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Synthesis and characterization of Cadmium Oxide and Al doped CdOnanocrystals

K.Karthiga, T.Seenivasan, K.S.Arjun, S.Saravanakumar
Research Centre and PG Department of Physics, The Madura College, Madurai-625 011, Tamilnadu, India

M. Prema Rani
Corresponding author: M. Prema Rani, Research Centre and PG Department of Physics, The Madura College, Madurai-625 011, Tamilnadu, India.

Abstract
Nano particles of Cadmium Oxide (CdO) and Al doped Cadmium Oxide were prepared by sol-gel method. Powder X-ray diffraction (PXRD), UV-Visible spectroscopy measurements were performed to study the crystal structure and optical band gap of the prepared nanocrystals respectively. Powder X-ray dataset of CdO and Al doped CdOnanocrystals were refined by Rietveld refinement technique. The electron density distribution study was done using MEM (Maximum Entropy Method) technique. The bonding behavior of prepared nanocrystalline materials was analyzed.

Keywords: X-ray diffraction, Rietveld refinement, Band gap, Maximum entropy method.

Introduction
Transparent Conducting Oxides (TCO) for doped metal oxides are used in optoelectronic devices such as flat panel displays and photovoltaics. Transparent conducting oxides (TCO) such as pure and doped indium oxide, zinc oxide, tin oxide and cadmium oxide have been extensively studied because of their utilization in optoelectronic technology [1-4]. CdO which has a simple rock salt crystal structure is a promising candidate for a transparent conducting oxide material due to its high carrier mobility, and high conductivity [5]. Electrical resistivity of micro-octahedral CdO crystals has been studied by Ghosh et al. [6]. Hexagonal nanodisks with nanostructure has been synthesized by Zhang et al. [7,8]. Optical properties of Gd³⁺ doped CdO sub-micron materials synthesized by sol-gel process has been reported by Alemiet al. The present study deals about charge density analysis for pure and Al doped CdOnanocrystals using MEM method.
Synthesis of pure and Al doped CdO nanocrystals

Cadmium acetate dihydrate (0.05 M) was dissolved in a mixture of isopropyl alcohol and distilled water with constant magnetic stirring at 85°C for 2 hours and appropriate amount of acetic acid was added to maintain the pH at 5. CdO nanoparticles were obtained after complete evaporation of the solvent. These CdO nanoparticles were annealed at 450°C for 2 h in ambient atmosphere so as to improve the crystalline nature. The same procedure was adopted to prepare Al doped CdO nanocrystals by the addition of aluminium nitrate.

Results and discussions

Powder XRD studies

The powder X-ray data set was collected in the 2θ range from 10° to 120° with step size 0.05° at SAIF, Cochin, with a monochromatic incident beam of wavelength 1.54056 Å offering pure CuKα radiations. The obtained datasets were compared with JCPDS (PDF #050640) and the crystal structure was confirmed as cubic, with space group Fm̅3m (225) with lattice constant 4.695 Å. The Reitveld refinement is the standard tool which is devised by Hugo Reitveld [9] for use in the characterization of crystalline materials. In the present work, the cell parameters and other structural parameters were refined using the software, JANA 2006[10]. The refined powder XRD profile for CdO and Cd$_{0.94}$Al$_{0.06}$O are shown in figures 1a and 1b respectively. The cell and other structural parameters are given in table 1.

