual space into physical space. A new ontology is emerging-cyberontology. The Colombian philosopher Rosa María Rodríguez Magda conceptualizes how the reference of this being is neither matter, nor the essence. It is the new structure of reality-Virtual Reality that acquires a noticeable presence, whose essence is the code, that is, the logos, the device whereby the intelligible world is sensible world without being material. The growth of new subjects like cyberpsychology, cybersociology amply demonstrates that we have entered into metaphysics of presence that no longer refer to the substantiality, but is revealed as an effective phenomenology of absence. Magda terms how it is the absence of materiality that counts in the digital Reality. Presence no longer is linked with the materiality. Rosa dreams of metaphysics of ciberontología in which science, mysticism and poetry become strange allies. She pits digital reason against Kantian critical reason to develop an emancipatory agenda in the new Integral Reality which has assumed the *"form of the sign that has been encoded, digitized, virtualized, without losing its force material"*.

What is required is to develop a new metaphysics, to push for a revolution in thinking itself. Thinking need not be merely binary and causal. A-causal thinking, synchronous thinking, correlative thinking, telescopic thinking, analogous thinking, chizimizing thinking, absurd thinking of Zen tradition, fuzzy thinking, khametic thinking (kha is the sunya, absolute emptiness in Indian tradition) that exposes vacuity of things; have been other modes of thinking. Sociologists are brooding over 'resonant thinking' to describe the recent popular uprisings in Tahrir, Taksim, Sol, Syntagma, Shahbagh, Zuccotti, and Ramlila ground. We do not need only instrumental reason to control and 'mirror' the nature. It is desirable to unleash an epic shift in elevating the communicative reason so that we seek permission from 'other-than-human' presences which might not be 'material and substantiated', for sharing their resources and domains. We will no longer feel abandoned in a populated universe. We need an integral thinking to make intelligible the interconnectedness of human and 'other-than-human' communities. India has been a powerhouse of philosophizing. It is time that our researchers and scholars take the lead to evolve an integral thinking which can provide bio-happiness to individuals, dharma guidance to the communities and social emancipation to the public. In this issue, we are publishing articles ranging from the ecological impact of dam construction in the Himalayas and the politics of the BRICS; critique of western philosophy and the poetry of G. Mend-Ooyo; study of oscillation of LASER beams and fractal geometry. This issue is a fusion of '*science, mysticism and poetry*' that reflects our zeal to promote integral thinking. I take this opportunity to acknowledge the support of the Mewar University, colleagues and the growing number of scholars who are sending us their work for widening the sphere of the journal. May this issue cause rush-hour of integral thinking among the readers!

-Niraj Kumar

THE SOCIO-ECONOMIC IMPACT OF HYDRO-PROJECTS: A CASE STUDY OF THE PONG DAM

Dr. Anurita Saxena*

ABSTRACT

A dam, built to addresses problems of irrigation and electricity, not only displaces people but also affects natural habitat of the area. The local populace, the flora and the fauna are caught up in a swirling vortex that throws up new ways of living, new means of livelihood, and above all, a new ecosystem wherein there is a place for everyone. The construction of the Pong dam on the river Beas in 1974 unleashed cataclysmic changes in the lives of the people living in its vicinity. It created a large reservoir, named as Maharana Pratap Sagar, and in no time, the society and its economy, surrounding the lives of the people, the migratory birds, agrarian system, the aquatic life, all underwent a sea change. The present paper is an attempt to bring into perspective the socio-economic changes and new patterns of life that came in the wake of the construction of the Pong Dam.

Keywords: Avifauna, Fisheries, Hydro-projects, Kangra, Maharana Pratap Sagar, Nomadic Tribes, Pong Dam, Siltation, wetland.

Introduction

While scholars have extensively written about the adverse impact of hydro-projects on environment and the lives of people displaced, very little has been written on how people make use of the new ecology created after the completion of a project. People have devised ingenious ways of adapting to new ecology, sometimes charting almost a new and unexpected terrain. *Sanjeev Khagaram*¹ and *R. Rangachari*² rightly argue that some of the outcomes are not envisaged during the planning of a project. Some of these unexpectedly prove beneficial to the community living in its vicinity as well as ecologically appropriate. In this context, we have chosen the Pong reservoir to explore various dimensions of it for a case study. We shall examine how building this reservoir has affected or altered the ways of living for the people living near it. In this paper, we are analyzing the new ecology created by the Pong dam, and how people made use of this. This reservoir has become an epicenter of various economic activities, which includes commercial fisheries, providing livelihood to many people, including those displaced by the reservoir. The reservoir has also emerged as a wetland area of international importance that attracts birds from various parts of India as well as abroad.

The History of the Pong Dam

The Pong dam, the focus of this research paper, was constructed as a storage project on the river Beas for meeting the irrigation requirements of Punjab, Haryana and Rajasthan in 1974. This dam was also part of a broader project to maximize the utilization of waters from the three eastern rivers of the Indus system; Sutlej, Beas and Ravi, allocated to India for its exclusive use under the Indus Water Treaty in 1960. After the completion of Bhakra dam in 1964, the focus was shifted to Pong to harness the waters of Beas. The dam

***Anurita Saxena** is a Post Doctoral Fellow at Centre for Studies in Science Policy, JNU, New Delhi on a Scholarship from ICSSR. She is a Lecturer in Government College in Himachal Pradesh. This paper is part of her research work on Hydro-Power projects in the state of Himachal Pradesh.

managed by Bhakra Beas Management Board (BBMB) is located at Pong, a tiny hamlet on the right bank of the river Beas in Kangra District, which was part of Punjab state till 1966. Initially planned as an irrigation project, a power plant was provided for in the final scheme, in view of the increasing demand for power. Six units each of 60 MW were installed at the Pong power plant. The water from the Pong reservoir goes to the Indira Gandhi Canal, which is 649 km long. The canal runs through the areas of Hanumanghar, Ganganagar, Raisinghnagar, Gharsana, Bikaner, Anoopghar, Suratghar, Nachna and Jaiselmer in Rajasthan.

This dam resulted in the creation of a large reservoir, known as Maharana Pratap Sagar, and displaced thousands of people. Later, it developed into a wetland area of international importance that nurtures a wide variety of flora and fauna. The wetlands are now regarded as important conservation sites, which support many endangered species. The reservoir also serves in a variety of ways with a large socio-economic purpose. People who live in its surrounding are the direct beneficiaries, though they also face some undesirable consequences that are often corollary to the emergence of such a new ecosystem.

The Land Acquired

With Dhauladhar as a magnificent backdrop, the reservoir presents a spectacular view. The reservoir submerged a large part of the 'Halduon Valley',³ which was the 'granary' of Himachal Pradesh. The Pong Dam was constructed in the Tehsil Dehra Gopipur and Nurpur of Kangra District, which was part of composite Punjab till 1966. Total area of land acquired for this project was 75268 acres and out of this 72371 acres got submerged into the reservoir. A total of 115 *maujas* (revenue estates), which comprised 339 *tikas* (revenue villages), were acquired between 1961 and 1965 for the dam to be built to a height of 1410 feet. Out of 339 *tikas*, 223 *tikas* were fully acquired and 116 were acquired partially. Almost 30 *maujas* and 110 *tikas* were fully submerged in the reservoir⁴ and the rest were partially submerged. The Pong project is estimated to have affected a population of almost 1,00,000, including a fully displaced population of almost 45,000 persons.⁵ In the official reports, the number of total families affected is 30,000⁶ and the number of affected landowner families is 20,722.⁷ But this does not mean that all these 30,000 families were displaced people. A major part of the population lost their agricultural lands either in parts or whole but retained their homes and villages. *Renu Bhanot* and *Mridula Singh*, on the other hand, argue that the reservoir submerged a population of 1,50,000 spread over 94 villages.⁸ This figure does not appear to be tenable, as the Census records do not support it.⁹ There is also a misunderstanding about the people who were fully displaced. Further, *Satyajit Singh* argues that 56 percent population displaced by Pong Dam was tribal.¹⁰ This is factually incorrect. Among the affected people, according to the 1971 Census, the percentage of tribal population was almost nil. The area submerged had only migratory tribal population of the Gaddis.

The People Displaced: The Society and Economy

The Changs or Girths or the Choudhary, a dominant caste in Kangra, were almost 65 percent of the population displaced. After 1990, they now enjoy the OBC status.¹¹ They were in possession of good fertile land and were the most indefatigable and hard working people.¹² Their main occupation was agriculture and their women folk worked in the fields and also used to carry wood, vegetables, fruits, milk and other products to the market for sale. They also used to work as Kashtkars (agricultural laborer) on the lands of the high castes Brahmins and Rajputs.

Brahmins and Rajputs formed almost 15 and 8 percent of the displaced people, respectively. Their men folk were partly in government service (mainly army) and partly agriculturists who rarely cultivated their land themselves but engaged the lower caste labourer or the Girths for cultivation. The rest of 15 percent population

comprised other backward castes such as Jats, Dharai, Jhiwar and Mallah (basically fishermen who were found in majority in 2-3 villages close to the river) and other lower castes. These castes had either small or no landholdings and worked either as agricultural laborers or artisans. The Gaddis of Chamba and Palampur used to cross over this valley to use the pastures of Dada Sibba in winters. On their way, they halted to use *shamlat*¹³ land of the villages. The village people used to provide them with grains in return for manure gained from the sheep and goats.¹⁴

Agriculture was the main occupation of the people of the Haldoon Valley, as the land was mostly plain, fertile and well irrigated. Almost 85 percent people tilled their own land, and 15 percent were agricultural labourers or sharecroppers. Some people were in government jobs.¹⁵ The artisans, like the Tarkhan and Lohar or the Carpenter and blacksmith, the Chamar or the shoemaker, Nais (Barber) and Chimbhas (Washerman), were paid in grain. But none of these had fixed perquisites and their duties and remuneration used to vary in different parts. The Rakha (Forest-Guard) and the Kohli (in-charge of the mending and maintenance of water courses) were village officials who were paid by grain contributions levied upon each house or plough.

The area submerged had 3 high schools, 8 middle schools and 14 primary schools. It had one government hospital and one veterinary hospital. Two railway stations that disappeared were, Jagatpura and Annoor. There were very few motorable roads and only two buses used to ply - from Pathankot to Dehra and from Talwara to Dehra. People mostly traveled on foot. Many temples were submerged, but the main temple, Bathu Ka Mandir, was relocated at Bani near Indora. Many fairs and festivals were a part of the social life of the area during the post independence period till early 1960's.¹⁶ These People were allotted new land to resettle and were asked to move out but they showed reluctance. Finally, they were virtually forced to move out hurriedly.

The Wetlands: Landscape and Ecology

'Wetlands' are basically areas where the soil is saturated with water throughout the year. The term 'wetland' includes a variety of habitats with permanent or temporary water such as the flood plains, shallow water bodies, and ponds, shallow peripheral areas of large lakes and reservoirs and coastal areas. Thus, a water body to be called a wetland has to possess above qualities; all lands with water or all water bodies do not qualify as a wetland. Wetlands have always been important. Agriculture had its beginning in the floodplains and the first human settlement was started close to floodplains. Wetland also provides a variety of resources: food, fodder, fiber and fuel.¹⁷ Wetlands are useful for retaining water, floodwater storage, ground water recharge, source of water like oases in deserts, silt trapping etc.¹⁸ They are also valuable as habitat for wildlife, as a source of economically important biota, nutrient and sediment retention, and carbon storage and also have socio-economic values and cultural, aesthetic and recreational values.¹⁹

They have certain negative aspects as well. For example, they serve as repositories for a host of undesirable biota. Mosquitoes, molluscs and invertebrates act as vectors of organisms causing diseases like malaria, cholera, and yellow fever. Incomplete decay of organic matter under anaerobic conditions results in the production and release of foul smelling gases, like ammonia and hydrogen sulphide.

Wetlands in India are all the more crucial for human and animal needs as three quarters of India's population is rural, and it places great demands on India's wetland.²⁰ India has 16 percent of the world's population, and only 2.42 percent of the earth's surface with very few natural wetlands and they are getting reduced due to excessive drainage and reclamation.²¹ With continuing losses and enhanced appreciation of the values and functions of wetlands, the Pong reservoir has emerged as an important wetland, which was declared a 'Ramsar Site' in 2001.

Pong wetland – A Ramsar Site

Pong is a man-made wetland and was declared so in 1983. It is the largest standing water body in Himachal Pradesh and has a spread of 310 sq. km. at its maximum. It includes one permanent island (*Ransar ki Ghari*) and several temporary ilets. The water level in the reservoir rises to a maximum of 420 m in August-September and then falls to 370 m in summer season i.e. April-July, hereby exposing a draw down²² area of about 50-220 km. The climate of the wetland is subtropical.²³ The size of the lake and its location on the trans-Himalayan highway and in the extreme north-west of the northern plains make it a suitable habitat for migratory birds entering the plains of India from Central Asia.²⁴ The main source of water for the reservoir is the Beas River and its tributaries i.e. the Dehar, Gaj, Bhul, Baner and Dheri.²⁵

The *Bhakra Beas Management Board* (BBMB, a government undertaking) owns the reservoir. The Forest Department controls the immediate catchment area, which is not a part of the reservoir. All land above 440m, within a 5 km radius of the lake (an area of about 20,000 hectare) is notified as a buffer zone. Because of its biodiversity i.e. migratory birds, fishes and flora, it was declared as Pong Wetland Wild life Sanctuary in 1983 and a wetland of National Importance in 1994. Total area of sanctuary is 30,270 hectare including the reservoir area.²⁶ Subsequently, Pong reservoir has been declared International Importance-Ramsar Site in November 2002.²⁷

It was declared a Ramsar Site on account of its rich water fowl, which consisted of more than 1,15,000 migratory birds belonging to 54 species, fishes of more than 27 species,²⁸ and also because of the dependence of more than 1500 fisherman families around on the lake for their livelihood. Though now the sanctuary is uninhabited, there are 45 panchayats and 215 villages in the intensively cultivated buffer zone, out of which more than 60 villages are densely populated. The population of the buffer zone is 77,075.²⁹

Avifauna in the Pong Wetland

The Pong dam is the first major wetland which potentially offers a transitory resting refuge for the migratory waterfowl in north India from Siberia and Central Asian countries.³⁰ Although some of the bird species are not new to this area and they use to frequent it even before the construction of the reservoir. Way back in the 1920's, *Whistler*³¹ had prepared a list of migratory birds in this region. As the *Whistler's* Punjab plain zone (where the Pong lake is now located) was then intensely cultivated, the birds from Siberia could not come here freely. After the creation of the reservoir, the diversity and abundance of water bird species have increased considerably. Because of the scarcity of this type of habitat in northern India, this vast stretch of open deep waters is of great importance for winter water birds.³²

This man-made water body has created the following five main types of avian habitats in the reservoir area: mudflats and mud spits, along the receding shoreline formed from October onwards; open deep water; dry sand banks with little or no vegetation; waterside vegetation and swamps below the outfall from the dam; and shallow water at the margin of reservoir.

The entire wetland has no tree cover, but grasses dominate its flora.³³ There is some submerged aquatic vegetation in the reservoir also, but due to the frequent seasonal changes in water level, the shoreline does not support extensive areas of emergent vegetation. The surrounding hillsides still have some mixed deciduous and pine (*Pinus roxburghii*) forest. The islands in the reservoir have been almost completely deforested by the forest department and the labour force.³⁴ There is an extensive swamp with reed beds and grasslands in the seepage area below the dam.³⁵ All this now constitutes an ideal setting for migratory birds.

Figure 1.1
Different Avian Habitat



Deep Water



Mudflats and Mudspita



Dry sand bands with no vegetation



**Water side vegetation and swams
below the dam**



Shallow water at the reservoir margin

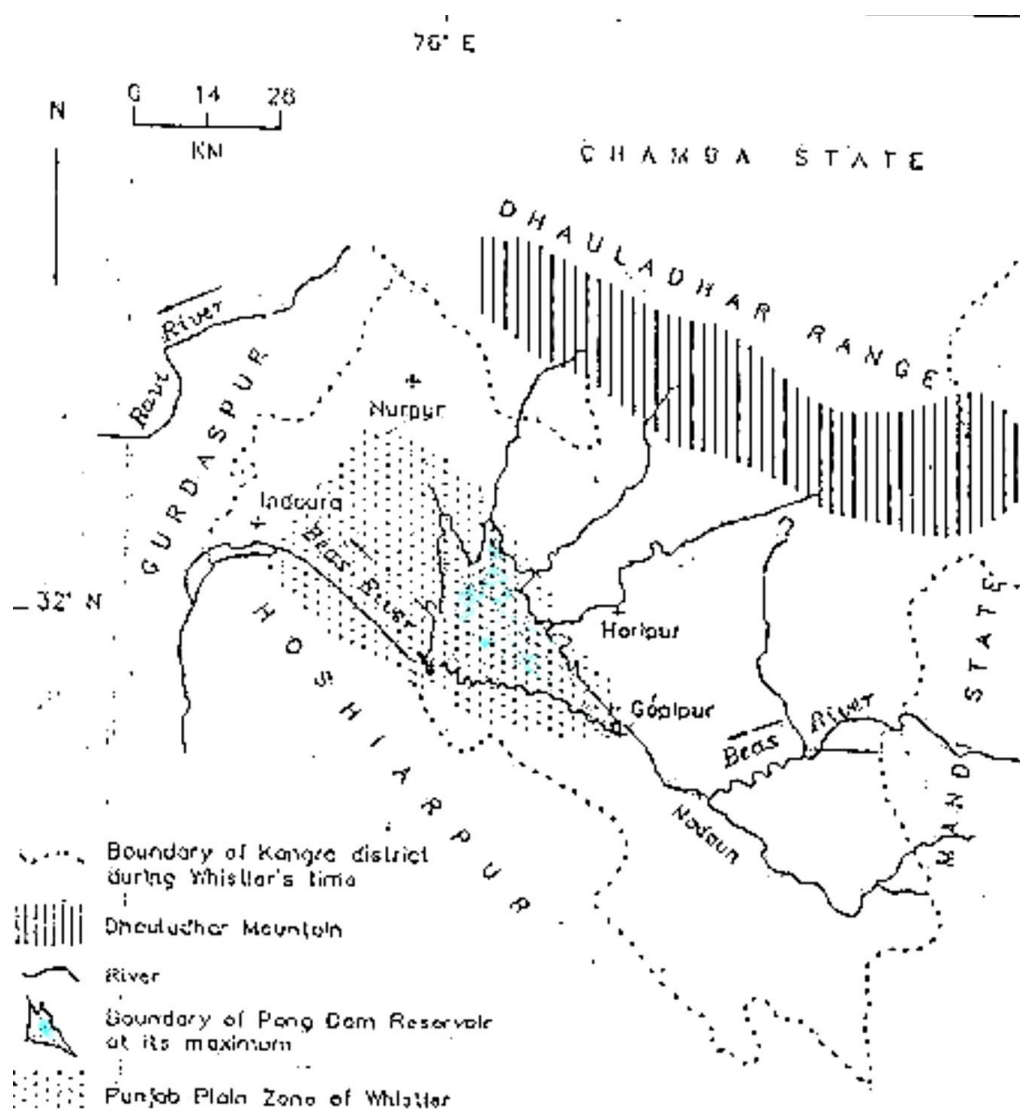


The migratory birds

Source: The photo collection of State Council for Science Technology and Environment, Shimla.

Figure 1.2

The Map of Kangra District showing the Pong reservoir and Whistler's Plain zone



Source: Pandey, Sanjeeva (1993). *Changes in Water bird Diversity Due to the construction of Pong Dam Reservoir*; Himachal Pradesh, India, Biological Conservation.

In the early 1920's, *Whistler* had recorded a total of 27 water bird species, with only eight regular visiting species, and the rest occasional visitor or rare. After the formation of wetland, the first waterfowl census was conducted by *Gaston* in 1985.³⁶ Another census was carried out by *Sanjeeva Pandey* between 1986 and 1995. It recorded a total of 54 species of water birds, of which 39 were common.³⁷ In 2004, *Den Besten*³⁸ recorded around 420 species of birds, including the water birds at the wetland, thus highlighting the importance of the area for avifauna. Now the wetland attracts more than 1,50,000 waterfowls of 69 species of water birds.³⁹ It is a major attraction for bird watchers and biologists.

The red-necked grebe was recorded from this reservoir for the first time in India.⁴⁰ The black headed gull, great black headed gull and herring gull, species which are fairly uncommon in non-coastal India, visit the reservoir each winter.⁴¹ *Sanjeeva Pandey* prepared a comparative list of the number of birds seen before (*Whistler*, 1926) and after the creation of the Dam, which is shown in the Table 1.1.⁴²

Table 1.1
List of birds observed in the area of Pong Dam in 1924-26 and in 1985-91

Birds Group	Species seen by Whistler (1926)		Present study (1985-91)	
	Total no. of species	Common Species	Total no. of species	Common species
Shore birds	10	6	13	10
Ducks and geese	6	-	12	12
Gulls and terns	3	-	5	4
Large wading birds	5	1	15	7
Others	3	1	9	6
Total	27	8	54	39

Source: Pandey, Sanjeeva(1993). *Changes in Water bird Diversity Due to the construction of Pong Dam Reservoir*, Himachal Pradesh, India', Biological Conservation.

The migratory as well as resident birds are capable of adjusting in any ecological setting, yet they prefer some special habitats. Most of the birds do not stick to only one habitat, but enjoy different habitats, which are well provided by the Pong Wetland.⁴³ Waterside birds such as wagtails, sand larks and pipits use the mudflats. Swamp habitat below the outfall of the dam is important for waders as well as ducks and coot. The shallow water on the margins of the reservoir provides important feeding areas for a large number of dabbling ducks and some long-legged waders. The sandy banks strewn with small boulders near the reservoir margin are used by stone curlew and pratincoles. The open and deep waters are used by the divers birds e.g. Grebes cormorants; darters etc. Bar headed geese and ruddy shelduck spend most of their time feeding in the draw down area, which is cultivated by local people during the winter. Waterside birds include warblers, babblers, munias, kingfishers and predators, which occur in swamps as well as in several of the other habitat types.⁴⁴ Several islands in the lake are being colonized by heronry species for nesting as well.⁴⁵

Pong's attraction does not stop at the wintering waterfowl; it extends to the raptors and scavengers that are found in good numbers here, though they are vanishing from most of the places. The wetland forms an ideal habitat for breeding of the critically endangered Indian white backed vulture. The study team of SCSTE found 6 nests of white backed vultures with chicks in four of them.⁴⁶

The construction of the Pong reservoir has produced suitable habitat for migratory birds. Their number has increased over the years. The ongoing process of fishing, cultivation and grazing has not adversely affected the birdlife yet, but it does pose a threat. Poaching is the main threat, so is the use of pesticides and insecticides by the farmers in nearby areas.⁴⁷ The grazing of cattle also poses a problem to the nests and eggs of the waterfowls.⁴⁸ The effect of increased avifauna in Pong wetland and on the people living in the periphery has yet not been studied. An intensive study can shed more light on this aspect.

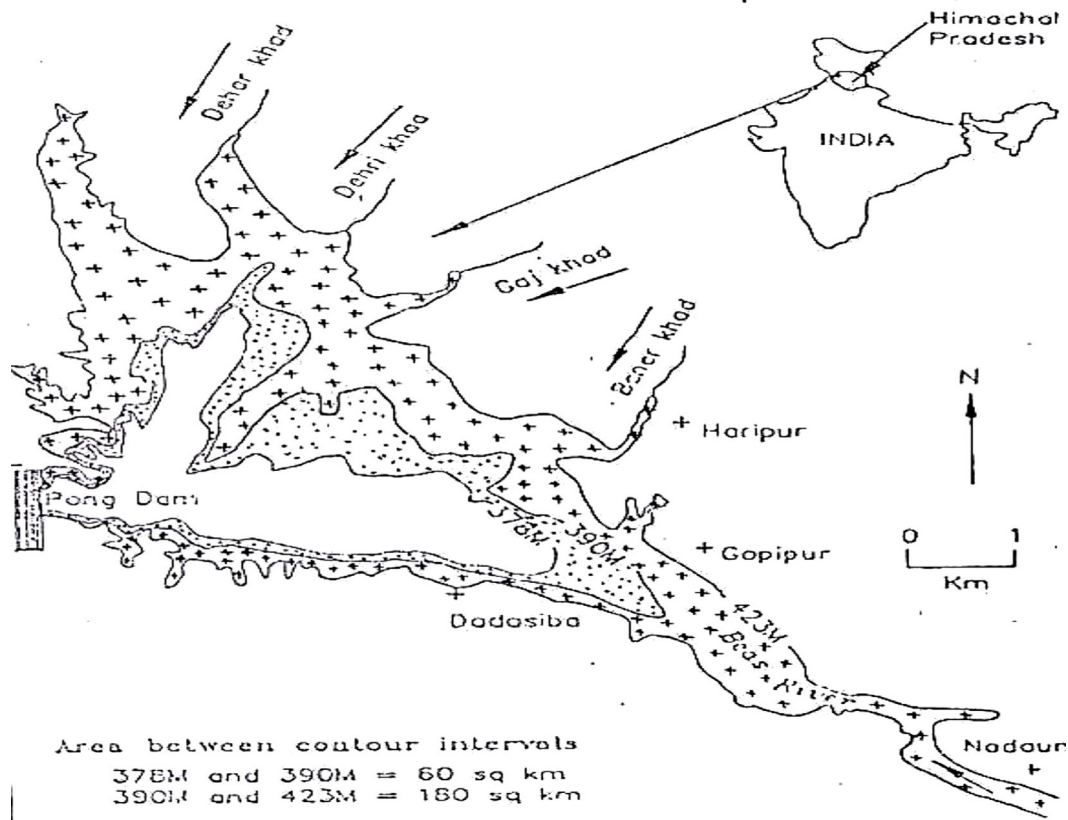
Wetland and the Cultivation

A major topographical change that resulted from the building of the Pong reservoir is the availability of the drawdown area of 50-220 sq. km for cultivation. The BBMB has acquired all land that would have

submerged when water level rises up to maximum.⁴⁹ But the reservoir is not full throughout the year. For a few months (from December to June) the water level goes down, leaving a big portion of the land exposed. This land is very fertile due to its submergence in water and silt it contains. Many families who had earlier left their lands have returned and again settled down in the periphery of the reservoir and have started tilling this land. Apart from the owners, many other people also eagerly cultivate this area as it gives them additional income. This land is fertile and gives good yield. It is estimated that about 4000 hectares of such land ⁵⁰ is tilled for the Rabi crop.⁵¹ Once the crops are cut the land is again left for inundation.

Figure: 1.3

Map of Pong Reservoir showing the drawdown area where the cultivation takes place.



Source: Pandey, Sanjeeva(1993). *Changes in Water bird Diversity Due to the construction of Pong Dam Reservoir*; Himachal Pradesh, India, Biological Conservation.

This practice, however, is giving rise to two problems. One, it leads to law and order problem as this is practically no man's land and any one can till it whether the land, prior to the construction of dam, belonged to him or not.⁵² Two, the cultivation in the protected area is leading to serious silt problem, reducing the life span of the Dam. The BBMB and the Himachal Government in the year 2003 have taken a decision that the protected area will be fenced and no cultivation will be allowed as it leads to soil erosion and also disturbs the migratory birds.⁵³ The local people have obviously not welcomed this move, as it hits their additional income. The decision has also not been implemented in full force, as it requires regular and strict monitoring by the local administration which is not easy, given the size of the draw down area. And perhaps a sympathetic attitude of the officers towards the oustees also does not help the matter. Little is known about the effect of agricultural practices on the Pong wetland. The use of chemicals fertilizers can adversely affect the biota. But it has not acquired any serious dimensions so far because fertilizer consumption is very low. Cultivation also

disturbs the mudflats and water birds habitat during the winter season. The migratory birds, on the other hand, harm the standing crops mainly the Bar-headed geese and Brahminy ducks.⁵⁴

Wetland and grazing

The uncultivated land around the wetland is also used by the villagers as pastures for their cattle during the monsoon season. A study conducted by the State Council for Science Technology and Environment (SCSTE) indicates that, for 6-7 months of the year, fodder for the cattle is procured from the wetland area, and it is a big economic relief for the people living in the vicinity of wetland.⁵⁵ The other related benefit of cattle grazing is the dung collection. The fallen dung is collected for fuel by the villagers and not necessarily by the people who own the cattle. This dung meets the need of a family for at least three months. It is also used as manure before the sowing of crops.⁵⁶

Wetland and Nomadic Tribes

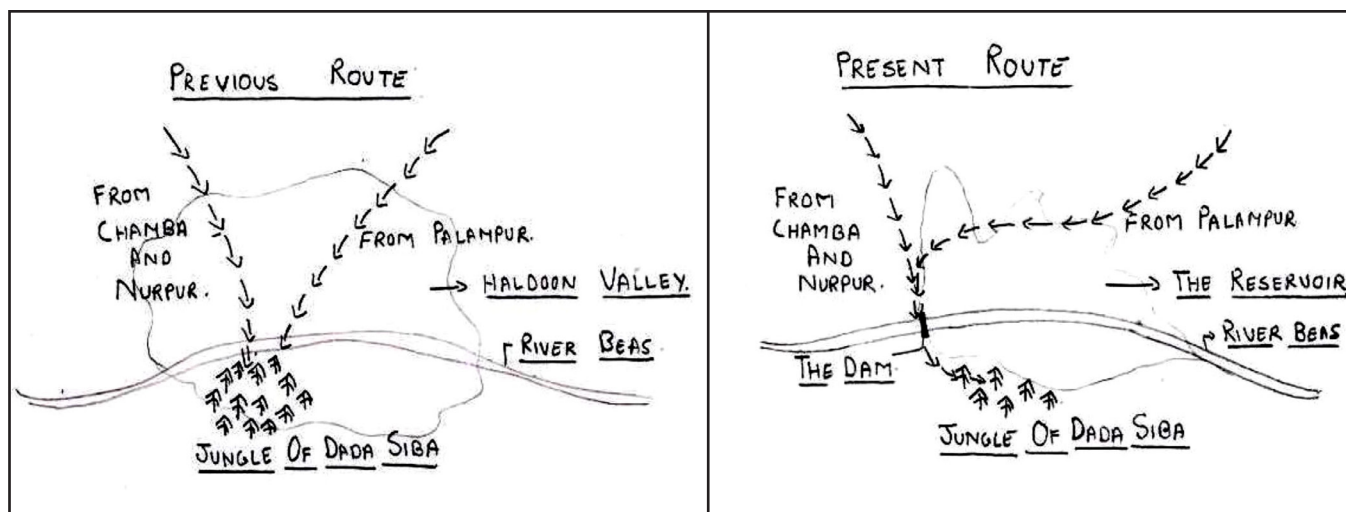
The creation of the reservoir might have thrown open land as pasture for the cattle of the people living in its vicinity, but has forced the nomadic pastoralists to change the routes of their seasonal migration. Some of them who earlier used submergence area for grazing had to search new places for this purpose.

Gaddi

The Gaddis are the most well known nomadic pastoralists in Himachal.⁵⁷ They reside mostly on the snowy range, which divides Chamba from Kangra. The Gaddi are a semi-pastoral, semi-agricultural people whose main wealth consists of flocks of sheep and goats. The Gaddis have always enjoyed the rights of grazing in the jungles, both in the low hills and in the higher ranges. Prior to the construction of the dam, the Gaddis used to come from Palampur, Baijnath and Chamba, and they used to pass through the Haldoon valley, cross the river Beas and settle in the jungles of Dada Siba in the winters. On their way to Dada Siba, they used to halt on the village *shamlat* land for a day or two. The local people exchanged grains and other necessities for the manure from these Gaddis.⁵⁸

Now, after the reservoir, the Gaddis have lost these halting places. They have to reroute Dada Siba which has increased the distance of their travel. They have also lost some of their grazing land as the jungles of Dada Siba have also been partially acquired and submerged.

Figure: 1.4
Previous and present routes of the Gaddi's

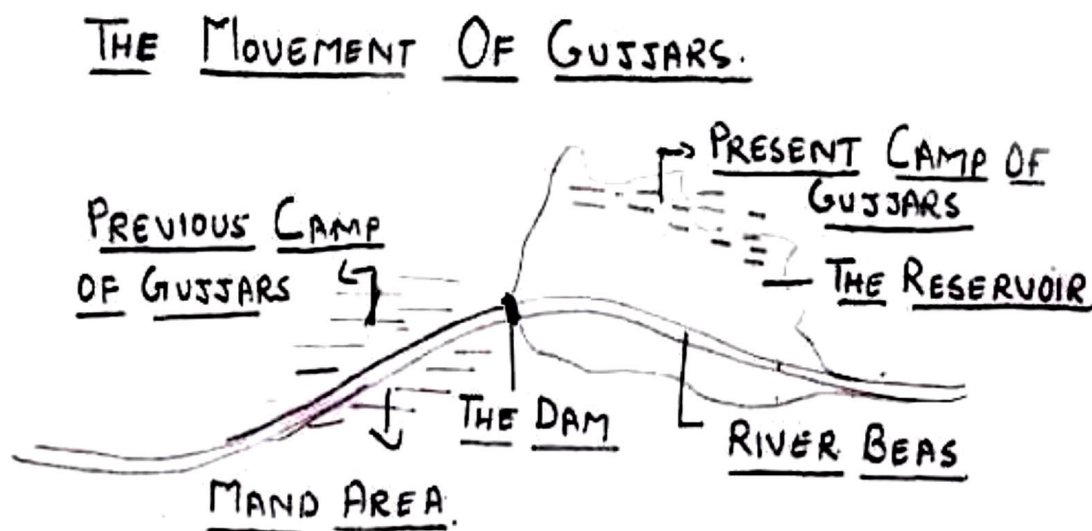


Gujjars

In the earlier twentieth century, the Gujjars were the only people in Kangra who sold milk and ghee because they kept herds of buffaloes.⁵⁹ There are two types of Gujjars in Kangra, one group has fixed houses and owned pasture. They mainly reside in the Nurpur area.⁶⁰ The second group constituted of the Ban Gujjars. They are pastoral nomads spending the summer in the high ranges of the Himalaya, and the winters in the lower hills.

Before the construction of the dam, the Ban Gujjars used to visit the Mand area, which is downstream of the dam. Here the riverbed of Beas was used for grazing. After the dam came up, the area was reclaimed, and it is now cultivated by the owners of the land who earlier did not cultivate it because of floods. The area, which is now under cultivation, is useful because of the growth of 'Kharkana' (a type of grass which is used for making papers). People sell it to the mill-owners of Punjab. So the Gujjars had to look for alternative site as they were no longer welcomed by the people of the Mand area.

Figure: 1.5
Movement of Gujjars



The availability of grass has also declined. For few years after the construction of the dam, the Gujjars kept on going to the Mand area, but later it was becoming difficult for them. From the year 1984-85, the Gujjars started to visit the drawdown area of Pong Reservoir, because of the open land and green grass. They stay there for 3-4 months from April to July, and as water level starts increasing, they again move out to Nurpur or Pathankot.

The Gujjars live in small groups in the makeshift tents that have a protective plastic covering as the roof and are mostly related by blood.⁶¹ The males look after the herds and females tend to household duties. Each

family supplies 50-60 liters of milk daily to local population for household consumption and tea and sweet stall along the main road.⁶² When they move to Punjab, they sell their products there. Some people feel that the movement of Gujjars create problems for the local people and at times create law and order problems as well when they clash with the local people over their movements.

Wetland and Tourism

Though the reservoir was never planned as a tourist spot, yet soon the beauty of this huge water body became an object of attraction. The government of Himachal Pradesh drew an ambitious plan for promoting water sports, avifauna, eco-tourism and angling. A water sports complex was built to encourage adventure water sports and also for training of budding sportspersons. Subsequently, a restaurant was built by the Tourism Department, adjacent to the Dam. The sight, no doubt, is beautiful; one can have the view of the dam as well as the reservoir from there, but the place is totally underutilized. A study conducted by SCSTE in 2004 revealed that, due to the lack of publicity and awareness, foreign tourists seldom visit this wetland. Only people from nearby places and that too in small numbers visit the wetland. The main reason being that the people need to seek permission to be there after 5 pm and people coming from Punjab side have to obtain a pass for crossing the Dam and reaching the sports complex. However, the State Government is trying to put the Pong Lake on the international tourist map. A spacious and beautiful restaurant was opened in 2005. The construction of a civil terminal at Pathankot airport in 2007 was likely to give impetus to the flow of tourists to Pong wetland but it did not happen so. The Bhakra Beas Management Board (BBMB) insists on putting restrictions because of security considerations which is a major hindrance in growth of tourism. Now the government, under its ADB funded project to promote Tourism in Himachal, is taking a few measures like upgrading the restaurant and toilet facilities, developing eco tourism facilities at Ransar island in the lake, developing jetty, watch towers and many other things.⁶³ Only time shall tell the result of these new initiatives. But the point remains that the oustees are mostly not involved in any such plans and for them the lake is a lake with not much tourism benefit attached to it.

Commercial Fisheries

Commercial fishing in Pong reservoir was initiated in 1974. A token consignment of 1.3 lakh fingerlings of mirror carp were stocked in the reservoir in June 1974.⁶⁴ The total catch during the first year of fishing operation was 98.1 tones and increased progressively, attaining a peak of 794.4 tons in 1987-88, and then declined. It has more or less stabilized around 400 tons by the end of the 20th century.⁶⁵ The fish yield from 1974 to 2012 is shown in the **Table 1.2**

The sharp decline in the fish catch after the year 1988 is attributed to the opening of the floodgates by the Dam authorities in that year due to heavy rains, which resulted in the escape of fish in large numbers from the reservoir.⁶⁶ But there can be other reasons as well. The construction of a large dam often increases the total amount of fish that can be caught in an area, which in turn bring changes in the location and structure of the fishing industry.⁶⁷ When vegetation and soils are flooded by a reservoir, they release huge amounts of nutrients, which nourish a fish population that is suddenly able to expend into an increased habitat, and this results in an increase in the fish yield. After a number of years, however, when the flush of nutrients from rotting bio mass starts declining, the fish catch also starts to decline and in some cases reservoir water become depleted of oxygen and clogged with aquatic plants which decreases fish productivity.⁶⁸ Such an example was found in the Kainji Dam where the yield was very high in the initial years; then the yield dropped, it stabilized for few years and now for past 5-6 years it is again declining. A large numbers of fish eating birds visiting the wetland is also considered to be one of the reasons for low yield.

Table 1.2
Total Fish Production in Pong Reservoir from the year 1976 to 2012

Sr. No	Year	Fish Production in Tonnes	Sr. No.	Year	Fish Production in Tonnes
1	1976-77	98.114	19.	1994-95	370.506
2.	1977-78	265.464	20.	1995-96	329.660
3.	1978-79	478.929	21.	1996-97	397.289
4.	1979-80	596.018	22.	1997-98	414.810
5.	1980-81	569.210	23.	1998-99	359.820
6.	1981-82	443.218	24.	1999-00	453.124
7.	1982-83	498.840	25.	2000-01	428.444
8.	1983-84	469.963	26.	2001-02	390.941
9.	1984-85	498.960	27.	2002-03	379.092
10.	1985-86	552.664	28.	2003-04	396.341
11.	1986-87	519.171	29.	2004-05	411.374
12.	1987-88	797.359	30.	2005-06	421.067
13.	1988-89	474.753	31.	2006-07	387.780
14.	1989-90	489.205	32.	2007-08	405.576
15.	1990-91	471.797	33.	2008-09	416.362
16.	1991-92	485.503	34.	2009-10	369.780
17.	1992-93	448.380	35.	2010-11	330.320
18.	1993-94	372.715	36.	2011-12	285.990

Source: Data provided by *Gurucharan Singh*, Director, Fisheries Department, Pong Dam, 2012

In the Pong wetland not many studies have been conducted to find out the real impact of the construction of dam on the fish species and the flora of the area.⁶⁹ When the commercial fishing was started, not much attention was paid on the life cycles of important fish species. In general the life cycles of many fish species are poorly understood. Where fish species migrate long distances, dams can decimate fish stocks and the diets of the people dependent on fish protein.⁷⁰ *Janet N. Abramovitz* writes that the Columbia river Salmon fisheries in North America declined sharply after dams were built on that river.⁷¹ *Abramovitz* has observed similar findings in the Amazon River basin, where many fresh water species have become rare. Salmon fish has almost completely disappeared from the Rhine for almost the similar reasons.⁷²

A somewhat similar trend is noticeable in the Pong reservoir. During the initial stages, the fish fauna of the reservoir consisted chiefly of catfishes, minor carps, and a few coarse fishes mainly residual and acclimatized from the river. Gradually certain migratory species started to find it difficult to retain their position in the ecosystem. Of these, three most important are the golden mahseer (*T. putitora*), Snow trout (*S. richardsonii*) and *L. dero*. The mahseer, which had its migratory run up to Sultanpur near Kullu, has disappeared in this area. The other affected species are *S. richadsonii* and *L. dero*. While the former could not survive in the new environment, the later is struggling to retain its progeny in the reservoir.⁷³

Traditional Fishermen and Fishermen Societies

Before the construction of Pong Dam on the river Beas, the traditional fishermen in Himachal were not

organized. There were few castes who earned their livelihood by fishing.⁷⁴ Their methods were traditional and they were used to riverine fishing. When commercial fishing started in Pong Dam in the year 1975, the fisheries department tried to formulate a concerted plan for the development of fishes and a State level 'Reservoir Development Committee' was set up in 1976.⁷⁵ As a first step, it was decided to bring all fishermen under a cooperative fold and only a member of the Co-operative Societies would be permitted to operate nets in the water body. Three Societies with the total membership of 303 fishermen were registered in 1976. By 2007, the number of societies rose to 15 with memberships of 2587 fishermen. No license fees was charged from the fishermen till 1981-82, but later an annual license fee of Rs. 50 was levied on each gill net of 80 m. length. The department also charges 15 percent royalty on the price of the fish caught by each fisherman.⁷⁶

For sale of fish the practice of appointing contractors by open auctioning at the beginning of each year is in vogue. The fish caught by the fishermen is brought to the fixed fifteen landing centers. The contractors pay weekly money to the societies, and the societies pay some royalty to the department. To avoid conflict between the societies regarding the area of operation, the societies and the department of fisheries have divided the reservoir into eight beats demarcated on the basis of area and productivity of water body.⁷⁷ Apart from active fishing, other jobs are also provided to more than 1000 families engaged in helping fishermen, like carrying/transportation, packing of fish, weaving and mending of gears, marketing. Though primarily formed for power generation and irrigation purpose, approximately 4178 tonnes of fish valued at Rs. 1978.69 lakhs were harvested from the reservoir during the last 10 years (1997 to 2007).⁷⁸ Prior to the impoundment of the river Beas, a subsistence fishery existed in the river and adjoining streams and the average catch hardly exceeded 2 to 4 kg. per fishermen per day. With the formation of reservoirs, a lucrative fishery started attracting large number of fishermen and the oustees who had no other viable means of livelihood. The fisheries department initiated training courses for operating gears in the deeper waters for fishermen.

Although the fishery department claims that lot many oustee fishermen are now engaged in the fishing activities, there is no evidence to substantiate it. The department never formed any incentive scheme for the oustees of the dam as such or the people who were engaged in fishing profession earlier. A reservoir does create lucrative fishery, but there is no guarantee that local fishermen and the other people who have their livelihood affected by the dam will be able to reap the benefits.⁷⁹ Often, it is only outside entrepreneurs and those with experience of open water fishing benefit from it. In Pong Reservoir, the people who are the contractors or the people who are buying the fishes are mainly outsiders, primarily from Punjab. The reservoir no doubt has created lucrative fishery, which is not yielding very good results now as it did during its initial years, but the dam oustees have not directly benefited from it.

People and Wetland: Perceptions and Experiences

The people affected by the creation of the Pong reservoir can easily be classified into three separate groups. The first group consists of the people who were fully displaced and who chose to resettle at a different place away from the reservoir. The second group is of the oustees who were also fully displaced but chose to resettle in the peripheral areas of the reservoir and the third group is of the people who were partially affected and continued to stay in the peripheral areas of the reservoir. The last two directly utilize the reservoir and the buffer zone. Naturally the experiences and perception of all the three groups vary from each other.

Most of the oustees who did not go to Rajasthan or could not go to Rajasthan chose to stay back and due to their socio-economic and cultural preferences settled as a group within the district. This led to concentration of oustees in certain pockets of district Kangra.⁸⁰ Most of the oustee families have tried to settle down at a place where one or more family member or close relatives had already settled.⁸¹ The main areas where the oustees have settled down are Nurpur, Jaswan, Jawali, Shahpur, Nagrota Surian, Dharamshala and Kangra. Almost

40 percent displaced population settled down within a radius of 20 to 100 km and almost 55 percent within a radius of 5 to 10 km. Only 1 to 2 percent oustees have settled down beyond a distance of 100 km.⁸² The reason cited by them was a genuine one and clearly reflected their subconscious attachment to the land, which they had to abandon. The people who moved away from the reservoir area usually bought land at the road-side so that they could have the advantages of infrastructural facilities. Most of the oustees utilized the compensation amount for building up house and buying some agricultural land. In general, economically, the oustee families are self-sustainable as many of them have taken up government service. Further, families who have their murrabas in Rajasthan and are tilling them, have a substantial earning from them.⁸³

But almost all the people, especially the older generation, are nostalgic about their previous homes. They all suffer from the complex of being dam oustees and are bitter about the fact that even after 30 years people still call them 'Damu'⁸⁴ and do not mix with them freely. The oustees generally interact with the oustee families only, argues Lahri Ram of Shahpur.⁸⁵ He also told the writer of this article that in the initial years, there was an incidence in Nurpur where the local people did not allow an oustee family to cremate a dead body, as they were considered to be outsiders. Most of the oustees feel the pang of separation from their loved ones as the whole of displaced villagers did not settle at one place.

The original inhabitants too perceive the oustees as the people who encroached upon their land (and because of which the prices rose sharply), jobs, opportunities and infrastructure. The area under pastures and forests has decreased due to the settlement of oustees as the pressure on natural resources increased.⁸⁶ The oustees, however, brought some advantages to the area as well. The infrastructure improved in the areas along with specific development schemes to develop the resettled areas. The money for this development comes out of *shamlat* compensation fund⁸⁷ given to the oustees.

The oustees who have settled down in the vicinity of the reservoir are those who got only partially affected and draw many advantages from the reservoir. The State Council for Science, Technology and Environment has conducted some studies to find about how the people availing these resources perceive it.⁸⁸ People in general feel good about the reservoir because this has made the place important and attractive for tourists. They also like the arrival of the migratory birds. The birds in general fascinate people when they flock together in lines and make different shapes in the sky. The view is especially beautiful during the sunrise and sunset.

It is alleged that some of the oustees indulge in killing the migratory birds, for their delicious meat or to procure the silver ring around their feet.⁸⁹ People use different methods to kill these birds, the most prevalent is to boil the wheat and maize seeds and then to mix poison in them and then scatter them in the fields.⁹⁰

The older generation is of the view that these birds visited the area even before the construction of the dam, though not in such large numbers. It is evident in the old folk tales and songs and they were known as 'kunjia'. One of the songs is

कुंजा जाई बड़िया जरोट, चीटे दंद गुलाबी ओंठ

However, it is the additional land available for tilling in the drawdown area, which is perceived by them as a major advantage of the reservoir, though they are aware that it is illegal to cultivate it. They also know that it is harmful for the preservation of the wetland. Yet they practice it as it gives them additional income and they justify it on the ground that the government has failed to resettle them satisfactorily. The land is scarce and prices are high, hence there is pressure on the land. The villages on the periphery are quite densely populated and, as Prabhat Kumar of village Dhameta complains, that it is difficult even to attend to the nature's call.⁹¹ The people keep their livestock closer to the house because of scarcity of land to make proper cowsheds, though there is no problem of common grazing land.

The creation of the reservoir provided an opportunity to the people to adopt fisheries for livelihood. But now, with a decline in the fish yield, the people are disappointed and want to switch over to other professions, which hardly exist.

The fully displaced people, however, feel that the people who got only partially affected had a better deal. They retained most of their lands and homes and they also till the draw drawn area of the reservoir for which they have already been paid compensation. The people (among the partially displaced) who have the murrabas and are tilling them and also those who have sold them have had substantial economic gains. The fully displaced people also feel that partially affected people were able to manage their murrabas more efficiently because they did not have to bother about the new home and family.