Table 1: Structural parameters of CdO and Al doped CdO

<table>
<thead>
<tr>
<th>Parameters</th>
<th>CdO</th>
<th>Cd$<em>{0.94}$Al$</em>{0.06}$O</th>
</tr>
</thead>
<tbody>
<tr>
<td>a=b=c(Å)</td>
<td>4.6913(17)</td>
<td>4.6988(8)</td>
</tr>
<tr>
<td>Number of electrons per unit cell $F_{000}$</td>
<td>224</td>
<td>216</td>
</tr>
<tr>
<td>$B_{Cd}$ (Å$^2$)</td>
<td>0.989122</td>
<td>1.275569</td>
</tr>
<tr>
<td>$B_O$ (Å$^2$)</td>
<td>0.712813</td>
<td>1.133308</td>
</tr>
<tr>
<td>$R_{obs}$ (%)</td>
<td>1.18</td>
<td>1.60</td>
</tr>
<tr>
<td>$wR_{obs}$ (%)</td>
<td>1.18</td>
<td>1.63</td>
</tr>
<tr>
<td>$R_p$ (%)</td>
<td>10.48</td>
<td>10.27</td>
</tr>
<tr>
<td>$wR_p$ (%)</td>
<td>14.25</td>
<td>13.99</td>
</tr>
</tbody>
</table>
Electron density distribution is analyzed using Maximum Entropy Method (MEM) which employs the software package PRIMA [11, 12]. The bonding nature and the distribution of electrons in the bonding region can be clearly visualized using visualization software VESTA[13]. The MEM refinements were carried out by dividing the unit cell into $48 \times 48 \times 48$ pixels. The initial electron density at each pixel is fixed uniformly as $F_{000}/a_0^3 (e/Å^3)$, where $F_{000}$ is the total number of electrons in the unit cell and $a_0$ is the cell parameter. The MEM parameters are given in table 2.

<table>
<thead>
<tr>
<th>Parameters</th>
<th>CdO</th>
<th>Cd$<em>{0.94}$Al$</em>{0.06}$O</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Cycles</td>
<td>660</td>
<td>821</td>
</tr>
<tr>
<td>Lagrange Parameter ($\lambda$)</td>
<td>0.008295</td>
<td>0.009100</td>
</tr>
<tr>
<td>R$_{\text{MEM}}$(%)</td>
<td>0.015383</td>
<td>0.019885</td>
</tr>
<tr>
<td>wR$_{\text{MEM}}$(%)</td>
<td>0.021979</td>
<td>0.028713</td>
</tr>
</tbody>
</table>

Figure 1(a) CdO  
Figure 1(b) Cd$_{0.94}$Al$_{0.06}$O

Figure 1 Refined XRD profile of CdO, and Al doped CdO

The two dimensional electron density distribution for undoped CdO and Al doped CdO are shown in figures 2(a) and 2(b) for CdO and Cd$_{0.94}$Al$_{0.06}$O on the (001) plane. The interaction of Cadmium and oxygen atoms is clearly visible. High
thermal vibration is observed in Cd$_{0.94}$Al$_{0.06}$O, compared to CdO which can be related to the high Debye-Waller factor in Cd$_{0.94}$Al$_{0.06}$O as shown in table 1.

![Figure 2(a) CdO](image1)

![Figure 2(b) Cd$_{0.94}$Al$_{0.06}$O](image2)

**Figure 2:** Two dimensional electron density map for (a) CdO (b) Cd$_{0.94}$Al$_{0.06}$O along (100) plane

The two dimensional electron density distribution are shown in figures 3(a)-3(b) for CdO and Cd$_{0.94}$Al$_{0.06}$O on the (110) plane. The numerical data of electron density distribution between Cd and O atom is given in table 3.

**Table 3:** Electron density distribution along bonding directions

<table>
<thead>
<tr>
<th>Sample</th>
<th>Distance (Å)</th>
<th>Electron Density (e/Å$^3$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CdO</td>
<td>1.3674</td>
<td>0.4263</td>
</tr>
<tr>
<td>Cd$<em>{0.94}$Al$</em>{0.06}$O</td>
<td>1.3695</td>
<td>0.4701</td>
</tr>
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</table>
UV analysis

The band gap of the prepared nanocrystals is estimated from the UV-Visible absorption spectrum collected at SAIF, Cochin in the wavelength range of 200 to 800 nm. From the absorption spectrum, the energy band gap is measured with the help of Tauc relation,

$$\alpha h\nu = A(h\nu - E_g)^n$$

where, $\alpha$ is the absorption coefficient, ‘$h$’ is Plank’s constant, ‘A’ is the optical constant, ‘$\nu$’ is the frequency and $E_g$ is the energy band gap. Plotting $(\alpha h\nu)^2$ as a function of photon energy ($h\nu$) and extrapolating the linear portion of the curve as shown in figure 4(a) and figure 4(b) gives the estimate of direct band gap and is tabulated in the table 4. The band gap results are also comparatively similar trends with the MEM analysis. Mid bond electron density for Cd$_{0.94}$Al$_{0.06}$O has high value than undoped CdOnanocrystal. Contribution of Al impurity has decreased the energy band gap.
Figure 4(a) CdO

Figure 4(b) Cd\textsubscript{0.94}Al\textsubscript{0.06}O

Figure 4: UV-Vis spectrograph for (a) CdO (b) Cd\textsubscript{0.94}Al\textsubscript{0.06}O
Table 4: Band gap energy

<table>
<thead>
<tr>
<th>Sample</th>
<th>Band gap (eV)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CdO</td>
<td>3.85625</td>
</tr>
<tr>
<td>Cd$<em>{0.94}$Al$</em>{0.06}$O</td>
<td>3.57838</td>
</tr>
</tbody>
</table>

Conclusion

Transparent conducting oxide materials of CdO and Al doped CdOnanocrystals were synthesized by sol-gel method. The prepared nanocrystals were characterized by PXRD and UV-Visible spectrophotometer for structural and optical analysis respectively. The profile fitting technique was used for extracting the structure factors. The extracted structure factors were used for the construction of charge density distribution in the unit cell. The ionic behavior of CdO and Al doped CdOnanocrystals was observed and analyzed.

Acknowledgements

Authors acknowledge with gratefulness SAIF, Cochin, Kerala, India for the XRD and UV data of the samples. The authors extend their thankfulness to The Madura College, Madurai, Tamilnadu, India for the moral support.

References


Utilizing Advertisements as Tool for Upliftment of Women

Neeru Sharma
Principal Technical Officer, National Institute of Science Communication and Information Resources, Dr K S Krishnan Marg, New Delhi 110 012, India

Abstract

It not only School and Text books that play important part in educating the children. There are other numerous factors too that govern the upbringing the women of a country like, nurturing, environment, financial status and social norms & ethics. Today the world has reached in a position where newborn, be it be male or female child, if not 100% but 80-90%, are surrounded by certain environment that is full of technologies. To whom we fondly call e-generation. This generation gets excess to communications means, like Telephone, Mobile Phone, Radio, FM Radio, Newspapers, Computer, Internet, Television, Satellite television, etc, etc. gradually within few months. Imagine a newborn/infant’s mind/brain getting exposed to all these devices, communication mediums within few months of birth. The infant grasps, understands and comes to understanding of living with all these appliances with their respective use. Television is something which attracts all with its audio visual quality. If we speak about the communication means in India, we have more than 62,000 newspapers, around 900 television channels and about 430 radio frequencies in India. They are available in Hindi, English, Urdu and various regional languages. All these means provide various kinds of programmes on news, sports, entertainment, etc. But the common thing in these entire communication mediums is advertising of various product and services. Advertisements, whether liked or not, they are integral part of any communications medium. These mediums require financial support through Advertising to sustain. Hence, Advertisements cannot be avoided. But using them for women education or enhancement of social status of women, purposes is something, needs to be looked/work upon.

Humans learns with imitation. From the time of their birth, through the teens and adulthood, they try to copy and imitate to learn, to impress upon or for sheer emotional pleasure or solace. And when children are directly exposed to advertisements that appear on Television they get inspired and try to copy the same. Advertisements have wide impact on human/child behaviour influencing the
It can best inform and empower to change attitude towards women and can also inculcate interest in education, use of education and social status of women, through basic character of advertisements, which is consistent persuasion with repetition.

Introduction

The builder of modern India, Pandit Jawaharlal Nehru, the first Prime Minister of India, laid the foundations of the liberal mass communication system and media in our country. His package contribution was the laying of foundations, securing extension to modernization of the media, introducing professionalism, tempering of media freedom with social responsibility and giving rural and research orientation. Mrs Indira Gandhi provided a thrust for sophisticated multi-media and indigenous technology. She aimed to ultimately strengthen and streamline the entire communication network to make it more service worthy. Keeping in steps, Mr Rajiv Gandhi laid foundations of electronic media in India. In last two decades time has witnessed phenomenal growth in digital mass media of which Advertisements are always an integral part as media cannot survive without them and advertisers cannot find better platform to reach their target audience.