Fish fauna in Pong Wetland

The construction of a dam might hamper the migratory run of the natural fishes, disturb their natural biota and deplete their numbers, but the Pong dam has brought major change in the status of fisheries in this area. Fishing was a regular profession for many castes like the Jhiwar, Mallah and Darein for many centuries mainly in the villages adjacent to river. The river Beas was full of many fish species; the most important being the Mahsir (*barbus tor*). The Kangra district came under the Fish Regulation in July 1916, and since then the fishery was regulated and the problem of 'poaching' was tackled to a certain extent.⁹² People including the big zamindars resorted to poisoning and using explosives for the purpose of killing fish throughout the district and especially during the months of May and June when the river and streams were low. Under the Fisheries Act of 1914, the licenses were given to the people, leading to an improvement in overall condition of fisheries and commercial fishing.⁹³ People started realizing the blunder committed by their folly of poisoning the fishes, which in turn poisoned the whole stream as well.

Prior to the construction and completion of the reservoir, a detailed study on ecology and fisheries of the Beas had never been done. However a list of fishes of the Kangra district is given in the Kangra Gazette of 1924-25.⁹⁴ G.C.L. Howel (1916)⁹⁵ also prepared a list of fishes of river Beas from Beas kund to Largee a stretch of approximately 150 km.

Conclusion

The Pong Wetland has emerged as a combination of lost and new opportunities. While the older generation prefers to live in past, the new generation has adapted well to the present scenario. Some have made good use of the opportunity thrown up by commercial fishing, and some others are waiting for eco-tourism to emerge as a new opportunity. From the ecological point of view, many changes are discernable. The old equilibrium has given way to the new one. While construction of the reservoir disturbed fresh water fisheries, the reservoir has become a breeding ground of many new species. The net losses and gains are difficult to measure, as no one has studied this aspect carefully. Similar is the case of avifauna. It seems that many of endangered species come over here, and hence the area has been declared '*Wetland Ramsar Site*'. Wetland is significant from the point of view of the preservation of bio-diversity. However, as has been discussed above, there are conflicts between the reservoir authorities and people on various issues. The agrarian activities of the people of the surrounding areas lead to siltation in the reservoir.

To address the problem of siltation, watershed development projects have been launched with an intention to prevent soil erosion along the watershed of the main river and its tributaries.⁹⁶ However, many of the problems stated above cannot be solved unless people that live in the vicinity of the reservoir are made partner in its management.

The Pong Wetland is a unique and important development from the ecological point of view but somehow

the enthusiasm of the academicians, scientists, government officers, and environmentalists is not shared by the common men who will only develop an interest if the wetland delivers incremental income to them. In fact, the recent decline in fish production is a major disappointment for the people in the area. The locals will start showing care and concern towards the migratory birds only if their advent is integrated with a tourism promotion plan, bringing economic gains to the population. Only when the area receives tourists along with the birds, will the common men await the arrival of them as eagerly as those who study them for academic interest. Obviously the conservation cannot be given preference over the survival of the people. Conservation strategy for biota or wildlife can only succeed if it takes into account the well being of locals. Only then the conservation can become the concern of the local people, as it is that of the scientist.⁹⁷

Notes

- 1 He has cited many examples to show that the performance and experiences of the large dams in the world is much more varied and complex than is generally assumed. Some of these projects arguably produce social and environmental benefits as well. Sanjeev Khagaram, *Dams and Development: Transitional Struggles for Water and Power*.
- 2 R. Rangachari in his book *Bhakra-Nangal Project*, praises Bhakra for fulfilling promises it had made to the nation and for producing certain advantages which were not even envisaged, like the massive breeding of the fishes in the Gobind Sagar Lake
- 3 Barnes, C. R., *Kangra Settlement Report*, 1889, Lahore Printing Press, p. 58.
- 4 'Status note on Pong Dam' Undated, File No. A 45, Pong Dam Branch, D C Office Kangra District Statistical Report 1971, based on the Censes Report of 1971.
- 5 According to the 1971 Census Report, a total of 90 villages got fully submerged in the reservoir and the total population of these villages was 31,425. The Office of the D.C. R&R, Raja Ka Talab, has provided almost similar data. Although some partially submerged villages also displaced its population and some villages were displaced for the construction of other allied works. The displaced population can be around 45 thousand.
- 6 The figure seems to be exaggerated, because according to the revenue records and the data provided by the D.C. R&R, the population of the landless people was very low and not 30% of them affected families.
- 7 File No. A 45, Pong Dam Branch, D C Office, Kangra.
- 8 Renu Bhanot and Mridula Singh, 'The oustees of Pong dam: Their search for a home', in E.G. Thukral, ed., *Big Dams, Displaced people: Rivers of sorrow; Rivers of change*, Sage publication, New Delhi, 1992, p. 108.
- 9 The total population of Dehra Gopipur Tehsil with an area of 1282 sq. km. was 2,13,458 in the year 1971. The population of the tehsil was almost uniformly distributed. Hence, one forth area cannot contain about 60 percent of the population. It is unlikely that the population of a part of the Tehsil with an area of 300 sq. km., which was submerged, be 1,50,000 Further, the numbers of villages affected was 115 and fully submerged was 30.
- 10 Satyajit Singh, *Taming the Waters, The political economy of large dams in India*, OUP, Delhi, 1997 p. 192.
- 11 *District Statistical Abstract of Kangra District, 1991-2002*, Dharamshala.
- 12 Barnes, *Kangra Settlement Report*, p. 40.
- 13 Common land of a village or group of villages.
- 14 *A socio- Economic Profile of Gaddi Habitat of Kangra District*, Directorate of Economics and Statistics H. P. Shimla.
- 15 Bhanot and Singh, 'The Ousteers of Pong Dam: Their search for home', p. 108.
- 16 Data based on the official records and the local people as told during the many interviews I undertook in

the months of May, July, October and November, 2003.

- 17 A. Lee Foote, Sanjeeva Pandey, and Naomi T. Krogman, 'Process of Wetland Loss in India', *Environmental Conservation*, 23(1): 45-54. *A Preliminary Analysis of the Environmental Economics of Pong Dam*, July 2004 to December 2004, Sponsored by State Council for Science, Technology and Environment, Government of Himachal Pradesh, Bombay Natural History Society, 2005, p. 6.
- 18 S.N. Prasad, 'Conservation of Wetlands of India – a review', *Tropical Ecology* 43(1): 173-186, 2002.
- 19 Gopal, 'Wetland Functions and Values', in Gopal ed., *WWF-INDIA'S Hand Book of Wetland Management*, p. 5.
- 20 Foote, *et al* 'Process of Wetland Loss in India', p. 46.
- 21 Sanjeeva Pandey, 'Changes in Water bird Diversity Due to the construction of Pong Dam Reservoir', Himachal Pradesh, India, *Biological Conservation*, 1993, p. 127.
- 22 The difference between two surface levels of a reservoir i.e. the minimum water level and the maximum water level of the reservoir.
- 23 S. Singh, A. Kothari and P. Pande, *Directory of National Parks and Sanctuaries in Himachal Pradesh*. Indian Institute of Public Administration, New Delhi, 1990, pp. 67-9.
- 24 'Integrated Management Action plan of Pong Wetland', p. 31.
- 25 Singh, et al., *Directory of National Parks and Sanctuaries in Himachal Pradesh*, pp. 67-9.
- 26 Notified as 30,729 ha, but re- estimated by IIPA/Environmental Studies Division as 32,270 ha using digitized maps.
- 27 It is known as 'Ramsar Sites' because the Convention on Wetlands was signed in the Iranian city of Ramsar in 1971. 'Ramsar sites' are those included in the List of Wetlands of International Importance maintained by the Ramsar Convention. In July 2002, there were 1,179 Ramsar sites in 133 countries, covering 102,126,760 hectares. To qualify as a Ramsar site, a wetland has to meet strict criteria-it must be-a wetland, that is, a representative, rare or unique wetland type and/or a wetland that is particularly important for conserving biological diversity. 'Pong Wetland-Ramsar Site', an unofficial report prepared by the State Council for Science, Technology, Environment Himachal Pradesh, Shimla, 2003.
- 28 *Trends of Fish Catches from Pong Reservoir; During 1976-77 to 1994-95*, A booklet published by the Directorate of Fisheries Government Of Himachal Pradesh, Bilaspur, 1996, p. 10.
- 29 Data obtained from the Census of India, 2001.
- 30 *A Preliminary Analysis of the Environmental Economics of Pong Dam*, July 2004 to December 2004, Sponsored by State Council for Science, Technology and Environment, Government of Himachal Pradesh, Bombay Natural History Society, 2005, p. 28
- 31 Whistler was the Senior Superintendent of Police of Kangra District who had divided Punjab into five zones and perhaps the first to prepare the list of migratory birds in Punjab Plain zone in 1924-26. The Birds of Kangra District Punjab. *Ibis*, Part I July, pp-521-28, Part II, October, pp. 724-83.
- 32 Pandey, 'Changes in Water bird Diversity', p. 127.
- 33 *A Preliminary Analysis of the Environmental Economics of Pong Dam*, p. 10.
- 34 S. Pandey, 'India: Pong Dam Lake', in *A Directory of Asian Wetlands*, ed. D. A. Scott. IUNC, Cambridge, pp. 392-3.
- 35 Gaston, 'Report on a visit to Pong Lake', p. 8.
- 36 A.J. Gaston, 'Report on a visit to Pong Lake', 2-3 December, 1985. Unpublished report with the Wild Life Department Kangra, p. 8. Gaston is a member of Canadian Wildlife Service, Ottawa.
- 37 Apart from waterfowls, a total of 220 bird species were also recorded. A detailed study was undertaken by Sanjeeva Pandey from 1986 onwards to study the changes in bird diversity. See his article 'Changes in Water bird Diversity Due to the construction of Pong Dam Reservoir, Himachal Pradesh, India' *Biological Conservation*, 1993.

- 38 A young Dutchman, Jan Willem den Besten, came to Macleod Ganj in 1996. He studied and documented the birds throughout the district from 1997-2003. J. W. den Besten, *Birds of Kangra*, Moonpeak Publishing, 2004, p. 23.
- 39 V. K. Singh, Conservator, Wildlife Dharamsala, File Name 'Birds in Pong Wetland', in the Dharamshala Office.
- 40 Gaston. et al, 'Sighting of red –necked grebe on the Pong dam Lake Himachal Pradesh', pp. 676-77.
- 41 Apart from Red necked grebe, there are many other species which are sighted more commonly at Pong wetland namely: bar headed geese, northern lapwing, ruddy shelduck, pintail, common teal, mallard and coot. However, four species- common crane *Grus grus*, black ibis *Pseudibis papillosa*, black necked stork, *Ephippiorhynchus asiaticus* and white necked stork *Ciconia ciconia*- reported by Whistler under the 'rare' category do not figure in the study conducted by Sanjeeva Pandey. Pandey, 'Changes in Water bird Diversity', p. 128.
- 42 After this no attempt has been made by any organization or an individual to prepare a new list.
- 43 'Integrated Management Action plan of Pong Wetland', p. 32.
- 44 Pandey, 'Changes in Water bird Diversity', p. 127.
- 45 *A Preliminary Analysis of the Environmental Economics of Pong Dam*, p. 28.
- 46 Ibid., p. 31.
- 47 According to Mr. V. K. Singh, the Wildlife Department of Himachal Government has also formed an anti-poaching group comprising local volunteers in order to keep a vigil on poachers and it has succeeded in catching a few of them. The department is also working on the improvement of habitat for these migratory birds and feeding them is also being taken care of. Interview on 23rd September, 2012.
- 48 *A Preliminary Analysis of the Environmental Economics of Pong Dam*, p. 29.
- 49 Taking 1410 feet as the highest point of submergence, BBMB acquired all the required land and the people have been fully compensated for it. But the reservoir (except for one time) has never been filled more than a height of 1390 feet, thus there is an area of 20 feet in the periphery of the reservoir, which was acquired but was never submerged. The people of this area were not really affected and they continue to till their lands for which the compensation has already been paid.
- 50 This figure was calculated by the study team of SCSTE for their Economic Survey of the Pong wetland after consulting the Dam authorities and the Wild Life Department. *A Preliminary Analysis of the Environmental Economics of Pong Dam*, p. 25.
- 51 Ibid.
- 52 The Sub Divisional Magistrates of Nurpur and Dehra are often called upon to solve many disputes regarding the possession of this drawdown area as it causes not only law and order problem but also caste and community tensions.
- 53 *A Preliminary Analysis of the Environmental Economics of Pong Dam*, p. 26.
- 54 Rajini Bala and Jagdev Singh of village Haar, Trilok Thakur of village Malela, Sushma Devi and Bibi Sabeera of village Batela, Anita Devi of village Jharar, Naseeb Singh of village Kohlari and many more like them feel that the migratory birds harm the standing crops and pollute the houses and fields through their viscera. Information gathered during our field trip on 7th and 8th September, 2011.
- 55 Sanjay Sharma, Study of Social Economic and Ecological Interaction of Local People in the catchment of the Pong dam Wetland. By State Council for Science, Technology and Environment, H.P., 1997-98. *A Preliminary Analysis of the Environmental Economics of Pong Dam*, p. 28.
- 56 Ibid.
- 57 District Gazetteer, Kangra District 1924-25, p. 176.
- 58 The manure of the goat was considered to be more fertile then the other manure, District Gazetteer, Kangra District 1924-25, p. 266.

- 59 Ibid., p. 265.
- 60 Lyall, 'Settlement Report of District Kangra', 1968, Lahore, p. 39.
- 61 The largest group is found in Suneth and adjoining area.
- 62 *A Preliminary Analysis of the Environmental Economics of Pong Dam*, p. 25.
- 63 Details of the proposed activities are provided in ADB's *Inclusive Tourism Infrastructure Development Project, Himachal Pradesh, TA7014: IND*.
- 64 *Trends of Fish Catches from Pong Reservoir, During 1976-77 to 1994-95*, p. 10.
- 65 Data provided by Mr. Gurucharan Singh, Director, Fisheries Department, Pong Dam, 2012.
- 66 *Trends of Fish Catches from Pong Reservoir, During 1976-77 To 1994-95*, p 5
- 67 Deudney, D., *Rivers of Energy: The Hydropower Potential*, World Watch Paper 44-June 1981, p 17.
- 68 McCully, P., *Silenced Rivers: The Ecology and Politics of Large Dams*, Orient Longman, Delhi, 1996, p 171.
- 69 L.K. Sehgal , 'Brief report on impact of construction and completion of Beas Project on liminology and fisheries of river Beas'. National Research Center on Coldwater Fisheries, Haldwani, U.P. p 36.
- 70 Deudney, *Rise of Energy*, p 17.
- 71 Janet N. Abramovitz, 'Sustaining Fresh Water Ecosystem' in the Lester R. Brown, ed., *State of the World*, New York, p 60.
- 72 *ibid*; p 63.
- 73 *Trends of Fish Catches from Pong Reservoir, During 1976-77 to 1994-95*, p.9.
- 74 As has been discussed in the beginning of this section.
- 75 When commercial fishing was initiated in the Bhakra reservoir in the initial years from 1964 -1975, the department issued license @ Rs. 10 per gill net and fishermen were free to dispose their catch as they wished. This, however, failed to develop a commercial fishing of appropriate size and hardly benefited the fishermen. Hence, the commercial fisheries in Pong was taken more seriously and in an organized manner. www.himachalnic.in/fisheries.
- 76 Data provided by Mr. Gurucharan Singh, Assistant Director, Fisheries Department, Pong Dam, 2007.
- 77 www.himachalnic.in/fisheries.
- 78 Dr. B.D. Sharma, Director Fisheries, Bilaspur, File name, 'Fisheries in Pong reservoir'.
- 79 McCully, *Silenced Rivers*, p. 172.
- 80 Some oustees have re-settled in District Bilaspur as well.
- 81 *Socio- Economic status of Pong Dam oustees in Kangra Himachal Pradesh*. A study conducted by the Department of Agricultural Economics, Himachal Pradesh Krishi Vishvavidalaya Palampur, Publication No. 91, October, 1996, p. 6.
- 82 *Ibid.*, p. 16.
- 83 *Ibid.*, p. 23.
- 84 The oustees who have settled in different parts of Kangra are called by the local inhabitants of that area as 'Damu' in a derogatory manner.
- 85 Lahri Ram is the Ward member in Shahpur and was Sarpanch of the submerged village Panjaral. Interviewed on 8th September, 2011, Shahpur.
- 86 *Socio- Economic status of Pong Dam oustees in Kangra Himachal Pradesh*, p. 28.
- 87 The corpus of this fund is increasing as the awards under Section 28A keep on maturing.(For details see Chapter 6) The developmental grants are released on the recommendation of District Level Pong Dam Advisory Committee. The Revenue Minister heads the Committee and some representatives of oustees are nominated as non-official members. File no A-45 II, Pong Branch D.C. Office Kangra.

- 88 Sanjay Sharma, Study of Social Economic and Ecological Interaction of Local People in the catchment of the Pong dam Wetland. By State Council for Science, Technology and Environment, H.P., 1997-98, Panchayats interaction on Pong Wetland & Its Resources on the eve of 'World Wetland Day', by State Council for Science, Technology and Environment(SCSTE), H.P. 12th February , 2002.
- 89 The endangered species in Siberia are monitored and a silver tag is tied on their feet with their individual number for identification.
- 90 Study of Social Economic and Ecological Interaction of Local People in the catchment of the Pong dam Wetland.
- 91 Resident of village Dhameta that is adjacent to the reservoir. Interviewed on the 8th September 2011.
- 92 *District Gazetteer, Kangra District 1924-25*, pp.23-25
- 93 *ibid*; p 25
- 94 A list of the fish found in the Kangra District during 1924-25 was made in the District Gazetteer of Kangra District, pp. 21-22
- 95 G.C.L. Howel, 'The making of A Himalayan trout water'. *Journal Bombay Nat. Hist. Soc.* 24(3) : 317-28
- 96 The wetland area falls in Integrated Wasteland Development Programme (IWDP)-II and III of District Kangra in Dehra, Paragpur and Fatehpur Development Blocks. File no. A-1/03 , DRDA Kangra (D.C. Office)
- 97 For details on the nature of conservation policy see M.Gadgil and R. Guha, *Ecology is Equity*, Delhi, 1995.

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THE 'BRICS' DEVELOPMENT BANK

Dr. Binod Singh*

ABSTRACT

The creation of the BRICS Development Bank is being regarded as a tectonic shift in the global strategic landscape. Its creation can launch us into a Post-Western world where the agenda of development will be decided by the major stakeholders of the developing nations and not dictated by the World Bank and the IMF. In the following sections, we first review the feasibility of this new Development Bank politics and the roadblocks that might thwart its smooth emergence. The paper will further focus on the prospect of potential rivalry among the five BRICS nations. The paper will also provide a brief agenda for the future development of BRICS as a major development institution. The paper conclude that the whole world, especially the BRICS countries desire India to perform extraordinarily in economic growth, but the country is deeply enmeshed in its domestic political and social churning which would act as constrain against its galloping growth for decades.

Keywords: BRICS, Development Bank, India, China.

Introduction

A New Development Bank was born in South Africa. The new financial powerhouse is being conceived to be a direct challenge to the World Bank and the IMF - both dominated by the US. The BRICS announced that their establishment of a multilateral development bank will contribute to 'a more just world order.' South Africa hosted the fifth BRICS Summit from 26 to 27 March, 2013 at the Durban International Convention Centre (ICC)¹. This completed the first cycle of BRICS summits. The initial series of summits were convened to seek common ground upon areas of importance for these major economies.

In the aftermath of the global financial crisis, the first BRIC Summit took place in Yekaterinburg, Russia in 2009, where the elected leaders of the four countries (Brazil, Russia, India, and China) formally declared the membership of the BRIC economic bloc. South Africa joined the bloc at the 3rd conference held in Sanya in 2010, resulting into expansion of acronym from BRIC to BRICS. In future there is possibility of adopting more countries into this group and further develop this organization as a common platform for the deliberation of global and regional developmental issues.

Jim O'Neil, a Goldman Sachs expert had coined the term BRIC. He could have never imagined that this acronym would have such an impact upon world politics. O'Neill believed that because of their sheer size and their enormous population; China, India, Russia and Brazil had the economic potential. BRICS as an economic and a diplomatic bloc has evolved from scratch since 2009 and has consolidated itself more and more by getting institutionalized. It is emerging as a major economic bloc with effective consequences for the global economic governance. At the Durban Summit, agreements signed included ,interalia, green economy cooperation and infrastructure co-financing for Africa. The leaders also launched the BRICS Business Council, which will provide business to business linkages within the grouping, while an agreement on the establishment

***Dr. Binod Singh(Gaoxing)** is a Faculty Member at the Centre for South Asian Studies of the Peking University in Beijing, PR China. He is also the Vice Presdient of Society for Asian Integration (www.asianintegration.com) E-mail: binod@126.com

of a BRICS Think-Tanks Council that was signed on March 11 was formally declared. They also recognized the fifth BRICS Academic Forum and the role of academics in fostering dialogue.²

The Case for a New Development Bank

Together the BRICS account for 25% of global GDP and 43% of the world's population, 20 percent of global trade and attract 53 percent of the foreign capital. These countries are currently generating about 45 percent growth of the world economy. The intra- trade among BRICS nations is also increasing at a very high rate. The flow of trade between Brazil and the BRICS grew from US\$ 48 billion in 2008 to \$ 95 billion in 2012, almost 100% net growth over a period of a little more than four years. According to the World Bank, BRICS member states are driving almost 50 percent of the global economic growth. At the New Delhi summit, leaders from the five BRICS countries had set a target of achieving intra-BRICS trade to a tune of \$500 billion by 2015. The target is realistic and within reach since already trade amounting to \$340 billion has been realized in the year 2012.

All of the five BRICS countries have been lauded for their stellar economic growth and resilience through the 2008/09 financial crisis. They are becoming models of development for development practitioners, researchers and other emerging economies. In contrast with the BRICS economies, the US economy is staring at a black hole. The middle-class might slip into poverty and the poor would be forced to live on charity as the rich and powerful will continue their wars abroad to make the world safe for profit making. In the post crisis era, when the European economies are collapsing one by one, the BRICS economy continues to develop rapidly. The Table 1 reflects the rising importance of BRICS countries in the global economy.

Table:1
BRICS Balance Sheet³

BRICS DATA SHEET							
Indicator/ Country	Population (in mn)	Foreign exchange reserves (\$ bn)	GDP (PPP) (\$ bn)	GDP (nominal) (\$ bn)	GDP growth 2011 (%)	GDP growth projection 2012 (%)	GDP growth projection 2013 (%)
Brazil	196.7	350.4	2,289.0	2,476.7	2.7	1.0	3.5
Russia	141.9	455.5	3,015.4	1,857.8	4.3	3.6	3.7
India	1,241.5	272.3	4,503.1	1,847.9	7.9	4.5	5.9
China	1,344.1	3,204.6	11,290.9	7,318.5	9.3	7.8	8.2
South Africa	50.6	42.8	554.4	408.2	3.5	2.3	2.8
BRICS	2,974.8	4,325.6	21,652.8	13,909.1			
World	6973.7	10,748.3	8,0855.2	69,981.9	3.9	3.2	3.5
BRICS share in world (%)	43	40	27	20			

Source: FICCI- UN Comtrade data

Jim O'Neill had predicted that by 2015, the combined size of the BRICS economies will become as big as the US and by the year 2027, the group would set to become as big as the G-7.⁴ BRICS economies are today the driving power of the global economy and of global trade. As their economic strength increases, BRICS are assuming an increasingly important role in the world economy. After global financial crisis, BRICS' outstanding economic performance has played a major role in saving the collapsing world economy. Therefore, the whole world look towards the BRICS countries with sheer expectation.

The news of creation of the BRICS Development Bank has spread like a wildfire. It is being regarded as a tectonic shift in the global political development. Its creation can launch humanity into a Post-western world where the agenda of development will be decided by the major stakeholders of the developing nations and not dictated by the Western nations-controlled the World Bank and the IMF. Jim O'Neill, Chairman of Goldman Sachs Asset Management told media in Beijing that *"the BRICS Development Bank could become a World Bank in future due to the increasing influence of emerging countries"*.⁵

The Creation of a New Development Bank

After ushering into the 21st century, India and China hold a clear view about their role in the new world order. They view concurrently that the current international institutions does not reflect their economic weight and the voting share in the global institutions is not commensurate with their country's actual influence in the world. The leadership of two countries strongly feel that institutions like the World Bank, the International Monetary Fund and the United Nations Security Council are not changing fast enough to reflect their new-found clout. In the past, at various global forums, India and China expressed their concern about the *"slow pace of quota and governance reforms"* in the IMF. Indian and Chinese leadership has long emphasized the need for reforming the global financial architecture and increase the voting share of developing countries at World Bank and IMF. The two organizations heeded to their demand partially in the last few years by increasing the voting power of India and China and also started appointing Indian and Chinese economists in their top management and board of directors. But the major concern with regard to the functioning of the World Bank has never been addressed. India and China are jointly seeking that *"nature of the Bank must shift from an institution that essentially mediates North-South cooperation to an institution that promotes equal partnership with all countries as a way to deal with development issues and to overcome an outdated donor- recipient dichotomy."*⁶ Since such fundamental change in the DNA of global institutions come as a cropper against western hegemony, the voice of India and China were not heard with much seriousness at these international institutions. Indian and Chinese development needs necessitates creation of new global institutions which should reflect the reality of the 21st century.

The idea of setting up a BRICS development bank as an alternative to the Western-dominated World Bank and the International Monetary Fund was mooted by India during the 2012 meeting of the organization's Finance Ministers in Mexico. But they failed to reach a final agreement on the establishment of the Development Bank. The talks continued and finally culminated in decision to form the BRICS Development Bank in the New Delhi Summit. BRICS nations agreed to launch the bank by creating a \$100 billion fund for contingency reserve arrangement to tackle any emergency financial crisis in member countries. However, the launch of the BRICS Bank itself was postponed until the next summit in Brazil during 2014. There has been some pessimism among certain quarters of the member countries that Western countries will not accept the creation of a parallel Developmental Bank which will rival the existing World Bank and the IMF. But at the Durban summit, the BRICS leadership has emphasized the point that the BRICS Development Bank will work together with the WB and IMF and it will only complement and not rival the existing global financial institutions which is more biased towards developed countries and recently much engaged with bailing out merely crashing European economies.

In the post World War-II era, the Western powers have only interfered in the domestic arena of the sovereign nations in the name of development aid. There was no Marshall Fund kind of initiative for the Asian and African countries and developing world was denied basic rights of development as the West controlled the transfer of technology as well as finances. For over 60 years, the development policy of the World Bank has been proven to be a failure. The widespread financial crises in many part of the world (1980 Latin American

debt crisis, 1994 Mexico currency crisis, 1997, East Asian crisis, 1999 Brazil crisis, and 2002 Argentina crisis, 2007-2009 Global Financial Crisis, and Greece Debt Crisis etc.) have exposed the shortcomings of financial liberalization movement. Especially, the East Asian financial crisis of 1997, have posed several questions to the Western countries controlled Global Financial Institutions for their slow response during crisis. Though, China and India were not severely affected by the 1997 Asian Financial Crisis as a result of capital controls in the case of China and minimal foreign investment in the case of India. But, they played an important role in by extending assistance to countries in crisis. Hence, there was a need felt for creating Asian financial institutions which can bail out the developing countries during any future crisis. The *Chiang Mai Initiative* was a right step in this direction led by Japan, but later it could not be institutionalized and under American pressure it has been shunted down. Therefore, the creation of BRICS development bank will be a fulfillment of this desire of developing countries to control their own fate in the time of any future financial crisis.

Out of such conundrum, the need for a fresh thinking for channelizing the immense foreign reserve that BRICS countries have created in the last two decades, has arisen. The creation of BRICS Development Bank will definitely give a new push to industrialization and technology innovation in the developing countries. The BRICS have combined foreign currency reserves of \$4.4 trillion and account for 43 per cent of the world's population. The proposal for the funding is deliberated around following formula: \$41 billion from China, \$18 billion from Brazil, Russia and India and \$5 billion from South Africa. It has been estimated that all the five BRICS countries require about \$4.5 trillion over the next five years for infrastructural development. Indian alone needs to invest \$500 billion in creating its basic infrastructure to sustain high economic growth. The BRICS fund would be used to draw on in times of liquidity or other crises and to foster trade.

However, this has given sleepless night to those who think that BRICS nation cannot work together and they meet just for a photo opportunity. In the mainstream Western media, doubts have been raised as what are the special characters of BRICS Development Bank and what mechanism it would follow.⁷ There has been attempt to derail the process by raising the hoax of China-dominated BRICS. But the leaders of the BRICS will be wise enough to dispel any negative thinking and work on equal basis for creating a new world order and global economic governance. The establishment of BRICS development bank will have important implications for the distribution of wealth and power among developing nations, as no similar organization exists as of now which can exploit the newly built wealth and foreign reserves of these nations. This will be a clear blow to the gemony of World Bank and it will redefine the international monetary system.

Resisting Rivalry within BRICS

The BRICS grouping of emerging powers in Durban could not come out with the specifics of the development bank that would rival Western-backed institutions such as World Bank and IMF. Was it due to certain internal differences on the specifics of the Bank? The main question that is being asked is who will dominate the Bank, who will be in charge of it? Is there possibility of an equal share of power among the five nations? What will be the mechanism for adopting new members in this Bank? According to an Opinion blog in the New York Times, "*aside from impressive growth over the past decade and an individual desire for a greater say in the institutions of global economic governance, these disparate countries have little in common.*"⁸ However, the intra-trade and economic relations are growing significantly. The South-South trade is emerging as the long-term substitute for hub and spoke system of trading with the US.

There is no easy answer as of now to the above questions. The blueprint of the proposed Bank has yet not being finalized, so the discussion is a bit premature. However there is a lot of pressure on countries such as Brazil and India is coming from the world Western Powers who want these countries to be concerned about Chinese dominance in the Bank. But the two countries will not be under any obligation to heed to the ulterior

motive from the world hegemonic powers and kill the bank in its embryonic form. India, China and all the BRICS countries have pursued the matter further and the specifics of the bank should be ready before the next summit meeting which is not yet decided. Following could be some of the basic steps where consensus has been arrived at. The first and foremost of all is that Brazil, Russia, India, China and South Africa has agreed to create new crisis fund which will be used to meet any financial challenge in future. Another understandings reached is to start trading in respective currencies and minimize the use of Dollar as a global currency. The proposed development bank is likely to focus on infrastructure financing. Indian officials have pressed for a BRICS-led South-South development bank, and recycling budget surpluses into investment in developing countries. Many developing nations inside and outside BRICS will hope to tap China's vast financial resources through this mechanism. Meanwhile China would like the bank to invest in trade-multiplying projects. The BRICS and especially, China's and India's growing share of global foreign reserves has given the emerging economies an increasing say in how the international monetary system are to be reformed and also an increasing responsibility to help correct global imbalances.

But one of the major disputes that may arise at BRICS is how to deal with trade deficits that all the countries are running with China. Especially, India runs a huge trade deficit with China and there is no sign that the same will reduce in future drastically. The total trade volume between the two countries crossed 70 billion USD at the end of 2012. But out of this, India has a trade deficit of 30 billion with China, i.e. it imported a total value of 50 billion USD goods and services from China, but exported only 20 billion USD of goods and services. Therefore, there is need for a negotiation with China to allow more market access for Indian products and services. There is some concern that in the future, China's rising power will likely provide a challenge to BRICS cooperation and the BRIC is as a grouping. It may be sorted out by devising some mechanism in the working of the bank or the overall functioning of the BRICS as an institution, so that equal weightage is given to all the stake holders.

The unequal global influence and conflicting interests of each of the five BRICS countries seemingly give rise to lots of concerns about the feasibility of the bank. Despite various common agenda that BRICS have developed in the last five years, observers are not sure how China will dominate the BRICS grouping by using its massive economic clout, military power and a huge forex reserve. China is the most prominent member of the BRICS countries and already the second largest economy in the world. China's growing importance in the world economy is also prompting its increased active participation in the international policy making arena. Therefore, the decisions China makes - both in its own interest and within a BRICS context - are extremely significant.

Emerging powers, including the BRICS countries, are developing countries. These are in need of huge capital investment to sustain their current and future economic growth rate. These are mostly young nations and a huge share of population is waiting to join their middle class. At the same time, these emerging economies are among the most unequal societies on the planet and the growth path taken by their growing middle classes – with massive energy usage for cars, air conditioners, and household equipment – is unsustainable. Growth is following the unsustainable path in China reflected in its low consumption rate as ratio to GDP and high consumption of energy and resources. China's increasing demand for imports might become an important source of growth for the world economy. China's thirst for basic commodities such as aluminum, steel, copper, coal and oil has helped push their world prices to record levels. Simultaneously, ever-increasing export of manufactured products is putting downward pressure on their prices. The entry of China into the WTO in 2001 has speeded up the opening of one of the biggest potential markets. The extent to which China has opened to foreign trade can be illustrated by the share of total trade (exports plus imports) in GDP over time. According

to the *World Bank Development Indicators*, in 1970, trade contributed 5.3% to GDP climbing to 34.8% in 1990, 44.2% in 2000 and rising sharply after WTO accession to reach a massive 65% in 2012⁹. BRICS leaders should establish business and think tank councils and launch an investigation into how trade can be more balanced, with other BRICS countries increasing their exports to China. The currency swaps would open the door for BRICS countries to tap some of China's massive \$3.31 trillion foreign reserves.

BRICS countries have great potential for cooperation in the agriculture, tourism, and academic sector. But there has been limited progress in these areas. These countries can negotiate a free trade agreement only in some limited products. The Durban Summit of BRICS did set up a Joint Business Council that would seek to encourage free trade and investment in goods and services among the five-nation grouping, which is a first step in creating an integrated market among the BRICS nations. The member countries have yet to identify clear business opportunities, economic complementarities and areas of cooperation among them. The progress may be very slow as each country has its own comparative advantages; hence there is a scope for huge bargaining among the five countries. For example, India is keen to enter the services market of China; on the other hand it has filed the maximum number of anti-dumping measures at the WTO against Chinese goods. In the field of enhancing tourism, the five nations can also open their borders by initiating a VISA free tourism for a month and augment it with visa-on-arrival facilities for tourists. This will give big push towards a greater consolidation of their economic relations and will also help in building political trust.

There are other areas of concern which the BRICS nations must sort out for a long term growth and united front at the global fora. The issue of energy is the foremost agenda for India and China. Can BRICS as an institution, work together to reduce the use of fossil energy and create green economy? If major BRICS powers can cooperate, the scramble for fossil fuel that ignite rivalry between India and China can be ended. We can only express optimism that BRICS mechanism can promote China - India Relationship by giving regular opportunity of dialogue and consultation on various issues of mutual concern. But that would not be sufficient to keep aside border problem and in the absence of a permanent border settlement, long lasting political trust between India and China is unlikely. Is there a minimalist mechanism that India may follow to building its partnership with China? We discuss this in the next section.

India's Partnership with China

Skeptics have raised concern that deep mistrust between BRICS countries would likely limit how close the grouping could become. This is especially true between India and China. India and China share the longest boundary problem in the world which is still far from reaching a mutually acceptable settlement. When the Chinese army (PLA) crossed over the LAC in the Daulet Beg Oldi sector of Ladakh in April this year, they have slowed down the building confidence between Delhi and Beijing and also created fresh tension in South Asia. Being a responsible country, China could have avoided such provocations. But nevertheless, at various bilateral and international summits the leadership of the both countries has displayed the will and ability to manage their differences and build on commonalities. In the late 1980s, the then leaders of the two countries decided to maintain peace and tranquility on the border and we have been successful in doing so for several decades. Without waiting for a settlement of the boundary issue, the two countries have gone ahead with economic engagement and developed trading relations to the point that China is India's largest trading partner in goods and gradually the two countries are seeking common stand at international forums such as WTO and Climate Change. China has proposed a border defense cooperation agreement to avoid any misunderstanding or flare up along the boundary. The two sides have decided to resume military-to-military relationship and a counter-terrorism exercise in China is expected this year. It is expected visit of Indian Defense Minister, and later by Indian Prime Minister, will take forward the bilateral relationship to some new level. Dr. Singh, since

assuming the premiership in 2004 has well articulated his China policy as that of “partnership” and not that of “competition”, as he stated on several occasions that there is enough space for both India and China to grow together peacefully and create wealth and prosperity for their citizens.¹⁰

The new premier of China, Dr. Li Keqiang made a successful trip to Delhi and Mumbai which was his first ever foreign trip after being appointed as China’s Prime Minister in March 2013. Among the issues impacting Chinese Premier Li Keqiang’s visit to India, the Ladakh intrusion loomed large. The Chinese economy is facing an immense challenge of rebalancing in the current decade in order to make the growth more balanced, equitable and sustainable. There is a huge pressure on the new premier as his predecessor have performed well in steering the Chinese economy out of the global financial crisis. Chinese Premier is trying his best to seek new market for Chinese products, as demands in western countries are shrinking. Business was on top of his agenda when he met his Indian counterpart in Delhi. He signed several documents for a new era of cooperation between the two countries, which included education, trade, Science & technology and new energy sector. Chinese Solar energy firms are facing anti dumping measures from EU and North America. These are eyeing now huge Indian market. But, agreements are yet to be signed. China and India have no cooperation in the area of nuclear energy. Since 2005, China has been pushing for a FTA with India, but the same can be done only after balancing the risks vis-a vis advantages. China is also trying to internationalize its currency RMB, but India has given cold response and has not shown interest in using RMB as a currency for reciprocal trade.

Although India is still emerging, China is no longer an emerging power or a developing country. India has been under pressure to continue its high economic growth as well as military modernization. At the same time, it should continue working with China on various regional and global issues of common concern. This can be achieved either in the framework of BRICS or even out of it such as IBSA, which was created for putting a common front against the industrialized countries on the issue of reduction in carbon emissions. In the South Asian region, India and China are now engaged in sharing their views related to the post-war situation in Afghanistan. NATO has withdrawn and the US is indulging Taliban in talks in Doha infuriating present Afghan administration. Two countries have similar predicament in the stability of Iran, civil war in Syria and peace process in the Middle East. There is a concerted policy in China to develop the Western region, such as Sichuan, Yunnan, Gansu, Xinjiang and Tibet. These regions are seeking closer cooperation with India by increasing border trade and tourism. But the visa regime is still very strict and there is no indication of any progress. However, India is considering issuing tourist visa on arrival for Chinese pilgrims visiting Buddhist sectors.

Future of India and BRICS

India has been perceived as a soft power known for its immense contribution to the world civilization in both spiritual and material progress. Fortunately or unfortunately, the country does not fit itself into the narrow definition of modern nation-states due to its immense cultural, religious and linguistic diversity. Hence, it has enjoyed a limited influence on the global stage. But despite that, due to its long history and geographical location, the country has always played an important role in the progress of human civilization. India is at the heart of Asia and along with China, it has always been the torchbearer of the Asian civilization. But in the current BRICS grouping, India faces some tough challenges emanating from its largest neighbor which may overshadow its influence in certain realm of the power sharing.

India should face the challenge and work out a common agenda to work with China and other member countries in order to create a balanced economic growth. In the 21st century, India has emerged as one of the three major states of Asia along with China and Japan. The prospects for India as a rising power depend on how it faces domestic challenges and engages with its neighbors. Over the next two decades, India will overtake

China as the country with the largest working-age population. The increase in India's working population has the potential to fuel substantial economic growth. However, India has always had a large, rapidly growing population. Sustaining strong growth will require that the country increasingly and more productively employ its labor force.

It is beyond doubt that the current world order is undergoing an economic and political transition. There is a shift in power from the traditional to the emerging world. It is only natural to see the emergence of new institutions like BRICS. However, there is still no clear consensus on the scope and agenda of BRICS. BRICS as an international organization is still in infancy and has its own teething problem. Nevertheless BRICS as an institution representing almost 40 % of the world population should express its opinion on matters of global importance like Syria crisis. BRICS can initiate meaningful steps in different global fora to address the political and economic crisis in the different regions and hence establish its legitimacy as an important platform for developing nations. The paramount focus of the BRICS economies should be to work with the international community in keeping the multilateral trading system stable, and curb trade protectionism. BRICS can be a neutral platform for China and India to work together. From the experience of joint cooperation, China and India can extend the cooperative framework to encompass working with other Asian powers, including the Association of Southeast Asian Nations, Japan, and the US, to ensure peace, prosperity, and stability in the region.

Despite being very diverse in their economic, political and social structure, we can expect that the BRICS countries will emerge as a new trading block, and in the coming years they will be able to develop homogenous interests. The BRICS have come together in a political grouping in a way that has far exceeded most expectations. As specified in the Sanya declaration, cooperation between BRICS firms, their think tanks and academic institutions, and government institutions will be necessary not only to build a consensus on developmental issues, but also for joint cooperation to create new technologies that are mutually beneficial to all the BRICS nations. Let us hope that the five countries will work closely on various issues and come out with an early announcement of the details of the BRICS Bank. This substantive step only can shunt down those western skeptics and prove what South African President Zuma said to reporters at the end of the summit: "*Brics is not a talk show, It is a serious grouping,*".

Notes and Reference

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THE MYTH OF JIZYA

Dr. Tarun Pratap Yadav*

ABSTRACT

European scholars exhibit bias while discussing Islamic economics and finances. Western scholars have spread canard about the Jizya tax pitting its origin to Islamic expansionism and oppression of the conquered non-Muslim subjects. Jizya is represented as oppressive measure to force the subject races against their will to embrace Islam in order to escape the burden of this tax. The quick expansion of Islam is attributed to the operationalization of Jizya. The paper examines the notion from multi-pronged sources and in the process reflects upon an important aspect of Islamic economics.

Keywords: ahl al-dhimmah , Caliphate, dirham, Jizya , Kharaj(land tax), zakah.

Introduction

The Arabic word Jizya has come to be generally used with a technical meaning; but originally it was used in the general sense of tribute. According to *Qamas*, “Jizya is a tax on land and a capitation tax imposed on non-Muslim subjects”. But neither the author of the *Qamas* nor Johri discuss the etymological roots. *Harsh Narain* suggests association between Arabic word jizya and the Aramaic word gizit/gizyat.¹ *Edward William Lane* in *English-Arabic dictionary*² suggests two possible derivations: either (a) it is derived from ‘Jaza’ ,exchange or compensation or (b) it is the Arabic form of Persian word *gizyah*. The latter derivation was copied by *Bustn Burus ibn Blas* in his edition of the *Muhit-ul-muhit*(1867), though he was not convinced. In the Persian lexicon under the word ‘gazit’, Jizya is said to be the Arabic form. In *Burhan-i-Qati* , ‘gazit’ is money collected by the officers of a Government from its subjects and is also called *Khiraj* (tribute). Also, it means money levied on non-Muslims subjects, as the poet *Nizami* said “*Sometimes Peking sends him the tribute of China and sometimes Caesar sends him the religious tax (gazit-i-din)*”. The vulgar pronunciation is *aizyat* and the word appears in Arabic under the prevalent form *Jizya* . The second meanings of the term given in the *Burhan-i-Qati* gets support from *Syed Jamaluddin*, the author of *Furhang-i- Jahangiri*, who quotes the following verse by *Hakim Sozni*, “ *We will not read our sacred book, nor act in accordance with it, that Jizya may not be imposed upon us, as on the people of the book*”.

There is not the slightest doubt that Jizya is a word of Persian origin. There is strong historical proof, besides the evidence of lexicons. It is certain that the word Jizya was in vogue in Arabia much before the advent of Islam and quite evident that in the Persian language the *gazit* expressed just the same meaning. The historical sources indicate that King *Noshirvan* might be the first who made regulations for the collection of Jizya and subsequently the rule devised in Persia at that time got extended across Yemen and the surrounding country. The word *gazit* came to be introduced into Arabia in its technical legal sense only in later times and assumed the more Arabic form of *Jizya*. The change was effected by the alteration of a single letter and some vowel points. The Arabic tongue has borrowed more words from Persian than from any other foreign language and a conquered people would naturally first adopt the technical administrative terms of its conquerors.

* **Dr. Tarun Pratap Yadav** is an Assistant Professor at Amity University, Noida.

E-mail: tarun.pratap@yahoo.com

The laws relating to tribute and Jizya, which we find across Arabia and Persia under slightly altered forms can be traced back to the reign of the King Noshirwan. Ibn-ul-Athir in his account of the rules laid down by Noshirwan respecting the tribute and the army wrote that , “ *Noshirwan caused a survey to be made of all the country, fixed the rates of the revenue and imposed Jizya on each of his subjects with the exception of those who were serving in the army or were connected with nobles of the Court. The various rates of this Jizya were 12, 8, 6 or 4 dirhams (1 dirham is equal to 5 pence) a head.*”³

After this account of the tribute, the historian adds that Omar followed the same rules. In the same author’s account of *Jizya*, he mentions that Omar exempted from this tax all those below the age of 20 and above that of 50. Noshirwan’s reason for this exception was as follows “*Those who served in the army were defenders of their country and risked their lives for its sake: it was then only right that the rest of the subjects of the crown should contribute some fixed amount in order to compensate them for their services*”. This account of Ibn-ul-Athir is confirmed by the following verses of Firdausi. “*All the governors gathered themselves together and measured out the land and imposed a tax (gazit) in dirhams, provided that the husband was in prosperous condition: Six dirhams on fruitful vineyards and the same on date gardens. He who had wealth but no land and had not to spend himself in tilling must pay a tax (gazit) of 10 to 4 dirhams every year.*”⁴ But the ministers and the courtiers were exempt. The two accounts do have certain discrepancies.

According to the laws of Islam, every Musalman might at any time be called upon to serve in the army. All Muslims were being looked upon as belonging *ipse facto* to the army. On this account, they were exempted from the payment of *Jizya*. It is another matter that men fit for army duty often made an escape to evade tough military duty. Islam claimed no right to forcibly lay the burden of military service on any non-Muslim who happened to be a subject of any Muslim State and whose life and property were under its protection. Provided that non-Muslims were not desirous of service in the army, it was only just that they could pay some tax for their protection and this tax was the *Jizya*. But if any non-Muslim tribe joined the army or promised to do so, it was at once released from the payment of *Jizya*. It was just treatment that made many Christian tribes to prefer Islamic rule. Emperor Constantine II sent secretly a messenger to the Christians residing in the Islamic state, exhorting them: “Here is a good opportunity: rise up against your government and I will also at the same time dispatch an army so that we may drive out this common enemy”. The Christians replied: These enemies of our religion are preferable to you.”⁵

Both in theory and practice, protection was looked upon by the Muslims as the legitimate equivalent of the *Jizya*. This may explain why etymologists never looked to Persian sources for any historical explanation of the word. They derived it from *Jizya* (exchange or compensation) and explained it as being taken in compensation for certain services rendered. However incorrect this may be from philological point of view, yet it certainly harmonizes with historical facts. Many treaties drawn up by the Prophet and Caliphs which have been preserved to us *verbatim* in historical works, show clearly that *Jizya* was given in return for protection. The Prophet himself, in an order addressed to the Governor of Eiltah, states that, “*inhabitants should be protected and defended against the enemies*”. Among the admonitions given by Omar on his death bed was the principle that “*non- Muslims who are our subjects and are under our protection, it is the duty of every Muslim to resist their enemies in their defence*”. The translation of some of the treaties would point further how *Jizya* was the tax paid in return for protection given, and that non-Muslims tribes paid it upon this very assumption. The objects on which the sums of money raised by the *Jizya* were spent on the following items of expenditure: maintenance of army; construction and maintenance of forts; construction and maintenance of roads and bridges; digging, maintenance and repairs of wells, construction of sarai(rest houses).⁶

These are words of Khalid-Ibn Walid to Saloba Bin Nastona and his tribe, “*I have made an agreement*

with you in respect of Jizya and protection. The responsibility of protecting you lies upon us. So long as this protection is given to you, we have right to receive Jizya; otherwise we have not.” It was written in the month of Safar, A.H.12.