Advertising

Advertisement, in the simplest terms, can be defined as ‘making known’. Advertising includes those activities by which visual or oral messages are addressed to the public for the purposes of informing and influencing them. The implicit objective is to create a demand for the products in the market. In order to achieve this objective every medium of information is used to deliver messages, including: television, radio, movies, magazines, newspapers, video games, the Internet and billboards. In doing so, it replaces interpersonal communication, a salesman or educator and manages to reach a large number of people/mass audience and replaces personal contact.

This cannot be achieved without mastering the art of presentation. The creativity, essentially, lies in the simplicity of its communication; a message, which is read with interest, understood to a point of conviction and acted upon by a large number of the audience, is considered to be the most effective one.
Education can change scenario of any society or country and so does the advertisement. Advertising, in modern times, is seen as an economic activity. It is a powerful educational tool capable of reaching and motivating large audiences. Howard Gossage argues that “Advertising justifies its existence when used in the public interest - it is much too powerful a tool to use solely for commercial purposes.” Today, the communication system is dynamic, purposive, practical and promotional in approach and nature. The active media message reception of the people has been effectively instrumental in changing needs, influencing their activities, attitudes, mindset and values.

**Position of Women in the Indian Society**

Indian Society is having many social issues like Widow Remarriage, Child Marriage, Sex ratio problem, Senior citizen problems and others. Advertisement with its persuasive and repetitive nature is bringing a change in the society. If the mass is able to receive and grasp information provided by the advertisement it can and is doing social work through which a society can take steps in the direction of Development, as the mass of a nation move forward in the better and prosperous direction so would the nation.

Due to strong preference for sons, Indian population has a deficiency of females. Surveys done by the New Delhi Operations Research Group in 1991 indicated that as many as 72 percent of rural parents continue to have children until at least two sons are born. Advertisements in print and broadcast media informing the mass about the gender disparity and legal issues in the subject to combat the problem of sex ratio in India. Advertisement informing the mass about the problem of female feticide through persuasive way can bring change in social attitude. Advertisements showing a daughter helping father as a son would have done the change can be expected from the mass and it can accept that girl child can be a asset of the family too.

Electronic Media advertisement depicting women empowerment in different sphere of life can be depicted effectively through advertisements on electronic media. Any society can move fast on the path of development if the condition of the women is strong. Government’s efforts to enhance living conditions of the society by improving the condition of the women through advertising is expected to yield result.
Strategy in the family welfare program and social status has to be such that it not only empowers but enables the women to take informed decisions in relation to their personal and delicate question on population control and family welfare.

The position of women in India needs to be addressed firmly to bring positive progress in the country. Women empowerment can really bring a good foundation of development process in India. 65% of girls in India are married by the age of 18 and become mothers soon afterwards. In some states more than 50% girls are married much before the age of 18. These problems need to be handled carefully.

Some Examples of Successful Advertisements campaign

AIDS Awareness: To control the dreadful disease a change in the mindset of the people was required. Most AIDS advertisements contain practical guidelines that can be used as a basis for action at enterprise, community and national levels. These advertisements cover areas such as prevention, care and support attitudes of the society towards personas affected by HIV/AIDS, and elimination of stigma and discrimination.

Polio Eradication: India has made tremendous progress in polio eradication, thanks to the consistent implementation of high-quality immunization campaigns that included regular advertising through a variety of advertisements all over India as per the need of the region and language.

Topical, funny and yet impressive ‘Amul’: The Amul brand is known for its sharp, witty and thought invoking commentary on the latest national/international events of mass interest. Amul Butter is a campaign that continues to be topical, funny and yet adds to the brand value of Amul as a butter brand.

What is required?

There mainly three kinds of advertisements which a common person view as campaign of miscellaneous products services namely Institutional Advertising, Product Advertising, Government advertising of various Social Message.