The following extract from an agreement which bears the signatures of several companions of Prophet, which was drawn up between the Governor of Mesopotamia and the people of that district, reveals the reason behind jizya: - *“To those who have consented to pay Jizya at such and such dates and with whom Khalid Ibn Walid has made peace, this is the charter of freedom. The sum agreed upon by Khalid and the other Muslims in the treaty has been duly received. If any other governor attempt to alter the terms of peace lay down by Khalid, do you compel him to desist, on condition that you continue to pay the Jizya. To those, to whom you grant quarter, we will grant quarter also; with those with whom you make peace, we will make peace also”*. To which the people of Mesopotamia returned with the answer that, *“We have paid the amount of Jizya which was agreed upon with Khalid, on condition that if any Muslim or the people of any other nation do us any wrong, the Musalman people with its General will be responsible for our protection”*.

From similar historical instances, it can be safely adduced that the institution of Jizya as it is found in Muslim times rested on the very same principle as Noshirwan had laid down. In the reign of Umar, the Second Caliph (634-644C.E.)- Abu Ubaidah Amin, the General of the Army, wrote at once to the governors of the conquered towns of Syria that *“refund to the people all the money that has been collected as tribute and Jizya and tell them that all that we took in this way was taken on the condition that we should protect them against their enemies, but owing to our present circumstances we are unable any longer to undertake such a charge”*. Abu Ubaidah also addressed the Christians that, *“the money which we took from you we return, because we have heard that a strong force is advancing against us. The agreement between us was that we should protect you from enemies, but as we no longer able to fulfill our part of the agreement, we return what money we took from you.”*⁷

This order was fully carried out and large sums from the State treasury were returned to the Christians. The return of Jizya by the Muslims at the time of war, when actually funds were needed most, was an unprecedented act. It speaks of extraordinary sense of responsibility of the Islamic state towards its non-Muslims protectorates. Normally during war, any government is expected to extract more money but the above event suggests that the early Islamic state did not raise funds just for the sake of fund-raising. The bilateral agreements were followed in letter and spirit even in the most critical times. It is reported that when these sums were returned, the Christians called down blessing on the Muhammadans and said, *“May God give you rule over our town again. The Romans on such an occasion, instead of giving us back our money, would have robbed us of all our possession.”*

Jizya was a compensation for protection. It is evident also from the fact that if any non-Muslim tribe accepted military service, it was exempt from Jizya just like any Musalman tribe. In the tribe of Uthman, when Habib Ibn Muslimah conquered the Jarajimah tribe, they elected to join the Muslim Army in times of emergency and for this reason the whole tribe was exempted from the payment of Jizya. Not only the Jarajimah but many other tribes and clans of the surrounding country joined the army and thus released themselves from the payment of Jizya. In the reign of Caliph Wathiq Billah Abbasi, the Governor of these territories imposed Jizya on these tribes by mistake. They accordingly laid a complaint before the Caliph, who gave a decision in their favour. It is amply demonstrated that Jizya was taken from non-Muslims in exchange for the protection given to them against their enemies, both internal and external; and that when the Muslims were no longer able to give that protection they returned the money and that tribes taking military service, thereby made themselves exempt from the payment of Jizya.

Zakah is imposed only on sahib al-nisab (the possessors of certain minimum wealth) Muslims irrespective of age, sex or profession but jizya is not levied on non-Muslim women, children, old, infirm and monks. Further, the amount of zakah ranges between 1/40th and 1/5th proportion of the material wealth. Particularly, zakah on agricultural produce is collected (at the rate of five percent or ten percent depending upon irrigation facilities) every time a crop is harvested, be it twice or thrice in a year. Shariah prohibits zakah payers from enjoying even the distant benefits accruing from the payment of zakah to the state, while jizya payers can benefit from protection and development expenditure.⁸

There are also reported instances when the collection of jizya was waived due to the poor economic conditions of protectorates. It happened during the period of Caliph Umar that he found an old Jew begging in the streets of Medina. On his personal enquiry, Caliph Umar found that the clearance of jizya due had made him to beg. Caliph Umar took him to the treasury and fixed his pension, remarking that it is unbecoming of a Muslim (caliph/ruler) that Jizyah should be collected when non-Muslims are healthy and capable of earning and that they should be left to suffer during their old age. Caliph Umar had advised Uthman bin Hanif and Hudhaifah bin Yaman, the noted surveyors, that they should study properly the conditions of regions and their people before deciding their rates of kharaj (land tax) and Jizyah.⁹

During the period of Ali (656-661 C.E.), the fourth Caliph, the non-Muslims ahl al-dhimmah (protectorates) were classified in four categories for the purpose of Jizya collection.

Table:1

No.	Category	Amount of Jizya
1	General public	12 dirhams per head
2	Businessmen	42 dirhams per head
3	Middle class	42 dirhams per head
4	Landlords	48 dirhams per head ¹⁰

It is clear that protectorates paying Jizya were put into different categories based upon their personal wealth. It is also evident that Jizya was a charge on persons according to their respective riches. Wealth was taken as merely an index of ability to pay.¹¹ Another positive aspect of Jizya administration during the times of righteous caliphs Umar and Ali was that the wealth was taxed at moderately progressive rates. This treatment delivers a message that personal wealth should also be taxed progressively, albeit moderately¹².

Islamic historians argue that Jizya accrued benefits to Muslims, but it was a price for Muslims fighting the battles to save the countries subject to them from all manners of dangers. Since, non-Muslim nations benefitted from the blood their rulers shed in these wars; it was not at all unjustifiable for the Muslim communities to reap some benefit from the property of the former.

Beside, in the sum rose exclusively from Muslims for alms (*sadqa*), non-Muslims had equal share. Omar gave instructions to the chief officer of the State treasury to keep remembering the words of Allah, viz., “Alms are for the poor and the needy”, and the word “needy” included both Christians and Jews. Persons below 20 and above 50 years of age, women, the palsied, the maimed, the blind, the insane and the poor who possessed not more than 200 dirhams were entirely exempt from the payment of Jizya. When this classification is studied along with other exempted categories such as non-Muslim military personnel, the clergy, etc., it is safe to argue that a major proportion of the non-Muslim population would not pay any Jizya. On the contrary, the entire segment of this population would enjoy the benefits flowing from numerous welfare-oriented programmes of

the state. The righteous caliphs, on the whole, exercised much restraint and care in the collection of Jizya.¹³

Can a tax so light, the payment of which relieved men from the dangers of military service and an institutions which can be traced back to Noshirwan the Just, be the object of much hatred and the cause of oppression as some Europeans have represented in historical writings? Would anyone abandon his religion merely to gain exemption from so light a tax? Could any man think his religion worth less than so trifling an impost? If there were any such, his conversion to another faith seems hardly to be a matter for regret. The above observations place the levy of Jizyah on a very sound and civilized footing and, possibly, dispel all doubts and false allegations against it. The Prophet and the faith of Islam have nothing to do with the misuse of Jizya by some over zealot rulers and their administrative and religious deputies.

In India, no Delhi Sultans tried to rule according to Shariat and none of them gave highest priority to the Ulemas. The Bhakti Movement flourished during this period and the people enjoyed complete expression of freedom. The Sultans faked as fanatic sometimes ---which they were not --- only to warn the Ulemas from playing the usurper role. Their policies revolved around filling State coffer. At times, the Sultans turned into iconoclast to force Hindu Rajas into submission. But, they never indulged into large scale conversion of Hindu subjects into Islam lest Jizya got reduced.

The Concept of Ahl Al-Dhimmah

Prophet Muhammad(570-632 C.E.) adopted a very personal approach to people he invited for conversion to the faith of Islam. He would speak to his family members, close confidants, relatives and friends and then to others. Many a times, he spoke to single person, at other times he addressed groups of persons. On several occasions, from amongst his followers, he deputed some one to far-off places to publicize his message. Similarly, he wrote numerous letters to the rulers of different countries and tribal chieftains asking them to embrace Islam. But, many rulers and tribal chieftains not only refused the appeal, they also imposed wars against the Prophet, threatening the very existence of the faith and newly established Islamic city-state at Medina

Prophet Muhammad's mission was to preach the message of Qur'an and to bring people to the right path. But, he had to face a very hostile and violent reaction. "It was the vicious and violent opposition to his mission that forced him to resort to arms. He was compelled to organize his followers to protect their faith. The practical way to do was to establish a state and take upon himself the burden of a ruler. It is this state that the Muslims cherish as a model." ¹⁴

Consequently, he too fought several wars. In almost all cases, the Prophet overpowered his opponents. Consequent of this, several treaties were concluded. The people of conquered territories were granted the status of ahl al-dhimmah (people of pledge). They, when not entering into the Islamic fold, were asked to pay Jizya because zakah cannot be imposed upon them. The Prophet is reported to have said: *"If you fight with a people and overcome their resistance and they agree to pay you tribute (according to another tradition: enter into a treaty with you) then you must not levy upon them a pie more than the stipulated amount"*¹⁵. Prophet Muhammad was quite stern in his message to not fleece subjects with heavy taxation and warned that the same would cause the wrath of Allah. Prophet said, *"Beware that anyone who tyrannizes over a pledged man or curtails his rights or puts burden on him beyond his endurance or obtains a thing from him without his consent, I shall myself be an accuser against him on the Day of Judgment"*¹⁶. The cloak of misrepresentations against Jizya needs to be historically corrected through post-orientalist gaze.

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NEW MEDIA TECHNOLOGY AS PUBLIC SPHERE FOR SOCIAL CHANGES: A CRITICAL STUDY

Dr. Abhishek Singh*

Gopal Thakur**

ABSTRACT

The revolution in the information technology is now fuelling the ongoing social movements world across. New Media Technology application like social networking sites and mobile phones are meant for social interaction, using highly accessible and scalable publishing techniques. Social media use web based technologies to turn communication into interactive dialogues and create public opinion on social issues. The dialogic nature of the social networking sites deepen the democratic aspirations of the mobile middle class and the young people , depoliticized from the political movements after the collapse of communism, are finding the tools easier to handle and vent their grievances. In this paper, researchers discuss the role of social media and other communication technologies in a democratic society, the power of social media in creating a public sphere and the rise of social opposition through social media in the Middle East.

Keywords: Arab Spring , Democratic Society , Habermas, New Media Technology, Public Sphere

“If you want to free a society, just give them Internet access.”

Egyptian activist *Wael Ghonim* in a CNN interview, Feb 9, 2011.

Public sphere in the modern societies is the site in which political participation is enacted through the medium of talk. It is space in which citizenry participate and deliberate about their common affairs. Public sphere is the institutionalized arena of discursive and dialogic interaction. This contrasts distinctly from the state. In fact, it can be compared to a buzzing street. Public sphere is a site for the production and circulation of critical discourses against the centralized power of the state, corporate or the resource-owners. Habermas who developed the concept of ‘public sphere’ in his seminal book, *“The Structural transformation of the Public Sphere: An Inquiry into Category of Bourgeoisie Society”* (1962) updated the concept recently and argues,

“By the ‘public sphere’ we mean first of all the realm of our social life in which something approaching public opinion can be formed...Citizens behave as a public body when they confer in an unrestricted fashion – that is, with the guarantee of freedom of assembly and association and the freedom to express and publish their opinions – about matters of general interest.” (Habermas, 2010)

After the collapse of the radical communist movement in the wake of the end of the Cold War and the demise of the erstwhile Soviet union , it was argued that new form of public sphere was needed to salvage this arena’s critical function against the ubiquitous power of the State and the corporate and to reinvigorate democracy. Deliberative democratic public sphere theory has become popular to examine the effects of

***Dr. Abhishek Singh** is an Assistant Professor, Department of Communication, Ministry of Higher Education, Sultanate of Oman. E-mail:dr.asingh89@gmail.com

****Gopal Thakur** is Assistant Professor and Program Coordinator at KRCHE/GGS Indraprastha University, New Delhi

internet expansion and opening up new platform for public deliberation. According to the “internet democracy” commentators, internet is a complete public sphere as it promotes the public discussion and participation. In the contrast to the mass media the internet is seen as force for ‘radical democracy’. Habermas strongly pointed out the impact of social media in his comment,

“At a time when disgust for traditional democratic party politics runs deep and when the so-called democratic deficit makes European political integration look like a scheme concocted by self-serving elites, perhaps the internet offers hope for change. Think, after all, of how social networking sites were used during last year’s Iranian elections to mobilize young voters.”(Habermas, 2010)

The internet is seen as helping marginalized groups- those groups excluded from the mainstream public sphere-develop their own deliberative forum, link-up and subsequently contest dominant meaning and practices. Before the expansion of new media, the earlier mass media of press and broadcasting were seen as adequate and beneficial for the conduct of democratic polity and the sustainment of public opinion in the public sphere. The forms of media enable the information about public events to be passed to all citizens and politicians and governments were able to be criticized by the society. However, information flow was predominantly vertical and asymmetric. The extreme commercialization of the media market has led to the neglect of democratic communication roles between the public itself and the leaders, institutions and the organizations of mass media. Thus, earlier forms of mass communication limited action and discouraged active political participation and deliberative dialogue within public sphere. Habermas has elaborated upon the collapse of the traditional media as the forum for public sphere succinctly,

“The disintegration of the electorate as a public becomes manifest with the realization that press and radio, “deployed in the usual manner”, have practically no effect; within the framework of the manufactured public sphere the mass media are useful only as vehicles of advertising. The parties address themselves to the “people,” de facto to that minority whose state of mind is symptomatically revealed, according to survey researchers, in terms of an average vocabulary of five hundred words. Together with the press the second classical instrument of opinion formation, the party meeting, also loses its significance. By now it has been learned that “used in the usual manner,” it can at best serve the task of handing out slogans to a small troop of persons who are hard core loyalists to begin with. Party meetings too are useful only as advertising events in which those present may at most participate as unpaid supernumeraries for television coverage. (Habermas, 1989 :p.217)

Habermas realized that traditional mass media is now prone to manipulation by parties and the oligarchy. In the manipulated public sphere of traditional mass media, it is an opinion climate instead of a public opinion. But, New media allows dialogues between politicians and active citizens and thus it provides an arena where public discourse can take place and public opinion, as its function can be formed. (McQuail, 2005;pp.150-151)

Social Networking Sites (SNS’s) play a very significant role in Arabs countries, as it is an ideal way to connect the public association, which brings together different communities and individuals for a common goal. In the real sense, social media opens the boundaries for sharing of thoughts. The countries like Morocco, Libya, Bahrain, Tunisia, and Egypt are some of the countries where massive flare up was tweaked by the social media and later people got motivated and started demonstration to challenge the might of the State.

Internet’s expansion in access to information and exchanges of ideas as enhancing political participation, civil society and democracy have provided the rise of social movements. Eric Hoffer argues how weakening of individuals through marginalization, in fact, has caused the present predicament when social movements become the only panacea to retrieve one’s potency. Hoffer writes,

“ It is impressive to observe how with a fading of the individual’s creative powers there appears a pronounced inclination toward joining a mass movement. Here the connection between the escape from an ineffectual self and a responsiveness to mass movements is very clear: The slipping author, artist, scientist—slipping because of a drying-up of the creative flow within—drifts sooner or later into the camps of ardent patriots, race mongers, uplift promoters and champions of holy causes. Perhaps the sexually impotent are subject to the same impulse.”(Eric Hoffer, 2010:p.30)

Social media have played a very crucial role in the Arab Spring movements in spite of the mass media ignoring the protesters. In the Arab world, the majority of the opinion leaders are male since traditionally women are expected not to engage themselves in the political activities. However, the internet provides women the opportunity to express their opinion more freely. There are bloggers and the face-book activities that allow more people to speak out, discuss and disseminate the ideas to influence their network. For social movement, the ideas can be spread faster among the connections, which again widens the horizon and space for the social changes. The effect cascades and results into amplified physical mobilization. The communication structure which is provided by the social media can thus foster social movement and results into social changes. Social media provides activities from all over the world the means to coordinate activities, exchanges best practice examples and gain attention for their causes.

In 2011, the Arab world was shattered with massive popular uprising. Soon it was followed by the political uprisings in Spain, Israel and Greece. Inspired by these social movement, the Occupy Wall Street movements took off in New York in September, 2011. The Occupy movement was orchestrated by public intellectuals like David Graeber and Slavoj Zizek. By the mid October, the protest went global. The root cause of all these protest was similar i.e. high unemployment especially young people frustration against political corruption, corporate greed and the financial sector as well as general dissatisfaction with the political situation, in order to organize protest, social media tools will continue to play a pivotal role for social movement, especially for the global democracy movement that is unfolding. (Fulya Sen, 2012)

In the last several years, we have witnessed the power of the internet that helps citizens to change the regimes that govern them. From the 2008 presidential campaign in the US to the Arab Spring and ongoing protest in Istanbul, organizer have been using online tools as the biggest support, disseminate information, raise money and mobilize citizens on the massive scale. Social media provides rapid flow of information to mobilize the social opposition. For social changes the formation of opinion is very important and internet is the perfect tool to inform and motivate People.

The Use of Social Media in Social Movement

The growth of the Social Media and its rapid expansion has led to extensive researches of the possible implications it might have for democracy. Social media not only start democracies, but also motivate people to sustain the radical democracy. The networked design of social media is the key factor threatening authoritarian regimes. The social media is the communication tools for the wealthy, urban, mobile and educated elites whose loyalty is important for any government to survive legitimation crisis in the wake of infinite demands from the new precariat(Proletariat in precarious existence). The Internet is also growing and expanding like mushroom both vertically and horizontally due to the cheapening of technology. Especially among young people, internet is as essential as education. One research indicates that use of Twitter, Facebook, YouTube, Myspace is increasingly very common among younger age groups within the Arab world, especially the 20 to 30 year old age group, which uses the net more avidly compared to the rest of the population (Abdulla, 2007: p.80). This can very well explain why and how new media were effectively deployed by young people in the Arab world to trigger political reform. In Egypt, for example, the 15 to 17 percent of the population who are

active Internet users are mostly youth, who were the driving force behind the Egyptian revolution. (Sahar Khamis & Katherine Vaughan, 2011)

The growth of the Social Media and its rapid expansion has led to extensive researches of the possible implications it might have for democracy. The bulk of it has been addressing interactivity as the main elements to change the nature of the citizen's participations in politics and public life in general. The advocate of the "electronic democracy" argues that the internet may either improve the existing form of democracy or revive the ancient form of direct democracy. Internet may offer solutions for the problems that have been obstructing political participation- time size, knowledge and access. The internet has overcome the boundaries of time and space and it is no longer necessary for citizens to be physically present to contribute to the discussion. The limited political knowledge of the ordinary citizens and the unequal distribution of resource which has been hampering their capacity to get involved in the process of deliberation may no longer be a problem. There are many slogan used for cross-border exchange of ideas using social media. A Tunisian activists posted on Facebook:

"Advice to the youth of Egypt: Put vinegar or onion under your scarf for tear gas"

The internet has been recognized as a platform for public deliberation and the fastest medium to share critical analysis. The net seems to provide a way around the practical problem posed by the democracy. Citizens can not only exercise their vote, but also deliberate on public policy to participate directly. Social media may be viewed both as technology and space for expanding and sustaining the network on which social movements depends. The Arab revolt amplifies how online social networks facilitated by social media have become a key ingredient of public movement. Social media are not simply neutral tools to be used by social movement but rather influence how activists form and shape the social movement.

Since the Arab spring burst forth in uprisings in Tunisia and in Egypt in early 2011, scholars have sought to understand how the internet and social media contribute to political change in authoritarian regimes. Social media are just one portion of a new system of political communication that has made its impact felt in North Africa and the Middle East. News coverage of the recent uprisings trends to concentrate on catchphrases like "Twitter Revolution" or "Facebook Revolution." However, the connectivity infrastructure should be analyzed as a complex ecology rather than in term of any specific advice. If we consider the role of social media in the cases discussed above, we can state that cross-section of resources have played very crucial role in the formation of public opinion and ideas, which range from Facebook & twitters to journalistic articles and academic journals. In all the cases, the acceleration of events occurred with the effective use of social media networks. Social networks are now a form of organizational infrastructure and not merely virtual networks. Egyptian activists were able to efficiently play off the strengths of the social networking capabilities of Facebook and Twitter by capitalizing on their "many-to-many" communication capabilities and the speed with which information can be transferred and spread.

The Role of Cell Phone in Arab Spring

The impact of mobile phones technology in the formation of public opinion is also very much discernible. In the Arab world, the influence of mobile phones is extensively used by opinion leaders. How the Cell phone contributed to recent political protests will be evident from examining the impact of various services that it offered.

1-SMS (Short Messages Services)

The role of SMS and new technologies in the creation of a "perfect storm" was well marked in the

revolution which took place in the Arabic countries in 2011. With the development of infrastructure of tele-communications, it became very easy for the opinion leaders of the countries like Tunisia, Egypt, Syria and Yemen to communicate their impressive views and thoughts and it was made possible due to unexpected rate of expansion of mobile telephony, Internet and 3G networks. It is important to mention here that understanding and deployment of mobile technologies and social media influenced Arab spring. There are various SMS used by the opinion leaders to motivate the people for the action. Some examples are given below:

- *shab yurid isqat an- nizam* ("the will of the people is to bring down the regime").
- "Tell your friends," and "Look what is happening in Tunisia."

There are many others example of SMS used for the mass mobilization of people in Egypt like, when government blocked Internet, people used the cell phone to disseminate message - 'Egypt can't be blocked and its people can't be unplugged'. According to Adel Iskander, Professor at Georgetown University and an expert on Arab media, for protestor in Egypt, mobile phones and Facebook were the very effective tool for public mobilization and organization, as mobile phones played a very significant role in empowering of the commitment of the community in Egypt and Tunisia by strengthening social views and constructive opinion for social, political and cultural upliftment.

2. MMS (Multimedia Messaging Services)

The role of cell phone in many Arab countries like Tunisia and Egypt uprising had been immense, since people could share their picture through MMS instantaneously and gather the People for protest. Dissemination of information in the Middle East countries now strongly relies on the Internet technologies and social media such as Twitter, Twits Pictures, Facebook and YouTube. All these through visual of atrocity and police excesses accelerated the social protest.

In the contemporary context, the postmodern public sphere and public discourse cannot be separated from the mass media. Public opinion has been facilitated by various forms of media including newspaper, magazines television, and talk program. The internet has been heralded as a new potential public sphere as it has opened newer form of public discourse. Within the internet, the SMS is seen as a potential tool to structure the public platform. The story of the social media in developing nations so far is one of individual empowerment. Social media not only connects deprived nations to the outside world but also provides power to shape the internet in a way that is relevant to common people's lives, the power to organize in scale and the power to speak. In fact, the new media technology has created a more democratic and participatory public sphere all across the world obliterating the ethnic, religious, racial or growth divide.

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ANALYSIS OF THREE FREQUENCY UNDULATOR INTENSITY AND GAIN DUE TO OFF AXIS CONTRIBUTION IN FREE ELECTRON LASER

Abhishek Verma*

Vikesh Gupta**

ABSTRACT

In this paper we study the three frequency undulator radiation and free electron laser gain for higher harmonics with the inclusion of off axis contribution. When electron enters the field off axis it causes additional oscillations due to which intensity and gain reduction take place. To enhance the intensity and gain, we introduce a new scheme -the three frequency undulator scheme.

Keywords: Free electron laser, intensity, undulator

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1. Introduction

In a free electron laser (FEL)[1-15], a relativistic beam of electrons passes through a periodic transverse magnetic field, to produce coherent radiation. The main advantage of the FEL is that it is tunable. In standard FEL, electron passes through on-axis undulator field.

When electron enters on-axis, the interaction region of undulators of a free electron laser device, it sees an on-axis field and executes small oscillations around the axis. However this on-axis field does not satisfy Maxwell's equation. Hence the off-axis fields are calculated from the Maxwell equations. With the presence of these off-axis fields, the electron executes additional oscillations known as betatron oscillations. These extra oscillations drive away electrons from the resonance and FEL gain drops. Both off-axis and angular injection of the electron induces betatron oscillations. When it enters the field off-axis causes additional field components of the undulator field. And this extra additional oscillation causes the degradation in the intensity and gain free electron laser.

The two-frequency & two-harmonic undulator [16-21], Optical Klystron Undulator [23-27] are some examples which have attracted wide interests in this context. In this paper we analyze the case of a three frequency [28] undulator scheme to increase the intensity and gain of a free electron laser in the presence of betatron oscillations.

2. Undulator Radiation

We assume the electron moves on axis in a three frequency undulator scheme whose on-axis field is given by,

$$\vec{B} = \left[0, B_0 a_1 \left\{ \sin(k_u z) + \frac{a_2}{a_1} \sin(2k_u z) + \frac{a_3}{a_1} \sin(3k_u z) \right\} \hat{y}, 0 \right]$$

* **Abhishek Verma** is a Research Scholar at Physics Department, Mewar University, Chittorgarh, Rajasthan, India, 312901 Email: abhi798@rediffmail.com

** **Vikesh Gupta** teaches at Physics Department, S D Bansal College of Engineering, Indore, Umariya, Near Rau (M.P.), India, 453331

Where $k_u = 2\pi/\lambda_u$, λ_u is the undulator wavelength, B_0 is peak field strength. The trajectory of the electron is determined through the Lorentz equation. This gives

$$x(t) = -\left[\frac{Kc}{\gamma\omega_u} \sin(\omega_u t) + \frac{Kc\delta_1}{2\gamma\omega_u} \sin(2\omega_u t) + \frac{Kc\delta_2}{3\gamma\omega_u} \sin(3\omega_u t) \right] \quad (2)$$

where, $K = \frac{eB_0 a_1}{m_0 c \omega_u}$, $\delta_1 = (a_2/2a_1)$, $\delta_2 = (a_3/3a_1)$, $\omega_u = k_u c$, where K defines the undulator parameter. The z-motion is,

$$\begin{aligned} z(t) = & \beta^* ct - \frac{cK^2}{8\gamma^2 \omega_u} \sin(2\omega_u t) - \frac{cK^2 \delta_1^2}{16\gamma^2 \omega_u} \sin(4\omega_u t) - \frac{cK^2 \delta_2^2}{24\gamma^2 \omega_u} \sin(6\omega_u t) \\ & - \frac{cK^2 \delta_2}{4\gamma^2 \omega_u} \sin(2\omega_u t) - \frac{cK^2 \delta_1}{6\gamma^2 \omega_u} \sin(3\omega_u t) - \frac{cK^2 \delta_2}{8\gamma^2 \omega_u} \sin(4\omega_u t) - \frac{cK^2 \delta_1 \delta_2}{10\gamma^2 \omega_u} \sin(5\omega_u t) \\ & - \frac{cK^2 \delta_1 (1 + \delta_2)}{2\gamma^2 \omega_u} \sin(\omega_u t) \end{aligned} \quad (3)$$

where,

$$\beta^* = 1 - \frac{1}{2\gamma^2} \left[1 + \frac{K^2}{2} + \frac{K^2 \delta_1^2}{2} + \frac{K^2 \delta_2^2}{2} \right]$$

The representation of the field in **Eq.(1)** is valid if the electron's path remains near to the undulator axis where there are no betatron oscillations. The dependence of the field on the transverse coordinates is found from the Maxwell equations. At the lowest order in transverse coordinates, the field components are [8-9]

$$\begin{aligned} B_x &= \frac{B_0}{2} xy \left[k_u^2 \delta \{a_1 \sin(k_u z)\} + k_h^2 \sigma \{a_2 \sin(k_h z)\} \right] \\ B_y &= B_0 \left[1 + \frac{k_u^2}{4} \{ \delta x^2 + (2 - \delta) y^2 \} \right] a_1 \sin(k_u z) \\ &+ B_0 \left[1 + \frac{k_h^2}{4} \{ \sigma x^2 + (2 - \sigma) y^2 \} \right] a_2 \sin(k_h z) \\ B_z &= B_0 y [a_1 k_u \cos(k_u z) + a_2 k_h \cos(k_h z)] \end{aligned} \quad (4)$$

where $\delta = 2\alpha^2/k_u^2$ and $\sigma = 2\alpha^2/k_h^2$. The equation of motion can now be derived using the field equation in **Eq. (4)**. We assume that the motion can be decomposed as $x = x_0 + x_1$ where x_0 represents the reference trajectory due to the field and x_1 describe the additional motion around the reference trajectory due to the extra terms in eq(4) depending on the transverse coordinate. Keeping the contributions at the first order only in x_1 and averaging over one undulator period, we get the following differential equation ruling the additional motion,

$$\frac{d^2 x_1}{dt^2} + \Omega_\beta^2 x_1 = 0 \quad (5)$$

where,

$$\Omega_{\beta}^2 = \frac{K_1^2 c^2 k_u^2}{4\gamma^2} [\delta + h^2 \sigma]$$

The solution of **Eq.(5)** is given by,

$$x_1(t) = x_0 \cos(\Omega_{\beta} t) \quad (6)$$

Where x_0 represent the off-axis position from the undulator axis and $y_0 = 0$. The z-motion is

$$\begin{aligned} z(t) = & \beta^{**} ct - \frac{cK^2}{8\gamma^2 \omega_u} \sin(2\omega_u t) - \frac{cK^2 \delta_1^2}{16\gamma^2 \omega_u} \sin(4\omega_u t) - \frac{cK^2 \delta_2^2}{24\gamma^2 \omega_u} \sin(6\omega_u t) \\ & - \frac{cK^2 \delta_2}{4\gamma^2 \omega_u} \sin(2\omega_u t) - \frac{cK^2 \delta_1}{6\gamma^2 \omega_u} \sin(3\omega_u t) - \frac{cK^2 \delta_2}{8\gamma^2 \omega_u} \sin(4\omega_u t) - \frac{cK^2 \delta_1 \delta_2}{10\gamma^2 \omega_u} \sin(5\omega_u t) \\ & - \frac{cK^2 \delta_1 (1 + \delta_2)}{2\gamma^2 \omega_u} \sin(\omega_u t) + \frac{x_1^2 \Omega_{\beta_x}}{8c^2} \sin(2\Omega_{\beta_x} t) \pm \frac{Kx_1 \Omega_{\beta_x}}{2\gamma (\omega_u \pm \Omega_{\beta_x})} \cos(\omega_u \pm \Omega_{\beta_x}) t \\ & \pm \frac{Kx_1 \Omega_{\beta_x} \delta_1}{2\gamma (\omega_u \pm \Omega_{\beta_x})} \cos(2\omega_u \pm \Omega_{\beta_x}) t \pm \frac{Kx_1 \Omega_{\beta_x} \delta_2}{2\gamma (3\omega_u \pm \Omega_{\beta_x})} \cos(3\omega_u \pm \Omega_{\beta_x}) t \end{aligned} \quad (7)$$

$$\beta^{**} = 1 - \frac{1}{2\gamma^2} \left[1 + \frac{K^2}{2} + \frac{K^2 \delta_1^2}{2} + \frac{K^2 \delta_2^2}{2} + \frac{x_1^2 \Omega_{\beta_x}^2 \gamma^2}{2c^2} \right]$$

The spectral properties of the undulator radiation are easily obtained from the Lienard-Wiechert integral [27],

$$\frac{d^2 I}{d\omega d\Omega} = \frac{e^2 \omega^2}{4\pi^2 c} \left| \int_{-\infty}^{\infty} \{ \dot{\mathbf{n}} \times (\hat{\mathbf{n}} \times \vec{\beta}) \} \exp \left[i\omega \left(t - \frac{z}{c} \right) \right] dt \right|^2 \quad (8)$$

The brightness expression reduced to

$$\frac{d^2 I}{d\omega d\Omega} = \frac{e^2 \omega^2 T^2}{4\pi^2 c} |F_m(z)|^2 \left(\frac{\sin(\nu_0/2)}{\nu_0/2} \right)^2 \quad (9)$$

where,

$$\begin{aligned} F_m(z) = & \left[\frac{K}{2\gamma} \{ J_{m-1}(0, z_1) + J_{m+1}(0, z_1) \} J_n(0, z_2) J_p(0, z_3) J_q(0, z_4) \right. \\ & + \frac{K\delta_1}{2\gamma} \{ J_{n-1}(0, z_2) + J_{n+1}(0, z_2) \} J_m(0, z_1) J_p(0, z_3) J_q(0, z_4) \\ & + \frac{K\delta_2}{2\gamma} \{ J_{p-1}(0, z_3) + J_{p+1}(0, z_3) \} J_m(0, z_1) J_n(0, z_2) J_q(0, z_4) \end{aligned}$$

$$+ \frac{x_0 \Omega_{\beta}}{2ic} \left\{ J_{q+1}(0, z_4) - J_{q-1}(0, z_4) \right\} J_m(0, z_1) J_n(0, z_2) J_p(0, z_3) \Bigg] \\ \times J_r(z_5, z_6) J_s(z_7, 0) J_{p1}(z_8, 0) J_{p2}(z_9, 0) J_{p3}(z_{10}, 0) J_{p4}(z_{11}, 0) J_{p5}(z_{12}, 0)$$

$$\nu_0 = \frac{\omega}{2\gamma^2} \left[1 + \frac{K^2}{2} + \frac{K^2 \delta_1^2}{2} + \frac{K^2 \delta_2^2}{2} + \frac{x_1^2 \Omega_{\beta_x}^2 \gamma^2}{2c^2} \right] - \eta$$

$$\eta = m\omega_u + n2\omega_u + p3\omega_u t + q\Omega_{\beta_x} r\omega_u + s \frac{3}{2} \omega_u + p_1 2\omega_u + p_2 \frac{5}{2} \omega_u + p_3 (\omega_u \pm \Omega_{\beta_x}) \\ + p_4 (2\omega_u \pm \Omega_{\beta_x}) + p_5 (3\omega_u \pm \Omega_{\beta_x})$$

with

$$z_1 = -\frac{\omega K^2}{8\gamma^2 \omega_u}, z_2 = -\frac{\omega K^2 \delta_1^2}{16\gamma^2 \omega_u}, z_3 = -\frac{\omega K^2 \delta_2^2}{24\gamma^2 \omega_u}, z_4 = \frac{\omega x_1^2 \Omega_{\beta_x}}{8c^2}, z_5 = -\frac{\omega K^2 \delta_1 (1 + \delta_2)}{2\gamma^2 \omega_u} \\ , z_6 = -\frac{\omega K^2 \delta_2}{4\gamma^2 \omega_u}, z_7 = -\frac{\omega K^2 \delta_1}{6\gamma^2 \omega_u}, z_8 = -\frac{\omega K^2 \delta_2}{8\gamma^2 \omega_u}, z_9 = -\frac{\omega K^2 \delta_1 \delta_2}{10\gamma^2 \omega_u}, z_{10} = \pm \frac{K x_1 \Omega_{\beta_x}}{2\gamma (\omega_u \pm \Omega_{\beta_x})}, \\ z_{11} = \pm \frac{K x_1 \Omega_{\beta_x} \delta_1}{2\gamma (2\omega_u \pm \Omega_{\beta_x})}, z_{12} = \pm \frac{K x_1 \Omega_{\beta_x} \delta_2}{2\gamma (3\omega_u \pm \Omega_{\beta_x})}$$

$J_m(0, z_1) \dots$ are the generalized Bessel functions of order $i = m, n, p, q, r, s, p_1, p_2, p_3, p_4, p_5$ respectively. The resonance condition in a free electron laser is provided by $\nu_0 = 0$. This provides the central emission frequency as,

$$\omega_i = \frac{2\gamma^2 \eta}{\left[1 + \frac{K^2}{2} + \frac{K^2 \delta_1^2}{2} + \frac{K^2 \delta_2^2}{2} + \frac{x_1^2 \Omega_{\beta_x}^2 \gamma^2}{2c^2} \right]}$$

3. GAIN

To calculate the gain, let us consider a linear polarized electromagnetic wave with

$$\vec{E} = E_0 \hat{x} \cos(kz - \omega t + \varphi) \quad (10)$$

The change in energy of the electron is given by,

$$\frac{d\gamma}{d\tau} = \frac{eE_0 K_1 L_u}{m_0 c^2 \gamma} \cos(\zeta_0 + \varphi) J_q(0, z_4) J_r(z_5, z_6) J_s(z_7, 0) J_{p1}(z_8, 0) J_{p2}(z_9, 0) J_{p3}(z_{10}, 0) J_{p4}(z_{11}, 0) J_{p5}(z_{12}, 0) \times \\ \left[\{ J_{m-1}(0, z_1) + J_{m+1}(0, z_1) \} J_n(0, z_2) J_p(0, z_3) + \delta_1 \{ J_{n-1}(0, z_2) + J_{n+1}(0, z_2) \} J_m(0, z_1) J_p(0, z_3) \right] \\ \left[+ \delta_2 \{ J_{p-1}(0, z_3) + J_{p+1}(0, z_3) \} J_m(0, z_1) J_n(0, z_2) \right] \quad (11)$$

where

$$\zeta_0 = \eta[(k_1 + k_u)\bar{z} - \omega_1 t]$$

The pendulum equation is,

$$\frac{d^2 \zeta_0}{d\tau^2} = |a| \cos(\zeta_0 + \varphi) \quad (12)$$

where the dimensionless field strength is,

$$|a| = \frac{4\pi N e E_0 K_1 L}{\gamma^2 m_0 c^2} \eta J_q(0, z_4) J_r(z_5, z_6) J_s(z_7, 0) J_{p1}(z_8, 0) J_{p2}(z_9, 0) J_{p3}(z_{10}, 0) J_{p4}(z_{11}, 0) J_{p5}(z_{12}, 0) \times$$

$$\left[\{J_{m-1}(0, z_1) + J_{m+1}(0, z_1)\} J_n(0, z_2) J_p(0, z_3) + \delta_1 \{J_{n-1}(0, z_2) + J_{n+1}(0, z_2)\} J_m(0, z_1) J_p(0, z_3) \right]$$

$$+ \delta_2 \{J_{p-1}(0, z_3) + J_{p+1}(0, z_3)\} J_m(0, z_1) J_n(0, z_2) \quad (13)$$

In its simplest form the wave equation is written as,

$$\frac{da}{d\tau} = -j \langle e^{-i\zeta_0} \rangle \quad (14)$$

where j is the dimensionless current density given as,

$$j = \frac{4\pi^2 N e^2 K_1^2 L^2 n_e}{\gamma^3 m_0 c^2} \eta J_q(0, z_4) J_r(z_5, z_6) J_s(z_7, 0) J_{p1}(z_8, 0) J_{p2}(z_9, 0) J_{p3}(z_{10}, 0) J_{p4}(z_{11}, 0) J_{p5}(z_{12}, 0) \times$$

$$\left[\{J_{m-1}(0, z_1) + J_{m+1}(0, z_1)\} J_n(0, z_2) J_p(0, z_3) + \delta_1 \{J_{n-1}(0, z_2) + J_{n+1}(0, z_2)\} J_m(0, z_1) J_p(0, z_3) \right]$$

$$+ \delta_2 \{J_{p-1}(0, z_3) + J_{p+1}(0, z_3)\} J_m(0, z_1) J_n(0, z_2) \quad (15)$$

The gain is

$$G = \frac{j}{\nu_0^3} [2 - 2 \cos(\nu_0) - \nu_0 \sin(\nu_0)] \quad (16)$$

(1)

4. Results & Discussion

In this paper we have examined the use of three frequency undulator scheme for reducing betatron oscillation effects in a free electron laser. In **Figure.(1)** the linear undulator emits at odd harmonics ($m = 1, 3, 5, \dots$). The betatron oscillation reduces the intensity at respective harmonics. **Figure (2)** represents both odd and even harmonics due to inclusion of $2\omega_u$ frequency. Here we saw the intensity enhancement for even harmonics as we increase value of δ_1 and odd harmonic intensity decreases. In **Figure(3)** we saw the intensity of third and fifth harmonic increases and we reach intensity of third harmonic as comparable to first harmonic at $\delta_2 = 0.3$. **Figure (4)** represents intensity plots for various harmonics and here we find that intensity of all the higher harmonics either odd or even get enhanced with certain combination of δ_1 and δ_2 . In **Figure (5)** we plot gain curves versus frequency. **Figure (5a)** shows gain degradation due to inclusion of betatron motion of electron.

Figure (5b) enhances gain for even harmonics and **Figure (5c)** enhances gain for odd harmonics. **Figure (5d)** enhances gain for odd and even harmonics except first harmonic for various values of δ_1 and δ_2 . The role of three frequency undulator scheme concludes that we can achieve higher intensity and gain at higher harmonics.

The analysis reflects the view that the betatron oscillations reduce the intensity and gain. However, in the case of a three frequency undulator, one gets substantial enhanced intensity and gain at a selected harmonic in comparison to a regular planar undulator field.

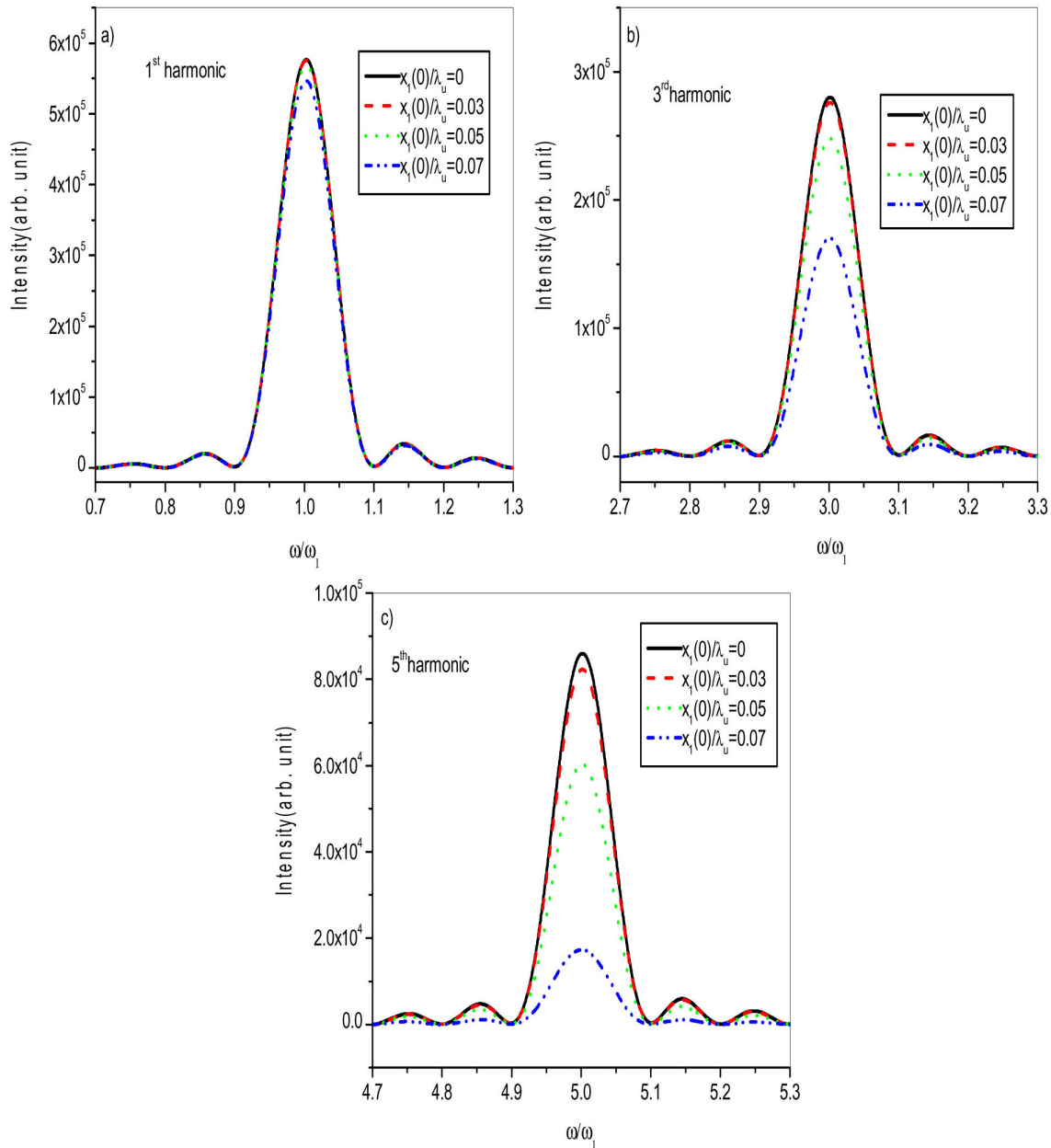


Figure 1. Intensity vs. frequency with various values of $\frac{x_1(0)}{\lambda_u}$.

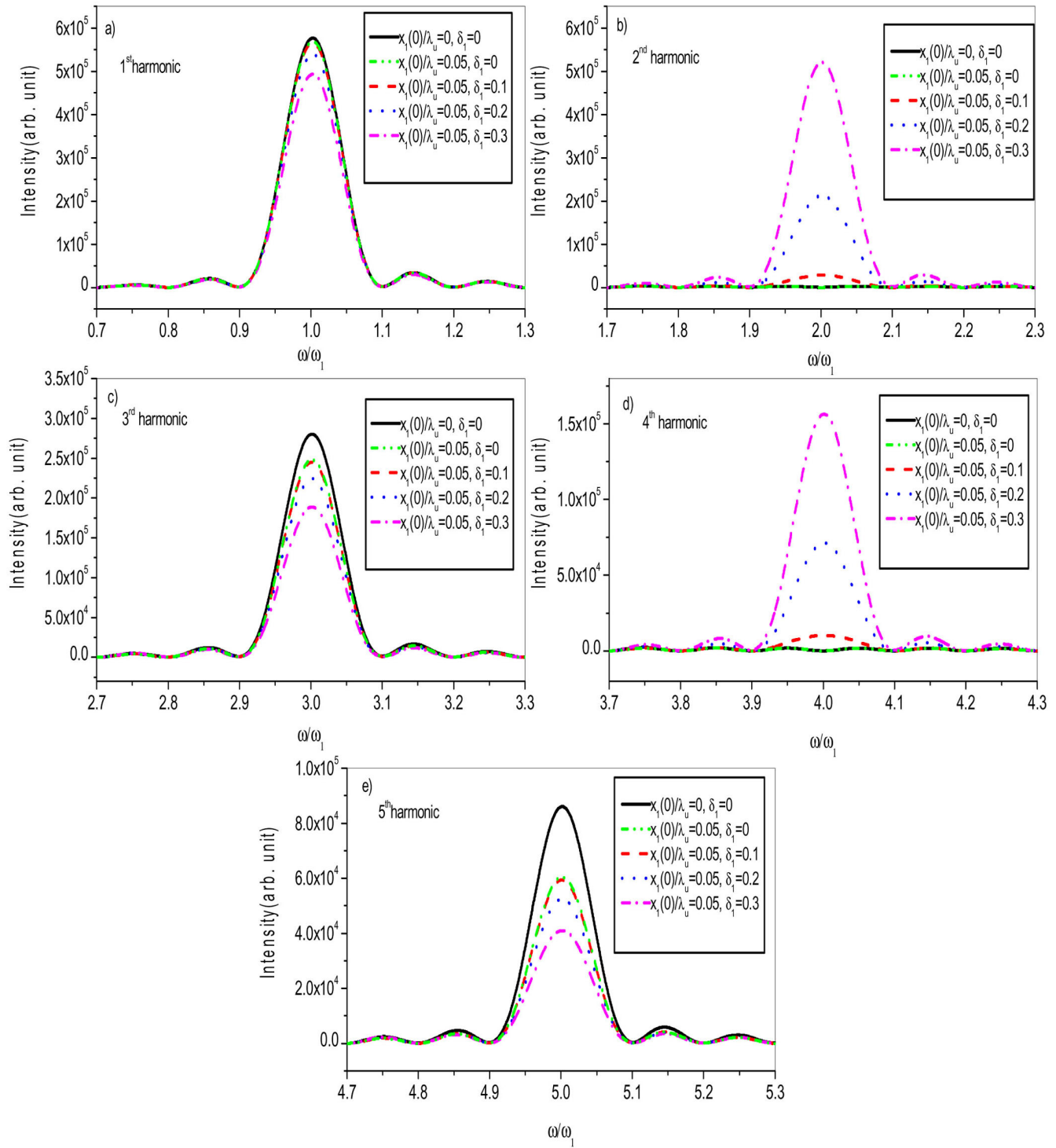


Figure 2. Intensity vs. frequency for various values of δ_1 .

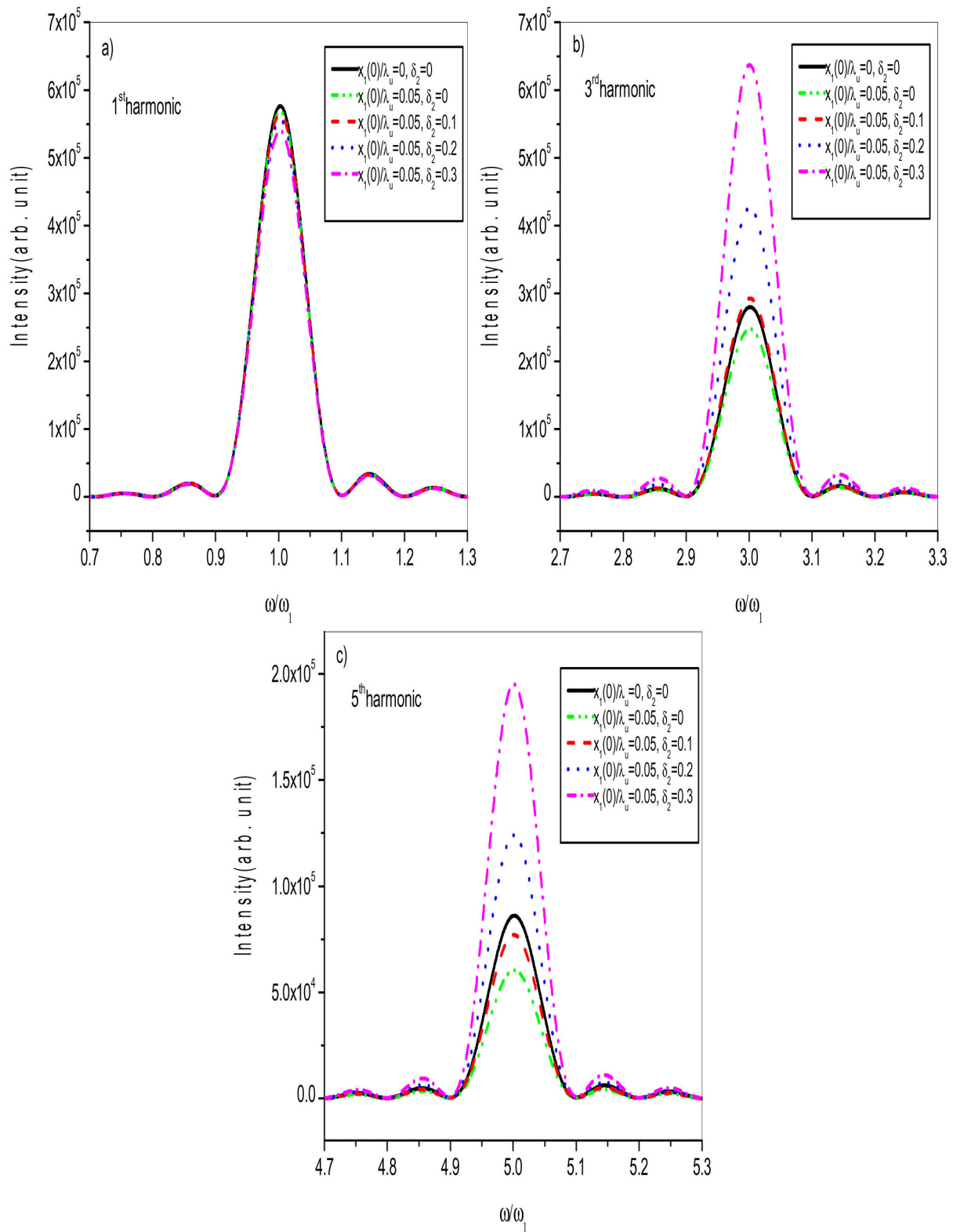


Figure 3 . Intensity vs. frequency for various values of δ_2

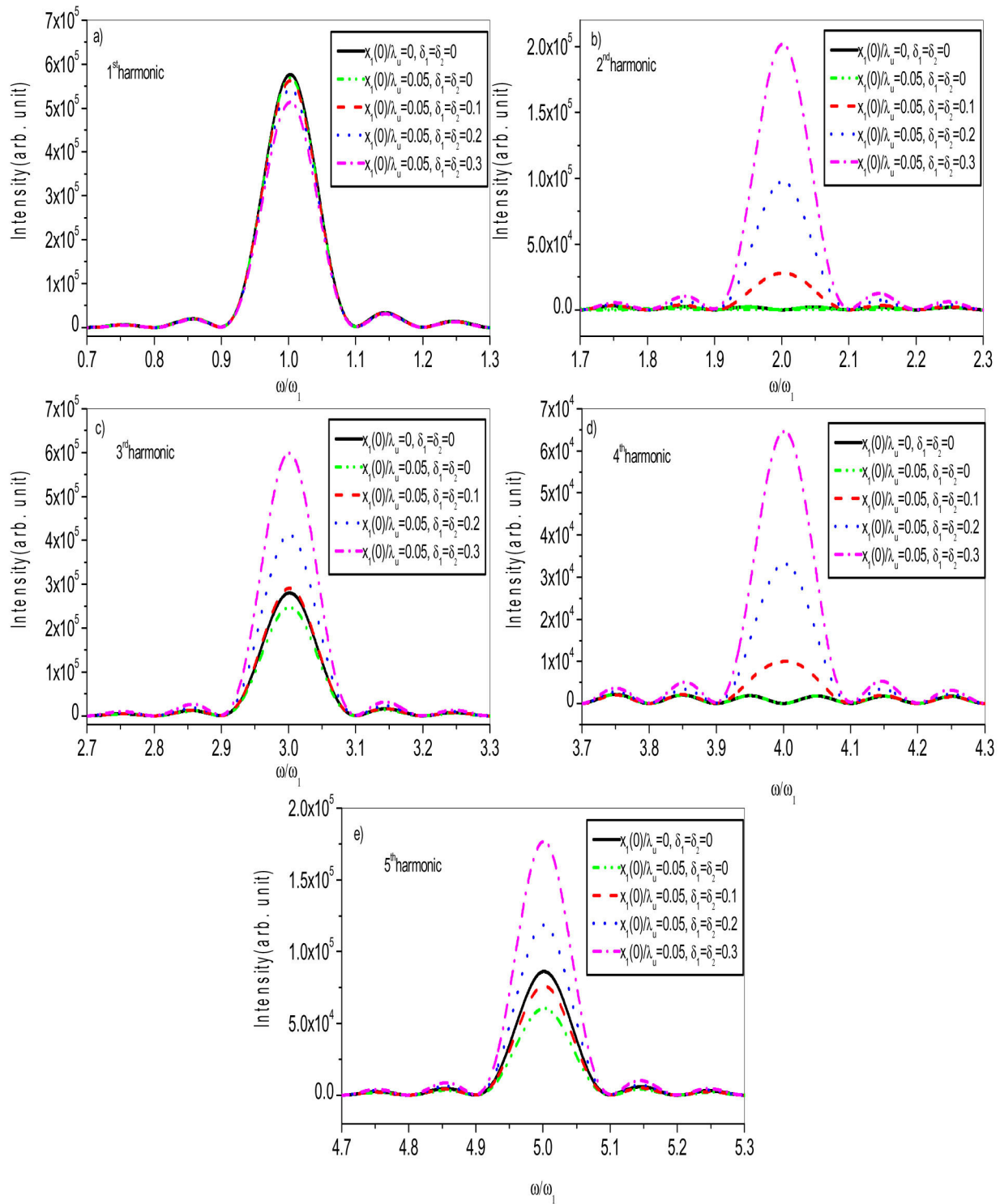


Figure 4. Intensity vs. frequency for various values of δ_1 and δ_2 .

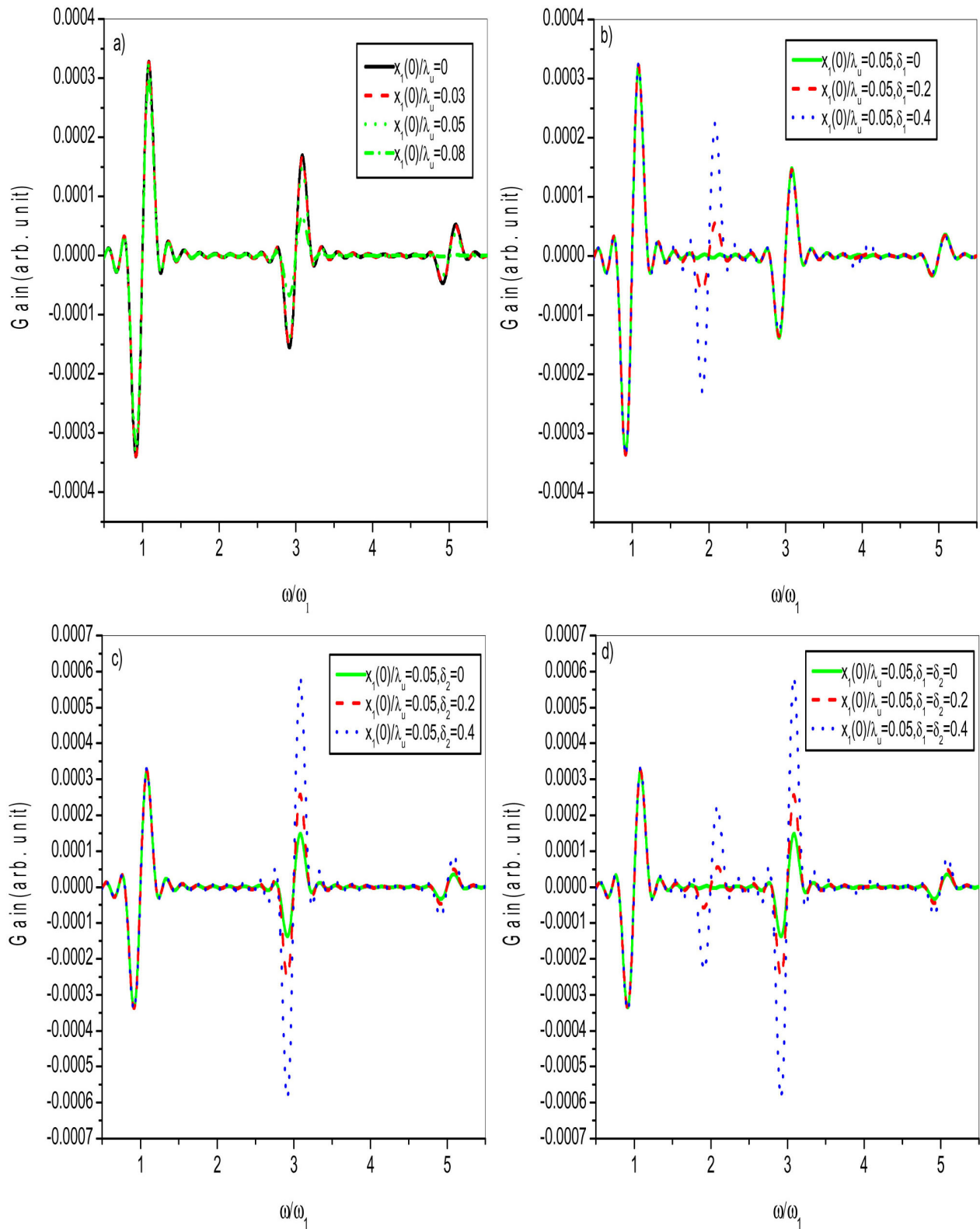


Figure 5. Gain curve versus frequency for various harmonics.

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DESIGN AND DEVELOP A SOFTWARE REQUIREMENT IDENTIFICATION TOOL

Sudhir K. Singh*
Dr. Raj Kumar*

ABSTRACT

Problem identification focuses on gaining an understanding of the customer's problem domain and identification of the root of the symptoms being observed by customer. Problem decomposition on the other hand is the process of translating our understanding of that problem into a statement of needs that provides the basis for solution specification. Software development activities performed by humans requires methodological shift to the description of what computers are required to solve as opposed to how computer are to solve a particular problem. Software development is highly dependent on the use of tools. These tools support and automate activities performed in different sub-domains of software development. The software development process definitions are used as inputs to create process models and provide actual implementations. The paper includes case-study work to identify the significance of the problems and the applicability of the method as a solution to issues in tool integration.

Keywords: CORE- Controlled Requirements Expression, IBIS- Issue-based Information Systems requirement analysis, RGM-requirement generation model, win-win spiral model

Introduction

The subject of software requirements is often given far less attention in software engineering education than software design, even though its importance is widely recognized. F.P. Brooks ponder over this dilemma in flowing words:

"The hardest single part of building a software system is deciding precisely what to build. No other part of the conceptual work is as difficult as establishing the detailed technical requirements, including all the interfaces to people, to machines, and to other software systems No part of the work so cripples the resulting system if done wrong. No other part is more difficult to rectify later" [Brooks, 1987]

Early experience in building software systems showed that existing methodologies were inept. Major projects were, at times, years late. Those cost much more than originally predicted, were unreliable, difficult to maintain and performed inefficiently. The inadvertent delays and significant budget overruns caused software costs to rise, while hardware costs were plummeting. New techniques and methods were needed to control the complexities inherent in large software systems.

***Sudhir Kumar Singh** is a Research Scholar at Mewar University, Gangrar Chittorgarh, Rajasthan.

** **Dr. Raj Kumar** is the Director of Dr Rizvi College of Engineering, Kaushambi, Allahabad.

Figure: 1
Life-Cycle terminology used in this Tool

	Existing Life-cycle Terminology	Terminology Used in this Tool
<pre> graph TD P1[Processes] --> S1([Software Needs]) S1 --> P2[Processes] P2 --> C1([Customer Requirements]) C1 --> P3[Processes] P3 --> D1([Developer Requirements]) D1 --> P4[Processes] </pre>	Market Analysis System Analysis Business Planning System Engineering	Context Analysis
	Market Needs Business Needs Demands System Requirements	Needs Product
	Requirements Analysis Requirements Definition System Specification	Customer Requirements Process
	Requirements Requirements Definition Requirements Document Requirements Specification Functional Specification	Customer Requirement Product
	Specification	Developer Requirement Process
	Behavioral Specification System Specification Functional Specification Specification Document Requirement Specification	Developer Requirement Product
	Design	Design Process

After more than 30 years of development, the software industry has made enormous progress in developing reliable software, more often than not, within budgetary and schedule constraints. We now have a better understanding of various processes involved in software development, and have modeled these processes in the form of software development lifecycles, lending much-needed structure to the overall development process. Nevertheless, many large software projects are still late and over budget. Moreover, software that is delivered often does not meet the real needs of the customer.

A requirement is something, which is desired or needed. From the software engineering point of view, a requirement is a condition or capability to which a system or software must conform to or a quality that the system must have. Requirements can be divided into two general categories, functional and nonfunctional requirements.

Functional requirements define the capability and the behavior of the system. They can be thought of as things that the system does on behalf of the user. Functional requirements are used to express the behavior of a system by specifying both the input conditions and the output conditions that are expected to result.

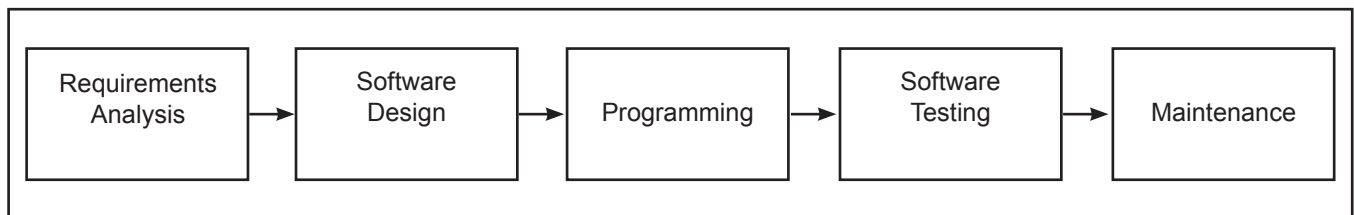
Non-functional requirements encompass a wide variety of attributes that do not specifically relate to the system's functionality. These kinds of attributes are, for example, quality attributes such as usability, reliability, performance and supportability. Non-functional requirements are usually as important to the end-user community as are the functional requirements.

Requirements engineering can be split into two main areas of activities, requirements development and requirements management. Requirements development concerns activities related to elicitation, analysis, documentation and validation of requirements. It deals principally with the content of the requirements. The purpose of requirements development is to produce and analyze customer, product, and product-component requirements.

Requirements management concerns activities related to controlling and tracking of changes to agreed requirements, relationships between requirements and dependencies between the requirements specifications and between specifications and other project artifacts. Requirements management can be seen as a supportive process, which helps to manage requirements through the product's lifecycle.

2. Software Development Paradigms: A Software Development Paradigm outlines a development strategy that encapsulates processes, methods, artifacts and tools. Software paradigms typically consisted of five activities: Requirements Analysis, Design, Implementation, Integration, Testing and Maintenance. Different Software Process Models decompose these generic activities in different ways. The timing of the activities varies, as does the outcome.

Figure: 2
Waterfall Model



The first development model, the Waterfall Model offered means of organizing the development process. This model placed the five activities in a linear timeframe, with each phase following the previous one.

Software development has thus become a complex sequence of information transformations, with a pre-defined aim and several levels of input and knowledge. These information transformations create outputs that are used as inputs in succeeding steps towards the goal. These transformations are specialized into separate processes like requirements engineering, software design, coding, and software testing. As in any engineering domain, tools have been developed to support software engineers by increasing the efficiency of the execution of processes.

3. Requirements Generation Process: The Requirements Generation process is placed at the beginning in most software development lifecycles. In itself, the process is composed of the activities listed below.

- **Software Requirements** are elicited from people or derived from system requirements. An important precursor to the elicitation process is the Problem Synthesis process, during which the underlying issues are diagnosed and customer needs are elicited.

- **Requirements Analysis** is usually performed before the customer commits to the actual development process. The customer assesses the acceptable level of risk regarding the completeness, correctness, and technical and cost feasibility.
- **Requirements Specification** elicited and analyzed in the preceding phases are documented and expressed in the form of a formal document, often referred to as the Software Requirements Specification (SRS).
- **Requirements Verification and Validation** ensures that the requirements elicited and specified in the SRS adhere to the customer needs or the high level requirements. The requirements elicited are presented to diverse audiences for review and approval. Adherence of specified requirements to pre-defined quality attributes is also tested.
- **Requirements Management** must incorporate a management methodology that pervades through the entire process and facilitates communication effectively, in case any changes are made. A process that establishes and maintains agreement between the customer and the project team on the changing requirements of the system.

4. Requirements Generation Models: We provide a survey of existing requirements generation approaches, describing existing methodologies, models, frameworks and techniques.

- **CORE- Controlled Requirements Expression:** CORE is a prescriptive, top-down method. It identifies clients and their viewpoints, and describes dynamic aspects of the software system with the primary aim to determine functional requirements. CORE assumes that different viewpoints are necessary to specify requirements. Viewpoints are the set of interests to be supported or influenced by the proposed system. Example viewpoints are environment view, process view and reliability view. CORE defines responsibilities for clients and requirements analysts and structures their communication. The customer is responsible to resolve conflicting views. The requirements analyst is responsible for the documentation of requirements specifications, which express (multiple) viewpoints, and ensure their successful combination into a coherent specification of the software system. CORE proceeds iteratively, first defining the problem, then decomposing it into viewpoints, and acquiring information about each viewpoint. This recurrent process leads to a hierarchy of viewpoints. The RE process comprises viewpoint structuring, tabular collection, data structuring, single and combined viewpoint modeling, and constraint analysis.
- **IBIS- Issue-based Information Systems:** IBIS assumes that RE is fundamentally a conversation among clients and requirements analysts in which they pool their respective knowledge and viewpoints to specify the software system. It organizes and tracks the rationale underlying requirements. The method helps to point out where alternatives have not been considered and where specifications are strong and weak, based on supporting or objecting arguments. IBIS acquires requirements by keeping track of issues being discussed, propositions on these issues, and arguments in support of a position or object to it. A typical IBIS method scenario would be a stakeholder posting an issue containing a question such as: How should we do X? Another stakeholder may respond by proposing one way to accomplish X and can also post arguments supporting the proposal. Other stakeholders can post competing arguments or support the proposal. Hence the goal of such discussion is to understand each other's proposals and to persuade others about one's viewpoint.
- **Jackson System Development:** Jackson System Development (JSD) method comprises software development starting from problem analysis and ending with code. The method does not subscribe to traditional life cycle models. Instead of top-down, it develops functional specification middle-out

from an initial set of requirements. JSD follows five steps to specify requirements: entity-action & entity structuring, initial modeling, function step, information function step and system timing. The first two steps are concerned with creating a model of the application domain, the others with the specification of functions to be added to the model. The model of the application domain is created in terms of actions and entities. These are documented and constraints on time ordering of actions are expressed as structure diagrams. Initial modeling produces a model of the application domain in terms of communicating processes that correspond to actions in the structure diagrams. The function step inserts the functions into the model as executable operations that produce required outputs. Finally, the purpose of system timing is to specify constraints on the implementation.

- Software Quality Deployment:** Software Quality Deployment (SQD) is a quality system for client satisfaction. It investigates needs and requirements of the client with the aim to improve the software system and the development process. SQD is driven by the voice of the customer. The method uses a series of matrices to deploy customer and quality requirements. These deployments are a structured way of dealing with a special concern at a detailed level, and provide a basis for linking these concerns into an integrated framework. SQD identifies, explicitly states, and prioritizes requirements. The SQD process builds a series of matrices correlating user needs and technical requirements. The matrices consist of the client characteristics/client segments matrix, the client segments/client requirements matrix, the client requirements/technical requirements matrix, and technical requirements/entities-and processes matrix. Firstly, customers and users are identified and classified in client segments. The problem is outlined and the development horizon is defined. Then primary needs of the customer are documented and refined. Information about needs can come from various sources, e.g. customer opinion surveys and market research data. The requirements are then used in client segments to understand which segments value which requirements and to what extent. This matrix indicates whether defined requirements cover client needs and depicts conflicts between needs and requirements. It also provides an elaborate method to prioritize requirements on the basis of their importance to the customer.
- Soft Systems Methodology:** Soft Systems Methodology (SSM) views Requirements Engineering as a recurrent cycle that aims at improving the problem situation. It applies systems thinking to explore the problem situation and to specify the software systems. SSM assumes that different views of the application domain exist and that these views must be considered while generating requirements. The method compares perceptions of the problem with models of its application domain. Initiated by this comparison, assumptions about the problem are drawn, challenged and tested. SSM is based on the assumption that RE proceeds via debate and that it is intrinsically participative. Initially, the requirements engineer enters the situation considered problematic and identifies the clients for the software system to be built. A first investigation of the problem situation is carried out and documented. Next, root definitions are formulated. These root definitions specify the purpose of the system in terms of transformation processes. In constructing root definitions, one has to consider the mnemonic CATWOE, where the C stands for customer as the victim or beneficiary of T the transformation process. A denotes the actors who perform the activities of the system, whereas O is the owner who can stop these activities, and E are the environmental constraints. W describes the worldview when formulating root definitions. The next stage of SSM compares conceptual models with perceived reality using informal discussion, formal questioning, scenario writing based on operating the model, and trying to model the problem in the same structure as the conceptual model. Finally, the comparison stage uses the differences between models and reality to discuss changes, which are desirable and feasible concerning the worldviews specified in root definitions. Implementing these changes completes the SSM cycle.

Methodology Comparison

Table 1:
Requirement Engineering Methodologies

<i>Sr. No.</i>	<i>Methodology</i>	<i>Characteristic</i>	<i>Requirement Engineering Process Coverage</i>
1	Core-Controlled Requirements Expression	Viewpoint Oriented Analysis	Requirement Analysis Requirement Elicitation
2	Issue-based Information System	Tracking Issues and proposition thereof	Requirement Elicitation Requirement Analysis
3	Jackson System Development	Formalizes Functional Specification development in 5-step process from initial requirements	Requirement Specification Requirement Analysis
4	Software Quality Development	Using series of matrices, phases and deliverables of the Requirement Engineering process and mapped and traced	Requirement Elicitation Requirement Analysis Requirement V & V
5	Soft Systems Methodology	Represents requirements in the form root definition, built as per the acronym CATWOE	Requirement Elicitation Requirement Analysis Requirement Specification

5. Models and Frameworks: Models and Frameworks provide a skeleton and overarching structure that guides the process progression. This section presents models and frameworks that have been inspirational to the development of the Synergistic Requirements Model.

- **RGM:** The RGM proposes a refinement to the conventional requirements generation process, by providing a structured framework that first distinguishes between requirements generation and requirements analysis, and then recognizes distinctively different activities within requirements generation, i.e. instruction, preparation, elicitation and evaluation. The latter three activities are embodied within an iterative process focusing on requirements capturing. The RGM provides guidelines and enforces protocols to help structure its attendant activities. Guidelines are suggestions or recommendations that offer support by serving in an advisory capacity. Protocols are rules that establish boundaries through pre-defined constraints. The RGM provides a means of structuring the requirements capturing process by providing a distinctive framework that guides the activities through which the customer and requirements engineer define requirements. It also incorporates a monitoring methodology that ensures all requirements elicitation activities follow proper procedures.
- **Requirements Triage:** Knowing what not to build is as important as knowing what to build. Davis claims that the software product planning helps extract the right product features, which is imperative for a development effort to be successful. In this spirit, the Requirements Triage advocates the consideration of factors such as price, market, cost, time-to-market, market size, feature mix, market penetration, revenues, profits and return on investment as a key to project success. After an initial selection of capabilities to be included in the product, the selection needs to be verified accounting

for development, sales, marketing and finance perspectives. If any of these perspectives indicate a losing situation, then it can be fathomed that the company will lose, resulting in a possible failure of the project. The process commences by eliciting features. Based on an elaborate set of guidelines, the features are categorized and prioritized based on the relative importance, cost and risk. Next, a decision is made about the features that are worth including in the final specifications, and the ones excluded are deferred to later releases. This is done by simply drawing a line among the sorted and prioritized list of features, so that the sum of the efforts required for the features above the line is less than or equal to the tentative development budget. If an acceptable situation is encountered, then software product planning is accomplished. On the other hand in case something does not fit in, either one of the criterion may be adjusted to find a satisfactory balance.

- **Knowledge-Level Process Model:** According to the composition, the elicitation process provides initial problem descriptions, requirements and scenarios elicited from stakeholders, as well as domain knowledge. The manipulation of requirements and scenarios process resolves ambiguous, inconsistent requirements and scenarios not supported by needs. This process reformulate requirements from informal requirements and scenarios, to more structured semi-formal requirements and scenarios. It also provides relationships amongst requirements and scenarios. The maintenance process of requirements and scenarios specification is used to store and retrieve the documents in which the information requirements and scenarios are described, including information on traceability.
- **The Win-Win Spiral Model:** Following are the main constituent processes of the Win-Win Spiral Model determine objectives: Identify process constituents and establish system boundaries and external interfaces determine constraints, determine the conditions under which the system would produce a win-lose or lose-lose outcome identify and evaluate alternatives, solicit suggestions from sources, evaluate them with respect to constituent's win conditions, analyze, assess and resolve win-lose or lose-lose risks record commitments, identify and record problematic areas that may require attention in the future stages of the development life cycle, cycle through the Spiral, resolve risks, prototype, accumulate responses and perform another iteration through the spiral, if needed.

Model Comparison

Table 2:

Requirement Engineering Models and Frameworks

<i>Sr. No.</i>	<i>Model</i>	<i>Characteristic</i>	<i>Requirement Engineering Process Coverage</i>
1	Requirements Generation Model (RGM)	Structure the process of capturing requirements from the customer	Requirements Elicitation Requirements Verification
2	Requirements Triage	Extensive Requirements Analysis, based on right product features	Requirements Analysis Requirements V & V
3	Knowledge-level Process Model	Separations of concerns aid process abstraction	Requirements Elicitation Requirements Management
4	Win-Win Spiral Model	Continuous, Collaborative development, refining requirements with each cycle	Requirements Management Requirements Analysis

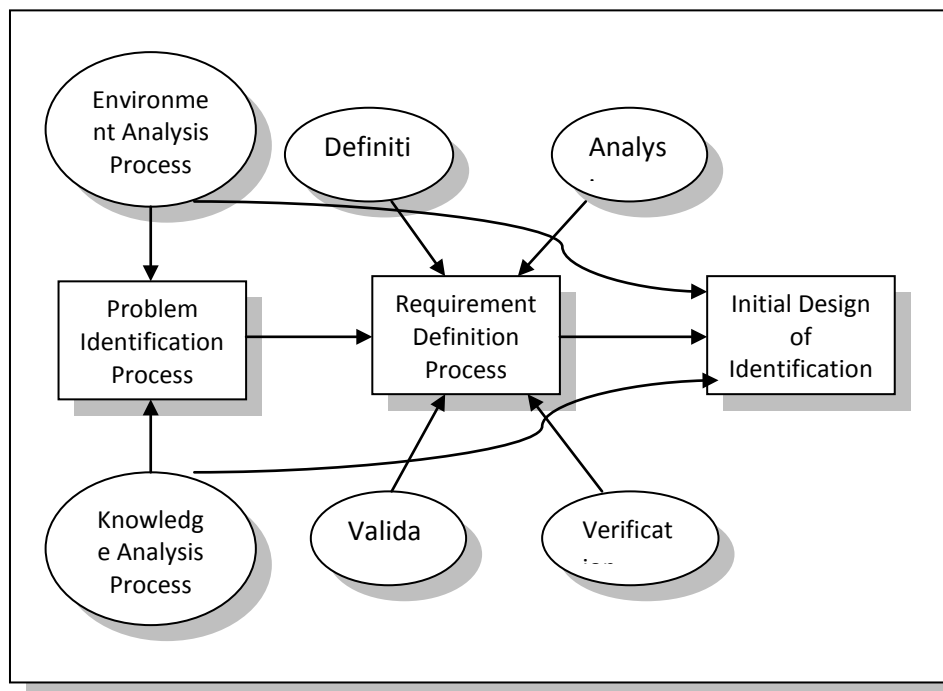
6. Requirement definition Process

The goal of the requirement definition process is to transform the stakeholder requirement into a set of technical requirements.

- **Solution Definition Process:** The Solution Definition Process is used to generate an acceptable design solution for Logical Solution Requirement, the developer shall define one or more validated sets of logical solution representation that conform with the technical requirements of the system
- **System Analysis Process:** In the analysis process, the developer shall perform risk analysis to develop risk management strategies, support management of risks and support decision making. The step of risk analysis can generate some safety requirement other than that defined by the acquirer and stakeholder. These new requirement must be taken into account.
- **Requirement Validation Process:** Requirement Validation is critical to successful system product development and implementation. Requirements are validated when it is certain that they describe the input requirements and objectives such that the resulting system products can satisfy them.
- **System Verification Process:** The System Verification Process is used to ascertain that the generated system design solution is consistent with its source requirements, in particular, safety requirements.

Figure:3

Process of Initial identification model design



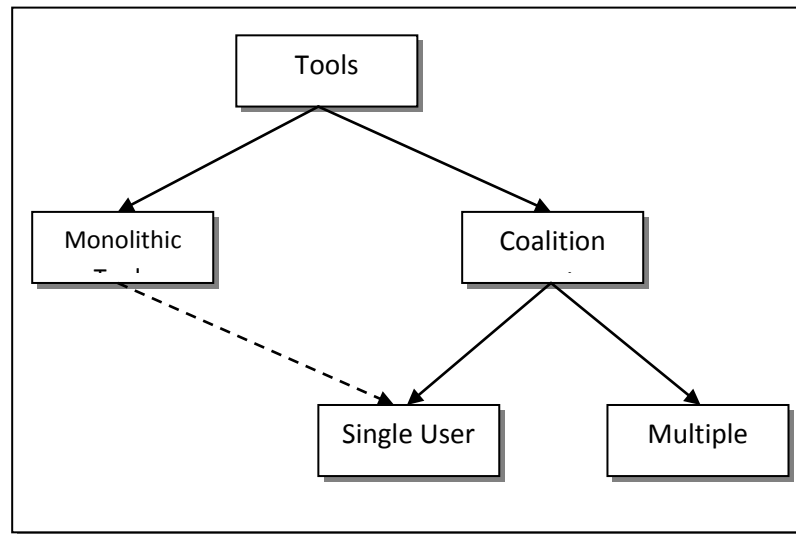
7. Software Development Tools: Tools that support software development can be classified into two groups: the first group contains monolithic development benches created and supported by a single vendor or organization. These development benches target a single platform, and are designed to support as much of the whole software development process as possible. Monolithic tools generally only support specific development technologies and target platforms. They are large, very complex and do not provide flexibility. They are costly to build and acquire, hard to maintain and modify for different goals. Monolithic tools are developed by a single group, and are inherently integrated. They aim to support the whole software development process, but generally support

a fraction of it in practice.

The second group is composed of individual tools supporting one or more discrete software development phases. Software development organizations targeting different technologies or those operating in heterogeneous environments require a variety of tools. Monolithic tools do not provide support for a mix of target technologies and are not suitable for modification.

Tools are used to handle the complexity surrounding software development processes. There is much evidence in the literature on how tool use provides benefits for software development in terms of quality and cost.

Figure:4
Types of tools



Conclusion

One of the principal problems of traditional software development lies in the fact that those who have been primarily involved in software development to date have not been willing to recognize that software development is, in most cases, mainly a question of occupational and/or organizational planning. Whenever software development is to be approached from such a perspective, it would be planned from the beginning to engage experts in occupational and organizational planning in the process of software design.

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FRACTAL GEOMETRY : AN INTRODUCTION

Dr. Vyomesh Pant*

Poonam Pant**

ABSTRACT

This paper aims at providing basic concept of Fractal Geometry, its origin and development, and how the use of fractals proliferated in modern science, art and technology, ushering paradigmatic change in our thinking. Fractals are the geometric shapes with fractional dimension. Most of the physical phenomena are dynamical system where an initial fluctuation can cause tremendous effect. Chaos and coherence are built in dynamical systems and only through the development of fractal geometry, the complexity of phenomena is getting unraveled at an amazing speed.

Keywords: Attractor, Cantor set, Euclid, Fractal, Mandelbrot

Introduction

Geometry is the branch of mathematics which is concerned with the points, lines, curves and surfaces. During 3rd century B.C., by assuming a small set of intuitively appealing axioms and deducing many other propositions from those, Euclid put Geometry into axiomatic form; which is commonly known as Euclidean Geometry. For many centuries, Euclidean Geometry served as an important tool in solving the geometrical and astronomical problems. However, the Euclidean Geometry is not capable of studying irregular and fragmented patterns around us. Benoit B. Mandelbrot, the father of Fractal Geometry describes the reason to transcend Euclidean Geometry, “Why is geometry often described as “cold” and “dry”? One reason lies in its inability to describe the shape of a cloud, a mountain, a coastline or a tree. Clouds are not sphere, mountains are not cones, coastlines are not circles, and bark is not smooth, nor does lightning travel in straight line.” (Mandelbrot, 1982) The study of these irregular patterns is out of the purview of classical geometry, and these were set aside by Euclid as being “formless”. In 20th Century, Mandelbrot introduced a new Geometry which is able to describe the shapes of the irregular and fragmented patterns around us, known as Fractal Geometry. Fractal Geometry brings together a large class of objects, under one roof, and it separates the classical mathematics of 19th century from the modern mathematics of 20th century. Classical mathematics is rooted around the regular geometric structures of Euclid and the dynamics of Newton, whereas the modern mathematics commences with the Cantor’s set theory and Peano’s space-filling curve.

Topology is a well defined branch of mathematics. Though it is a major area of mathematics, it is not capable of explaining the theory of Form. Topology is the study of qualitative properties of certain objects that are invariant under certain kind of transformations, especially those properties that are invariant under a certain kind of equivalence. In topology, all single island coastlines are of the same form, because they are topologically identical to a circle. Similarly, all pots with two handles are of the same form, topologically, because, if both are infinitely flexible and compressible, these can be molded into any other continuously, without tearing any new opening or closing up and old one. To differentiate the form of topologically identical objects, Mandelbrot went beyond topology and proposed fractal dimension.

*Dr. Vyomesh Pant is a mathematician based in Delhi. Contact E-mail: vyomeshpant@yahoo.com

**Poonam Pant teaches Mathematics and based in Delhi.

In mathematics, the dimension is generally defined as the minimum number of coordinates required to specify each point within a space or object. Generalizing the concept of dimension, Hausdorff and Besicovitch gave the notion of Hausdorff-Besicovitch dimension. We denote it by D . However, the concepts of irregularity or fragmentation cannot be made by defining dimensions as a number of coordinates. Euclidean Geometry is limited to sets for which all the useful dimensions coincide, so Mandelbrot termed these dimensionally concordant sets. The concept of dimension is not restricted to physical objects. In the study of Fractal Geometry, the dimensions fail to coincide; therefore, these sets are called *dimensionally discordant*.

In the early 20th century *Karl Menger*, *L E J Brouwer*, *Pavel Urysohn* and *Henri Lebesgue* introduced the idea of topological dimension. We denote it by DT . While working in Euclidean space E_n , both DT and D are at least 0 and at most n . According to Mandelbrot, “*A fractal is by definition a set for which the Hausdorff Besicovitch dimension strictly exceeds Topological dimension.*” The dimension DT is always an integer, but D need not be an integer and the two dimensions need not coincide. Instead they satisfy the inequality, $D \geq DT$. In the Euclidean Geometry, $D = DT$. However, in case of Fractal Geometry, $D > DT$.

Every set with a non-integer D is a fractal. For example original Cantor Set is a fractal because,

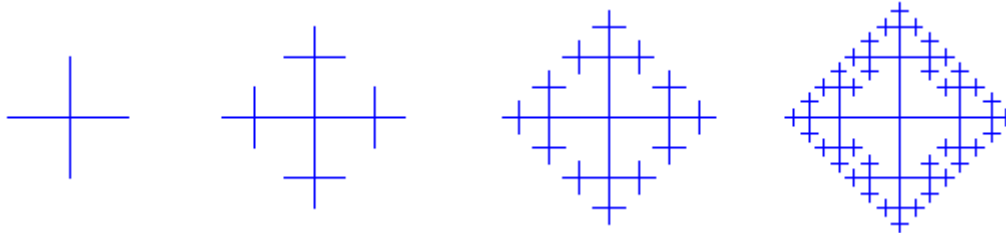
$$D = \frac{\log 2}{\log 3} \sim 0.6309 > 0, \text{ while } D_T = 0$$

A fractal is “*a rough or fragmented geometric shape that can be split into parts, each of which is (at least approximately) a reduced-size copy of the whole*” [1]. The term fractal was introduced by *Benoît Mandelbrot* in 1975. It was derived from the Latin *fractus* meaning “broken” or “fractured.” A fractal is irregularly shaped and it cannot be described by using the traditional aspects of Euclidean geometry. A fractal is a quantity or object which exhibits self-similarity on all scales. Even at arbitrarily small scales, it has fine structures. Fractals are self-similar, meaning thereby that a fractal is exactly or approximately similar to a part of itself. Self-similarity means that each small portion, when magnified, can reproduce exactly a larger portion. Mathematically, a fractal is based on some equation which undergoes iteration. The length of a coastline measured with different length rulers may be an example of fractal. The shorter the ruler, the longer the length measured, a paradox known as the coastline paradox (for details we refer [1]). Examples of fractals among natural objects include clouds, mountain ranges, lightning bolts, snow-flakes, various vegetables (e.g., cauliflower and broccoli), and animal coloration patterns. These are self-similar to certain degree. However, all self-similar objects are not fractals. For example, the real line is formally self-similar but fails to have other fractal characteristics; for instance, it is regular enough to be described in Euclidean terms.

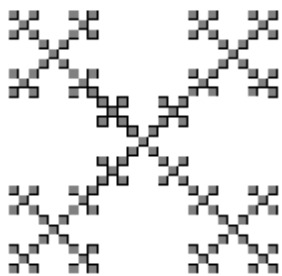
Mathematically, the Cantor set, Mandelbrot set, Julia set, Sierpinski triangle, Sierpinski carpet, space-filling curve, Koch curve, Menger sponge and dragon curve are considered as example of fractals. Chaotic dynamical systems are also associated with fractals. The easiest fractals are those based on iterated function system. Cantor set, Sierpinski carpet, Peano curve, Menger sponge are some examples of such fractals. These fractals have a fixed geometric replacement rule. Some fractals are generated by stochastic process rather than the deterministic process. These are called random fractals. Some examples are trajectories of Brownian motion, fractal landscape etc. There are Escape-time fractals or orbits fractals which are defined by a rule or recurrence relation at each point in a space. Examples of this type are the Mandelbrot set and Julia set. Another type of fractals is known as strange attractors, which are generated by iteration of a map or the solution of a system of initial-value differential equations that exhibit chaos.

Fractals are geometrical figures that are generated by starting with a very simple pattern that grows through the application of certain rule or rules. In many cases, the rules to make the figure grow from one

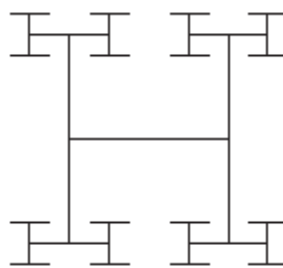
stage to the next that involves taking the original figure and modifying it or adding to it. This process can be repeated recursively (the same way over and over again) an infinite number of times. For example, if we start with a + sign and grow it by adding a half size + in each of the four line ends. We repeat the exact same process recursively as many times as we desire. We get a fractal as shown in the figure below and call this the Plusses fractal:



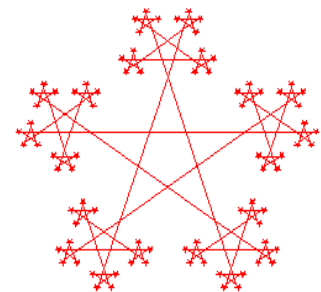
Following figures shows some fractals which can be drawn easily:



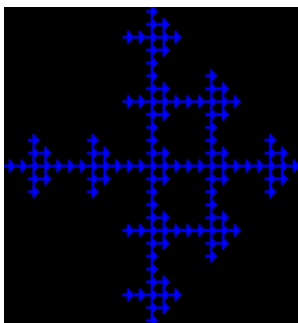
Box - Fractal



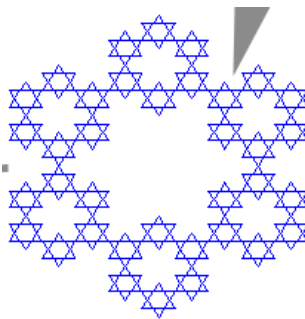
H - Fractal



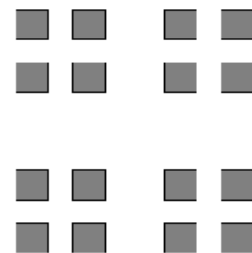
Star - Fractal



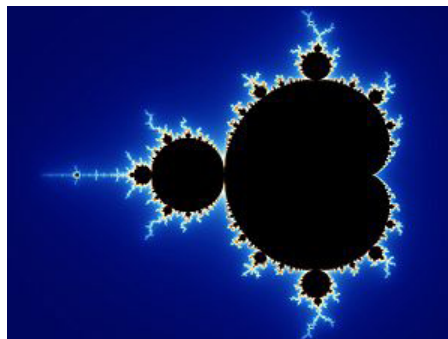
Arrow - Fractal



Star of David



Cantor Square Fractal

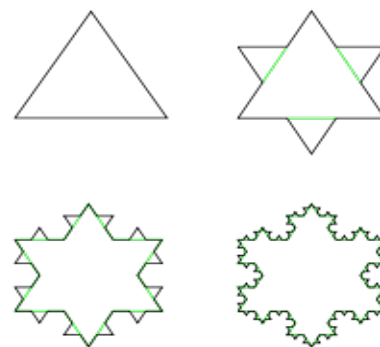


Mandelbrot Set



The Sierpinski triangle is a fractal named after the Polish mathematician Waclaw Sierpiński who described it in 1915.

The Koch snowflake is one of the earliest fractal curves, which were described by Helge Von Koch, Swedish mathematician.



Koch Snowflakes

Fractals are very useful. Computer graphics have been one of the earliest applications of fractals. Fractals can achieve realism, beauty and require very small storage space. A fractal “footprint” can be used to identify man made versus natural features on aerial mappings and tracking submarines. Scientists use fractal geometry to locate oil, identify geologic faults, and possibly predicting earthquakes. Statistical models using fractal geometry are used to test for stress loading on oil rigs and turbulence effects on aircraft. Acid rain and corrosion can be modeled using fractal geometry. Our universe is self-similar to much extent and it can be studied on the basis of cluster fractals. Even the big bang theory and understanding of the structure of the universe can be improved with fractals. Edward Norton Lorenz has discovered that weather, which behaves very chaotically, creates fractal patterns. On the basis of his work, he gave the notion of ‘*strange attractor*’ and coined the term ‘*butterfly effect*’. One of the very odd applications of fractals is in turning geometric patterns in sound patterns. Fractals are used in movies for landscapes, dinosaur skin textures, etc. For instance, the raindrops on the skin of the dinosaurs in ‘Jurassic Park’ were done using a fractal model. Fractals were marvelously used in movies ‘Star Trek II’, ‘The Wrath of Khan’ and ‘Return of Jedi’. This diverted the attention of many artists and producers of scientific fiction movies to the use of fractals. Mandelbrot applied fractals in information theory, economics, cosmology and fluid dynamics. He found that price changes in financial markets do not follow a Gaussian distribution, but Levy stable distributions having theoretically infinite variance. Fractals are also prevalent in art, architecture, textiles and sculpture. By using a technique, known as *Decalcomania*, artists can produce fractal like patterns. The spring industry uses fractal geometry to test spring wire in 3 minutes instead of 3 days. Fractals are being used in the study of chemical reactions, human anatomy, plants, bacteria cultures, molecules etc. Fractal Geometry has very wide and far reaching applications in medical science. It is used in the study and treatment of lungs, AIDS, cancer, bone fractures and heartbeats etc.

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STARVATION RESISTANCE FOR FRUCTOSE SUGAR IN THREE INDIAN SPECIES OF THE GENUS-*DROSOPHILA*

Arun Kumar*
Dr. Ajai Kumar**

ABSTRACT

During present investigation, starvation resistance of isofemale line from different natural populations of three closely related Indian species of bipectinata-sub group of the genus-Drosophila have been undertaken in presence of fructose sugar in culture media. The species were Drosophila malerkotiana, Drosophila bipectinata and Drosophila parabipectinata. The F1 individuals from each isofemale line were placed under starvation condition in vials. Survival time in fructose sugar media was recorded for each male in the vial. Variations in resistance for starvation in inter -population studies were analyzed by student t-test. In certain comparison, significant differences were observed in starvation tolerance among different Drosophila species under observations. The paper discusses about the genetic basis for such a significant variation in resistance to starvation.

Key words: *bipectinata* subgroup, *Drosophila*, Fructose, inter-population, Starvation resistance, survival time,

Introduction

The genetics of complex adaptation, particularly the degree to which populations follow either parallel or divergent evolutionary trajectories under common selective pressures is an area of active interest in evolutionary biology (Gompel and Prud'homme, 2009; Stern and Orgogozo, 2009). Desiccation resistance in *Drosophila* is an interesting choice for its complex trait in which the study of repeated patterns of evolution among species and populations can throw fresh insight on the correlation between ecology and physiology. Many *Drosophila* encounter periods of low humidity during their life-history and must balance water content against integument water loss owing to a high surface area/volume ratio. In doing so, numerous *Drosophila* species have successfully colonized arid habitats including deserts and high altitudes as well as tropical and temperate zones, providing an excellent model to study adaptation to desiccation at the intra- and inter-population level (Gibbs, 2002; Parkash et al., 2005). By contrast several rainforest restricted species show little ability to evolve resistance little ability to evolve resistance to desiccation (Hoffmann et al., 2003; Kellermann et al., 2009), although they show ample genetic variation for many other traits. Little is known about the mechanisms underlying natural genetic variation for desiccation survival in *Drosophila* at the population scale, and it is difficult to ascertain why some species adapt easily whereas others are limited by low adaptive variation for desiccation stress.

To date, most studies on the evolution of desiccation resistance have focused on populations derived from experimental evolution, with emphasis on the physiological, correlated and life-history responses

*Arun Kumar is a Research Scholar, Feroze Gandhi College Raebareli 229001, India. Email- arun_nsps@yahoo.com

** Dr. Ajai Kumar is Head & Associate Professor, Genetics & Molecular Biology Laboratory, Department of Zoology, Feroze Gandhi College Raebareli- 229001. Email: ajaikumar_rbl2002@yahoo.com

associated with increased desiccation (Hoffmann and Harshman 1999; Telonis-Scott et al., 2006). Comparative physiology among different *D. melanogaster* lines suggests that multiple evolutionary solutions can arise from a common selection pressure, although reducing water loss by water retention is a common mechanism underlying survival to desiccation (Gibbs et al., 1997; Hoffmann and Harshman, 1999; Gibbs, 2002; Telonis-Scott et al., 2006). Although artificial selection experiments are not without limitations, trait variation in natural populations may be inferred if enough alleles are sampled from the founding population. Signatures of natural selection for desiccation resistance are also evidenced in latitudinal clines, where survival can vary markedly among *Drosophila* according to local climatic conditions. Substantial variation in survival between populations suggests local adaptation and the presence of ample genetic variation (Coyne et al., 1983; Blows and Hoffmann, 1993; Kristonson et al., 2011; Hoffmann et al., 2005). Opposing clines for desiccation and starvation resistance have been observed for seven *Drosophilid* species of the Indian subcontinent including *D. melanogaster*, where desiccation survival increased with latitude (Parkash et al., 1994; Karan and Parkash, 1998; Karan et al., 1998; Parkash and Munjal, 1999, Prakash, et.al 2011 (a) Parkash, et al., 2011 (b))

Genus - *Drosophila* is largest group of drosophilid flies comprising as many as six subgenera and many species groups. Among these groups the *bipunctineta* sub group of *melanogaster* species group is second largest one. It contains several example of sibling species (Parson, 1987). The cytogenetics and population genetics of *bipunctineta* subgroup of the genus *Drosophila* have been widely investigated (Kumar et al., 2004; Panigrahy 1984; Gupta & Panigrahy 1990). Most common among sibling species of this subgroup are *Drosophila melanogaster*, *D.bipunctinata* and *D.parabipunctinata*. Due to their close morphological feature, sympatric nature, divergence in resource utilization for different fruit bits and different sugar in culture media, these species were selected for the present investigation for variation in intra and inter specific level of starvation resistance in fructose sugar media for baits first time.

Methods

The flies of three species of the *bipunctinata* subgroup of the genus- *Drosophila* viz. *Drosophila malerkotiana*, *Drosophila bipunctinata* and *Drosophila parabipunctinata* were collected during different seasons from different geographical localities of Raebareli and adjoining area by using fermented banana bait. The female individuals caught from these collections were reared on *Drosophila* food medium containing agar-sugar fructose -maize at $24^{\circ}\text{C} \pm 1^{\circ}\text{C}$ temperature to construct isofemale lines. Single female was kept in separate food vials. Only F1 males were compared in 10 randomly selected isofemale line to observe starvation tolerance in three *Drosophila* species under investigation, since both the sexes have similarity for tolerance at genetic level (Parson, 1983)

On emergence, the adults of *Drosophila* species were distributed in group of 10 male individuals. Each group was fed on same food medium for 72 hours and then placed in experimental capped plastic vials of 60 ml capacity without food. These vials contained a piece of foam sponge dipped in water saturated with nipagin to prevent bacterial infection. Relative humidity was observed to be 100%. Duplicate set of all the vials were prepared during this experiment to avoid any error in the observations. Experiments were performed at 24°C . After setting up the experiments, each vial was observed at an interval of one hour and number of dead individuals was recorded

Result

During present study three *Drosophila* species belonging to *bipunctinata*-subgroup were collected from different geographical regions of UP of India in different seasons. The average number of flies collected in different seasons was much higher for *Drosophila malerkotiana*, as compared to *Drosophila bipunctinata* and

lowest for *Drosophila parabipectinata*. The survival time for each individual male under starvation conditions has been recorded in all the three species of *Drosophila* under investigation (**Table 1**). The data show variation in resistance to starvation among individual of isofemale line despite being reared from a single female. The mean survival time varies at inter population level from 36.5 ± 1.59 to 57.8 ± 2.88 . The mean survival time also varies at intra-specific level e.g. in *Drosophila malerkotiana* it ranges between 43.5 ± 2.26 to 57.8 ± 2.88 in *Drosophila parabipectinata*, the mean survival time varies from 36.5 ± 1.59 to 46.2 ± 2.08 and in *Drosophila bipectinata*, the differences fluctuate from 48.8 ± 1.62 to 53.5 ± 1.62 (**Table 1**).

Students t-test was performed to observe the variations in survival time among the individuals of two different isofemale lines and the values for different comparisons are presented in **Table 2**. **Table 2** although shows that in most of the comparison, the differences between two isofemale lines are statistically insignificant, however significant differences have been observed in some comparisons 1vs. 2, 3, 5, 9 & 10; 2vs. 3, 5, 9, 10; 3vs. 5, 9 & 10; 5vs. 10; 9 vs. 10. The data shown in **Table 1** and **Table 2** for inter-population variation in starvation resistance can possibly explain the required genetic and physiological changes underlying during inter-released stress.

Discussion

Desiccation and starvation resistance vary markedly among *Drosophila* species. The most extensive comparison has considered resistance in 22 species and related differences among species to their tropical/temperate origins and to their cosmopolitan/endemic status (*Van Herrewege & David, 1997*) In general, tropical species are less resistant to desiccation stress than temperate species but there are no clear patterns for endemism. Tropical species are also less resistant to starvation, which varied (at 25°C) from 171 h (*D. buzzatii*) to only 25 h (*D. sechellia*). The experiments undertaken to date suggest a robust association between starvation and desiccation resistance, and therefore common mechanisms underlying some of the variation in these traits. This has been demonstrated in *D. serrata* as well as in independently selected lines of *D. melanogaster* (*Blows & Hoffmann, 1993; Hoffmann & Parsons, 1993a; Harshman et al., 1999a*). It has also been observed in comparisons of isofemale lines of *D. melanogaster* (*Hoffmann, unpublished observation*). This association may stem partly from the contribution of glycogen to both traits (*Rose & Archer, 1996*). A comparison of *Drosophila* species (*Van Herrewege & David, 1997*) also indicates a positive correlation between these traits. This raises the issue of whether associations at the level of variation among species generally reflect similar patterns at the geographical and intra-population levels.

There is ample genetic variation for both starvation and desiccation resistance within populations of *D. melanogaster*. This is apparent from the rapid responses to laboratory selection for these traits (*Service et al., 1988; Hoffmann & Parsons, 1989a; Chippindale et al., 1996; Harshman & Schmid, 1998*). Moreover, high heritability estimates have been observed for both traits; estimates near 100% have been obtained for starvation resistance (*Service & Rose, 1985*) whereas for desiccation resistance estimates are around 60% (*Hoffmann & Parsons, 1989a*). High levels of genetic variation allow for large shifts in the mean resistance of populations. For instance, (*Chippindale et al., 1996, 1998*) observed increased levels of desiccation and starvation resistance in a population of *D. melanogaster* by 3–4 and 4–6 times, respectively and more recently different gene loci in genome of *D. melanogaster* have been identified for starvation resistance (*Mezey et al., 2005, Bublly and Loeschcke, 2005*).

For starvation, there is good evidence that an increase in the lipid content of adults underlies increased resistance to starvation. Some data suggest that this trait accounts for almost all the variation in starvation resistance. For instance, (*Chippindale et al. 1996*) scored lipid and starvation levels in different sets of lines

selected for starvation or changes in life history traits. They found a correlation close to one between starvation and lipid levels when all lines were considered. The lipid association has also been documented from a set of starvation-selection lines derived from a different base population (*Harshman et al.*, 1999a), in comparisons of allozyme genotypes (*Oudman et al.*, 1994), and the way in which lipid levels and starvation change with age (*Service*, 1987).

The results obtained from the present investigation are consistent with the assumption for *D. melanogaster* that long lived isofemale lines had greater resistance to various abiotic stresses including starvation (*Block and Wheeler*, 1972). The earlier experiments for stress tolerance have proved that lower metabolic rate alter the energy requirement of flies to lower level, (*Parson*, 1987). The death of flies under optimum temperature range occur due to loss of all body reserve especially lipids in presence of water. To overrule the possibility of other stresses like heat or cold causing death of flies besides starvation condition, a thermal range of 11°C was considered to be an important factor since all reserve exhaust at this temperature (*Joshi*, 1997) and hence during present study all experiments were performed at 25°C.

Table 1 shows remarkable difference in mean survival time of not only isofemale line from three inter-specific natural populations of *Drosophila* but also in isofemale line of intra-specific populations of each *Drosophila* species. The mean survival time was recorded to be the highest in *Drosophila malerkotiana*, than *Drosophila bipectinata* and the lowest in *Drosophila parabipectinata* under starvation conditions. These results resemble very much for distribution records of the three species collected in rainy season from different hot and humid forest regions of India. Since *Drosophila malerkotiana*, were caught in the highest number in comparison to the other two species under consideration, in other seasons the occurrence of lower number of all three species of *Drosophila* from natural populations is not only due to starvation condition but other environmental stress could have affected their distribution.

Though there has been a remarkable difference in mean survival time under starvation condition among inter-specific population of three *Drosophila* species, the statistical differences were insignificant in most of the cases; however significant variations were obtained in some case. This maintains that resistance to starvation is an additive genetic trait and populations therefore have potential to undergo rapid genetic changes in response to different environmental stresses (*Parson*, 1983; *Kristenson et al.*, 2011). It has been observed that populations with more heterozygous genotype are more resistance to starvation (*Singh & Gupta*, 1980). The three *Drosophila* species also differ at the level of heterozygosity. The species of *Drosophila malerkotiana*, which is highly polymorphic for its genotype maintains highest survival under starvation, whereas *Drosophila parabipectinata* with comparatively lower heterozygosity have lowest survival time, the only exception to such assumption being *Drosophila bipectinata* which have less genotype polymorphism but better average survival rate than *Drosophila parabipectinata* (*Das et al.*, 1994; *David et al.*, 1983; *Hoffmann and Parson*, 1989).

It will be premature to conclude the exact reason for starvation tolerance in fructose sugar media, since this study has been carried out at inter-species level from natural population among three different species of *Drosophila* from *bipectinata* subgroup for the first time, and hence to elucidate the role of ecophysiological conditions and its genetic basis in different environmental stress including starvation, elaborate study will be of immense significance.

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Table:1

**Time of survival and mean survival time in each isofemale line of *bipectinata*
Subgroup of the genus *Drosophila*, exposed to starvation condition in fructose sugar media.**

Isofemale Line	Male Individuals	Survival Time (in Hrs)\pmSE	Isofemale Line	Male Individuals	Survival Time (in Hrs)\pmSE
<i>1-Drosophila</i>	1	40 \pm 3.75	<i>2-Drosophila</i>	1	42 \pm 3.28
<i>malerkotiana</i>	2	35 \pm 2.18	<i>malerkotiana</i>	2	34 \pm 1.86
<i>Raebareli</i>	3	42 \pm 3.92	<i>Salon</i>	3	44 \pm 1.58
	4	33 \pm 1.55		4	36 \pm 1.56
	5	46 \pm 4.39		5	43 \pm 3.38
	6	52 \pm 1.81		6	55 \pm 2.30
	7	50 \pm 2.09		7	50 \pm 2.39
	8	45 \pm 3.27		8	48 \pm 1.21
	9	54 \pm 1.69		9	53 \pm 2.09
	10	38 \pm 3.37		10	44 \pm 3.12
	mean \pm SE	43.5 \pm 2.26		mean \pm SE	44.9 \pm 2.14
Isofemale Line	Male Individuals	Survival Time (in Hrs)\pmSE	Isofemale Line	Male Individuals	Survival Time (in Hrs)\pmSE
<i>3-Drosophila</i>	1	39 \pm 3.00	<i>4-Drosophila</i>	1	49 \pm 2.52
<i>malerkotiana</i>	2	45 \pm 3.53	<i>malerkotiana</i>	2	55 \pm 5.12
<i>Unchahar</i>	3	40 \pm 1.61	<i>Bachhrawan</i>	3	50 \pm 2.32
	4	36 \pm 1.56		4	46 \pm 1.56
	5	44 \pm 3.51		5	54 \pm 2.24
	6	51 \pm 2.44		6	61 \pm 4.52
	7	49 \pm 2.25		7	59 \pm 1.95
	8	52 \pm 2.03		8	62 \pm 2.23
	9	55 \pm 2.41		9	65 \pm 2.06
	10	54 \pm 3.39		10	77 \pm 1.44
	mean \pm SE	46.5 \pm 2.11		mean \pm SE	57.8 \pm 2.88
Isofemale Line	Male Individuals	Survival Time (in Hrs)\pmSE	Isofemale Line	Male Individuals	Survival Time (in Hrs)\pmSE
<i>5-Drosophila</i>	1	44 \pm 3.47	<i>6-Drosophila</i>	1	63 \pm 5.08
<i>Bipectinata</i>	2	46 \pm 3.73	<i>bipectinata</i>	2	47 \pm 3.15
<i>Raebareli</i>	3	43 \pm 3.25	<i>Unchahar</i>	3	50 \pm 3.65
	4	47 \pm 2.85		4	51 \pm 3.52
	5	46 \pm 3.12		5	57 \pm 3.86
	6	54 \pm 5.11		6	60 \pm 2.99
	7	49 \pm 3.68		7	54 \pm 3.24
	8	58 \pm 4.59		8	52 \pm 4.22
	9	51 \pm 2.25		9	53 \pm 3.31
	10	50 \pm 3.76		10	48 \pm 3.34
	mean \pm SE	48.8 \pm 1.62		mean \pm SE	53.5 \pm 1.62

Isofemale Line	Male Individuals	Survival Time (in Hrs) \pm SE	Isofemale Line	Male Individuals	Survival Time (in Hrs) \pm SE
7-Drosophila	1	40 \pm 1.43	8-Drosophila	1	42 \pm 4.61
parabipectinata	2	39 \pm 1.76	parabipectinata	2	35 \pm 2.39
Raebareli	3	33 \pm 1.56	Salon	3	40 \pm 1.96
	4	32 \pm 1.83		4	31 \pm 2.45
	5	42 \pm 3.32		5	44 \pm 4.23
	6	41 \pm 3.42		6	52 \pm 2.64
	7	32 \pm 2.62		7	35 \pm 2.24
	8	30 \pm 2.17		8	32 \pm 2.69
	9	33 \pm 2.58		9	34 \pm 2.58
	10	43 \pm 2.57		10	27 \pm 1.81
	mean \pm SE	36.5 \pm 1.59		mean \pm SE	37.2 \pm 2.32
Isofemale Line	Male Individuals	Survival Time (in Hrs) \pm SE	Isofemale Line	Male Individuals	Survival Time (in Hrs) \pm SE
9-Drosophila	1	39 \pm 2.29	10-Drosophila	1	58 \pm 2.92
parabipectinata	2	34 \pm 2.58	parabipectinata	2	39 \pm 3.46
Unchahar	3	41 \pm 3.24	Bachhrawan	3	43 \pm 3.13
	4	32 \pm 1.17		4	41 \pm 4.08
	5	45 \pm 2.51		5	45 \pm 2.65
	6	51 \pm 2.11		6	52 \pm 3.02
	7	49 \pm 1.77		7	49 \pm 4.37
	8	44 \pm 2.52		8	44 \pm 2.72
	9	53 \pm 2.03		9	53 \pm 3.62
	10	37 \pm 3.38		10	38 \pm 3.80
	mean \pm SE	42.5 \pm 2.26		mean \pm SE	46.2 \pm 2.08

Figure:1

<- Species Group ->

Figure 1: Mean Survival time of each population in bipectinata subgroup of the genus Drosophila malerkotiana, D.bipectinata, D.parabipectinata, Bars on histogram represent SE for mean survival time.

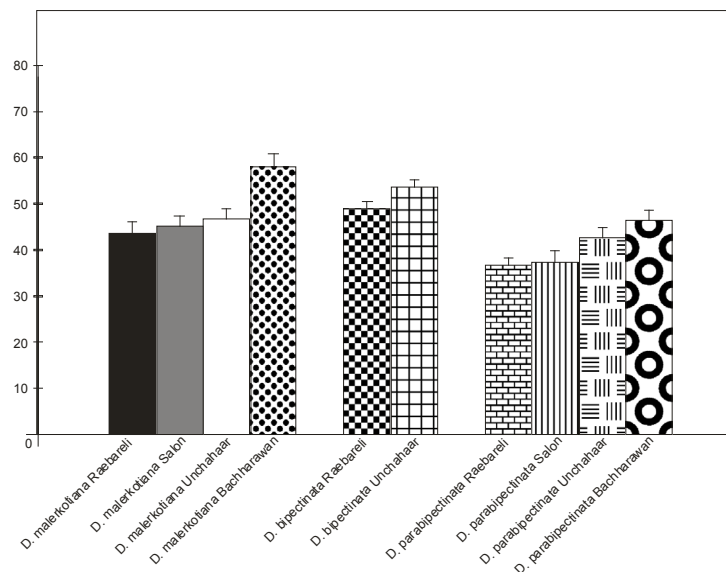


Table2:

The t-vale (above diagonal) and associated probability (below.diagonal) between the mean survival time of two given isofemale line of three species of *biplectinata*-subgroup of the genus *Drosophila* in fructose sugar media.

	1	2	3	4	5	6	7	8	9	10
1	—	-0.45 (20)	-0.97 (20)	— 3.90 (20)	-1.97 (20)	— 3.49 (20)	2.48 (20)	1.89 (20)	0.31 (20)	-0.88 (20)
2	<0.10*	—	-0.53 (20)	— 3.59 (20)	-1.50 (20)	— 3.10 (20)	3.08 (20)	2.37 (20)	0.77 (20)	-0.43 (20)
3	<0.10*	<0.10*	—	— 3.16 (20)	0.89 (20)	— 2.55 (20)	3.70 (20)	2.88 (20)	1.29 (20)	0.10 (20)
4	>0.10	>0.10	>0.10	—	2.78 (20)	1.26 (20)	6.31 (20)	5.40 (20)	4.05 (20)	3.26 (20)
5	<0.10*	<0.10*	<0.10*	>0.10	—	— 2.08 (20)	5.59 (20)	4.10 (20)	2.34 (20)	1.62 (20)
6	>0.10	>0.10	>0.10	>0.10	>0.10	—	7.11 (20)	5.42 (20)	3.89 (20)	2.69 (20)
7	>0.10	>0.10	>0.10	>0.10	>0.10	>0.10	—	— 0.24 (20)	-2.12 (20)	-3.63 (20)
8	>0.10	>0.10	>0.10	>0.10	>0.10	>0.10	<0.10	—	-1.59 (20)	-2.80 (20)
9	<0.10*	<0.10*	<0.10*	>0.10	>0.10	>0.10	>0.10	>0.10	—	-1.20 (20)
10	<0.10*	<0.10*	<0.10*	>0.10	<0.10*	>0.10	>0.10	>0.10	<0.10*	—

*Significant, the values in parentheses indicate the degree of freedom.

A STUDY OF THE MANAGERIAL SKILLS OF SCHOOL PRINCIPALS AND PERFORMANCE OF SCHOOLS

Soma Mukherjee*

ABSTRACT

The need for effective management is all pervasive. Investments in terms of time and monetary resources are of little use if the same is not managed and administered effectively. Those at the senior managerial positions of educational institutions have the prime responsibility of running a successful system so as to ensure proper and smooth functioning of the organization. This study is aimed to explore whether there is any significant relationship between a School Principal's managerial effectiveness and School's performance. The study is summation of a systematic quantitative analysis of data collected from 527 respondents (comprised of school teachers, Heads of departments and vice-principals) from government and Private schools in Ghaziabad and Mathura districts of Uttar Pradesh. Regression analysis and tests of significance have been used as the corner stone for this study. The study reveals an insightful understanding of what works for Heads of schools in order to successfully manage their institutions.

Keywords: communication skill, linear regression, performance parameter, t-test,

Introduction

For decades, Principals have been recognized as important contributors to the effectiveness of schools. In an era of shared decision-making and management in schools, leadership matters. Principals constitute the core of the leadership team in schools.

We know from existing effective schools research that “effective Principals influence a variety of school outcomes, including student achievement, through their recruitment and motivation of quality teachers, their ability to identify and articulate school vision and goals, their effective allocation of resources, and their development of organizational structures to support instruction and learning” (Hornig, Kalogrides & Loeb 2009, p.1).

The quality of a Principal effects a range of school outcomes including teachers' satisfaction and their decisions about where to work, parents' perceptions about the schools their children attend, and, ultimately, the academic performance of the school. School Principal's job is complex and multifaceted, and the effectiveness of principals depends on their level of experience, their sense of efficacy on particular kinds of tasks, and their allocation of time across daily responsibilities

Many a time, Principals' subjective evaluations of teachers may offer valuable information on teacher performance beyond what can be captured by student test scores alone.

There is little doubt that school leaders matter for school success. A large number of studies spanning the last three decades link high quality leadership with positive school outcomes, including student achievement.

* Soma Mukherjee is a Research Scholar at Mewar University, Chittorgarh, Rajasthan, India.

This study would focus on the extent of the impact of school Principal's managerial skills on school's performance, and identify the importance of different skills needed for Principals to perform their job effectively. Furthermore, the study would also provide systematic evidence of the linkages between school leader efficacy and school outcomes, including student achievement gains and teacher satisfaction.

Statement of the problem

The present study focuses on establishing the relationship between schools Principal's managerial effectiveness and school's performance based on key performance indicators.

Specifically, the study aims to answer the following key questions –

- a) How Principal's efficacy predicts key school outcomes, including student achievement gains, teacher satisfaction, and parents' assessments of school performance?
- b) Which are the key managerial skills that truly drive Principal's overall performance?

Research Objectives

In order to answer the key questions mentioned above, the study aims to understand the impact of managerial skills of Principals and Heads of schools in terms of their effectiveness in relation to the school's achievements.

Specifically the research covers the following areas:

- a) Relationship and impact of Principal's managerial efficacy on school's success
- b) The key managerial skills required to be a successful Principal of schools
- c) The relative importance of these skills with respect to their effectiveness
- d) Identification of the ideal mix of managerial skills in order to be successful as a Principal

Research Hypothesis

The study would test out the following key null and alternative hypothesis:

Null Hypothesis: Successful performance of a school depends on the managerial skills and effectiveness of the Principal of the school

Alternative Hypothesis: Successful performance of a school is independent of the managerial skills and effectiveness of the principal of the school

Scope of the Research

Variables of the study:

To establish the relation between a school's overall performance and Principal's efficacy, Principal's overall performance has been used as independent variable and overall school performance has been used as the dependent variable in a linear regression model.

Further, sub-parameters of Principal's performance ratings were regressed with Principal's overall performance (as dependent) to achieve their relative importance.

Population

The population for this study consisted of teachers of government and private schools (having classes till standard XII) in Ghaziabad and Mathura districts in the state of Uttar Pradesh.

Sample

A total of 527 respondents having a mix of teachers, Heads of departments and Vice-Principals were interviewed using a quantitative structured survey questionnaire in order to record responses for statistical analysis to assess importance of various managerial skills.

Findings of the study

At the start of the analysis, linear regression was run between school's overall performance (dependent variable) and Principal's performance (independent variable). The analysis gave the following results:

Table: 1

Analysis Summary

Model	R	R Squared	Adjusted R Square	Std. Error of the Estimate
1	.802(a)	.643	.642	.833

Predictors: (Constant, Overall performance of the Principal of the school)

Table:2

Regression Analysis Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.367	.151		9.075	.000
	Overall performance of the principal of the school	.797	.026	.802	30.721	.000

Dependent Variable: School's Overall Performance

With an R^2 of 0.64, the above analysis clearly shows a strong model fitment between school's performance and Principal's efficacy. Sig value of 0.000 shows strong significance of the model. Further, a t-test for significance also reveals significant difference between school's performances depending on Principal's efficacy (Sig – 2 tailed of 0.000).

A further exploration to understand what really is perceived as school's performance; a regression analysis was run between school's overall performance and performance scores on other key parameters – Overall results and academic performance of students passing out of class 10th, – Overall results and academic performance of students passing out of class 12th, Teachers' satisfaction and motivation level and school's involvement in co-curricular and extra curricular events.

With an R^2 of 0.506, the model revealed that there is strong linkage between overall ratings and the ratings for the above mentioned sub-parameters.

Table:3
Analysis Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.712(a)	.506	.502	.982

Predictors: (Constant), Co-curricular and extra-curricular activities, Overall results and academic performance of students passing out of class 10th , Overall results and academic performance of students passing out of class 12th, Teachers' satisfaction and overall motivation

The relative importance of Beta values uncovers that academic performance of students passing out of class 12th (0.294, see **Table 4**) and 10th (0.242) are the most important parameters driving overall ratings for school (with teachers as survey respondents). This is followed by ratings on teachers' satisfaction and motivation (0.166) and school's involvement in extra-curricular/co-curricular events (0.155).

Table:4
Regression Analysis Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.023	.215		4.755	.000
	Overall results and academic performance of students passing out of class 10 th	.258	.043	.242	5.943	.000
	Overall results and academic performance of students passing out of class 12 th	.346	.053	.294	6.513	.000
	Teachers' satisfaction and motivation overall	.156	.047	.166	3.338	.001
	Co-curricular and extra-curricular activities	.144	.043	.155	3.346	.001

Dependent Variable: School's Overall Performance

Key Drivers of Overall Ratings for Principal's Performance

The next step in this analysis was to find out the performance parameters , which are key drivers of overall ratings for Principal's performance. To come up with this insight, regression analysis was run with Principal's overall performance and sub-parameters like Administrative Skills, Communication Skills, Cognitive Skills and Supervisory Skills.

Table:
5 Analysis Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.736(a)	.541	.538	.952

Predictors: (Constant), Supervisory skills, Administrative Skills, Cognitive skills, Communication skills

Table:6
Regression Analysis Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.497	.184		8.144	.000
	Administrative Skills	.084	.041	.084	2.061	.040
	Communication skills	.224	.047	.257	4.798	.000
	Cognitive skills	.189	.044	.211	4.294	.000
	Supervisory skills	.277	.042	.289	6.555	.000

Dependent Variable: Overall performance of the Principals of the school

The analysis in **Table 6** clearly shows that Supervisory Skills (Beta 0.289) and Communication Skills (0.257) are the two most important skill-set required for managerial effectiveness of Principals. Cognitive skills (with Beta of 0.211) is also a very important factor.

Within Supervisory skills, *appropriate delegation of work and responsibilities and carrying out appropriate performance appraisal of staff members* are the two most important aspects (as shown in the **Table 7**).

Table:7
Regression Analysis Coefficients (Regression R² = 0.534)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.573	.189		8.316	.000
	Ability and extent of training, coaching and mentoring	.154	.047	.165	3.294	.001
	Appropriate delegation of work and responsibilities	.306	.050	.299	6.084	.000
	Carrying out appropriate performance appraisal of staff members	.261	.054	.287	4.830	.000
	Imparting discipline in the school	.064	.037	.068	1.735	.083

Dependent Variable: Supervisory skills

A similar ranking of communication skills sub-factors in order of their importance disclosed that the most important aspect of communication is *the ability to give clear instruction and information* followed by *listening skills and getting involvement of staff members in decision making* and *the ability to give honest constructive feedback to staff members*.

Within the cognitive skills umbrella, the three most important sub-parameters that came up in the analysis were- a) *Identification and acknowledgement of issues and problems* b) *Ability to make correct decisions and assess associated risks* and c) *Identification and implementation of appropriate solution to problems*.

Conclusions and Implications of the study

The study clearly reveals a strong relationship between performance of a school and the managerial effectiveness of its principal, where the latter is the driver of the former. Perception about a school's performance is primarily driven by the academic results of class 12th and 10th.

Principal's managerial effectiveness is primarily driven by Supervisory Skills, followed by Communication Skills and Cognitive Skills.

Some of the key sub-parameters within these areas are *appropriate delegation of work and responsibilities, carrying out appropriate performance appraisal of staff members, the ability to give clear instruction and information and by listening skills and getting involvement of staff members in decision making*.

The study acts as a reference guide for Principals of schools so as to help them prioritize their focus areas to become good managers, and in turn good Principals, to be able to drive the success of schools.

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AN EMPIRICAL TESTING OF RELATIONSHIP BETWEEN MICROFINANCE AND ECONOMIC GROWTH IN INDIA

Dr. G.L. Sharma*,

Himanshu Puri**

ABSTRACT

Microfinance is the provision of a broad range of financial services such as deposits, loans, payment services, money transfers and insurance to poor & low-income households and micro enterprises. Microfinance sector in India has grown manifold from its inception. This has given a great opportunity to the rural poor to attain reasonable economic, social and cultural empowerment, leading to better living standard and quality of life for participating households. Microfinance has been a panacea for poverty reduction in India and thus it is profoundly promoted by our financial system throughout the economy. Moreover the phenomenon has a two way linkage with economic growth. The present study intends to look into various aspect and try to derive the inter relationship between these two factors. Two variables, i.e. GDP and Micro loans to Self Help Groups (SHG), have been taken for the study. Their annual data from the financial year 2006-07 to 2011-12 have been taken for analysis. The tools like coefficient of correlation and regression have been used to get an insight into the relationship of the selected variables. The result shows a very high level of correlation, i.e. 0.96, between the variables and a significant impact of Microloans on GDP.

Keywords: Correlation, Economic Growth, GDP, Microfinance, Micro Loans, Regression, Self Help Groups (SHG)

Introduction

The microfinance concept introduced by Bangladeshi Professor in Economics, Muhammad Yunus, in 1970 has grown into worldwide movement & is gathering momentum to become a major force in India. Before this, the world's poorest people were almost underserved by financial institutions as they were unable to offer the necessary collateral to secure loans. Along with it, most banks did not consider small loans to be appropriate as high transaction costs were prohibitive. Here in India, many poor people lacks formal banking services. In the absence of formal access to financial services, the poor have no choice but to go to local money lenders at the time of need, which exploits and charges interest rates ranging from 30% to 120%.

Microfinance, as a boom, came to rescue such poor. Microfinance, through granting very small loans, enables poor people to run small businesses and earn livelihood. Microfinance is an economic development approach that involves providing financial services through institutions to low income clients. Microfinance is the practice of providing small scale financial services to the world's poor, mainly loans and savings and increasingly other products like insurance and money transfer. Also referred to as "banking for the poor",

***Dr. G.L. Sharma** is Professor and Dean (Corporate Affairs) at Lal Bahadur Shastri Institute of Management, New Delhi. E-mail: glsharma@lbsim.ac.in

**** Himanshu Puri** is a Research Scholar as well as an Assistant Professor at Mewar University and IILM, CMS, respectively. E-mail: himanshu.puri@iilmcms.ac.in

microfinance has emerged as a simple and viable way to provide financial assistance to the under privileged. It also helps in pulling them out of rut of poverty and thus acclaimed recognition across the globe as a silver bullet to reduce poverty & bring in social empowerment. The study will look into the basic concept of microfinance. Thereafter the study will focus on depicting the relation between the economic growth and the innovative financial tool called microfinance. The two representative variables have been taken where GDP will be representing the economic growth and Micro loans to SHG will symbolize the state of microfinance. The tools like coefficient of correlation and regression analysis have been used for empirically testing the relationship. The study would also be helpful to all academicians, researchers and practitioners in this field.

Objective of the study

The main objectives of the study are as follows:

- To understand the concept of Microfinance
- To understand the relationship between the microfinance activities and economic growth.
- To know whether micro loans has an impact on GDP of India

Hypothesis

- a) There is no correlation between the microloans to SHG and GDP of India
- b) There is no significant impact of microloans on GDP of India

Literature Review

Barr (2005) evaluated the relationship between the microfinance and financial development. He argued that millennium developmental goals would only be achieved if the new financial reforms will focus more on microfinance to curb the poverty and thus achieving financial development. He emphasized on making the microfinance an integral part of the overall financial development strategy of any developing economy.

Khandker (2005) in his article scrutinized the effects of microfinance on poverty reduction at both the participant and the aggregate levels using panel data from Bangladesh. The results suggested that the access to microfinance contributes to poverty reduction, especially for female participants, and to overall poverty reduction at the village level. Microfinance thus helps not only poor participants but also the local economy.

Tulchin (2006) in his policy working paper examined microfinance as a sustainable tool for urban poverty alleviation in Latin America and the impact that government actors have on the sector. The paper begins by defining the value of microfinance and its role in development within the urban Latin American context. As per the author, Government actors in developing nations impact the sector through economic policy, financial institution regulation, and supervision. Governments and their implementing agencies shape the overall environment in which microfinance institutions operate. They can also be influential in linking microfinance to other productive financial flows, particularly remittances. 'Sustainable microfinance' was also defined and then considered in light of two goals: on a micro level, financially self-sufficient institutions able to provide services without external funding; and on a macro level, industry 'massification' to rapidly extend outreach to reach more people and make microfinance a meaningful vehicle for poverty alleviation. Test factors of sustainability included: 1) market-driven cost of services to clients; 2) institutional financial soundness; 3) repeat clients; and 4) an ongoing industry. Actor behavior was evaluated based on the success of these indicators. Lastly, the paper provided a research agenda to develop deeper support for policy recommendations.

Sengupta and Aubuchon (2008) have focused on achievement made by *Prof. Muhammad Yunus* and

the Grameen Bank for their efforts to create economic and social development from below. Their article was intended as a non-technical overview on the growth and development of microcredit and microfinance. The Grameen bank and its achievement were reviewed. They emphasized on the group lending mode of granting microfinance and how it is beneficial. The paper also reviewed the microfinance in different economies and its future.

Vanroose & D'Espallier (2009), in their paper analyzed the relationship between performance of microfinance institutions (MFIs) and the development of the formal financial sector of the country in which the MFI is active. They found indications of interdependencies between MFI-performance and formal financial sector development and also found that the MFIs reach more clients and are more profitable where access to the formal financial system is low.

Kumar, Bohra and Johari (2010) in their descriptive paper analyzed the present microfinance sector of India focusing on economic problems like population, under employment, low rate of education, low per capita income etc. that has actually resulted in poverty. Another major factor, as per the authors, resulting in poverty is the low asset base. The paper also centers its attention on microfinance in rural sector of our economy and how marketing of microfinance takes place in such areas. The paper concluded that the rural people have very low access to institutionalized credit especially from commercial banks which needs to be improved.

Pillai and Nadarajan (2010) in their paper provided evidences about Microfinance being a powerful tool to alleviate poverty and empowering rural women and also in bringing social and economic changes in the rural India. Microfinance and self help groups were found to be successful in promoting empowerment of women leading to development. Their paper analyzed the impact of microfinance on the empowerment of SHG leaders in psychological, economic, social aspects, managerial skills and their attitudes in Kanyakumari District.

Awojobi and Bein (2011) in their paper have established a causal relationship between the variables selected and evaluated it with the "t-test" statistic. The relevance of the independent variables in explaining the subject has been justified based on the F-statistic test and R² coefficient of multi-determination. They also used a lin-log regression model, where economic growth has been regressed on poverty level in Nigeria. Results showed that about 93 percent variation in GDP is explained by changes in micro loans and savings. And 79 percent change in poverty was due to growth and unemployment. It was also observed that poverty is multifaceted and it is because of the lack of productive resources in the country. It was revealed that the standard of living of the Nigerian people can be improved by providing them finance (Capital). Because of which there can be extensive participation in economic activities which could improve their lives.

Devaraja (2011) has described the evolution of the Microfinance revolution in India. The study stated that the outreach of such activities has been low along with the question mark on the profitability and sustainability of MFIs. This paper defined the three distinct aspects where government needs to play a significant role. The first was to protect the rights of the micro-borrower. The second was that of prudential oversight of risk-taking by firms operating in microfinance. The third was a developmental role, emphasizing scale-up of the microfinance industry where the key issues are diversification of access to funds, innovations in distribution and product structure, and the use of new technologies such as credit bureaus and the UID. He also suggested having proper regulation mechanism for the microfinance industry.

Krishnan (2011) emphasized on the well functioning of financial system for the long-run economic growth of a country. The paper looked at how the financial development of an economy can be measured. It then traced the financial development of India through the 1990s to the present, assessing the development of

each segment of financial markets. In doing so, it highlighted the dualistic development of the financial sector. Finally, the paper made an attempt to offer an explanation of this dualistic development and proposed a road map for the future development of financial markets in India.

Research Methodology

The study begins with the collection of the data pertaining to Microloans to SHG and GDP of India.

Data and its source

The present study uses 6 years annual data for the financial year 2006-07 to 2011-12 for the following variables, namely, GDP at factor cost and Micro loans disbursed to SHG. The major source of data for the above variables is Handbook of Statistics on Indian Economy maintained by Reserve Bank of India (RBI) and specifically for Microloans to SHG, it is the Status of Microfinance Report published by NABARD.

Variables in the study

The major variables used in this study are briefly explained below:

GDP: Gross domestic product (GDP) is the market value of all officially recognized final goods and services produced within a country in a given period of time. GDP per capita is often considered an indicator of a country's standard of living. GDP per capita is not a measure of personal income. Under economic theory, GDP per capita exactly equals the gross domestic income (GDI) per capita. GDP is related to national accounts, a subject in macroeconomics.

Micro Loans to SHG: Microcredit is the extension of very small loans (microloans) to impoverished borrowers who typically lack collateral, steady employment and a verifiable credit history. It is designed not only to support entrepreneurship and alleviate poverty, but also in many cases to empower women and uplift entire communities by extension. Modern microcredit is generally considered to have originated with the Grameen Bank founded in Bangladesh in 1983. Many traditional banks subsequently introduced microcredit despite initial misgivings. As of 2012, microcredit is widely used in developing countries and is presented as having enormous potential as a tool for poverty alleviation.

Statistical tools and techniques

Correlation: In statistics, the Pearson correlation coefficient or Pearson's r is a measure of the correlation (linear dependence) between two variables X and Y , giving a value between $+1$ and -1 inclusive. It is widely used in the sciences as a measure of the strength of linear dependence between two variables. It was developed by Karl Pearson from a related idea introduced by Francis Galton in the 1880s. It is also defined as the covariance of the two variables divided by the product of their standard deviations. Pearson's correlation coefficient when applied to a population is commonly represented by the Greek letter ρ (*rho*) and may be referred to as the population correlation coefficient or the population Pearson correlation coefficient. The formula for ρ is:

$$\rho_{X,Y} = \frac{\text{cov}(X,Y)}{\sigma_X \sigma_Y} = \frac{E[(X - \mu_X)(Y - \mu_Y)]}{\sigma_X \sigma_Y}$$

Pearson's correlation coefficient when applied to a sample is commonly represented by the letter r and may be referred to as the sample correlation coefficient or the sample Pearson correlation coefficient. We can obtain a formula for r by substituting estimates of the covariances and variances based on a sample into the formula above. That formula for r is:

$$r = \frac{\sum_{i=1}^n (X_i - \bar{X})(Y_i - \bar{Y})}{\sqrt{\sum_{i=1}^n (X_i - \bar{X})^2} \sqrt{\sum_{i=1}^n (Y_i - \bar{Y})^2}}$$

An equivalent expression gives the correlation coefficient as the mean of the products of the standard scores. Based on a sample of paired data (X_i, Y_i) , the sample Pearson correlation coefficient is

$$r = \frac{1}{n-1} \sum_{i=1}^n \left(\frac{X_i - \bar{X}}{s_X} \right) \left(\frac{Y_i - \bar{Y}}{s_Y} \right)$$

Where.

$$\frac{X_i - \bar{X}}{s_X}, \bar{X}, \text{ and } s_X$$

are the standard score, sample mean, and sample standard deviation, respectively.

Regression: Regression analysis is a statistical technique for estimating the relationships among variables. It includes many techniques for modeling and analyzing several variables, when the focus is on the relationship between a dependent variable and one or more independent variables. More specifically, regression analysis helps one understand how the typical value of the dependent variable changes when any one of the independent variables is varied, while the other independent variables are held fixed. Most commonly, regression analysis estimates the conditional expectation of the dependent variable given the independent variables — that is, the average value of the dependent variable when the independent variables are fixed. Less commonly, the focus is on a quantile, or other location parameter of the conditional distribution of the dependent variable given the independent variables. In all cases, the estimation target is a function of the independent variables called the regression function. In regression analysis, it is also of interest to characterize the variation of the dependent variable around the regression function, which can be described by a probability distribution. Regression analysis is widely used for prediction and forecasting, where its use has substantial overlap with the field of machine learning. Regression analysis is also used to understand which among the independent variables are related to the dependent variable, and to explore the forms of these relationships. In restricted circumstances, regression analysis can be used to infer causal relationships between the independent and dependent variables.

In linear regression, the model specification is that the dependent variable, y_i is a linear combination of the parameters (but need not be linear in the independent variables). For example, in simple linear regression for modeling n data points there is one independent variable: x_i , and two parameters, β_0 and β_1 :

$$\text{Straight line: } y_i = \beta_0 + \beta_1 x_i + \varepsilon_i, \quad i = 1, \dots, n.$$

(In multiple linear regressions, there are several independent variables or functions of independent variables.)

Data Analysis

Descriptive Statistics

From the Table 1, it can be seen certain descriptive statistics of the variables selected, i.e. GDP and Microloans. The mean average GDP for the duration selected is Rs. 4369269.8 cr. where as for microloans it is 12201.5 crore rupees. The median point is Rs.4333156.5 and Rs 13353.4. For GDP and Microloans respectively. The kurtosis is -1.25 for GDP data and -1.09 for Microloans. The standard deviation, range, and sum for GDP are 615793.75, 1638150 and 26215781, respectively. Similarly, the standard deviation, range, and sum for Microloans are 3802.68, 9964.38 and 73208.96, respectively.

Table 1:
Descriptive Statistics

GDP		Micro Loans to SHG	
<i>Mean</i>	4369296.833	<i>Mean</i>	12201.49333
<i>Standard Error</i>	251396.7476	<i>Standard Error</i>	1552.441574
<i>Median</i>	4333156.5	<i>Median</i>	13353.405
<i>Standard Deviation</i>	615793.7547	<i>Standard Deviation</i>	3802.689712
<i>Sample Variance</i>	3.79202E+11	<i>Sample Variance</i>	14460449.05
<i>Kurtosis</i>	-1.258863857	<i>Kurtosis</i>	-1.093470182
<i>Skewness</i>	0.106060072	<i>Skewness</i>	-0.603005358
<i>Range</i>	1638150	<i>Range</i>	9964.38
<i>Minimum</i>	3564364	<i>Minimum</i>	6570.39
<i>Maximum</i>	5202514	<i>Maximum</i>	16534.77
<i>Sum</i>	26215781	<i>Sum</i>	73208.96
<i>Count</i>	6	<i>Count</i>	6

Correlation Analysis

Table 2 clearly specifies that there is high level of positive correlation between the variables. The GDP and Microloans to SHG is having 0.96 of coefficient of correlation. Both the variables move in the same direction together. Hence we reject the null hypothesis that there is no correlation between the microloans and economic growth represented by GDP.

Table 2:
Correlation Matrix

	GDP	Micro Loans to SHG
<i>GDP</i>	1	
<i>Micro Loans to SHG</i>	0.960035958	1

Regression Analysis

Regression analysis also proves the point that the microfinance has a strong impact on the economic growth of our country. The model's R square is 0.9216 which specifies that the 92.16% of variation in GDP is explained by Microloans to SHG. Both the intercept and the coefficient of variable are significant as it can be seen by the P value as well as T statistic. The p value for both the intercept and coefficient of micro loans is less than 0.05. It can be interpreted that the microloans have a significant impact on GDP of India, thus rejecting our null hypothesis.

Conclusion

The microfinance sector is able to reach the large population below poverty line which aims to bring every assisted family above the poverty line, by creating a self employment opportunity through micro credit taken. The Industry as a whole is on an upswing. The study rightly pinpoints the relationship between the microfinance and economic growth. The study shows a high level of positive coefficient of correlation between the variables and also significant impact of microloans on GDP of India.

Table 3:
Regression

Regression Statistics	
<i>Multiple R</i>	0.960035958
<i>R Square</i>	0.921669041
<i>Adjusted R Square</i>	0.902086301
<i>Standard Error</i>	192689.0383
<i>Observations</i>	6

	Coefficients	Standard Error	t Stat	P-value
<i>Intercept</i>	2472394.909	287471.8498	8.600476572	0.001
<i>Micro Loans to SHG</i>	155.4647347	22.66110678	6.860421081	0.00236

<i>RESIDUAL OUTPUT</i>		
Observation	Predicted GDP	Residuals
1	3493858.848	70505.15238
2	3848142.768	48493.23244
3	4377383.591	-218707.5906
4	4719373.359	-211736.3593
5	4734053.894	151900.1058
6	5042968.541	159545.4594

No doubt, micro finance has come a long way but it has to climb the ladder further. Microfinance institutions have not been completely successful in its pursuits because of some inherent weaknesses and restraints. The industry have made impressive gains in coverage of rural population with financial services but mainstreaming of impact assessment and incorporation of local factors in service delivery to maximize its impact on achievement of goals of poverty alleviation has to be considered. In spite of weakness and various constraints, microfinance remains a powerful tool for the development of economy, poverty alleviation and social empowerment. It may be a drop in the ocean, but it has made people self sufficient and fuelled economic growth.

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AN OVERVIEW OF MERGERS AND ACQUISITION

CA. Sanjeev Kumar Gupta *

Dr. Sambit Kumar Mishra **

ABSTRACT

Mergers and acquisitions (M&A) and corporate restructuring are a big part of the corporate finance world. M&A which bring separate companies together to form larger ones. This paper highlight on the various ways of the M&A and regulatory implications on the M&A entities.

Keywords: Competition Commission ,Mergers and Acquisitions (M&A), Ownership-location-internalization (OLI), SEBI, Transaction cost economics (TCE)

Introduction

The Global Consulting firm, Grant Thornton declared a couple of years back, “2012 will be the year of mergers and acquisitions.” What are Mergers & Acquisitions? Mergers and acquisitions are strategic decisions taken for maximization of a company’s growth by enhancing its production and marketing operations. These are being used in a wide array of fields such as information technology, telecommunications, and business process outsourcing as well as in traditional businesses in order to gain strength, expand the customer base, cut competition or enter into a new market or product segment.¹

Mergers & Acquisitions

A merger is a combination of two or more businesses into one business. Laws in India use the term ‘amalgamation’ for merger. The Income Tax Act,1961 [Section 2(1A)] defines amalgamation as the merger of one or more companies with another or the merger of two or more companies to form a new company, in such a way that all assets and liabilities of the amalgamating companies become assets and liabilities of the amalgamated company and shareholders not less than nine-tenths in value of the shares in the amalgamating company or companies become shareholders of the amalgamated company.²

Regulations for Mergers & Acquisitions

Mergers and acquisitions are regulated under various laws in India. The objective of the laws is to make these deals transparent and protect the interest of all shareholders. These are regulated through the provisions of:-

a) Competition Act, 2002

The main provisions related to the four components of Competition Act, 2002 are anti-competitive agreement, abuse of dominance, combination regulation and competition advocacy. The companies always use merger, a type of combination, as a business strategy to grow and consolidate and to eliminate competition.

*Sanjeev Kumar Gupta is a Research Scholar at Mewar University, Gangrar, Chittorgarh(Rajasthan)–312901,Corresponding author E-Mail: rajchawlaca@gmail.com

**Dr. Sambit Kumar Mishra is an Assistant Director at The Institute of Chartered Accountants of India, ICAI Bhawan, Indraprastha Marg, New Delhi-110002

b) Companies Act, 1956

Merger/Demerger is a compliance of provisions under sections 391-394 of the Companies Act, 1956. The Companies Act , 1956 (Section 372) stipulates that a company's investment in the shares of another company in excess of 10 percent of the subscribed capital can result in takeovers.

c) Income Tax Act, 1961

Under the provisions of the IT Act, 1961;unabsorbed losses of the amalgamating companies are deemed to be the losses for the previous year in which the amalgamation was effected, the amalgamated company (subject to fulfillment of certain conditions) will have the right to carry forward the loss for a period of eight assessment years immediately succeeding the assessment year relevant to the previous year in which the amalgamation was effected.

d) Foreign Corrupt Practices Act, 1977 of the US

Foreign Corrupt Practices Act, 1977 (FCPA) extends even to a US investor's investee company in India and could expose the investor's management in the US to penal sanctions if an Indian investee company has been involved in bribing or unduly influencing a public official. During a market downturn, the likelihood of fraud increases and financial integrity concerns are more frequently uncovered. In a merger or acquisition, due diligence that includes the use of forensic accountants to assess bribery and corruption risk can help the acquiring company to better understand the risks associated with a target, including its relationships with customers, suppliers, government agencies and officials, and other business partners.

e) SEBI

Under SEBI's Amendment to Clause 24 of the Disclosure & Investor Protection Guidelines, each of the companies involved in a merger has to obtain the opinion of an independent merchant banker on the valuation of the deal. Modifying the Clause 41 of the listing agreement to bring more efficiency in the disclosure of financial results, SEBI has allowed a listed entity two months' time from the end of a quarter if it is submitting consolidated financial results in addition to submitting quarterly and year-to-date stand alone financial results.

Scope of M&A

Mergers & Acquisition have gained popularity throughout the world in the recent times. These have become popular due to globalization, liberalization, technological developments & intensely competitive business environment. Mergers and acquisition are a big part of the corporate finance world. This process is extensively used for restructuring the business organization. In India, the concept of mergers and acquisition was initiated by the government bodies. The Indian economic reform since 1991 has opened up a lot of challenges both in the domestic and international spheres. The increased competition in the global market has prompted the Indian companies to go for mergers and acquisitions as an important strategic choice.³

The trends of mergers and acquisitions in India have changed over the years. The immediate effects of the mergers and acquisitions have also been diverse across the various sectors of the Indian economy. Mergers and Acquisitions have been around for a long time and has experienced waves of popularity during these times and they are very much an important part of today's business world. They have also become increasingly international which can be due to the rising global competition.⁴ The popularity of cross-border M&As makes it important to look at them from an international perspective.

An Overview

Mergers and acquisitions (M&As) have long been a popular strategy for firms . The companies indulge for

strategic expansion without undertaking tedious work of establishing a new entity in a new place. Technological development in financial sector and globalization of finance have vastly contributed to the popularity of M&As and cross-border M&As since it becomes easier for the capital to seek best profit from anywhere in the world. In the decade of the 1990s (the so-called fifth merger wave), the popularity of this strategy increased tremendously. Acquisitions completed in 1997 alone were valued at more than all acquisitions during the 1980s (*Hitt et al.*, 2001a,b). In 1998, worldwide M&A activity totaled more than US\$2 trillion in terms of the stock value of the transactions announced (*Child et al.*, 2001). And, while the overall M&A market follows a cyclical nature—and has cooled since the heyday of the late 1990s—the total number of worldwide M&As has been increasing recently at a rapid rate. This can be attributed to the dynamic nature of international trade. The consolidations of industries and regions have also contributed to the overall number and value of M&As worldwide to continuously increase. While the majority of M&As involve two firms within the same country, over 40% of the M&As that were completed between 1999 and 2000 involved firms headquartered in two different countries (*Hitt et al.*, 2001a,b). The increasing globalization of business has heightened the opportunities and pressures to engage in cross-border M&As (*Hitt*, 2000; *Hitt et al.*, 1998a,b). Cross-border M&As pose tremendous challenges, in particular, at the post acquisition stage (*Child et al.*, 2001).

Recent evidence suggests that they are not highly successful. For instance, a study by KPMG found approximately that only 17% of cross border acquisitions created shareholder value, while 53% destroyed it (*Economist*, 1999). Given the increasing number of cross-border M&As and their growing importance in the global market, a better understanding of the opportunities and challenges for firms following this strategy is required. While the occurrence of cross-border M&As has grown dramatically in the last few years, academic research on this type of strategic action has not kept pace with the changes. A review of the academic literature suggests that the results are fragmented across various disciplines, including strategic management, international business, human resource management, and finance. In fact, this subtopic has not been universally recognized as warranting distinctive examination separate from (domestic) M&As, in general. Presumably, this is the reason why *Werner* (2002) did not include cross-border M&As when identifying 12 distinct topics in the review of international management research between 1996 and 2000. Nevertheless, research on cross-border M&As has focused on a number of important issues, such as mode of foreign direct investment (FDI) or entry (*Andersen*, 1997; *Barkema and Vermeulen*, 1998; *Brouthers and Brouthers*, 2000; *Hennart and Reddy*, 1997; *Kogut and Singh*, 1988;), performance outcomes from acquisitive entry (*Brouthers*, 2002; *Li and Guisinger*, 1991; *Nitsch et al.*, 1996), and shareholders' wealth creation by the cross border M&As (*Datta and Puia*, 1995; *Harris and Ravenscraft*, 1991; *Kang*, 1993; *Markides and Ittner*, 1994; *Morck and Yeung*, 1992). Recently, more attention has been paid to post acquisition issues such as integration processes (*Child et al.*, 2001; *Inkpen et al.*, 2000; *Lubatkin et al.*, 1998; *Olie*, 1994; *Weber et al.*, 1996), integration processes from an employee viewpoint (*Risberg*, 2001), post-acquisition turnover of acquired firm executives (*Krug and Hegarty*, 2001; *Krug and Nigh*, 2001), post-acquisition performance of acquired (*Very et al.*, 1997) and acquiring firms (*Larsson and Finkelstein*, 1999; *Morosini et al.*, 1998), and the resulting knowledge transfer and organizational learning (*Bhagat et al.*, 2002; *Bresman et al.*, 1999; *Vermeulen and Barkema*, 2001). Because of the growing importance and popularity of cross-border M&As, this study provides a review of the extant literature across different areas, with an explication of the theoretical bases used. Furthermore, we identify potential areas for future research. First, we compare important issues regarding domestic and international M&As to identify the differences, if any. Next, we examine the current research from the perspectives of cross border M&As as a mode of entry, as a dynamic learning process, and as a value-creating (or destroying) strategy.

Herein, we define cross-border M&As as those involving an acquirer firm and a target firm whose headquarters are located in different home countries. However, it is important to note that “M&As of companies

with their headquarters in the same country, although normally classified as domestic, often have cross-border issues of concern when they integrate operations located in different countries” (*Child et al.*, 2001). Cross border M&As are an implementation instrument for the firm’s international diversification strategy (internationalization). Cross-border M&As have been motivated by the necessary search for new opportunities across different geographic locations and markets in a turbulent and continuously changing environment.

2. Cross-border mergers and acquisitions

There is evidence suggesting that the rate of cross-border M&As is growing rapidly. In 1999, cross-border M&As were valued at approximately US\$1.4 trillion (nearly 40% of the overall acquisitions for that year), doubling the value of the preceding year (*Hitt et al.*, 2001). Thomson Reuters full year review of worldwide M&A activity reveal the staggering growth in this strategic activity of the companies.

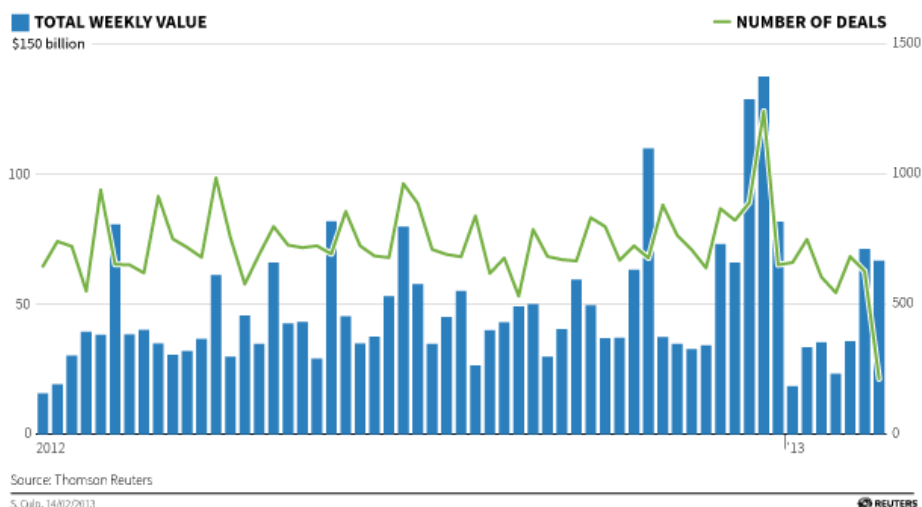
The value of worldwide M&A totaled US\$2.6 trillion during 2012, a 2% increase from comparable 2011 levels. Worldwide spinoffs and divestitures, which totalled US\$1.2 trillion for full year 2012, accounted for 47% of overall M&A activity. The companies based in the emerging markets accounted for one quarter of worldwide announced merger activity, and the amount totaled US\$723.0 billion during 2012, a 9% increase from 2011. Cross Border M&A activity totaled US\$944.1 billion during same period 2012, accounting for 36% of overall M&A volume and up 6% compared to the previous year 2011.

The Report points out that most of the cross border M&A was driven by the energy & power, industrials, and consumer staples sectors, which comprised 42% of cross-border deal volume during 2012. Regionally, the deal activity was maximum in the Americas that accounted for 58% of the worldwide fee pool, while Europe, Middle East and Africa accounted for 28%. Asia Pacific and Japan contributed 10% and 5%, respectively. The energy & power sector was most active during full year 2012, commanding 18% of announced M&A, while the financials and real estate sectors accounted for 13% and 11% of M&A activity, respectively.⁵

The year 2013 has seen greater increase in the M&A activity, particularly in the US. United States pushed February M&A levels to \$147.9 billion with nearly two weeks remaining, a 15% increase over the entire month of January 2013. Year-to-date, M&A activity totals \$278.9 billion, an increase of 18% compared to the same time last year. US M&A, which has more than doubled compared to the year ago period, accounted for 57% of global deal making so far this year.⁶

Worldwide M&A activity

Deal making picks up steam



Several factors are responsible for fueling the growth of cross-border M&As. Among these factors are the worldwide phenomenon of industry consolidation and privatization, and the liberalization of economies. The dynamics of cross-border M&As are largely similar to those of domestic M&As. However, due to their international nature, they also involve unique challenges, as countries have different economic, institutional (i.e., regulatory), and cultural structures (*Hofstede*, 1980; *House et al.*, 2002). Cross-border M&As can be used to access new and lucrative markets, as well as expand the market for a firm's current goods. *Martin et al.* (1998) found that suppliers often follow the international expansion of the related buyers. This is a strategic move to ensure that the transplanted buyer does not start a relationship with an alternate foreign supplier, which could later threaten the current supplier in its own domestic market. Thus, international M&As may be motivated to take advantage of a new opportunity or to avoid a possible future threat. Moreover, acquisitions of firms headquartered in other countries present an especially good opportunity for the acquiring firm to learn new knowledge and acquire new capabilities. The pursuit of cross-border M&As is not without challenges. Firms engaging in cross border M&As are faced with unique risks such as "liability of foreignness" (*Zaheer*, 1995) and "double-layered acculturation" (*Barkema et al.*, 1996). Differences in national culture, customer preferences, business practices, and institutional forces, such as government regulations, can hinder firms from fully realizing their strategic objectives. Uncertainty and information asymmetry in foreign markets make it difficult for firms to adjust and learn from both the local market and target firm (*Kogut and Singh*, 1988; *Zaheer*, 1995). Thus, liability of foreignness and double-layered acculturation serve as barriers to learning new knowledge and capabilities in a cross-border M&A.

In pursuing cross-border M&As, firms consider various conditions, including country-, industry-, and firm-level factors, which relate both to the acquiring and to the target firm. At national and industry levels, factors such as capital, labor, and natural resource endowments, in addition to institutional variables such as the legal, political, and cultural environment, are highly significant. At the firm level, organizations pursuing an internationalization strategy need to identify and evaluate potential targets to acquire in the host countries. After completing an acquisition, firms generally must integrate the target firm into their operations to realize the potential value of their investment. Accordingly, in the following sections, we review the current literature on cross-border M&As in terms of cross-border M&As (1) as a mode of entry/diversification in a foreign market, (2) as a dynamic learning process, and (3) as a value-creating strategy. Historically, economic perspectives such as transaction cost economics (TCE) and ownership-location-internalization (OLI) framework have provided the dominant theoretical foundations on which cross-border M&A research was based (*Dunning*, 1993; *Williamson*, 1975). This is not surprising, given that cross-border M&As were often examined in the context of FDI, with emphasis on entry mode decisions and resulting wealth creation. A major focus in this research has been the uncertainty and risk associated with different national cultures and institutional settings. This stream of work emphasized minimization of the risks and inefficiencies in entering the foreign markets in which transaction costs played a key role. Recent research has examined the value of international expansion and cross-border M&As from the resource-based (RBV) and organizational learning perspectives (*Barkema and Vermeulen*, 1998; *Madhok*, 1997; *Vermeulen and Barkema*, 2001). Moreover, attention has gradually changed from the antecedents of M&As to the processes and outcomes of post-M&A implementation. These aspects are crucial to the comprehension of M&As (*Haspeslagh and Jemison*, 1991) but have not been carefully examined, particularly in international contexts (*Child et al.*, 2001). TCE and OLI framework provide limited insights for M&A implementation processes. Given the increasing strategic importance of cross-border M&As, both from research and practitioner perspectives, we suggest that additional theoretical insights and broader foci of research are required.

Conclusion

M&A create synergies and economies of scale, expanding operations and cutting costs. Investors can take comfort in the idea that a merger will deliver enhanced market power. However M&A has to be augmented with the regulatory compliance in the country where M&A takes place.

Notes

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FINANCIAL STABILITY: IS MONETARY POLICY SUFFICIENT?

CA. Raj Chawla *

Dr. Sambit Kumar Mishra **

ABSTRACT

This Paper highlights the causes, management, preventions of financial crises, including banking, securities market, payments and currency crises with respect to the financial stability. The paper also highlights the attributes that would be useful in managing public policy with respect to financial stability. The paper discusses how the monetary policy may not be sufficient to handle financial instability.

Keywords: exchange rate, financial instability, IMF, Monetary policy, RBI

Introduction

The meltdown of financial markets in 2008-2009 was the result of institutionalized fraud and financial manipulation. The “bank bailouts” were implemented upon the instructions of the Wall Street, leading to the largest transfer of money wealth in recorded history, while simultaneously creating an insurmountable public debt in the US economy.

With the worldwide deterioration of living standards and plummeting consumer spending, the entire structure of international commodity trade is potentially in jeopardy. The payments system of money transactions is in disarray. Following the collapse of employment, the payment of wages is disrupted, which in turn triggers a downfall in expenditures on necessary consumer goods and services. This dramatic plunge in purchasing power backfires on the productive system, resulting in a string of layoffs, plant closures and bankruptcies.

Financial Stability

In India, financial stability has emerged as a key consideration in the conduct of monetary policy since the 1990s. Consequent to the structural reforms initiated in the early 1990s, the gradual opening up of the Indian economy, the financial system has transformed from a planned and administered regime to a market-oriented financial system. Financial stability in India would mean (a) ensuring uninterrupted settlements of financial transactions (both internal and external); (b) maintenance of a level of confidence in the financial system amongst all the participants and stakeholders and (c) absence of excess volatility that unduly and adversely affects real economic activity. (Y.V. Reddy, 2004)

Financial Markets

Financial market encompasses in broad terms any marketplace where buyers and sellers participate in the trade of assets such as equities, bonds, currencies and derivatives. Financial markets are defined by having transparent pricing, basic regulations on trading, costs and fees and market forces determining the prices of securities that trade.

* **CA. Raj Chawla** is Research Scholar at Mewar University, Gangrar, Chittorgarh (Rajasthan) – 312901. E-Mail: rajchawlaca@gmail.com

** **Dr. Sambit Kumar Mishra** is Research Guide at Mewar University, Gangrar, Chittorgarh (Rajasthan) – 312901. E-Mail: rajchawlaca@gmail.com, E-mail: sambit_mishra1@yahoo.co.in

Some financial markets only allow participants that meet certain criteria, which can be based on factors like the amount of money held, the investor's geographical location, knowledge of the markets or the profession of the participant.

Financial markets can be found in nearly every nation in the world. Some are very small, with only a few participants, while others – like the New York Stock Exchange (NYSE), Shanghai Stock exchange, London Stock exchange and Hong Kong Stock exchange. These markets trade trillions of dollars daily.

Most financial markets have periods of heavy trading and demand for securities. During such periods, prices may rise above historical norms. There are complementary phases of downturns also that may cause prices to fall past levels of intrinsic value, based on low levels of demand or other macroeconomic forces like tax rates, national production or employment levels.

Information transparency and information symmetry is important to increase the confidence of participants and therefore foster an efficient financial marketplace.

Financial Institution

Financial institution provides financial services for its clients. The most important financial service provided by financial institutions is to act as financial intermediaries. There are three major types of financial institutions:

1. Deposit-taking institutions: These accept and manage deposits and make loans.
2. Insurance companies and pension funds; and
3. Brokers, underwriters and investment funds.

Regulatory measures

Keeping in pace with times, various regulatory prescriptions were being issued by the central bank from time to time. These steps are taken to basically ensure banking stability vis-à-vis exposures and risks. Kishori J. Udeshi, former Deputy Governor of the RBI outlined some of the key measures:

- Capital adequacy norms at 9% which is higher than the 8% international norm
- Income Recognition and Asset Classification (IRAC) norms
- Exposure norms – individual and group norms 15% and 40%, respectively with additional 10% in case of infrastructure funding.
- Cap on foreign currency borrowing and lending as well as policy measures on hedging of such foreign currency loans
- Cap on Capital market and sensitive sector exposures
- Building up of Investment Fluctuation Reserve (IFR) to a minimum of 5% by March 2006.

(Kishori Udeshi,2005)

In India, the degree of compliance with Basel Core Principles has been high. The RBI has introduced consolidated accounting for banks along with a system of Risk-Based Supervision (RBS) for intensified monitoring of vulnerabilities. A scheme of Prompt Corrective Action (PCA) was introduced effective from December 2002 to undertake 'structured' and 'discretionary' actions against banks exhibiting vulnerabilities in certain prudential/financial parameters. The RBI has also introduced the Know Your Customer (KYC) norms for better monitoring of financial markets. The RBI has fined Axis Bank, HDFC Bank and the ICICI with Rs.

10.5 crore for violating the KYC norms on 10th June, 2013 after a sting operation by Cobrapost.cost, a news website.

With liberalization, financial conglomerates are emerging. Banks have accordingly been advised to prepare and disclose consolidated financial statements and prepare consolidated prudential reports. The inter-regulatory coordination has also been streamlined with the establishment of a monitoring system in respect of Systemically Important Financial Intermediaries (SIFIs), coupled with the establishment of three Standing Technical Committees constituted by the High Level Coordination Committee on Financial and Capital Markets (HLCCFCM) to provide a more focused inter-agency forum for sharing of information and intelligence.(Udeshi,2005)

Review of Literature

Somesh K. Mathur succinctly reviews the sources of market failure in financial institutions and markets and various measures that can be undertaken to alleviate them (Mathur,2001)

The IMF is bringing regular Global Financial Stability Report to strengthen bilateral and multilateral surveillance of international financial markets, with a view to promote global financial stability. Issues considered in such reports include, inter alia, developments and sources of risk in the major financial centers; emerging market developments and financing; and emerging local bond markets.

Barry Eichengreen, Andrew K. Rose and Charles Wyplosz(1993) evaluate the causes and consequences of episodes of turbulence in foreign exchange markets. They found that the exchange rate market may be subject to multiple equilibria. They have argued that in pegged exchange rates,

“so long as the exchange rate peg is considered ‘credible’, the evolution of domestic factor costs is consistent with external equilibrium. However, once a change in the exchange rate occurs, a new set of expectations governing price formation evolves and the exchange rate ceases to be in equilibrium. The second type of exchange market instability occurs in a floating exchange rate situation, when the amplitude of fluctuations in the market exchange rate exceeds that which can be explained on the basis of underlying fundamentals. This is usually termed as volatility.

(Eichengreen, Rose, Wyplosz,1993)

Douglas W Diamond has developed a theory of financial intermediation based on minimizing the cost of monitoring information which is useful for resolving incentive problems between borrowers and lenders.

Viral V. Acharya and Matthew Richardson describe how the financial theory need to be better adapted to the practical requirements of maintaining reasonable stability of markets and institutions while restoring the financial stability. Charles A. E. Goodhart and Dimitri P. Tsomocos, points out how there is an emerging consensus about the framework whereby a central bank should fulfill its macro monetary functions. In sharp contrast, there is no consensus about the framework for achieving its financial stability objective, either on the appropriate theory or practice.

Is Monetary policy sufficient?

Monetary policy determines only the level of prices and not the unemployment rate or other real variables. In this sense, it is monetary policy that has ultimate responsibility for the purchasing power of a nation's paper currency. Employment depends on other factors such as demographics, productivity, tax policy, and labor laws. But, many economists pit their hope upon short term monetary policy boost to temporarily stimulate real economic activity in the short run. Such activist monetary policy is quite difficult to do successfully for several

reasons. First, any boost to the real economy from stimulating monetary policy will eventually fade away as prices rise and the purchasing power of money erodes in response to the policy. The short term benefit can thus be mitigated if inflation expectations rise in reaction to the monetary accommodation. There is a lurking fear of a variety of shocks that can simultaneously buffet the economy. Shocks can occur to specific sectors, such as a sharp drop in housing prices or a sharp rise in the price of oil, or to specific regions. If monetary policy responds to one shock in an attempt to offset its possible effects, it may aggravate the effects of another shock. Thus, monetary policy's ability to neutralize the impact of shocks is quite limited.

For successful implementation of such financial stabilization policy, it is necessary to anticipate and plan much earlier. Ad-hocism cannot prove to be the panacea. The managers of the economy must be in a position to approximately predict the state of the economy more than a year in advance and anticipating the nature, timing, and likely impact of future shocks. But, mostly economists falter in their predication about the real economy. Thus, attempts to stabilize the economy will, more likely than not, end up providing stimulus when none is needed, or vice versa. It also risks distorting price signals and thus resource allocations, compounding instability further. In most cases, the effects of shocks to the economy simply have to play out over time as markets adjust to a new equilibrium. Monetary policy is likely to have little ability to hasten that adjustment. Monetary policy has its own limitations. It cannot retrain a workforce or help reallocate jobs to lower unemployment. It cannot help keep gasoline prices at low levels when the price of crude oil rises to high levels. Monetary policy cannot reverse the sharp decline in asset prices when there is a house bubble. In all such cases, monetary policy cannot eliminate the need for households or businesses to make the necessary real adjustments when such shocks occur.

On the macro-economic policy side of the RBI, remarkable consensus has been emerging over the last two decades. This covers both the applicable theoretical framework for analyzing the transmission mechanism of monetary policy and the appropriate institutional structure for the Central Bank to deploy its macro-economic policies. There is no such consensus on the appropriate theoretical framework for the analysis of financial stability.

Financial stability has moved to centre-stage nationally as well as in discussions relating to the future of the global monetary and financial system. Several factors have brought this about: the disturbing intensity and frequency of financial crises, the move to strengthen domestic financial systems under Basel II and now Basel III and the deepening quest for the appropriate international financial architecture for crisis prevention and management. Unlike in some countries where the responsibility for financial stability has been allocated to an independent authority, Indian approach has been to deploy the synergies that exist between the conduct of monetary policy and the function of financial regulation. It is thus not a surprise that financial stability in India is an integral responsibility of the Reserve Bank. But, global experiences suggest that might not be sufficient if India undergoes instability in financial market. With a plummeting rupee that crossed Rs 60 per dollar, growing current account deficit, slowing economic growth, declining investment grading and in a climate of uncertainty, the RBI might not be the safest bet to handle a financial tsunami in India!

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A COMPARATIVE STUDY OF INTELLIGENCE AND ACADEMIC ACHIEVEMENT OF KASHMIRI AND PAKHTOON STUDENTS

*Hafiz Mudasir**

*Dilruba Syed Yatu***

ABSTRACT

The present study was carried out to compare the intelligence and academic achievement of Kashmiri and Pakhtoon students. P.N. Mehrotra's Mixed Type Group Test of Intelligence (MGTI) was administered on a group of 120 students to find out their intelligence and the aggregate percentage of marks of students as indicator of academic achievement. Mean, Standard Deviation and test of significance were calculated and the result revealed significant mean differences between the two groups under empirical study.

Keywords: Academic achievements, Intelligence, Kashmiri Students, MGTI, Pakhtoon Students,

Introduction

Man is bestowed with certain mental abilities, which make him a rational being. Man can reason, understand and adapt himself to new situations. Man, by using his mental power is superior to all other living beings. But differences of mental powers do persist within human family. Some can grasp and learn quickly whereas others are slow in learning.

Human intelligence has been defined in various ways as a capacity for compression and reasoning. It is the ability to profit from experience to absorb new information and to react reasonably to new situation . It builds up the ability to solve emergent problems. Stern defined intelligence as, “*A general capacity of an individual consciously to adjust his thinking to new environment.*”

Buckingham defined intelligence succinctly, “*Intelligence is the learning ability.*”

Intelligent pupils show rapid progress in academic achievement. Academic achievement is of paramount importance. It has been indicated that a good number of variables such as personality characteristics of the learners, the organizational climate of the school, curriculum planning, teaching-learning setup, variables arising out of home influences achievement in different degrees. Each of them is actually a cluster of variables, which separately or on interaction with others can influence over individual's academic achievements. Both nature and nurture play a combine the role in making an achieving individual.

Man is primarily distinguishable from other living beings because he is bestowed with higher intelligence which facilitates him to solve problems, think abstractly, comprehend complex ideas, learn quickly and learn from experiences. An intelligent individual reflects a broader and deeper capability of comprehending the surroundings-“catching on,” making sense of things’ or “figuring out” what to do and what not to do.

The growing concern of researchers, to understand ethnic groups, cultural diversity, has generated a demand for cross-cultural studies. The characteristics of these studies is their comparative nature i.e., they involve a comparison across two different cultures on a focal phenomenon. Such studies are very important

***Hafiz Mudasir** is a Faculty Member in Govt. Girls Hr Sec. School, Chanapora, Srinagar, Kashmir

** **Dilruba Syed Yatu** is a Research Scholar at the University of Kashmir.

as these help the members of the teaching community to plan an all-round curriculum that lead the students to uncover, understand and practice the processes and think independently .A considerable number of studies have been undertaken, but none on the cross-cultural comparison of Kashmiri and Pakhtoon students. It is against this background that the investigators felt necessary to select the study of intelligence and academic achievement of ethnic groups.

Statement of the problem

The problem of the present study was formulated as under:

“A comparative Study of Intelligence and Academic achievement of Kashmiri and Pakhtoon students”

Objectives

The objectives of the present study read as under:

1. To measure the intelligence of Kashmiri and Pakhtoon school going boys and girls.
2. To measure the academic achievement of Kashmiri and Pakhtoon school going boys and girls.
3. To compare the intelligence of boys and girls of Kashmiri and Pakhtoon schools.
4. To compare the academic achievement of boys and girls of Kashmiri and Pakhtoon schools.

Hypotheses

1. There is a significant mean difference between Kashmiri and Pakhtoon students on intelligence test
2. There is a significant mean difference between Kashmiri boys and girls on intelligence test.
3. There is a significant mean difference between Pakhtoon boys and girls on intelligence test.
4. There is a significant mean difference between Kashmiri boys and Pakhtoon boys on intelligence test.
5. There is a significant mean difference between Kashmiri girls and Pakhtoon girls on intelligence test.
6. There is a significant mean difference between Kashmiri and Pakhtoon students on academic achievement.
7. There is a significant mean difference between Kashmiri boys and girls on academic achievement.
8. There is a significant mean difference between Pakhtoon boys and girls on academic achievement.
9. There is a significant mean difference between Kashmiri boys and Pakhtoon boys on academic achievement.
10. There is a significant mean difference between Kashmiri girls and Pakhtoon girls on academic achievement.

Sample

The sample of the present study comprised of 120 Kashmiri and Pakhtoon students (both boys and girls) drawn from the government schools in the Kashmir valley.

Tool used

The tools for the present study were selected in a manner to achieve optimum level of confidence by the investigator for the accomplishment of the objectives of the study. The investigator selected the following tools

to collect the relevant data.

1. Mehrotras Mixed Type Group Test of Intelligence.
2. Aggregate percentage of marks as indicator of academic achievement.

P. N. Mehrotra devised Mixed Type Group Test of Intelligence as the first Indian test on intelligence on Wechsler line. It includes mixed item of verbal and non-verbal type in equal number. It measures I.Q. of 10 to 18 year adolescents within 20 minutes. Verbal part of the Test contains analogy, number series, classification vocabulary and reasoning whereas Nonverbal test contains analogy, arrangement, classification, digit symbol and part fitting tests.

Statistical Treatment

The data collected was subjected to the following statistical treatment:

1. Mean
2. Standard Deviation(S.D.)
3. t-test

Analysis and Interpretation

In order to achieve the objectives formulated for the present study, the data collected has been tabulated as under

Table : 1

Showing Significance of mean difference between Kashmiri and Pakhtoon students on intelligence test

Group	N	Mean	S.D	t-value	Level of significance
Kashmiri Boys	60	59.11	4.39	2.10	Significant at .05 level
Pakhtoon Boys	60	60.46	2.51		

The above table shows the significance of mean difference between Kashmiri and Pakhtoon students towards intelligence test and depicts that the calculated t-value (2.10) exceeds the tabulated t-value, which indicates the significance at .05 level. The result of the present study indicates that Kashmiri and Pakhtoon students have different intelligence and Kashmiri students are more intelligent than Pakhtoon students.

Table: 2

Showing Significance of mean difference between Kashmiri boys and girls on intelligence test

Group	N	Mean	S.D	t-value	Level of significance
Kashmiri Boys	30	56.23	5.7	5.1	Significant at .01
Kashmiri Girls	30	62	2.38		

The above table shows the significance of mean difference between Kashmiri boys and girls and depicts that the difference is significant, as our calculated t-value (5.1) exceeds from the tabulated t-value, which indicates the significance at .01 levels. This confirms that the attitude of boys and girls towards intelligence is not similar.

Table: 3**Showing Significance of mean difference between Pakhtoon boys and girls on intelligence test**

Group	N	Mean	S.D	t-value	Level of significance
Pakhtoon Boys	30	58.8	1.92	5.2	Significant at .01
Pakhtoon Girls	30	62.13	2.98		

The above table shows the significance of mean difference between Pakhtoon boys and girls and reveals that the difference is significant, as our calculated t-value(5.2) exceeds from the tabulated t-value, which indicates the significance at .01 level. This confirms that the attitude of boys and girls towards intelligence is not similar.

Table:4**Showing Significance of mean difference between Kashmiri boys and Pakhtoon boys on intelligence test**

Group	N	Mean	S.D	t-value	Level of significance
Kashmiri boys	30	56.23	5.7	2.35	Significant at .05
Pakhtoon boys	30	58.8	1.92		

The above table shows the significance of mean difference between Kashmiri boys and Pakhtoon boys depicts that the difference is significant, as our calculated t-value (2.35) exceeds from the tabulated t-value, which indicates the significance at .05 level. This confirms that the attitude of Kashmiri boys and Pakhtoon boys towards intelligence is not similar.

Group	N	Mean	S.D	t-value	Level of significance
Kashmiri girls	30	62.00	2.38	0.11	Not significant
Pakhtoon girls	30	62.13	5.7		

Table: 5**Showing Significance of mean difference between Kashmiri girls and Pakhtoon girls on intelligence test**

The above table shows the significance of mean difference between Kashmiri girls and Pakhtoon girls on intelligence test and depicts that the calculated t-value(0.11) is less than the tabulated t-value at .01 and .05 level of significance. This result indicates that the Kashmiri girls and Pakhtoon girls have similar intelligence.

Table :6**Showing Significance of mean difference between Kashmiri and Pakhtoon students on academic achievement**

Group	N	Mean	S.D	t-value	Level of significance
Kashmiri	60	64.04	20.04	1.28	Not Significant
Pakhtoon	60	60.02	18.04		

The above table shows the significance of mean difference between Kashmiri and Pakhtoon students on academic achievement and show that the difference is not significant, as our calculated t-value(1.28)is less than the tabulated t-value at .01 and .05 level of significance. This confirms that both Kashmiri and Pakhtoon students show similar academic achievement.

Table:7

Showing Significance of mean difference between boys and girls of Kashmiri schools on academic achievement

Group	N	Mean	S.D	t-value	Level of significance
Kashmiri Boys	30	56.06	9.69	1.36	Not Significant
Kashmiri Girls	30	52.04	12.33		

The above table shows the significance of mean difference between Kashmiri boys and girls on academic achievement and indicates that the difference is not significant, as our calculated t-value(1.36) is less than the tabulated t-value at .01 and .05 level of significance .This confirms that both boys and girls show similar academic achievement.

Table:8

Showing Significance of mean difference between boys and girls of Pakhtoon schools on academic achievement

Group	N	Mean	S.D	t-value	Level of significance
Pakhtoon Boys	30	54.04	10.22	1.37	Not Significant
Pakhtoon Girls	30	58.0	12.24		

The above table shows the significance of mean difference between boys and girls of Pakhtoon community on academic achievement and indicates that the difference is significant, as our calculated t-value (1.37) is less than the tabulated t-value at .01 and .05 level of significance. The results confirm that the Pakhtoon boys and girls show similar academic achievement.

Table :9

Showing Significance of mean difference between Kashmiri boys and Pakhtoon boys on academic achievement

Group	N	Mean	S.D	t-value	Level of significance
Kashmiri boys	30	56.06	9.69	0.77	Not Significant
Pakhtoon boys	30	54.04	10.22		

The above table shows the significance of mean difference between Kashmiri boys and Pakhtoon boys on academic achievement and indicates that the calculated t-value (0.77)is less than the tabulated t-value at .01 and .05 level of significance at .01 level. The results confirm that the Kashmiri boys and Pakhtoon boys show similar academic achievement.

Table :10
Showing Significance of mean difference between Kashmiri girls and Pakhtoon girls on academic achievement

Group	N	Mean	S.D	t-value	Level of significance
Kashmiri girls	30	52.04	12.33	1.86	Not Significant
Pakhtoon girls	30	58.02	12.24		

The above table shows the significance of mean difference between Kashmiri girls and Pakhtoon girls on academic achievement and depicts that the difference is not significant, as our calculated t-value (1.86) is less than the tabulated t-value at .01 .05 level of significance. This confirms that the Kashmiri girls and Pakhtoon girls show similar academic achievement.

Conclusions

On the basis of analysis, interpretation and discussion; certain indications can be delineated which are given as under:

- Kashmiri students are more intelligent than the Pakhtoon students.
- The girls of Kashmiri and Pakhtoon schools are more intelligent than the boys of the respective schools.
- The Kashmiri boys are more intelligent than the Pakhtoon boys.
- The Kashmiri girls are more intelligent than Pakhtoon girls.
- Kashmiri students showed better academic achievement than Pakhtoon students.
- Kashmiri boys showed better academic achievement than Pakhtoon boys.
- Kashmiri girls showed better academic achievement than the Pakhtoon girls.
- Boys and girls of Kashmiri schools showed similar academic achievement.

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RURAL ELEMENTARY SCHOOL EDUCATION IN INDIA: A GENDER BASED STATISTICAL PROFILE

Dr. Virendra Pratap Singh*

Dr. Ranjit Kaur**

ABSTRACT

The present study provides a gender based statistical profile of rural elementary school education in India. The study concludes that the gender disparity vis-à-vis the gap between boys and girls in the Rural India is reducing for number of estimated rural child population, rural enrolment at elementary stages in different categories of schools, rural gross enrolment ratio (GER) at elementary stages and rural teachers in the elementary schools.

Keywords: Dakar Goals, Gross Enrollment ratio(GER), MDG, UNICEF, Universal Elementary Education(UEE)

1.0 Introduction

Education is a fundamental right for all children, including girls. Yet, as in many other areas of their lives, girls' prospects for education are diminished because of gender discrimination. The UNICEF's long-term goal is for all children to have access to complete education of good quality. The international goals connected to girls' education are as follow:

Dakar Goals (World Education Forum)

- Ensuring that by 2015 all children -- particularly girls, children in difficult circumstances and those belonging to ethnic minorities -- have access to and complete free and compulsory primary education of good quality.
- Eliminating gender disparities in primary and secondary education by 2005, and achieving gender equality in education by 2015, with a focus on ensuring girls' full and equal access to and achievement in basic education of good quality.

Millennium Development Goals

- Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling
- Eliminate gender disparity in primary and secondary education, preferably by 2005, and to all levels of education no later than 2015.

A World Fit for Children Goals

- Eliminate gender disparities in primary and secondary education by 2005, and achieving gender equality in education by 2015, with a focus on ensuring girls' full and equal access to and achievement in basic education of good quality.

***Dr. Virendra Pratap Singh** is Associate Professor at Department of Elementary Education National Council of Educational Research and Training ,Sri Aurobindo Marg, New Delhi – 110016.

****Dr. Ranjit Kaur** is Assistant Professor at Rayat Bahra College of Education, Sahauran, Mohali, Punjab

The last half-century, which was also the first half century of the independent India, had passed through an exciting stage of educational development. The National Policy on Education (*NPE* - 1986) defines goals of the Universal Elementary Education (UEE) in a broad framework, changing the emphasis from enrolment to participation, retention and achievement of satisfactory quality for all children upto the age of fourteen years (*GOI*, 2003: 9). The total eradication of illiteracy from rural area was still elusive; and country had stepped ahead with 40.79 percent or so illiterate rural people in the 21st century. These agreed goals may be achieved by directing resources towards bringing girls into the classroom and keeping them there until they complete their basic education. The Government of India has instituted several schemes and programmes to bridge disparities in education at all levels of education. However, this phenomenon continues to exist and pose a major challenge in contemporary India. One of the main reasons for this unfinished agenda is lack of attitudinal change. There is some indication that achieving equal access to education for boys and girls (gender parity in enrolments) leads towards progress in the education for all targets. As gender equality is a complex issue to measure, it is very difficult to assess the extent to which such increase in girls' enrolments translates into the empowerment of girls and women. In order to understand these complex issue, this paper analyses the rural elementary school education with regard to gender disparity and its direction in recent past decades in India.

2.0 Materials and Methods

The secondary data on key parameters of rural elementary school education in India with regard to gender disparity are collected from the Fourth, Fifth, Sixth All India Educational Survey (AIES) Reports, and Seventh All India School Education Survey (AISES) - Provisional Statistics. The data on estimated rural child population between the age of six and fourteen years, rural enrolment for boys and girls at elementary stages, rural gross enrolment ratio at elementary stages, rural enrolment in class I and terminal classes of primary (class V) and upper primary (class VIII) stages, rural teachers in primary and upper primary schools are collected from the referred survey reports (*NCERT* 1982, 1992, 1998, 2005).

3.0 Results and Discussions

We shall, now, present our major results on the elementary school education with regard to gender disparity to explore its direction in the rural India.

3.1 Estimated Rural Child Population

Table 1 set out the estimated rural child population in India from Fourth to Seventh survey. The primary stage children age group falls between ages 6 to those below 11 years, and upper primary stage children age group falls between ages 11 to those below 14 years, respectively (*GOI*, 2003: 21). Boys and girls for their analytical comparison further segregate the children category.

It is evident from the **Table 1** that between ages 6 to below 11 years, the growth in number of rural boys are nearly 53.66 per cent and this is marginally higher than growth in number of rural girls with respective figure of 52.65 per cent during Fourth to Seventh survey. However, the comparative gap between rural boys and girls between age 6 to below 11 years reflects an increasing trend that is 2470, 2577.99, 3001.14, and 4114.32 thousands in Fourth, Fifth, Sixth and Seventh survey, respectively. This increasing gap from Fourth to Sixth survey reveals an alarming growth of 66.57 per cent. Similarly, the gap between rural boys and girls between ages 11 to below 14 years are as follows: 1630, 1510.72, 2573.21, and 2973.49 thousands in the referred surveys at different points of time, which reflects a highly considerable growth (82.42 per cent) from Fourth to Seventh survey.

3.2 Rural Enrolment at Elementary Stage

Enrolment is defined as the number of pupils or students enrolled in a given level (viz., primary, upper primary, secondary and higher secondary stage) of school education, regardless of age. The elementary stage (Class I to VIII) of school education includes primary (Class I to V) and upper primary (Class VI to VIII) stage. **Table 2** presents the rural enrolment by boys and girls at elementary stage in different categories of schools from Fourth to Seventh survey in India.

The seventh survey reveals that nearly 12,31,42,548 children of all ages were enrolled at elementary stage in rural schools, which is an increase of nearly 95.80 percent in comparison to the Fourth survey. Boys and girls further segregate these children across the primary and upper primary stages as presented in **Table 2**.

The gap in rural enrolment between boys and girls at primary stage for classes I to V have reduced during Fourth to Seventh survey. This gap in rural enrolment is nearly 14350184, 13848523, 11652378, 6027882 in the Fourth, Fifth, Sixth and Seventh survey, respectively. However, the growth in gap from the Fourth to the Seventh survey for primary stage has reduced by 57.99 per cent. Similarly, the gap in rural enrolment for upper primary stage for Class VI to VIII has also reduced numerically from 4860446 to 4525766 during Fourth to Seventh survey, and a negative growth (–6.88 per cent) is observed between Fourth and the Seventh survey.

1.1 Gross Enrolment Ratio (GER)

The GER represents the number of pupils enrolled in a given level of education, regardless of age, expressed as a percentage of the population in the theoretical age group for the same level of education (*UNESCO Institute for Statistics*, 2004: 148). This ratio can often exceed one hundred percent because of late entrance or repetition and is an indication of the theoretical capacity of an education system to accommodate all children of that level of school age.

It is evident from the **Table 3** that the rural GER for boys at primary stage has decreased from 97.44 in the Fourth survey to 94.36 in the Seventh survey, whereas it has increased for girls from 59.57 in the Fourth survey to 89.91 in the Seventh survey. It reveals a negative growth (–3.16 percent) for the boys and a positive growth (50.93 percent) for the girls in rural GER. The gap between boys and girls in rural GER at primary stage from the Fourth survey to the Seventh survey is in decreasing trend and the respective figure for the Fourth, Fifth, Sixth and Seventh survey, is 37.87, 31.81, 31.42 and 4.45. The most significant reduction in gap between boys and girls in rural GER at primary stage is found during the Seventh survey, which might be attributed to the implementation of the *Education For All* policy in the country.

On the other hand, the rural GER has increased for upper primary stage from 43.08 during the Fourth survey to 56.23 during the Seventh survey for boys, and from 18.23 during the Fourth survey to 46.11 during the Seventh survey for girls, thereby, reflecting a growth of 30.52 percent for boys and 152.93 percent for girls in rural GER, respectively. Besides, the gap between boys and girls in rural GER stands at 24.85, 26.59, 20.09 and 10.12 during the Fourth, Fifth, Sixth and Seventh surveys, respectively.

3.4 Teachers in Elementary Schools

Teachers are considered the most valuable resource for a school. Teachers are defined as persons whose professional activity involves the transmitting of knowledge, attitudes and skills that are stipulated in a formal curriculum programme to students enrolled in formal educational institutions. **Table 4** presents the rural teachers in elementary schools during the Fifth to the Seventh survey in India. The data on the Fourth survey for rural teachers by sex for primary and upper primary schools were not available.

Quantitatively, around 24,44,748 teachers in the Seventh survey as against 19,00,007 teachers in the Fifth survey were available to teach the children in rural primary and upper primary schools, thereby, registering a growth of 28.67 percent during referred surveys in the country. The reported number of teachers is further distilled by sex. During the Seventh survey, the primary schools have engaged 14,14,975 teachers, whereas, 10,29,773 teachers are teaching in the upper primary schools in rural area in the country.

The participation of female teachers to educate the children in rural primary and upper primary schools has increased during the period 1978-2002. The percentage of female teachers in rural primary schools has an increasing trend that is nearly 20.94, 23.50 and 33.34 percent during the Fifth, Sixth and Seventh survey. Similarly, this percentage in rural upper primary schools is found nearly 23.48, 25.40 and 33.65 percent during the referred surveys. In addition, the strength of female teachers for primary and upper primary schools has gone up in terms of percentage growth during the Fifth to the Seventh survey, which is estimated to be nearly 90.96 and 105.02 percent for primary and upper primary schools in the country.

The gap between male and female teachers in the rural primary and upper primary schools has provided a reducing trend during the referred surveys. It is nearly 685872, 675744 and 471541 for primary schools and 382013, 388875 and 336653 for upper primary schools during the Fifth, Sixth and seventh surveys, respectively. Such reducing trends in gap between male and female teachers have negative growth, thereby, indicating a decrease in gender disparity in elementary schools in the country.

4.0 Conclusion

Based on the data analysis of the four successive educational surveys over a period of twenty-four years on school education, it can be concluded that the gender disparity vis-à-vis the gap between the boys and girls in the rural India is reducing in the estimate for number of rural child population, rural enrolment at elementary stages in different categories of schools, rural gross enrolment ratio (GER) at elementary stages and rural teachers in elementary schools.

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Table 1:
Estimated Rural Child Population in India, 4th to 7th Survey

Educational Survey (Year)	Estimated Rural Child Population (in Thousands)			
	Age: 6 to below 11 Years		Age: 11 to below 14 Years	
	Boys	Girls	Boys	Girls
4 th (1978)	34013	31543	18361	16731
5 th (1986)	37505.960	34927.972	22743.697	21232.976
6 th (1993)	45345.873	42344.728	24416.618	21843.408
7 th (2002)	52263.468	48149.155	31177.905	28204.417

Table 2:
Rural Enrolment at Elementary Stages in Different Categories of Schools in India, 4th to 7th Survey

Educational Survey (Year)	Rural Enrolment at Elementary Stages			
	Primary (Classes I to V)		Upper Primary (Classes VI to VIII)	
	Boys	Girls	Boys	Girls
4 th (1978)	33140942	18790758	7910325	3049879
5 th (1986)	39824661	25976138	12089291	5640427
6 th (1993)	42062680	30410302	13651758	7823354
7 th (2002)	49317841	43289959	17530257	13004491

Table 3:
Rural Gross Enrolment Ratio (GER) at Elementary Stages in India, 4th to 7th Survey

Educational Survey (Year)	Rural GER for at Elementary Stages			
	GER for Primary Stage (Classes I to V)		GER for Upper Primary Stage (Classes VI to VIII)	
	Boys	Girls	Boys	Girls
4 th (1978)	97.44	59.57	43.08	18.23
5 th (1986)	106.18	74.37	53.15	26.56
6 th (1993)	92.76	61.34	55.91	35.82
7 th (2002)	94.36	89.91	56.23	46.11

Table 4:
Rural Teachers in Elementary Schools in India, 5th to 7th Survey

Educational Survey (Year)	Rural Teachers in Elementary Schools			
	Primary School		Upper Primary School	
	Male	Female	Male	Female
5 th (1986)	932896	247024	551050	169037
6 th (1993)	975481	299737	589573	200698
7 th (2002)	943258	471717	683213	346560

PEDAGOGIES IN INCLUSIVE SETUP

Dr. Satveer. S. Barwal*

Seema Sharma**

ABSTRACT

Education is a lifelong process involving many planned and unplanned experiences that enable children and adults alike to develop and learn through mutual interaction with the society and culture in which they grow and live. Education also involves adaptation to society and culture. With all the combinations of life, events, adaptation will mean that each person is subject to a unique set of learning and problem solving experiences that constitute an understanding of the world and the events that take place in it. However, if we limit our attendance to intentional learning and instruction of children across the time from preschool to tertiary education, this would involve learning from a curriculum that has been determined by the central or state education authority. There are many children who, for some reason, are unable to take full advantage of the school curriculum as it is normally offered. For these children, special strategies must be used to ensure that they receive the opportunities and experiences, which will help them to learn and develop to the extent of their capabilities. This paper is an effort to unfold the teaching pedagogies which can be used to cater to the needs of all students in the inclusive setup.

Keywords: Collaborative Learning, Cooperative Learning, Inclusive Education, Peer Tutoring

Inclusive Education

Inclusive Education signifies the dictum, “Children who learn together, learn to live together.”

In inclusive education, the children with disabilities are educated in the “least restrictive environment” appropriate to meet their “unique needs.” In inclusion the children learn together and learn to live together. Inclusive education, as an approach, seeks to address the learning needs of specific groups of children, youth and adults who are vulnerable to marginalization, discrimination and exclusion. It implies that all learners, irrespective of certain forms of disability being able to learn together through access to common pre- school, schools and community educational setting. Only a flexible and liberal education system that focuses on assimilation can turn such possibility into reality. Inclusive education aims at all stakeholders in the system, inter alia, learners, parents, community, teachers, administrators and policy makers. The stakeholders are made to appreciate the diversity of learners and handle it as a humane opportunity rather than a social burden.

Teaching In Inclusive Setup or Inclusive Teaching

Inclusive teaching refers to recognizing, accommodating and meeting the learning needs of all students including children with special need. It acknowledges all such students that have a range of individual learning needs and belong to of diverse communities. A student with physical impairment may also have additional difficulty and bodily constraints. But, Inclusive teaching also avoids pigeonholing students into specific groups with fixed format to learning.

*Dr. Satveer. S. Barwal is an Assistant Professor at Delhi University.

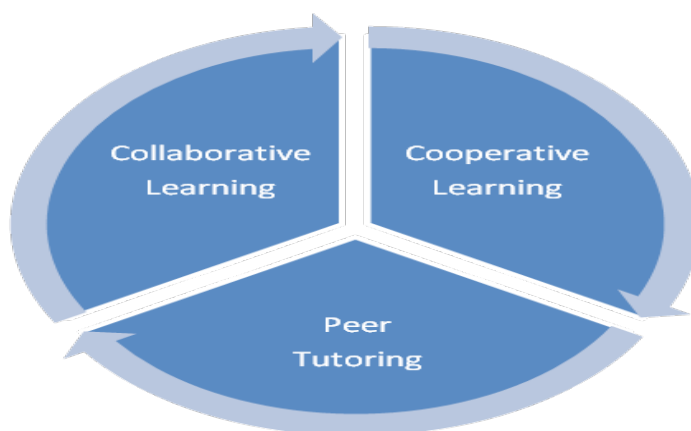
** Seema Sharma is Research Scholar at Mewar University.

Celebrating diversity lies at the core of inclusive teaching and it enhances the teaching and learning experiences of students as well as teachers. While inclusive teaching relates to all students, it is necessary for students from Indigenous cultures, low socio-economic backgrounds, students with disabilities, students from marginal social and/or cultural backgrounds.

Strategies for Inclusive Teaching

We have categorized the three-fold strategies to cope up with Inclusive Teaching as follows:

- I. Collaborative Learning
- II. Cooperative Learning
- III. Peer Tutoring



Strategies for Inclusive Teaching

I. Collaborative Learning

Collaboration among teachers is essential and necessary in Inclusive Educational Settings. Collaboration is a style that professionals choose to use in order to accomplish a goal they share. *Friend & Bursuck* describe how “any activity that teachers work with someone else requires collaboration” *Friend and Bursuck* further mention that “collaboration is how people work together, not what they do.”¹

Majority of educational centres provide inclusive education for students with and without disabilities. Teachers and associated educational staff support students in achieving academic skills as well as developing skills and attitudes to cope up with the biopolitical needs as good citizens. It is only through collaboration that ideas can be shared, refined and better strategies can co-evolve. A changing strategy can monitor students’ progress in a better way. True collaboration can enhance an effective inclusive education .

Characteristics of Collaboration

Friend & Bursuck (1999/1996) outlines the characteristics of collaboration to be:

- i. Voluntary.
- ii. Parity in relationships
- iii. Share a goal

- iv. Shared responsibility in key decisions.
- v. Shared accountability in outcomes
- vi. Shared resources.
- vii. Growing trust and respect.

Prerequisites for Collaboration

In order to create collaborative relationships among team members, Hwa Lee² summarizes following ingredients as essential:

- A. Reflecting on one's personal belief system:
- B. Refining interaction skills
- C. Contributing to a supportive environment: Administrative and staff support, teachers' effort to contribute to collaborative atmosphere, and the availability of time for collaboration.

Hwa Lee also stressed upon the need for proper communication skills for effective collaboration³ and summarized the steps under an eight-fold scheme:

1. Use knowledge of frame of reference to foster effective collaboration.
2. Recognize that shared problem solving begins with the understanding that there are many "right" answers for addressing student learning and behaviour.
3. Develop effective strategies for listening.
4. When someone shares a concern with you, avoid the temptation to offer advice immediately.
5. As much as possible, focus your interactions on observable information.
6. Use collaborative language; that is, ask questions that encourage others to speak.
7. Monitor how much you interact.
8. If you have a disagreement with a colleague, address it as soon as possible and in a straightforward manner.

Sometimes, consulting may become necessary to address the concerns of a team when divergent views cause impediment to implementation of effective strategy. Consultation is a specialized problem-solving process in which one professional who has particular expertise assists another professional who needs the benefit of others⁴. Hwa Lee explains the whole process of consultation in inclusive education. The *consultee uses the information* and expertise of consultants and other collaborators to provide direct service to the client. All who are involved including *consultants, consulter, and client are collaborators working together* in a combined effort to address a particular need. For example, a learning-disabilities consultant (consultant) may serve a new student (client) who has a learning disability indirectly by collaborating with the classroom teacher (consultee) who provides direct service to the student⁵

II. Cooperative Learning

Cooperative learning is an approach to organize classroom activities into academic and social learning experiences. Students are encouraged to work in groups to complete the two sets of tasks collectively. Everyone succeeds only when the group succeeds. Students are given structured activity in which each has individual responsibility and each has to also contribute to the success of the group. In such task-oriented groups, teachers

gain new insight about the capability of individual students and also their pitfalls. Diversity is celebrated, and all contributions are valued. There is parity among each member of the group and this allows sense of equity and fairness among the physically impaired students.

Cooperative and collaborative learning differs from traditional teaching approaches because students work together in congenial atmosphere rather than competing with each other individually.

Research suggests that cooperative and collaborative learning bring positive results such as positive intergroup relations, greater acceptance of mainstreamed students, and self-esteem. But, the effect has been on other important educational outcomes. These include liking school, development of peer norms in favour of doing well academically, feeling of individual control over the student's own fate in school and cooperativeness and altruism⁶

Cooperative Learning can be formal, informal and group- based. Brown & Ciuffetelli Parker⁷ discuss the 4 basic and essential elements to cooperative learning:

1. *Positive Interdependence*

Students must fully participate and put forth effort within their group

2. *Face-to-Face Interaction*

Students explain to one another what they have or are learning and assist one another.

3. *Individual Accountability*

Each student is accountable for their learning and work

4. *Social Skills*

These must be taught in order for successful cooperative learning to occur and the skills include effective communication, interpersonal and group skills

Cooperative Learning is advantageous for students as such process increases self esteem and self concept in general. For the marginalized groups, it is an antidote to exclusion and discrimination. Cultural and physically/mentally handicapped barriers are broken down that creates a conducive environment for positive interactions and friendships among each member on equal basis.

III. Peer Tutoring

A peer tutor is someone who is of a similar status as the person being tutored. In peer tutoring, both the tutor and the tutee are from the same grade and the peer tutor helps the peer tutee. There are many benefits for both the peer tutor and tutee in this relationship. The peer tutor can establish a rapport with the tutee in a way that a teacher cannot. A peer tutor is not bound to give any grade on the paper, whereas a teacher serving in a tutor role may still be perceived as someone who grades papers. This brings in a non-hierarchic atmosphere for the tutor and the tutee.

Various types of Peer Tutoring has been studied. Educationists have categorized these as Including Class Wide Peer Tutoring (CWPT), Peer-Assisted Learning Strategies (PALS), and Reciprocal Peer Tutoring (RPT).

There are various advantages of Peer Tutoring to school children. The student who provides the tutoring remembers and revises the learned material. Similarly, tutee student also learns fast as the student can discuss in non-intimidating atmosphere. Peer tutoring helps nurture new friendships. It has been observed that students involved in peer tutoring behave better in the classroom and show more engagement throughout the learning process.

Conclusion

The aforesaid discussion seeks out the way to bring in inclusive education at the doorstep of each child. Strategies like cooperative learning, collaborative learning and peer tutoring can facilitate the learners requiring special need with optimum development. These strategies can be utilized by the teachers or the resource persons engaged with the inclusive setup. In collaborative consultation the individuals with diverse expertise interact to provide services for children. Collaborative learning encourages shared responsibility. Another effective methodology which can be effectively practiced in the inclusive classroom is the cooperative learning. It helps in catering the individual differences as well as following the principle of constructive approach. Learners get full advantage of holistic development by engaging themselves in a group. Peer tutoring is quite effective in improving the relations among children from different ethnic groups as the tutor can establish a rapport with the tutee in a way that a teacher cannot. It provides the opportunities for better understanding, long retention and stress free learning. Collaborative, cooperative learning and peer tutoring can emerge as effective tools in inclusive educational setup.

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A COMPARATIVE STUDY OF ENGLISH COMMUNICATION SKILL OF STUDENTS STUDYING IN GOVERNMENT AND PRIVATE SCHOOLS

*Shashi Sharma**

*Dr. Neetu Chawla***

ABSTRACT

The importance of the ability to speak or write English has recently increased significantly because English has become the de facto global standard language. Learning English language has become popular for business, commerce and cultural reasons and especially for internet communications throughout the world. The study was conducted using 't' test to compare the communication skill in English, of higher secondary students of Government and Private schools of rural and urban areas of Ghaziabad district.

Keywords: Streams of School Education, Medium of Instruction, Elite Class, Competence, Proficiency, defacto standard, Call centre phenomenon, Cyber-technology

Introduction

The prevailing view across India is that unless students learn English, they can only work in limited jobs. Those who do not have basic knowledge of English cannot obtain good quality jobs. The votaries of English language also claim that without English language proficiency, one cannot communicate efficiently with others, or harvest the benefit of India's rich social and cultural life. Men and women, who cannot comprehend and interpret instructions in English, even if educated, are unemployable. They cannot help with their children's school homework everyday or decide their income options of the future.

In India, there are two basic streams of School Education, namely Government. Schools and Private schools, especially at primary level. Generally, the medium of instruction in Govt. Schools is either Hindi or regional Language and in Private Schools, it is usually English. At Lower Secondary and Higher Secondary level in Government schools, it is generally Hindi and in Private Schools it is usually English (with special reference to Uttar Pradesh). When students enter in the University Education, it is often found that they lack competence in either language the exception being the students coming from elite schools.

The students coming from Govt. Schools are found to be good at spoken Hindi, whereas spoken English is good among the students studying in Private Schools. However, both categories of students lack competence in both the languages, as has been generally observed. In their effort to learn English as a Primary language, the students are not learning either of the languages properly. This may be the consequence of the fact that though they are taught English in schools, they do not get the appropriate environment to practice it at their homes and social set-up to acquire fluency and proficiency in it.

Based on the above observations, I tried to compare the communication skill in English of the higher secondary students of Government and Private schools in rural and urban areas of Ghaziabad district.

* **Mrs. Shashi Sharma** is a Research Scholar at Mewar University, Chittorgarh and an Assistant Professor at Saraswati College of Professional Studies, Ghaziabad

** **Dr. Neetu Chawla** is the Head of Department of Education at R.C.C.V. College, Ghaziabad

Objectives of the Study

- To study the Status of English Communication Skills of the students studying at Higher Secondary level.
- To compare the English Communication Skills of the students studying at Higher Secondary level in schools in rural and urban area.
- To compare the English Communication Skills of the student studying at Higher Secondary level in government and private schools.
- To compare the English Communication Skills of the students studying at Higher Secondary level in government and private schools in rural area.
- To compare the English Communication Skills of the students studying at Higher Secondary level in government and private schools in urban area.

Hypotheses of the Study

- There is no significant difference between the English Communication Skills of the students studying at Higher Secondary level in schools of rural and urban area.
- There is no significant difference between the English Communication Skills of the students studying at Higher Secondary level in Government and Private schools
- There is no significant difference between the English Communication Skills of the students studying at Higher Secondary level in Government and Private schools in rural area.
- There is no significant difference between the English Communication Skills of the students studying at Higher Secondary level in Government and Private schools in urban area.

Methodology

The present study aims at exploring the status of communication skills in English at higher secondary level. For collecting data, the normative method of research was used.

Sample

Cluster Random sampling technique has been used. The sample of the present study includes 300 students studying at higher secondary level in Govt. and Private schools in urban and rural in Ghaziabad.

Government Schools in Urban Area

- **Kanya Vedic Girls Inter College**
- **S.D. Boys Inter College**

Private schools in Urban Area

- **D.D.P.S. Sanjay Nagar**
- **Greenfield Public School**

Government Schools in Rural Area

- **Sir Chhotu Ram Inter College, Muradnagar**
- **Kailashwati College, Arthala**

Private schools in Rural Area

- **Shaheed Memorial Public School**
- **Mother India Public School**

Tools

To fulfill the purpose of the study, the teacher prepared achievement test for English language and grammar test was constructed and standardized.

Statistical Techniques

The statistical techniques used in this study are the parametric statistics. To evaluate the status of Communication skills the coefficient of correlation was used, whereas, to see the difference between and among groups, the t- test was used respectively.

Analysis and Interpretation

The first objective of the study was to study the status of English communication skill at Higher Secondary level. For this purpose, the scores obtained by the students, were transferred on a seven-point scale. The table shows that the 0.33% students fall in the very poor category. 13% students came under the poor category. 42.67% students are in below average. 29.33% students fall in the average category. 12% students are under good category. 2.67% students fall in the very good category and no student is excellent.

Table: 1**English Communication Skill at Higher Secondary Level at Ghaziabad**

Result in Percentage	Percentage (%)	Category
43-49	0	Excellent
36-42	2.67	V. Good
29-35	12.00	Good
22-28	29.33	Average
15-21	42.67	Below Average
8-14	13.00	Poor
1-7	0.33	Very Poor

Thus, it may be concluded that students studying at higher secondary level are not very well developed in their communication skill in English.

This result shows that the communication skill of English language in District Ghaziabad at higher Secondary level in urban as well as rural areas are not good because no student has excellent skill and 72% has average or below average communication skill in English language.

C.1 Results Related to the Hypothesis – I

To test this hypothesis, the 't'- test was applied. Whole sample was divided into two groups according to the urban & rural students at higher secondary level.

Table: 2**‘t’ Value between Urban & Rural Students in Higher Secondary Level**

Particulars	Rural School	Urban School
<i>No. of students</i>	150	150
<i>Mean scores</i>	20.43	22.28
<i>Standard deviation (S.D.)</i>	5.85	7.16
SE_D		
<i>df</i>	298	
<i>t-value</i>	2.47	
<i>t-value in table at</i>	.01 level – 2.59	
	.05 level – 1.97	

The result obtained after statistical analysis shows the obtained t-value of 2.47. In the **Table 2**, t- values for degree of freedom 298 at the 0.5 level of significance is 1.97 and at .01 level of significance, it is 2.59. Obtained t-value is significant at .05 level of significance. On this basis ,the null hypothesis is rejected and it has been concluded that the difference between urban & rural students at higher secondary level is significant. Students studying in urban schools are better in their English communication skills.

C.2 Results Related to the Hypothesis –II

To test this hypothesis, ‘t’ test was applied whole sample was divided into two groups according to the Government and Private school students at higher secondary level in Ghaziabad district .

Table: 3**‘t’ Value between the Government and Private School Students at Higher Secondary Level**

Particulars	Government School	Private School
No. of students	150	150
Mean scores	19.31	23.41
Standard deviation (S.D.)	5.09	7.27
SE_D		
<i>df</i>	298	
<i>t-value</i>	5.69	
<i>t-entries in table (D) at</i>	.01 level – 2.59	
	.05 level – 1.97	

The result obtained after the statistical analysis show that the obtained ‘t’ value 5.69 in the **Table 3**. The t- value for degree freedom 298 at the .05 level of significance is 1.97 and at .01 level of significance it is 2.59. On this basis, the null hypothesis is rejected and it has been concluded that the difference between government and private school students at higher secondary level is significant and English communication

skills of students studying in private schools are better in comparison to English communication skills of students studying in government schools.

C.3. Results Related to the Hypothesis –III

To test this hypothesis, 't' Test was applied. Whole sample was divided into two groups upon criteria of the government and private school at higher secondary level.

Table: 4

't' Test between Rural Government and Private Schools at Higher Secondary Level

Particulars	Rural Government School	Rural Private School
No. of students	75	75
Mean scores	20.06	20.8
Standard deviation (S.D.)	5.05	6.52
SE _p		
df	148	
t-value	0.78	
t-entries in table (D) at	.01 level – 2.61	
	.05 level – 1.98	

The result obtained after statistical analysis shows that the obtained 't' value is 0.78. In the **Table 4**, 't' value for degree of freedom 148 at the .01 level of significance is 2.61 and at .05 level of significance, 1.98. On this basis, the null hypothesis is accepted and it can be concluded that there is no significant difference between students studying in rural government and private schools in regard to English communication skills.

C.4. Results Related to the Hypothesis – IV

To test this hypothesis 't' test was applied whole sample was divided into two groups according to the urban government and private students at higher secondary level.

Table: 5

't' Test between Urban Government and private School Students at Higher Secondary level

Particulars	Urban Government School	Urban Private School
No. of students	75	75
Mean scores	16.02	18.54
Standard deviation (S.D.)	7.08	4.95
df	148	
t-value	7.48	
t-values in table (D) at	.01 level – 2.61	
	.05 level – 1.99	

The result obtained after statistical analysis show that the obtained 't' value is 7.48. In **Table 5**, the 't' value for degree of freedom 148 at the .01 level of significance is 2.61 and at 0.5 level of significance, 1.98. On this basis, the null hypothesis is rejected and it was concluded that the difference between urban private and private schools is highly significant. English communication skills of the students studying in urban private schools are better.

Findings of the study

Findings related to the status of English communication skills of students at higher secondary level in Ghaziabad district are as follows:

1. The competency and the ability of the 0.33% students fall in very poor category. 13% students came under poor category. 42.67% students are in below average. 29.33% students fall in average category. 12% students are under good category. 2.67% students fall in very good category and no student is excellent.
2. It has been concluded that the difference between urban & rural at higher secondary level is significant. Students studying in urban schools are better in their English communication skills.
3. It has been concluded that the difference between government and private school students at higher secondary level is significant and English communication skills of students studying in private schools are better in comparison to English communication skills of students studying in government schools.
4. It has been concluded that there is no significant difference between students studying in rural government and private schools with regard to English communication skills.
5. It was concluded that the difference between urban private and government schools is highly significant. English communication skills of the students studying in urban private schools are better.

Findings of the Study related to speaking Skills

For the present investigation, "Skill Based Achievement Test" was prepared for higher secondary level students in English language to measure their communication skill in English. This Communication Skill test included test of comprehension, vocabulary, grammar, & composition. Although the test is an ideal measure of all communication skills like speaking, reading, & writing, significant effort have been made to adjudge listening & speaking skill in a more reliable way by recording. Hence a short "*Interview schedule*" was developed & audio recording was done to evaluate speaking and listening skill in English language. The interview schedule includes three types of questions as under:

1. *General introductory questions: Name, Class, Hobbies etc.*
2. *Speaking a few lines on some issues such as festivals they celebrate, about the school, any current issue etc.*
3. *Reading a passage*

While analyzing the data following components were taken into consideration (considering the objectives of teaching language).

1. *Vocabulary*
2. *Pronunciation*
3. *Fluency & accuracy*

4. *Stress & Intonation*5. *Punctuation*

By implementing this proposal, the investigators believe, will help in ascertaining the magnitude of each achievement in the study as well as in ascertaining the validity of the hypotheses.

Conclusion

At Higher Secondary level, Mean scores in English communication skill (listening & speaking) was found to be 11.4. The reason behind such skewed result is that the present period is a period of transition. We are constantly emphasizing the need and importance of English language, but our home environment surrounded by mother tongue constantly interferes. Hence, children find themselves free in communicating with Hindi languages in spite of the pressures exerted by the society to adopt English language.

Suggestions

The present study was an attempt to ascertain the status of communication skills at higher secondary level to provide suggestions to enhance the skill. Researcher made an intensive effort to find out the barriers in communicative & competence measures so that the same can be significantly lowered. The researcher purports to provide following suggestions to develop communication skills in English at higher secondary level:-

- Enrich The Organizational Climate
- Parental Concerns
- Exposure to the Real Language
- Pay Heed to Individual Student
- Using Literature
- Encourage Student to Verbalize their Knowledge
- Teaching through communicative Approach
- Application of Skill Approach
- Teacher As Participant in Language Learning Task
- Develop Self Instructional Material
- Exposure to Language Laboratory

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STUDENTS' ATTITUDE TOWARDS PHYSICAL ACTIVITY- A STUDY OF GENDER & CASTE DIFFERENCES

Arun Kumar Tyagi*
Dr. Ajay Kumar**

ABSTRACT

The purpose of this study is to investigate the differences in attitude towards physical activity of college students in relation to their gender and caste group. The sample consisted of 400 students comprising set of 100 each of Scheduled and Non-Scheduled Caste boys, and of Scheduled and Non-Scheduled Caste girls aged between 18 to 23 years. The Physical Activity Attitude Scale (PAAS) constructed by J. Bhullar (1976) was utilized to collect the data from the sample. The 'mean' and 't-test' were used for statistical treatment of the data. The mean score disclosed the differential attitude on both parameter- gender and caste. While the mean score for boys at 275.58 was higher than that of girls 266.65, the same figure for Non-Scheduled Caste students was 273.60 in comparison with the Scheduled Caste students with mean score of 268.63. The t-ratio between boys and girls was quite significant with score of $t = 2.95$. The same figure for Non-Scheduled Caste and Scheduled Caste students was insignificant with $t = 1.63$.

Keywords : activity preferences, Attitudes Toward Physical Education Activity, Perception, value of program, Physical Education, , theoretical framework

Introduction

Human body is one of the most beautiful as well as the most complex thing nature has created. The intelligent ways in which this unique creation acts, reacts and interacts is a rare extraordinary phenomenon. The same idea is indicated in the following shloka from the Veda—

'sharirmadhyam khalu sadhanam'

(Sound body is prime means of any religious duty.)

It has been accepted that physical activity is the main cause of Physical Activeness. Physical Activity has been defined by the US Department of Health and Human Services as 'Any bodily movement that is produced by the contraction of skeletal muscles and that substantially increases the amount of energy you expend'. (USDHHS, 1996).

Therefore, it should be an essential part of life. Ajay Kumar (2008) expressed that Physical Activeness depends on mainly two factors. One is balanced diet which gives us required energy to do the daily work. Other is the Physical Activity which has come in the new educational, systematic & scientific form of discipline as Physical Education. Harold M. Barrow(1983) defines *Physical Education* as "an education of and through human movement where many of the educational objectives are achieved by means of big muscles activities sport, games, gymnastics, dance and exercise" ¹

*Arun Kumar Tyagi is Research Scholar, Deptt. of Physical Education, Mewar University, Gangrar, Chittorgarh, Rajasthan

** Dr. Ajay Kumar is Assistant Professor & Head, Deptt. of Physical Education & Sports, R.B.A.Govt. Degree College, Gajraula, Amroha, U.P.

Physical education is necessary for the total development of human beings and to stay healthy and active for a longer time by delaying ubiquitous biological senescence. Physical Education gives us a scientific knowledge related to the body movements through different types of physical activities like games & sports. Physical Education activities that include inter alia, Games & Sports are the most potent factor in keeping an individual physically healthy, active and mentally alert.

Kothari Education Commission (1964-66) emphasized that physical education activities and sports do contribute not only to physical fitness and health but also to physical efficiency, mental alertness and development of certain qualities like perseverance, team spirit and many other values of life processes and high achievements.

Commenting on the importance of Physical Activities, *Robinson and Shaver* (1969)² had shown that sports participation in general is positively correlated with the development of psychological, physical and physiological well-being and the people who are active in a variety of ways in such activities tend to report a higher degree of emotional well being, life satisfaction, perceived happiness and physical fitness.

C.E. Willgoose (1984)³ views that physical education should be part of every individual's total education. Vigorous activity is a physiological necessity for optimum health and well being. Through physical education, a person learns the satisfaction and joy of movement, exercise and activity. The individual acquires adequate physical movement skills and maintains muscle tone as well as cardio-vascular efficiency. Participation in physical education provides a means to maintain and extend endurance, strength and flexibility. It can also be a physically beneficial and socially acceptable means to release tension; but more than that, it can be a social participation in which one can grow to know one's self.

It is clear from the literature that the development of an acceptable level of physical fitness which would help to attain certain healthy personal and psychological characteristics and a better healthy living are universally accepted as a goal of physical education programme. Physical educators and teachers have postulated that social acceptance and educational conditions in addition to physical education activities and games provide excellent media through which better physical fitness, personality characteristics, values, adjustment in different areas and attitude could be developed. Here, attitude is the root factor to develop such qualities. It is imperative to conduct an attitudinal evaluation of youths towards physical activity. With this avowed objective, the investigator made an attempt to study the varying attitude on gender and caste basis towards the physical activities, since no such study was conducted with this approach in Indian condition.

Statement of the Problem

"Students' Attitude towards Physical Activity: A Study of Gender & Caste Differences"

Purpose of the Study

The purpose of this study is to evaluate the students' attitude towards physical activities.

Hypothesis

Following is the hypotheses which were being tested through empirical studies:

1. There would be significant difference between the attitudes of boys and girls towards physical activity.
2. There would be significant difference between attitudes of non-scheduled castes and scheduled castes students towards physical activity.

Delimitations

Taking into consideration the time and the resources available with the investigator, the study has been

limited to the following aspects:

1. The sample consists of students of graduate classes, who are studying Physical Education as a compulsory subject.
2. The sample consists of the boys and girls aged between 18 to 23 years.
3. The study is further limited to the student of different colleges affiliated to the M.J.P. Rohilkhand University, Moradabad, and U.P.
4. The study is further limited to the Moradabad Region only which comprises four districts of Rampur, Bareilly, J.P.Nagar and Moradabad.
5. The study is further limited to the following scale: Physical Activity Attitude Scale (PAAS) developed by J. Bhullar (1976)⁴.
6. The Study is further limited to the set up of significance level 0.05.

Variable

Independent Variable

- | | | |
|--------------------|------------------------|--------------------|
| 1. Gender – | A. Boys | B. Girls |
| 2. Caste – | A. Non-Scheduled Caste | B. Scheduled Caste |

For the purpose of this study, the scholar divided the total population into two categories i.e., Scheduled Caste (SC) and Non-Scheduled Caste (NSC).

Scheduled Caste populations are those population who have been certified by the State or Central Government in light of the Indian Constitution. Rest of population has been categorized as Non-Scheduled Caste.

Dependent Variable

Attitude towards Physical Activity

Method

Sample of the Study

The subjects for this study were 200 boys and 200 girls selected from 8 different colleges of Moradabad region. 100 boys and 100 girls were taken each from the Non-Scheduled Caste category and the Scheduled Caste category. These colleges from the M.J.P.Rohilkhand University were selected through lottery system.

Tool

As a tool, 'Physical Activity Attitudes Scale' of J. Bhullar (1976) was used.

Sampling Technique

'Stratified Random Sampling' was used to select the subject for the purpose of collecting data for this study.

Data Collection

For sampling the students, office record from each college was checked and a list of graduate class students was prepared. These students were treated as the subjects for the empirical study and they were requested to write their response on the inventories. Instructions given in the manual were followed. No time limit was prescribed to the subjects to complete the Physical Activity Attitude Scale, but it was categorically

mentioned that subjects should try to fill in the responses preferably within 20 minutes. The investigators conducted the testing programme and collected data in different colleges on the same pattern.

Statistical Technique

The 't-test' was used for testing the hypotheses.

Data analysis, results & discussion:

In the present study, the data obtained from four hundred (400) subjects on the basis of their responses on Physical Activity Attitude Scale, were tabulated and analyzed using "mean and t-test" statistical techniques.

The results are presented in table no. 1 to 4.

Table No.1

Mean Scores of Attitude towards Physical Activity of Boys and Girls

Gender	N	Mean
	NSC + SC = T	
Boys (A_1)	100 + 100 = 200	275.58
Girls (A_2)	100 + 100 = 200	266.65

Table No.1 represents the mean scores of Attitude towards Physical Activity of boys and girls of selected college students. With a mean score of 275.58, boys show more favorable attitude among boys towards physical activity in comparison to the girls with mean score of 266.65.

Table No. 2

Mean Scores of Attitude towards Physical Activities of Non-Scheduled Caste and Scheduled Caste Students

Castes	N	Mean
	Boys + Girls = T	
Non-Scheduled Caste (B_1)	100 + 100 = 200	273.60
Scheduled Caste (B_2)	100 + 100 = 200	268.63

Table No. 2 represents the mean scores of Attitude of Non- Scheduled Caste and Scheduled Caste students towards Physical Activity. Non-Scheduled Caste subjects with mean score of 273.60 is favorably disposed towards the Physical Activity in comparison with the attitude of Non-Schedule Caste with a mean score of 268.63.

Table No.3

Mean Score of Attitude towards Physical Activity of Non-scheduled Caste and Scheduled Caste Boys and Girls

	Non-Scheduled Castes		Scheduled Castes	
	Boys	Girls	Boys	Girls
Number	100	100	100	100
Mean	276.50	270.70	274.66	262.60

Table No.3 represents the mean score of attitude of Non-Scheduled Caste and Scheduled Caste boys and girls towards physical activity. The mean for Non-Scheduled Caste boys is found to be 276.50; whereas for Scheduled Caste boys, the value was 274.66 . The respective mean value for the Non-Scheduled Caste girls and Scheduled Caste girls was found to be 270.70 and 262.60 respectively. Thus the mean score of Non-Scheduled Caste boys shows more favorable attitude in comparison with that of Scheduled Caste boys and Non-Scheduled Caste girls shows more favorable attitude as compared to Scheduled Caste girls.

Table. 4

Significance of Difference Between the Attitude of Students towards Physical Activity on the Basis of Gender and Caste Wise

Variable	Subject	N	Mean	SD	T-ratio
Gender (A)	Boys	200	275.58	29.140	2.95*
	Girls	200	266.65	31.320	
Caste (B)	N-SC	200	273.60	31.405	1.63
	SC	200	268.63	29.520	

* Significant at 0.05 level of Confidence

Table No. 4 reveals that there is a statistically significant difference between the attitude of boys and girls. However, the attitudinal difference that exists is not significant between non-scheduled and scheduled caste students.

The finding of present study is dissented from the findings of the study conducted by J. Bhullar (1976) on Male and Female students. Bhullar had measured attitudes on a physical activity attitude scale constructed and standardized by him which consisted of 70 items. Scoring was done on the basis of Scale Product Technique by giving weight for each response category in the Likert fashion and then multiplying the same with scale value of the statement.

In the present study, the obtained value of 't'-ratio is 2.95, which is quite high in comparison to the value of t'-tabulated. Hence, we can say that there is significant gender difference between attitude of boys and girls towards physical activity.

Table No.4 further reveals that for caste (non-scheduled caste and scheduled caste), the value of t'-ratio is 1.63 which is less than the value of t'-tabulated. This indicates that there is insignificant statistical difference between attitude of the non-scheduled caste and scheduled caste towards physical activity.

The first hypothesis stands complemented from the empirical study while the second one stands unproven at 0.05 level of confidence.

Conclusion

The present study has indicated that the majority of the boys respondents had more favorable attitude towards physical activity in comparison to girls respondents. Similarly the majority of non-scheduled caste students also held favorable attitude towards physical activity in comparison with scheduled caste students, on the basis of obtained mean scores. Significant difference has been found between boys and girls. However, the attitudinal difference between non-scheduled caste and scheduled caste students was found insignificant towards physical activities.

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RIGHT ATTITUDE IN TEACHING PROFESSION

Dr. Neetu Chawla *

Ashish Kumar Mittal **

ABSTRACT

Teaching is a great profession which not only provides opportunity to build lives of children, but also the health of the nation. Teacher occupies the in-between of the educational system. Until and unless, teachers have right attitude, they cannot elevate themselves into a role model for the young students. Students learn through their role models both in and out of classrooms. There have been various constraints to inculcate right attitude in teachers and to retain teacher in one centre for education for long to allow an individual to emerge as a role model. This paper discusses the new understanding about generating proper attitude among educators.

Keywords: Barriers in teaching, Class Room Teaching, Quality Of Teaching, Teachers' Attitude

Introduction

Teaching is an art .The quality of teaching depends upon love, dedication and devotion of the teacher towards the subject of the knowledge as well as students. But, it is the attitude which holds paramount in determining the proper transaction of knowledge and experience between the teacher and the student. *Gordon Allport*(1935) defined an attitude "as a mental and neural state of readiness, organized through experience, exerting a directive or dynamic influence upon the individual's response to all objects and situations with which it is related."¹ People's attitudes towards their profession have an effect on their performance.

Attitude as a concept is concerned with an individual's way of thinking, acting and behaving. It has very serious implications for the learner, the teacher, and the immediate social group with which the individual learner relates and the entire school system.

Attitudes are formed as a result of some kind of learning experiences. These may be learned simply by following the example or opinion of parent, teacher or friend. Even imitation has a part to play in the teaching and learning situation. The learner draws from teachers' disposition to form his own attitude, which may likely affect his learning outcomes. In an observational theory, *Bandura* (1971) demonstrated that behaviours are acquired by watching another (the model, teacher, parent, mentor, and friend) that performs the behaviour.²

A good teacher shows the right path that the students should follow and nourish the human resource for further development of the nation at large. Teaching job offers an opportunity to earn one's living and to engage in one of the oldest and noblest profession. Some people find teaching jobs appealing as it entails the engagement in various extracurricular and other activities of the institution. No doubt, the teaching profession is attracting massive number of young people in the recent years and the number of private and government educational institutes are increasing at astronomical pace both in India and across the world. There are multiple

***Dr. Neetu Chawla** is the Head of Department of Education at R.C.C.V. College, Ghaziabad.

****Ashish Kr. Mittal** is the Head of Department of Mathematics at Indirapuram Public Sr. Sec. School, Indirapuram, Ghaziabad.

areas of specialization for becoming a teacher that includes, inter alia, teaching at nursery schools, primary schools, middle schools, high schools, colleges, universities, institutes, special schools etc. Different type of expertise is required to handle work at each level. But, across the teaching spectrum, the teachers must inculcate basic quality of being patient, perseverant, ready to adapt to the demands of the students and exuding a pleasant personality. Students should look up to a teacher with admiration and respect and should not be wary of him/her. To inculcate the basic expertise for the teaching profession, various courses are in vogue for different level in India.

Courses in Teaching

Pre-primary:

Most polytechnics and vocational training centers conduct training for pre-school teachers. The preferred eligibility is Class XII with 50% aggregate. Personal attributes are, however, more important. There are Montessori teacher training schools which are privately owned in some large cities.

Primary teacher training:

Teachers with Diplomas in Education / Bachelors in Education teach the primary classes. Graduates of Home Science also serve as primary teachers.

Secondary and senior secondary teachers:

Teachers having Bachelor in Education(B.Ed) Degrees after graduation are called Trained Graduate Teachers (TGTs), while those completing after post graduation are known as Postgraduate Trained Teachers (PGTs). These courses are imparted in various teacher's training colleges.

To be a successful teacher, one has to be passionate about the subject that one is teaching. It is one's interest in the subject that can secure one's future. Teaching should not be taken up as a back-up option. It should be taken up only if one strongly believes in oneself as a mentor because teachers are responsible for the future of novice students.

Teaching requires enormous patience, and there is no ready-made formula for good teaching. Studies on effective teaching demonstrate that there are nearly as many successful styles as there are successful teachers.

Many good teachers recognize that their strengths are valuable and required even outside the classroom. The impulse of meaningfully engage with the lives of the people lead many teachers to actively engage outside school to serve their wider community.

Plurality and diversity to overcome the problems of schooling for marginal communities is essential. Research suggests that some minority students do better when they are in classrooms with teachers of the same race and ethnicity.³ Encouraging highly qualified, highly motivated minorities to enter the teaching profession, therefore, can help close the achievement gap. Keeping those teachers, through mentoring and support during the first few years, is just as important.

Many new and mid-career teachers don't make teaching a long-term profession. Nearly half of new teachers quit within five years, and half of those who teach in urban schools leave within just three years.⁴ Edward J. McElroy, the President of the American Federation of Teachers, lambasted the present level of teacher attrition. He wrote, "*The schoolhouse door has become a revolving door.*" Such rate of leaving schools are higher in schools with low academic achievement, leading many to conclude that policies to reduce teacher attrition are needed in order to improve student achievement. High attrition would be particularly problematic if those leaving were the more able teachers.⁵ This kind of affair cause tremendous harm to the students who need committed teachers with whom they can develop rapport on long term basis..

Leaving the Profession

The most obvious common reason that teachers leave the profession is due to low salary and poor retention policy by the management. Salary of teachers in private schools lag far behind those of many other service profession. The implementation of the new wage scheme commensurate with the Sixth Pay Commission have made some progress to ameliorate condition of teachers working in the public sector or acclaimed public schools, but there is still a long way to go. Apart from the low pay, there are other mitigating factors that drive teachers away. Teachers are frustrated with high expectancy, multi-tasking, excessive bureaucracy, dilapidated infrastructure and growing class sizes. Teachers are under intense pressure to deliver from both management and parents side. But such constraints divert much of their efforts from tendering to the students to handling multifarious activities.

Attitude and Performance

There has been a general agreement that the attitude of teachers towards teaching is significantly correlated with teaching success. In general, it may be concluded that there are indications that teacher's attitudes have a positive relation with success in teaching.⁶ According to *Bradley* (1995), inadequate funds of schools, lack of parent and community support, and insufficient salaries are examples of those factors.⁷ *Merchant* (1992)⁸ added the role of experience to the factors influencing teachers' attitudes for their profession. *Dodeen et al.* (2003) found that female teachers have more positive attitude than male teachers.⁹ The attitude and expectation of society in general and of the family of the learner effect how learning is viewed and how teaching is organized. These attitudes and expectations vary from society to society and attempting to copy learning and teaching strategy from one society into another, without trying to adapt into the local conditions may not be successful (*Derebssa*, 2006).¹⁰

Teachers' attitudes towards their students in school must be favorable enough to carry students along. The role of the teacher as facilitator of learning and the contributions to students' achievement is enormous. *Ejiogu* (1999) was of the view that in order to improve any aspect of education, it is therefore imperative to involve a well articulated teacher education programme that will prepare the teacher for the leadership role they are expected to play.¹¹

No nation can fully develop without harnessing the potential of its citizenry. Educational system is the bedrock of modern civilization which carries the weight of not only human development, but also the socio-political empowerment of the citizenry. It is necessary thereof to introduce quality into the educational system. But, the hub of the system is the teacher. Without motivated teachers with right attitude, the desired output cannot be obtained.

Conclusion

Teachers should guard against creating unrealistic expectations among students. It is necessary for teachers to remain cheerful and deploy humor to generate ease and inter-subjectivity among students in the classroom. A sense of humor also makes class more enjoyable for our students and induces students to look forward to attend classroom further. A sense of humor allows one to see the joy in life and makes one a happier person as one drifts through this stressful career.

It is appropriately stated by Dan Rather that the dream begins with a teacher who believes in you, who tugs and pushes and leads you towards the next plateau, sometimes poking you with a sharp stick of 'truth'.

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DOMESTIC VIOLENCE –REASON AND REMEDY

Sham Chand*

ABSTRACT

The domestic violence against women is rampant in Indian condition. Apart from deep rooted patriarchy and retrograde customs like dowry, various psychological conditions aggravate the insecurity of woman. The Parliament legislated the Protection of Women from DV Act, 2005 to provide legal support to the victims. But, the low rate of conviction under the Act raises calls for much stringent law and revamp within judiciary so that the law acts as preventive deterrent and provide succour to millions of suffering woman victims.

Keywords: Domestic Violence Act, patriarchy, torture

Introduction

According to the United Population Fund Report, “as many as 70 per cent of married women in India between age of 15 and 49 are victims of beating, rape or coerced sex”.¹

According to the National Family Health Survey-III, over 40 per cent of the Women surveyed reported being beaten by their husband at some point of time. Over 51 per cent of men didn't find anything wrong with assaulting their wives. More shockingly, around 54 per cent of women and men surveyed thought that such violence was justified on some ground or other.”²

It is interesting to note at this juncture that above said facts have come into light in a society where women are worshiped as goddess. We feel proud to sing paeans in honour of Rani Jhansi. The economic centre of the country is named after Mumba Devi. Country's pride is lifted by likes of P.T.Usha, Anju George, Karnam Malleshwari, Sania Mirza, Saina Nehwal. However in spite of all these , we do not hesitate to burn someone's else daughter , if she is not financially beneficial and kill our daughter in the name of honour and give second class treatment in education and other life enhancing opportunities to a daughter comparing to the son.

Keeping in mind the treatment being met to the girl or women in the society, it always clicks our mind to think that what has failed -society as a whole or the law made by it to curb such type of crime?

Domestic Violence

Basically, Domestic Violence is a “*pattern of coercive and assaultive behaviours that include physical, sexual, verbal and psychological attacks and economic coercion that adults or adolescents use against their partner*”³.

It is violence towards someone who we are in a relationship with, be it wife, husband, son, daughter, father, grandfather or any other family member. It can be a male's or female's atrocities towards another male or a female. Anybody can be a victim and victimizer. This violence has tendency to explode in various manner such as physical, sexual or emotional.

* **Sham Chand** is Research Scholar at Faculty of Law, Mewar University, Chittorgarh, Rajasthan.

In particular, Domestic Violence also includes harms or injuries which endanger women's health, safety, life, limb or well-being, whether mental or physical. It may also be caused through physical, sexual, verbal, emotional and economic abuse.

Domestic Violence Tactics

In general, the types of Domestic violence actions perpetrated by abusers include physical, sexual, verbal, emotional and psychological tactics. For example:

Physical Tactics:- Pushing and Shoving, Restraining, Pinching and Pulling hair, Slapping, Biting, Kicking, etc.

Sexual Tactics: Raping or forcing the victim into unwanted sexual practices, objectifying or treating the victim like a sexual object, forcing the victim to have an abortion or sabotaging birth control methods.

Verbal, Emotional, and Psychological Tactics: Using degrading language, insults, criticism, screaming, harassing, refusing to talk, humiliating the victim privately or in the presence of other people, controlling where the victims goes, who he or she talks to, and what he or she does.

Threats and Intimidation: Breaking and smashing objects or destroying the victim's personal property, glaring or staring at the victim to force compliance, intimidating the victim with certain physical behaviours or gestures, displaying or making implied threats with weapons.

Economic Coercion: Preventing the victim from obtaining employment or an education, withholding money , prohibiting access to family income, forcing the victim to hand over any income etc.

Cause of Domestic Violence

Some People believe domestic violence occurs because the victim provokes the abuser to violent action while others believe the abuser simply has a problem managing anger. In fact, "*the roots of domestic violence can be attributed to a variety of cultural, economic and psychological factor*."⁴

Deep rooted problem of dowry is also contributing to domestic violence towards women to a great extent. Apart from all these, psychopathology, substance abuse, poverty, cultural factors, anger, stress, and depression are often thought to cause domestic violence, however there is little empirical evidence that suggests these factors patriarchy, torture as direct causes of domestic violence. Though, research suggests that such causes can affect its severity, frequency and the nature of perpetrator's abuse.

Further , the most common causes for women stalking and battering include, inter alia, exploitation of women for demanding more dowry, discrimination of women, alienation of women's self-acquired property fraudulently , torture by husband and in-laws of the husband, arguing with partner, refusing to have sex, going out of home without telling partner, indulging in extra marital affairs, insulting and using vulgar language.

Remedy

As a remedial measure, the Parliament of India has passed legislation called, "*The Protection of Women from Domestic Violence Act, 2005*." Under this Act, several provisions have been made to protect the women from domestic violence. Now every women who have been deprived of their right to life by the act of husband or relatives of the husband, can file a complaint to the protection officer, police officer or magistrate in the form of '*Domestic Incident Report*' and a complaint can also be filed by the relative of the victim and it is considered as a prima facie evidence of the offence. Under this Act, the Protection Officer is empowered to pass certain orders like protection of the women and order of monetary relief to the victim etc.

Path Ahead

According to 2000 study by the National Law School of India University, it was observed that there were an extremely low number of convictions in a large sample of domestic violence cases in various Indian courts. The study cites the need for more systematic and thorough record keeping throughout all levels of the Indian court system, as well as the imperative need for more clarity in current legislation that provides a very unclear definition of what domestic violence even is. This allows for cultural biases, social (patriarchal) structures, institutional structures and gender disparities to cloud the nature of many of these cases, and is a major reason why the vast majority of husbands charged with any form of domestic abuse tend to be acquitted⁵.

In view of the above said facts, the solution of domestic violence lie, firstly in understanding of mutual and human relation which we inherits from our culture and in particular, respect towards human values and the women in more practical way and secondly, the Indian Parliament must come out with a more stringent laws to protect the rights of women who are victims of violence of any kind occurring within the family, so that it would work as preventive measure to eradicate the crime.

It would not out of place to mention here that an awareness program for protection of women should be launched by the Government because domestic violence in one or another way, affects the national productivity and lesson to protect and respect the women should be given from basic education level as men and women both participate equally in national growth.

Finally, last but not least, prosecution shortcoming in handling of domestic violence case must be addressed and conviction rate should be increased in cases like domestic violence to create fear in the mind of violator or abuser.

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DOMESTIC VIOLENCE IN INDIA

Ms. Sudha Chaudhary*

ABSTRACT

Domestic violence is one of the most common crimes against women which is inextricably linked to the perpetuation of patriarchy. Domestic violence refers to violence against women not only in matrimonial homes but also in live-in relationship. Domestic violence is recognized as the significant barrier in the path of women empowerment and also skews the democratic set up of the polity. India has specifically legislated Domestic Violence Act in 2005 to reduce the violence against women but the same has bore mixed result as of now. The paper examines the domestic violence in multi-dimensional perspective.

Keywords: cognizable crimes, domestic violence, human rights, NCRB, patriarchy

Introduction

In ancient India, women enjoyed a significant role not only at home but in the society as whole. Many a Vedic hymns are attributed to the woman sages. The dialogue between Gargi and Yajnavalkya in the Brihadaranyaka Upanishad reflects the position that women held in the public sphere. The woman was the apostle of the Matrri-shakti. The kings and the priests always held and propagated that the prosperity depends upon the respect that a household shows towards the women and the Kingdom would be visited by inauspicious events in case the woman was harassed by the subject. The Turkish and Afghan invaders changed the gender equation in the sub-continent. The locals having lost the battle into subjection were coerced to hand over their women. The invaders always came single on horse back without accompanied by their families and they sought subjection rules to be written over the body of the women in the conquered territory. To protect the honour and chastity of the women became a major societal aim for the local population. The purdah system became in vogue for Indian women. A series of superstition and oppressive customs were manufactured that confined women within the four walls of their house. The status of women was reduced to the status of a maid, and merely a source of progeny. The patriarchy dominance was total. The male dominant society would not give women due regard and respect and the system continues to linger in the twenty first century. Every day we hear and read about atrocities inflicted upon women by their own husbands for whom they live and die.

Women have inherent ability for compassionate understanding. She is hardworking and many anthropologists argue that it were women who discovered the art of agriculture as well as culture. Women are bold to take initiative and she produce and nurture the progeny. In spite of multifarious qualities, the women have rarely been treated at par with the men in the patriarchal system. Women face discrimination, exploitation and violence. Violence against women and girls has spread into a global epidemic. This has debilitating effect over the performance of the women. She is harassed physically, psychologically, sexually and economically. It is one of the most pervasive of human rights violations, denying women and girls, equality, security, dignity, self-worth, and their right to enjoy fundamental freedoms at par with men.

* Ms. Sudha Chaudhary is a Research Scholar at Mewar University, Chittorgarh, Rajasthan.

Violence against women is present across the world cutting across boundaries of culture, class, education, income, ethnicity and age. When the violence occurs within home, the abuse is effectively condoned by the tacit silence and the indifference by the instruments of the state and the law-enforcing machinery. Internationally, one in three women have been beaten, coerced into sex or abused in their lifetime by a member of her own family (*Heise et al.* 1999). Domestic violence is the most prevalent yet relatively hidden and ignored form of violence against women and girls. While reliable statistics are hard to come by, studies estimate that, from country to country, between 20 and 50 per cent of women have experienced physical violence at the hands of an intimate partner or family member. Wife beating is not only rampant, but male justify it with plethora of contexts.

Violence in the domestic sphere is usually perpetrated by males who are, or who have been, in positions of trust and intimacy and power – husbands, boyfriends, fathers, fathers-in-law, stepfathers, brothers, uncles, sons, or other relatives. But, many of the victims of domestic violence has either refused to name the perpetrator of the assault or attributed the injuries to other reasons (*Daga et al.*, 1999). In fact, many a victims also justify the wife-beating. *Harihar Sahoo & Manas Ranjan Pradhan* conducted a study upon 90,303 ever married women and discovered widespread prevalence of domestic violence (21 percent, since age 15) in India but also the acceptance of majority of ever-married women (57 percent) to at least one reason for justifying a husband beating his wife. (*Sahoo et al.*, 2007)

The World Conference on Human Rights in Vienna (1993) accepted that the rights of women and girls are “an inalienable, integral and indivisible part of universal human rights.” The United Nations General Assembly adopted the Declaration on the Elimination of Violence against Women, in December 1993. It is the first international human rights instrument to deal exclusively with violence against women and kindling a string of enactments against the abuse of women at home world across.

National Crime Records Bureau Report of 1991 reveals that in every 33 minutes one Indian woman is being abused by her husband. It also reveals that in 1989 one dowry death occurred in every 125th minute. In 1990, 91, 92 and 93 the figures were 109th, 102nd, 106th and 90th minute respectively. India's National Family Health Survey-III, carried out in 29 states during 2005-06, has found that a substantial proportion of married women have been physically or sexually abused by their husbands at some time in their lives. The survey indicated that nationwide 37.2% of women experienced violence after marriage. Bihar was found to be the most violent, with the abuse rate against married women being as high as 59%. It was followed by Madhya Pradesh (45.8%), Rajasthan (46.3%), Manipur (43.9%), Uttar Pradesh (42.4%), Tamil Nadu (41.9%) and West Bengal (40.3%). The National Crime Records Bureau has recorded an increase of 40% in the case of social harassment, and 15.2% in cases of dowry deaths. The NCRB statistics reveal altogether different picture of prevalence among Indian states. West Bengal now tops in the recorded domestic violence, followed by Andhra Pradesh and Rajasthan. The rate of incidence of the domestic violence too is very high in West Bengal with figure of 21.6% among all cognizable crime.

The National Crime Records Bureau(NCRB) Report for the year 2011 further highlights some staggering statistics about the domestic violence against women. The percentage share of domestic violence against women in the cognizable crime has grown from 3.8% in 2007 to 4.3% in 2011. The cruelty by husband and relatives under IPC 498A comes at number four in the maximum incidences of cognizable crimes. Only theft under IPC sec. 379-382, Hurt under the IPC Section 323-333 and sec 335-338; and causing death by negligence under IPC Section 304A are more frequent than the domestic violence.

Table:1
State-wise Cruelty by Husbands and Relatives During 2011

S.No.	State/UT	Cruelty by Husband and Relatives	
		Incidence	Rate of Cognizable Crime
1.	ANDHRA PRADESH	13376	15.8
2.	ARUNACHAL PRADESH	18	1.3
3	ASSAM	5246	16.8
4	BIHAR	2607	2.5
5	CHHATISGARH	834	3.3
6	GOA	18	1.2
7	GUJARAT	6052	10.0
8	HARYANA	2740	10.8
9	HIMACHAL PRADESH	239	3.5
10	JAMMU & KASHMIR	286	2.3
11	JHARKHAND	659	2.0
12	KARNATKA	3712	6.1
13	KERALA	5377	16.1
14	MADHYA PRADESH	3732	5.1
15	MAHARASHTRA	7136	6.4
16	MANIPUR	39	1.4
17	MEGHALAYA	21	0.7
1	MIZORAM	9	0.8
8	NAGALAND	1	0.1
	ODISHA	2320	5.5
1	PUNJAB	1136	4.1
9	RAJASTHAN	12218	17.8
20	SIKKIM	4	0.7
21	TAMIL NADU	1812	2.5
22	TRIPURA	702	19.1
23	UTTAR PRADESH	7121	3.6
24	UTTARAKHAND	307	3.0
25	WEST BENGAL	19772	21.6
	TOTAL(STATES)	97494	8.2

S.No.	State/UT	Cruelty by Husband and Relatives	
		Incidence	Rate of Cognizable Crime
1.	A &N ISLANDS	5	1.3
2.	CHANDIGARH	46	4.4
3	D &N HAVELI	3	0.9
4	DAMAN &DIU	2	0.8
5	DELHI	1575	9.4
6	LAKSHADWEEP	0	0.0
7	PUDUCHERRY	10	0.8
	TOTAL(UT)	1641	8.2
	TOTAL(ALL INDIA)	99135	8.2

Source: Crime in India, 2011 Statistics,NCRB, p. 218

Table:2
Percentage Distribution of Cognizable Crimes(IPC) (2007-2011)

S. No.	Crime Head	2007	2008	2009	2010	2011
1	Theft	14.3	15.1	15.3	14.8	14.7
2	Hurt	13.7	13.6	13.2	13.0	13.0
3	Causing Death by Negligence	4.4	4.4	4.6	4.8	4.7
4	Cruelty by Husband and relatives	3.8	3.9	4.2	4.2	4.3

Source: Crime in India, 2011 Statistics,NCRB,p.197

According to the Declaration on the Elimination of Violence Against Women, adopted by the UN General Assembly, violence against women is any act of gender-based violence that results in, or is likely to result in, physical, sexual or psychological harm, or suffering to women including threats of such acts, coercion or arbitrary deprivation of liberty; whether occurring in public or private life.

In the context of India there was no such law, like the British Matrimonial Homes Act, 1967. It was desirable to enact a stringent law to checkmate the rise in domestic violence against women. Protection of Women from Domestic Violence Act, 2005 (DVA, 2005) was passed. The law came into force on the 26th October, 2006.

Forms of domestic violence

Violence against women can be physical, sexual, psychological, and threat of physical or sexual violence. Physical violence includes acts of physical aggression such as slapping, hitting, kicking and beating. The common sexual abuses women endure are forced intercourse, and other forms of sexual coercion. Psychological abuse includes acts like intimidation, constant belittling, humiliating, nagging and various controlling behaviours such as isolating a person from their family and friends, monitoring their movements, and restricting their access to information or assistance. When abuse occurs repeatedly in the same relationship, it reduces into an act of “battering”.

Causes of domestic violence

There is no one single factor to account for violence perpetrated against women. Increasingly, research has focused on the inter-relatedness of various factors that should improve our understanding of the problem within different cultural contexts. *Murthy et al.* (2004) posited in their empirical study that numbers of family members, type of marriage and husband’s education besides menstrual problems have significant influence on domestic violence. Many have pointed out that marriage at a younger age makes women vulnerable to domestic violence (*Mishra*, 2000)

Factors That Perpetuate Domestic Violence

The various factors which have been discovered by the researchers can be put in a tabular form at (Table:3)

Table:3
Factors That perpetuate domestic violence

<p>Cultural</p> <ul style="list-style-type: none"> • Gender-specific socialization • Cultural definitions of appropriate sex roles • Expectations of roles within relationships • Belief in the inherent superiority of males • Values that give men proprietary rights over women and girls • Notion of the family as the private sphere and under male control • Customs of marriage (bride price/dowry) • Acceptability of violence as a means to resolve conflict 	<p>Political</p> <ul style="list-style-type: none"> • Under-representation of women in power, politics, the media and in the legal and medical professions • Domestic violence not taken seriously • Notions of family being private and beyond control of the state • Risk of challenge to status quo/religious laws • Limited organization of women as a political force • Limited participation of women in organized political system
<p>Economic</p> <ul style="list-style-type: none"> • Women's economic dependence on men • Limited access to cash and credit • Discriminatory laws regarding inheritance, property rights, Use of Communal lands • maintenance after divorce or widowhood • Limited access to employment in formal and informal sectors • Limited access to education and training for women 	<p>Legal</p> <ul style="list-style-type: none"> • Lesser legal status of women either by written law and/or by practice • Laws regarding divorce, child custody, maintenance and inheritance • Legal definitions of rape and domestic abuse • Low levels of legal literacy among women • Insensitive treatment of women and girls by police and judiciary

Source: Heise et al.,1994

There are varied consequences of domestic violence depending on the victim, their age group, the intensity of the violence and frequency of the torment they are subjected to. Living under a constant fear, threat and humiliation are some of the feelings developed in the minds of the victims as a consequence of an atrocious violence.

According to the DVA, 2005; Domestic Violence includes-

- (I) Any harm or injury that endangers health, safety, limb or well being either mental or physical abuse, sexual abuse, verbal and emotional abuse or economic abuse;
- (II) If one harasses, harms, injures or endangers the aggrieved person with a view to coerce her or any other

person related to her to meet any unlawful demand for any dowry or other property or valuable security;

(III) If one injures or causes harm, whether physical or mental to the aggrieved person;

Any person who believes that an act of domestic violence has been or is being committed may give information about it to the concerned protection officer. This makes the Act socially embedded. The Act exempts such persons from any liability, civil or criminal.

The Supreme Court has interpreted the rights under the DVA, 2005 as the rights which may be available prior to the coming into force of the PWD Act on 26th October, 2006. After considering the constitutional safeguards under Article 21 of the Constitution, vis--vis, the provisions of Sections 31 and 33 of the PWD Act, 2005, and after examining the statement of objects and reasons for the enactment of the PWD Act, 2005, the Supreme Court held in *V.D. Bhanot vs. Savita Bhanot* (Special Leave petition(Crl.) No. 3916 of 2010, decided on 7.2.2012,)that it was with the view of protecting the rights of women under Articles 14, 15 and 21 of the Constitution that the Parliament enacted the PWD Act, 2005, in order to provide for some effective protection of rights guaranteed under the Constitution to women, who are victims of any kind of violence occurring within the family and matters connected therewith and incidental thereto, and to provide an efficient and expeditious civil remedy to them and therefore the rights are available even prior to the enactment.

The DV Act, 2005 ensures the reporting of cases of domestic violence against women to a 'Protection Officer' who then prepares a Domestic Incident Report to the Magistrate "and forward copies thereof to the police officer in charge of the police station within the local limits of jurisdiction."

But, efficacy of the DV Act. has yet not been documented. Initial trend suggest significant rise in the cases of domestic violence registered under Protection of Women from Domestic Violence Act 2005

As per information provided by the National Crime records Bureau (NCRB), a total number of 7,803, 11,718 and 9,431 cases of domestic violence cases under Domestic Violence Act 2005 were registered during year 2009, 2010 & 2011 respectively, thereby indicating a mixed trend. The State-wise details of cases are given in the below Table No .4. Now, Domestic Violence Act covers all kinds of abuse, and not only a married woman, any woman cohabitating with others in the same place can lodge the complaint under the Act. The Union Home Ministry had issued advisory to the State Governments/UT Administrations to explore the possibility of associating NGOs working in the area of combating crimes against women and also advises that all Police stations may be advised to display the name and other details of Protection Officers of the area appointed under the Domestic Violence Act, 2005. The conviction rate is still insignificant and that makes it an ineffective tool to handle menace of growing domestic violence.

Table:4
All India figure for status of cases under Domestic Violence Act, 2005

Year	Cases registered	Cases charge-sheeted	Cases convicted	Persons arrested	Persons charge-sheeted	Persons convicted
2009	7803	1641	236	641	695	9
2010	11718	4330	415	182	323	5
2011	9431	4499	17	695	713	3

Source: MHA,Lok Sabha Unstarred Question No. 283, 26th February, 2013

Conclusion

The varying causes which can spark the violence within the four walls of homes need to be analysed carefully and a wise study of the factors causing the violence may prevent a family to suffer from the menace of domestic violence. The domestic violence may have a wider and deeper impact in life of the victims. A proper societal-legal environment has to be built to make the houses safe and secure for the woman. India cannot prosper by keeping half of its population under duress.

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GANGA RIVER, GANGA LAKE, FOLKTALES AND POETRY: THE FIVE OF US

G. Mend-Ooyo*

EDITOR'S NOTE

Gombojavyn Mend-Ooyo is a living legend of contemporary times. He is one of the most influential surviving poets of the world. Mend-Ooyo is the force behind revival of almost lost Mongolian script. His works reflect an alternative to the global capitalism. His writings bring the nomadic tradition alive. Mend-Ooyo's rhapsody of nomadism with a powerful melody enlivens the longing for the stage of In-Between, the Sunyata(Emptiness) . His works prepare ground work for 'another' thinking, fluid and void. Ooyo compares his verses with the music of Mongolia's national music instrument Morin Khurr. He expresses in this essay the quest for the Holy land of India in Mongolian imagination. India is indeed connected with the turquoise sky and green pastures of Mongolia.

Keywords: Bodhisattva, Dariganga, Eight jewels, Ganga, Mongolia,

Everything I listened to as a kid, were folktales. All folktales turned out to be true. One of the stories narrated about the snowy Himalayas as the columns of the Heavens. The story described the Ganga River as , “descending from these celestial peaks, as the holy water from the Heaven. If somebody manages to sip even a drop of the holy water of the Ganga , all his sins would be purified. If you manage to fetch some for your mother, it is the best service you can do for your mother to pay back everything she has done for you.”

Once my mother told me another story, “Ages ago, my father's brother named Aagaa set out from Dariganga (the author's native region) on foot to go on a pilgrimage to the lands of Buddha. But when he returned 20 years later, nothing changed in appearance. He was wearing the same filthy rag. People were quick to gossip and complain about how he could not even bring a single gilt Buddha figure. What a waste of life! What a waste of all those 20 years! Little did they know the vast treasure of intellect and knowledge that he brought in his mind. Next 20 years witnessed 20 volumes of books, inscribed in golden letters and written by the Aagaa the Aranjamba , which was placed in the sacred space of a monastery. That is how one brought wisdom instead of gold and jewel from the lands of India, lying on the banks of the River Ganges.’

There is another legend my father told, “Once upon a time, a man who came back after many years of study from India brought a vessel of the Ganges water and sprinkled at the spot where the Ganga Lake is now located. That is how the Ganga Lake originated”. I was yet to realize that these stories were feeding the headwaters of my future poem.

***G.Mend-Ooyo** is the President of the Mongolian Academy of Culture and Poetry. He was born into a herding family in Dariganga, Mongolia, in 1952. He grew up riding horses and tending sheep, moving over the steppe by camel caravan. In 1980, he published his first book of poetry, Birds of Thought (Bodliin Shuvuu), and has since published over 40 books of poetry, novels, children's books, fiction, criticism and essays. His ongoing work of poetic fiction, Altan Ovoo (Golden Hill) (first published in 1993), has become one of the most influential pieces of contemporary Mongol literature. He received the title of Poet Laureate from World Academy of Arts and Culture /USA/ in 2009.

Sensing these special ties between the Ganges River of India and the Ganga lake of Dariganga country, the juvenile mind of mine wandered across the green fields and blue sky to reach the celestial columns of the Himalayas and sip the nectar from the holy river of the Ganges.

The famous Dariganga region of Mongolia took its name from two of its iconic landmarks -the Dara Mountain and Ganga Lake. The inhabitants, known as *Darigangians*, created a peculiar nomadic culture in the southeastern Mongolia. In this region, a large collection of ancient Indian stories, called the *Ulgeriin Dalai* (Ocean of Stories) is frequently heard. The collection is also placed on top a chest in the northern section of gers of some elders. The collection has a chapter about “*Ganga and Dara, two sons of the heavens*”, reminding me of the river or lake names in my homeland and in India. The Indian Ganga duplicates and multiplies in my own homeland of Mongolia.

When you lookout from top of the Dara Mountain, or better known as the *Golden Hill*, you have a beautiful view of sand dunes edging the foot of the mountain, red willow growing on the lake shores and thousands of birds flying in, as if it was the legendary land of Shambala. The lake is fed by twenty-one springs. The numbers also symbolize something special. Mother Tara has twenty one manifestations.

Us, the children of nomads, would be very homesick living in the dorms of the *soum* secondary school, located south of the Golden Hill. We used to discreetly stare at the horizons, hoping somebody from our homes might come riding around the Golden Hill. My homesickness worsened in the spring of my sixth grade year after I learnt my mother was ill. Not to mention the poor lodging and inadequate nourishment of the school dorm.

One day I borrowed a horse from a family I used to help in chores and headed to the Ganga lake, accompanied by my classmate Moononshar. I could not stop thinking about a legend about the curative properties of the Ganga lake which I had often heard. According to the legend, water from the lake could cure my mother's illness. That is at least what I believed. School was soon to be over. Almost time to go home.

I followed the golden shores of the lake until I came across a small spring, flowing into the lake. It was a marvelous scene with water boiling out from the ground and overflowing out to the lake from its tiny rock crater. Geysering out right from below! “*Is it not true that it started from the source of Ganges River and continued to flow underground until it gushes out here?*” That is how a young boy found connection between the Ganges River and the Ganga Lake and brought for his mother a bottle of holy water. My mother recovered well, thanks to the doctors, but I am sure my holy water from the lake did help.

Twenty years later, I had the opportunity to go to India and bring back real Ganges water for my aged mother. Thus I continued my naive childhood belief and fulfilled the dreams of ancestors in the legends.

That fall in 1987, after having participated in the Young Writer's Conference from Asia & Africa in New Delhi, I wrote a series of poems called “*Bodi modni navch*” (Leaves of the Bodhisattva Tree) which were published in the *Utga Zolhio Urlag*, the prime literature newspaper at the time. Among the poems were “The Waters of Ganges”. I clearly remember the series created quite a sensation. That was the first time I heard positive and encouraging comments about my verses from many people.

Ten years after that, I and my closest friend, the Great Poet of the East, Nyamsuren Danzan spent a full moon night singing by the bank of the Ganga lake. The lake surface riffled with almost unnoticeable white waves, the whooping of the swans never ceased and sometimes a splash would sound as if one of the stars in the sky has fallen. I wrote my first poem “The Ganga Lake” when I was in the 6th grade. My literature mentor, poet and translator Gombojav Dorj got it published in a newspaper. Later in my twenties, I wrote “*Gangiin naiman*

sondor” (Eight Jewels of the Ganga) and one of the lines were “*The white twilight of the moon is the house, I write my poetry in*” which is proudly cited by my friend and famous poet Dashbalbar on many occasions. The poem I recited that night before my friend Nyamsuren and the mysterious, esoteric Ganga Lake was “The Waters of Ganges”

THE WATER OF THE GANGES

*Only a very few fortunate men, they say,
Travel the Buddha's land.
Far from what is desirable, they walk on,
They follow the path of their desires.
A certain Mongolian fellow
Completed the study of the Dharma of unique wisdom,
Whose perfect qualities illumine everything
And returned after twenty years.
He brought the pure water of the Ganges
For his grey-haired mother to taste.*

*One day, he struggled home
From India.
He crossed the Himalayas with ease
He strode over the salty plains just fine.
But ten days in the waterless desert,
And his mouth was tired and exhausted.
He had no choice but to drink the waters of the Ganges,
He inevitably swallowed its power.
His body regained strength,
Soaked in the water of the Ganges.
His fading pulse grew strong,
Swallowed in the water of the Ganges.
He dragged his feet,
He managed to move forward.*

*The sand dunes were like hot ashes,
And again he felt dizzy.*

*The sun glowed, like glass in a fire,
The world turned red.
The feet of the shattered man grew slack,
His exhausted body tumbles to the earth.
In a flash, he comes to his senses,
He thinks over and over about his world.
He has drunk the last few drops
Which he had put aside for his mother
He stood and looked to the horizon.
He saw his homeland, tinged in blue.*

*At the very end of the dusty road,
In the distance, he could see familiar hill.
This gave him the will to continue walking,
He strode over the threshold of his birthplace.
He crept upon his hands and knees,
He came to the lake of silken blue.
He treated his wound with the sandy earth,
He sucked upon the roots of the green grass,
He swam like a goose in the water.
The young man stood up, revived.
There is no pure water which,
Having saved his life, would save his mother;
He railed at himself; he was a useless creature,
The pit of his stomach grieved.*

*The lake is secretly crying,
Its tears as though coaxed from the waves.
It gleamed with the color of beryl,
Manifesting the eight qualities.
This best of water soothed the feet of Heaven.
He knelt upon the ground,*

And filled the silver bowl with the water of the lake.

He whispers, "Let this become magic water."

He walked over the threshold of his brown ger.

He met his mother, she was desperately ill

He gave her the silver bowl of pure water,

And pretty soon his mother was up and healthy.

He searched for magic water from the pure Ganges,

But it was shimmering beneath his feet, in his homeland.

That wonderful magic water he had sought

Was actually the water of the Lake Ganga.

Right at that moment, a breeze brought the waves in, wetting our feet and washed away. We felt the lake was expressing its gratitude.

Now my mother is no more. My Ganga Lake is beyond thousands of mountains. There is no water of eternity. There is nothing eternal in this world except the meanings of stories and legends. The Ganges River originated from the Heavens and the Ganga Lake originated from the Ganges River. All the waters of the world are miraculously interconnected through cosmo-telluric veins which gave way to legends. Legends and stories also flow along the longitudes of time, feeding the lives of humans.

Now I sense that I am flowing into the future, following the same channel as the Ganga River, Ganga Lake, poetry and the legends.

Verbal translation done by S.Soyolbold

ADVANTAGES OF PODCASTS IN ENGLISH LANGUAGE CLASSROOM

*Dr. Seema Jain**

*Farha Hashmi***

ABSTRACT

The modern era has unleashed the new ways of learning. English a global language is no more learnt in traditional classroom but in a web-based environment that ensures feasible and fastest learning amongst the learners. The modern learning setting in the ELT classroom offers such opportunities and ensures the best level of listening skills, speaking skills and presentation skills among the learners. The practicability of new techniques boosts the idea to broaden the possibility of faster learning and provides the constructive and virtual material to the learners in a virtual environment. The present paper, in particular, touches these aspects of the modern approach of teaching English as a second language and discusses the multifarious advantages of the ELT podcasts, the audio programs on the web which are usually updated at regular intervals. It sheds light on how a group of English language learners, which was encouraged for listening and producing ELT podcasts in the language classroom. The paper brought forth the advantages of new methods to be adopted in teaching-learning a 'Target language'. It also gives details of modern learning settings which conduce to feasible learning and captivates the mind towards addressing and focusing on revision of old teaching methods and unfolds the idea that students' learning in Target Language should be viewed in a new perspective. Besides these, the paper also presents many undeniable reasons for using podcasts along with related activities in a language classroom to learn English easily, quickly, and automatically.

Key words: Foreign Language, Listening Skills, Spoken Skills

Introduction

Foreign language acquisition is a skill, more than a body of facts, acquired with practice; therefore, sustaining motivation and promoting lengthy practice outside the classroom are key factors. The urge to communicate is very strong in humans and is what ensures first language acquisition in the first place (*Pinker, 1994*); therefore, creating the desire to communicate in the target language will also be a strong motivator for its acquisition. This paper presents a study on using Podcasts for developing listening and speaking skills amongst the learners in second or target language. **Podcasts** are audio programs on the web which are usually updated at regular intervals. A podcast can be uploaded automatically to your computer using RSS (really simple syndication), *podcatching* software. It can cover a wide range of topics and can include music and video. It can last anything upwards of a few minutes to an hour or more. Podcasts are popular for their authentic listening programme prepared by the proficient speakers and are extremely helpful for the learners to produce the natural speech as by the native speakers. Podcast directories are best place to start looking for podcasts. The authentic podcasts ranging from vocabulary practice to idiomatic expressions to phrasal verbs to general English are easily available in plenty at podcast directories. Learners can click on a category and scroll through

***Dr. Seema Jain** is the Principal of R.G.P.G.College, Meerut, U.P.

****Farha Hashmi** is a Research Scholar at Mewar University, Gangrar, Chittorgarh, Rajasthan.

a list of podcasts, listening to and subscribing to any that interest them. A podcast directory aimed specifically at teachers and learners of English is *Englishcaster* (<http://www.englishcaster.com>). New episodes can be listened to on the computer, or download to an MP3 player or iPod for later listening. Another example of a general podcast directory is <http://www.podcatalog.com/>. Stanley (2006) points out that podcasts offer students a wide range of possibilities for extra listening both inside and outside the classroom. More advanced learners can be encouraged to listen to authentic podcasts. This web-based environment effectively narrows the gap between the formal English which dominates most second language classroom and the informal English used in most real –life communication events. ELT podcasts cover a wide range of subject matter. Here are some examples of ELT podcast topics:

- Podcasts based on comprehension activities, interviews and vocabulary.
- Podcasts based on idiomatic expressions with their usages.
- Podcasts containing conversations between the native speakers.
- Podcasts based on that encourage careful listening by the learners.
- Accompanied by the text of the lyrics.
- Podcasts containing vocabulary with their pronunciation.
- Story-based podcasts followed by listening comprehension questions.

In addition to provide the extra listening practice, teachers can also create their own podcasts or guide their students to produce their own. With the advent of information and communication technology, it is now easy for teachers and students to produce podcasts. This follows the simple procedure explained below to help them produce their own podcasts: Using a free podcast site like Podomatic (www.podomatic.com), the teacher can set up a podcast page. The podcast page provides a website for learners to post their podcasts. To record a podcast, the teacher needs a computer and Internet connection, and a microphone and speakers or a headset. Podcast sites are extremely easy to use and no specialist technical knowledge is needed. Indeed, learners get full exposure to a number of listening activities to enhance their oral proficiency. Also it improves their knowledge of the expressions as well as their usages in different contexts. Therefore, the learners must also be encouraged to create their own podcasts. For this, they could be given short text to prepare and rehearse. The more learners practice podcast texts, rehearsing them and recording them, the more proficiency will come in their speech. As Nuan (1995) points out that *‘the ease of downloading podcasts to MP3 players and iPod means that learners can now engage in plenty of listening practice. The production of podcasts provides students with plenty of meaningful language use, which is highly desirable for second language acquisition’*.

The paper aims at presenting the enriched learning experience that English learning students had while listening to ELT podcasts in the language lab. They were also offered training to produce their own podcasts. The study was carried out with a group of English learning students of a College. This study investigated the attitudes of students towards developing listening and speaking skills through podcasts.

Aim of the Research

- To motivate learners to learn new expressions via podcasts normally used in communication.
- To upload the podcasts, listen to them carefully, and improve their listening and speaking skills.
- To design activities based on podcasts that encourage students to respond to each other in target language.
- To offer valuable opportunities to the students to develop foreign language skills in an improved

environment which promotes cooperative and autonomous learning and engage learners in a countless communicative activities in a congenial and stimulating environment?

The study would also serve as a model for a future wider research study. The participants in the study had no previous knowledge of Podcasts. They were offered the opportunity to attend a lecture on the use of podcasts for language learning. Twenty students attended the lecture at the language lab. The students were asked to log on the various podcasts sites, listen to them carefully and prepare a report what they had listened to. They were also asked to note down the important expressions and vocabulary used along with their usages. The students were supposed to follow the correct pronunciation and natural accent of the expressions used by the native speakers. The learners were also engaged in different language learning activities based on podcasts. The students were randomly divided into five groups of five students each and asked to complete the above-mentioned assignment. Each group was allotted two hours for completing the task. Each group was allowed only two computers with Internet access.

Some of the Podcasts Sites used by the students were-

<http://www.bbc.co.uk>

www.eltpodcat.com

<http://breakingnewsenglish.com>

www.likely.podmatic.com

www.esl.about.com/od.englishlistening

<http://www.englishcaster.com>

[http://www.podcatalley.com/.](http://www.podcatalley.com/)

<http://www.e-poche.net/conversation>

<http://phoneticpodcast.com>

<http://www.englishthroughstories.com>

<http://englishpodsong.blogspot.com>

<http://mylcpodcasts.blogspot.com>

The students vigorously made a quick search on the podcasts sites provided to them. They uploaded various ELT podcasts ranging from a wide variety of topics, from vocabulary items to discussion on topics of interest to jokes and to learning songs. They also performed related activities such as writing a summary of what they had listened to, noted down idiomatic expressions, phrasal verbs, tags and important words strange to them. They were also asked to use them in various situations. These activities proved to be realistic as most of the expressions are relevant to learning of the target language. Also the learners used these expressions in most natural way like the native speakers.

After completing the assignments, the students came together and shared the expressions they found while listening to podcasts. This creative method of learning English language in classroom enabled the students not only to develop listening and speaking skills effectively but also build up their confidence in learning correct pronunciation and accent of second language by using modern technology. The relevance of podcasts in learning English language has also been cherished by many studies conducted to elicit the information about the attitude of EFL students towards the integration of podcasts in English language classroom or outside the classroom. ELT podcasts can be used for interactive and extensive listening activities. However, ELT podcasts are particularly suited for extensive listening, for the purpose of motivating student interest in listening to English, and providing them with exposure to native speakers' speech (Rost, 1991).

Podcasting as new technology has huge potential in enhancing second learners' listening and speaking skills. (Stanley, 2005). This activity is also suited for less confident learners, since it reduces the anxiety brought about by real-time interaction (Gardner, Day, & MacIntyre, 1992).

To answer the main question (How students respond to the use of podcasts in language learning) a questionnaire containing fifteen items in it was distributed to the students during class time after listening podcasts. They were allowed twenty minutes to answer. Included in the questionnaire were items relating to different aspects concerned with podcasts use, such as enriched language learning, motivation, web-based environment, improved communication skills and achievement. The questions asked in the questionnaire were as follow

- I would like to keep on listening to podcasts.
- I would like to know more about ELT podcasts.
- I enjoy listening to dialogues on podcasts.
- I like the application of podcasting.
- I prefer the web-based environment.
- I enhance my English proficiency by listening to podcasts.
- I use different expressions in more natural way via podcasting.
- I wish to learn effective language with podcasts.
- Podcasts help me to improve listening and speaking skills.
- I enjoy podcasts -based activities in the classroom.
- I improve my language skills by producing my own podcasts.
- I rev up my confidence by listening to podcasts.
- I improve my communication skills via podcasts.
- I like to study in a virtual environment.
- I appreciate the idea of introducing new learning tools in classroom.

The obtained results were quiet positive and responsive. Most of the students enthusiastically answered all the questions and showed their willingness to integrate podcasts into their classroom learning practice, and as Kenneth Beare (2005) points out, *'podcasting is especially interesting for English learners as it provides a means for students to get access to 'authentic' listening sources about almost any subject that may interest them.'*

Salient features of student podcasts

- Podcasts can be accessed easily and quickly by the learners. This motivates them to participate in various ELT classroom activities. Also, it offers them opportunity to enthusiastically respond to teachers and the levels of their learning speeds up desirably.
- The rehearsal of texts for producing podcasts gives learners full exposure to hone their language skills. The more they undergo plenty of practice, the more their listening and speaking skills improve.
- Podcasting is unique for its collaborative skills that it offers to its learners. They work in group and share multiple information on various topics of their interest. Thus leading them towards a collaborative learning and improving their communication skills. As the learners get exposure to the listening programmes

and related activities in new and interesting ways in the language classroom, the other three skills i.e., speaking, reading and writing automatically go hand in hand. Because podcasts provide authentic oral language materials, an important aspect of language teaching which has often been neglected in the past in favour of text-based activities. Thus the learners confidence rev up in learning second language at the fastest speed via podcasting.

- A podcast can be created by different students according to his or her capability. Thus less confident learners also get opportunity to develop their listening skills through listening and producing podcasts. This makes podcast learning superior to traditional classroom learning.
- The principal motivating force behind Podcasting is that it allows students to reach large audiences. Producing Podcasts in class contributes to wider listening activities. It also helps to augment the motivation level of learning second language among the learners. Besides, the advanced learners can also be encouraged to listen to authentic Podcasts to narrow the gap between the native speakers and the non-native speakers.

Considering the advantages of creating and listening English podcasts in the classroom, it must also be pointed out that

- I. Students were motivated to search the podcast directories and to quickly and accurately find best ELT podcasts material of their interest. They were given prompt support to upload podcasts from the web, and the best search engines available to them were Google for wide searches over a large database of websites and Yahoo for a more theme-based approach.
- II. Most of the students keenly liked the idea of uploading ELT podcasts on provided websites.
- III. Students enjoyed and gained confidence in learning English language with the new technology.
- IV. Most of them expressed their full satisfaction on using podcasts and showed improvement in their communication and language skills.
- V. The students learned new expressions in web-enabled environment and simultaneously jotted down the vocabulary they found difficult to understand.
- VI. By Listening podcasts, the students really had the rich experience of learning English language easily, quickly and naturally.

To conclude, it can be stated strongly that English Language Teachers may use podcasts in the classroom: (a) as an interesting activity in which students learn communication skills, (b) to teach English in a simple and easy way, (c) to teach students how to be an effective listeners as well as good speakers since most of the available ELT podcasts are designed by the proficient speakers and the native speakers on a wide variety of topics, (d) to teach language with the help of diverse activities based on podcasts, (e) to enhance competency in the use of technology, and (f) as a motivational technique to keep students on task. The positive outcome of the study positively supports the idea of incorporating technology in the language classroom. It also points out that ELT podcasts hone their potential to learn English faster and promote effective and collaborative learning, motivation, and better communication and boost up the achievement level among English language learners.

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BOOK REVIEW

PRINCIPLES AND PRACTICES OF MANAGEMENT

Author: Smita Gupta

Galgotia Publishing Company , New Delhi, 2012, pp. 485, Price :Rs.300/-

Review by *Sonam Sachdeva**

There is a growing need for professionally qualified managers because of growing competition and industrialization. To achieve competency, principles of management is required and it is essential to put those into practice for becoming a professional manager. Knowledge of these principles enhances decision making ability. An integrated reading material can help a professional to pick up the best practices without scurrying for different materials

The book Principles and Practices of Management explains how management principles and concepts can be applied in real life situation at the micro as well as macro level. This book has been organized with the aim to articulate the conceptual core of management with the emphasis on the contemporary developments. At the same time, works that have proved their worth over the years, have not been ignored.

This book is divided into 7 sections each consisting of subsections comprising of 20 chapters. The first section introduces the meaning and nature of management, evolution of management thought and the social and ethical issues in management. Section 2 mainly focuses on planning, planning premise, forecasting and decision-making.

Section 3 talks about the nature and process of organizing, organizational theories, types of departments, design and form of organization structures, authority and responsibility, delegation and decentralization of authority. Section 5 digs into the fundamentals of staffing, job design, recruitment and selection, training and development and performance appraisal. Good knowledge of these concepts is essential because the success of the organization depends upon the people of the organization and in order to have right kind of people in your organization, one must be very well versed with these concepts. Section 6 deals with the controlling and related aspects like principles of controlling, controlling techniques, quality circles and management by exception. The final section consists of case studies, objective type questions, fill in the blanks and model question papers.

The text of the book is presented in a very comprehensive manner. The language used is lucid and even students will be able to grasp and understand the nitty gritty of the management concepts. The text is well supported by diagrams and tables for better understanding of the concepts. Discussion questions are given at the end of each chapter.

The writing of the case studies is coherent and embroidered with real life examples as well as hypothetical situations and questions for discussion so as to enable readers to test their analytical skills and come out with workable situation.

***Sonam Sachdeva** is Assistant Professor at Gitarattan International Business School
PSP 2A & 2B Complex - II, Madhuban Chowk , Sector – 14, Rohini, Delhi- 110085

This book does not provide any chapter summary at the end of each chapter to recapitulate what has been studied before. Neither there is any glossary. If the reader wants to know the meaning of any term, he/she has to flip through the entire book to find the meaning of that term. Such lacunae should have been avoided.

The book largely is a fine resource for both the students as well as the teachers. It contains various topics and concepts which are not explained in other books on management studies. A comprehensive study of this book enlightens our perception to the application of management Principles in all spheres of life; in whatever we do. However, the utility of the book could have been enhanced by providing a chapter summary and highlighting the important concepts of the chapter so as to aid students to recapitulate and reinforce what has been learnt. Another additional feature i.e. Pre-test and Post-test could also have been incorporated. This could have helped the course instructor to gauge the knowledge of the students during pre and post discussion on the topic.

THE MORTILOQUIST: A BARBARIC INTERPRETATION OF THE LIFE AND PROBLEMS OF WESTERN PHILOSOPHY

Author: Reza Negarestani

Sequence Press, 2013, Forthcoming

ISBN: 978-0-9567750-0-9

Review by *Niraj Kumar**

The Mortiloquist is the second work in the Blackening Trilogy by young Iranian philosopher and theory-fiction writer, Reza Negarestani. Negarestani is in exile and has recently shifted to the USA. He originally hails from Shiraz in Iran and was based in Seremban, Malaysia. His first work, *Cyclonopedia: Complicity with Anonymous Materials* (2008)¹ caused quite a stir in the academic world for the dense and elliptic arguments on petro-politics. This work was rated as one of the best books of 2009 by Artforum International.

The Mortiloquist is highly awaited by the western academic world. Reza undertakes the challenge to interpret a barbaric interpretation of the life and problems of Western philosophy.

The Mortiloquist is a cross-breed of play and philosophy, another evolving step in his theory-fiction genre. It is a textual mongrel and the Greek world, the fountain head of Western world, is represented from the perspective of the barbarians. The play starts with a hypothetical siege of Athens by the barbarians. There is an argument among three philosophers major Greek philosophers- Aristotle, Speusippus and Andronosus. The three philosophers rather than fleeing from the Academy, were busy arguing the philosophical concepts. The philosophers were captured by the barbarians and unimaginable cruelty inflicted upon them. Three philosophers are forced into freshly gutted out carcasses of three oxen. These are then sewn up to trap the philosophers in a way that only their heads protrude.

Upon the stage, three oxen corpses lie in the foreground and from each carcass a the head of a philosopher protrudes. Each act begins with depictions of barbarous savageries taking place in the stage background. Conversations between the three philosophers who are trapped in dead animals are appear as theatrical dialogues.

In *The Mortiloquist*, in the Act II, there are three scenes. Each scene begins with a generation of a new entity from the putrefying animal carcasses. The oxen carcasses change to canine and fox corpses and other chimerical forms. Ideas and philosophical debates among the three master-philosophers shift according to the “germinal power of putrefaction and the possibility of the infinite deformity of forms in decay”. The history of western philosophy is interpreted barbarically.

In fact, Reza Negarestani traces the custom of unimaginable torture to the Greek tradition and examines how this might be at the root of western “reason”. The western historians generate a novel dichotomy where barbarians are coated with every negative vice and the Greek civilized world as the perfect repository of virtue. In an earlier essay Reza picked up the two passages from leading Greek writers and poets for his erudite exposition in the essay, ‘*The Corpse Bride: Thinking with Nigredo*’². The passages come as utter surprise to a modern reader for the level of imagination on part of the Greek thinkers to inflict cruelty against “outsiders”.

*Niraj Kumar is the Editor of Journal of Indian Research.

*The living and the dead at his command,
Were coupled, face to face, and hand to hand,
Till, chok'd with stench, in loath'd embraces tied,
The ling'ring wretches pin'd away and died.*

Virgil³

The punishment imposed by Mezentius on the soldiers of Aneas should be inflicted, by coupling him to one of his own corpses and parading him through the streets until his carcass and its companion were amalgamated by putrefaction.

Erinensis,⁴

Reza refers to Jacques Brunschwig's 1963 essay, "*Aristotle et les pirates tyrrhèniens*"⁵ to discover the impact of Etruscans' exploitation of dead bodies on western philosophy. Reza explains in details the Etruscan's punishment. The Etruscans were the marauding pirates and settlers who had occupied strongholds in the Aegean in the eastern Mediterranean. Michel Foucault could not trace the genealogy of reason or punishment in his famous work, *Discipline and Punish*⁶, and remained stranded at the edge of European modernity.

Reza describes how during the Greek's golden period, outlandish form of punishment were meted to the barbarians. Even the Etruscan King Mezentius, was not spared.

Similar practices were revived during the reign of the Roman Emperor Marcus Macrinus. Even as late as the sixteenth century, the horror of this torture was expressed, by an emblem called *Nupta Contagioso* in which a woman was shown being tied to a man plagued by syphilis, at the King's order. *Nupta Contagioso* or *Nupta Cadavera* literally suggests a marriage with the diseased or the dead: a forcible conjugation with a corpse, and a consummation of marriage with the dead as a bride.

There was a furor across the western world in May, 2011 when a Moroccan Islamic Scholar and member of the religious establishment, Abdelbari Zemzami issued a fatwa allowing sexual intercourse with a corpse. The western world was aghast at the way necrophilic sex was declared Halal in Morocco. Later, the clergy had to withdraw the fatwa under intense media criticism. But, the Western world views the 'cruelty' of the "outsider" and indulge in selective amnesia of their own 'cruel' formulations.

Negarestani describes about Etruscan's punishment:

*"a living man or woman was tied to a rotting corpse, face to face, mouth to mouth, limb to limb, with an obsessive exactitude in which each part of the body corresponded with its matching putrefying counterpart. Shackled to their rotting double, the man or woman was left to decay. To avoid the starvation of the victim and to ensure the rotting bonds between the living and the dead were fully established, the Etruscan robbers continued to feed the victim appropriately. Only once the superficial difference between the corpse and the living body started to rot away through the agency of worms, which bridged the two bodies, establishing a differential continuity between them, did the Etruscans stop feeding the living."*⁷

Reza tries to figure out how the putrefying punishment made an impact over Aristotle's thinking and later on western reason. Reza also show how Aristotle draws a comparison between the soul tethered to the body and the living chained to a dead corpse (nekrous):

“Aristotle says, that we are punished much as those were who once upon a time, when they had fallen into the hands of Etruscan robbers, were slain with elaborate cruelty; their bodies, the living [corpora viva] with the dead, were bound so exactly as possible one against another: so our souls, tied together with our bodies as the living fixed upon the dead.”⁸

In Etruscan punishment, both the living and the dead turned black through putrefaction. This was the point of unshackling the bodies. Reza states that the blackening of the skin indicated the superficial indifferentiation of decay (the merging of bodies into a black slime). For the Etruscans, it signaled an ontological exposition of the decaying process which had already started from within. This stage was known as the blackening of decay or chemical necrosis, *nigredo*. Such kind of putrefaction is the inspiration behind Reza Negarestani's ***Blackening Trilogy***!

Reza thence describes the necrophilic roots of western reason. The western reason was merely the mirror image of the barbaric reason. He refers Aristotle to reflect over Etruscan reason :

“It is not the supposedly living body which is tethered to a corpse to rot, because it is exactly the soul qua living which is bound to a corpse – namely, the body. For Aristotle, the soul, as the essence of a being, needs a body to perform its special activities, and it is the responsibility of the soul to be the act of the intellect upon the body. Therefore this necrocratic confinement is both the price and a means of having a body as instrument, and then using this instrument to govern and eventually unite beings. The soul, in this sense, has two activities, inward and outward. The outward activity of the soul is the actualization of the body according to the active intellect (nous) which is immortal; in other words the extensive activity of the soul is the animation of the body according to the ratio (reason) derived from the nous, the intensive and inward activity of the soul. The inward activity of the soul is its unitive activity according to the intellect as the higher genus of being qua being.”⁹

Reza further concludes in his essay:

“Reason grounds the universe not only on a necrophilic intimacy but also in conformity with an undead machine imbued with the chemistry of putrefaction and nigredo.”¹⁰

What perplexes Reza that all the guiding light of western philosophy tell us only about the living and not the corpse while both are the mirror image. He describes about the missing side from the mirror motif in Greek philosophy :

“ not only does the living see itself as dead, but the dead also looks into the eyes of the living, and its entire body shivers with worms and dread. It is indeed ghastly for the living to see itself as dead; but it is true horror for the dead to be forced to look at the supposedly living, and to see itself as the living dead, the dead animated by the spurious living.”¹¹

Reza calls this as “molesting of dead with the animism of the living.” Reza discovers a particular kind of torture that barbarians employed to inflict upon the living. It was for a dead to act like living. The barbarians “slaughtered their own cattle, disembowelled them and then forced the Romans inside the carcasses in such a way that only the talking heads of the soldiers protruded. In doing so, they exhibited the farce of vitalism by ventriloquising the dead with the living.”¹²

Such Greek cruelty with corpse is not lesser than the barbaric practice of packing the philosophers in the dead carcass of oxen. This is the barbaric innovation which Reza terms as “*Mortiloquism*” in this second book in the Blackening trilogy, “Mortiloquist”. It is a neologic term derived from two words mortality and loquism. This has serious philosophical implications for the planetary philosophy.

IMPLICATIONS FOR WORLD PHILOSOPHY

For more than five decades , social sciences and philosophy revolved around the linguistic turn. The Postmodernist discourse took it to extreme by positing that Reality is linguistically constructed. Reza Negarestani has emerged as the synthesizing philosopher for the new “material turn in western philosophy”. Inspired from Deleuze and Guattari’s work on geophilosophy that how thoughts are grounded in the earth, the paradigm inherited from Nietzsche through Heidegger ; the new breed of philosophers are lifting their speculations much beyond the earthly foundation of philosophy. From the spices to culinary, carcass to worms, rats to porous earth; the philosophers are bringing back material things as the foundation of enquiry. What distinguishes Reza from others is that he is developing an asymptote of thinking, an open movement of thinking. He claims in his recent essay, “*Globe of Revolution: Afterthought on Geophilosophical Realism*”¹³ that , once the geophilosophical synthesis as the drive of earthly thought is freed of grounded relation to the earth, thinkers can construct “*the asymptotic thought of the open*” . That way, Reza is insisting against the closure of Being, closure of thought, closure of bodies.... One can see throughout his work, *Cyclonopedia*(2008) obsession with porodynamics, worms, twists, holes, perforation, topology of the cut... everything is an open-ended movement. Political implication of his revolutionary thinking during the present age of bio-political surveillance is immense.

Negarestani is cutting open the cadaver of western philosophy. The western philosophy is trapped within the dyadic thinking. The Mirror is the western motif par excellence. One sees itself as the other, the perfect matching ‘double’. But, it is the only one side of the mirror that has been thought about by the chain of western philosophers. Like Etruscans torture of captive by chaining dead bodies face to face with the living, facing part by part; western thinking has its “other”. Reza takes out the image of decomposition, the blackening of bodies which homogenizes the living and the dead bodies in the Etruscan punishment. He elevates *decomposition* to a transcendental level. Decomposition contains the seeds of ‘synthetic materialism’. Decomposition also takes one away from the linguistic universe into real spaces, materiality of things.

Negarestani pits openness and survival as the two determinant of creativity. Every being exist between the two necroses of openness and survival. It is the primacy of “openness” in his works which when combined with emerging synthetic materialism has wherewithal to bring revolutionary changes in the global system which is under closure after the 9/11 incident.

Negarestani has devoted the last chapter in the *Mortiloquist* on Mezentius, the Etruscan King who was tortured by the civilized Geeks later on . He has earlier deliberated upon Mezentiusial Metaphysics in his essay, *The Corpse-Bride*. Following Bacon’s view on Mezentius that the “*living perish in the embrace of the dead*”, Reza explores how soul as living is in embrace of two synergistic necroses and explores a hyperbole, “*soul is a bicephalous necrosis*”. He pits “decay” as the third necrosis. He succinctly puts up his idea of triumvirate necrosis corresponding with the triad of body, soul and intellect in the gradation of reason. He exclaims, ‘For Reason, there is always crowd of deaths’. Reason explains, ‘***All roads lead to the bosom of the dead!***’

Reza Negarestani is pointing to the underside of the western reason. Western reason gained primacy through practices as barbaric as those can be and that has inflicted the worst cruelties against non-western societies , nature and ecology.

The forthcoming book, *Mortiloquist*, will become a phenomenal text that would lead to decomposition of western reason. Like new Zarathustra, Reza Negarestani appears on the planetary scene with fresh thoughts to illuminate the man with the movement of the Open.

“Thee I conceived as holy, O Ahuramazda, when thy Good Thought appeared to me. [...] A difficult thing it seemed to me, to spread thy faith among men, to do that which Thou didst say was best.”

[Yasna 43.4]

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Notes:

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<http://www.thing.net/~rdom/ucsd/Zombies/The%20Corpse%20Bride.pdf>
3. Virgil, *The Aeneid*, VIII 483-88
4. Erinensis, ‘*On the Exploitation of Dead Bodies*’, *The Lancet*, 1828-9: 777.
5. Brunswigh J. (1963). “*Aristote et les pirates tyrrheniens*”, *Revue Philosophique de France et de l’étranger*, **153**: 171- 190.

6. Foucault, Michel(1975). *Discipline and Punish :The Birth of the Prison*. Paris: Gallimard
7. Negarestani,n.1,p.131
8. Quoted by Cicero from Aristotle in *Hortensius*. Also see *Saint Augustine Against Julian :Writings of Saint Augustine* (1957). Volume **6**, Washington, DC: The Catholic University of America.
9. Negarestani, n.1, p.134.
10. *Ibid*, p.135.
11. *Ibid*.
12. *Ibid*,p.136.
13. Negarestani, Reza(2011). *Globe of Revolution. An Afterthought on Geophilosophical Realism* , Identities: Journal for Politics, Gender and Culture , **17**: 25- 54.