1. Institutional Advertising: In 1970-80s Institutional Advertising was at its peak. This kind of advertising used to highlight the new discoveries, inventions, facility available, and they did not contained product advertising. This sort of advertising used to enhance producers’ brand image immensely as Institutional Advertising could only be afforded by afew big
brands like TATAs and Birla’s. Now again it is required that big brands like Reliance, Tata, Aditya Group, etc. come forward do their bit to produce good quality women oriented advertisement with a message of educational value and broadcast them on air on TV and Radio, and improve brand image.

2. Advertisement with a Educational or social message: There are few advertisement on air now who are doing such job, like, “How many stars in the sky” advertisement of Bournvita'slitl champ campaign, which induce interest in education in children; “Jago re” advertisement campaign of TATA tea, which awakes for social cause or corruption, etc. The Advertising Standards Council of India (ASCI) which is a regulating body of the Advertisement content. This council should force some guidelines to advertising agencies to create advertisements with a message in storyline of ‘importance of women’s education’ or ‘enhancement of position of women in the society’ while creating an advertisement of a product. And instruct media houses to broadcast such advertisement for lesser rate during primetime.

Conclusion

It is argued here that characteristics of advertising can effectively be used for creating awareness about educational temper. Through repetitive messaging the educational information through advertisements could become part of the cognitive structure of the common public to bring about a change in the target audiences in regard to educational view.

If advertisements can work for McDonalds, Amul, Airtel, Bournvita, and many more brands, they should also work for the brand ‘educational temper’. If used effectively, the medium of advertisement can change the mindset of the masses at large. It can equip and motivate the masses to think positivity about education in more relative term. For effective communication of the message, the advertisement should use the language of the consumer; understand their needs, emotions and their lifestyle. In short, the venture to use advertising as tool for creation of educational impetus at national level can be useful.

Advertisement designers are basically Mass Communicators. They understand the likes and dislikes of the masses with respect to their financial and regional conditions. Thus, they are able to connect to the public at large.
Subconsciously, one is adapting to the kind of life dictated by the advertisements. The twentieth century witnessed a phenomenal growth in advertising and today advertising is not only being utilized in selling merchandise but also as a means of education. The advertisement through mass media thus played a major role in informing and educating the society.

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ORGANIC CHEMISTRY HAS A LOGICAL STRUCTURE
AND ITS STUDY PROMOTES LOGICAL THINKING

Dr. E. R. SUBRAHMANYAM
Reader & Head, Department of Organic Chemistry, SKBR. PG College,
Amalapuram, E.G.Dt., Andrapradesh.

Science is the methodical study of nature that forms testable explanations and predictions. Chemistry is the science of matter, its chemical reactions but also its composition, structure and properties. Chemistry is concerned with atoms, their interaction with other atoms and particularly with the properties of chemical bonds. Organic chemistry, inorganic chemistry, biochemistry, analytical chemistry and physical chemistry are the five traditional areas of study of chemistry. Organic chemistry is the chemistry of hydrocarbons and their derivatives. Organic chemistry has now matured as a major scientific discipline. Over 95% of known chemical compounds are organic compounds and roughly half of the present-day chemists are organic chemists. Rapid advancement in the field of organic chemistry is due to the fact that the organic chemical industry plays a major role in the world economy and because organic compounds are literally the stuff of life. Many changes have taken place in the practice and theory of organic chemistry during the last two or three decades. Among these changes are the ready availability of a much wider range of substrates and reagents; the development of a whole host of new synthetic reagents, a greater awareness of hazards associated with handling of organic chemicals, the routine use of chromatographic and spectroscopic techniques and use of mechanistic concepts to rationalize and predict the outcome of organic reactions. In addition to the introduction of new reagents and techniques the philosophy of organic synthesis has seen remarkable development.

Over the past fifty years or more, archetypal cases within each of the types of organic reactions, such as substitution, addition to multiple bonds, elimination, rearrangement, oxidation and reduction, have been studied in great detail. These extensive studies have enabled ideas on the nature and stabilization of transition states and on the timing of bond-breaking and bond-forming processes to be formulated. Many of the results have led to modifications in techniques and to the
discovery and design of new reactions and reagents, i.e., to the development of the methodology of synthesis.

In this developing framework involving mechanism and methodology, control and selectivity were recognized as playing a crucial and integral role in reaction pathways.

A recognition of the concept of stereo selectivity has led the way to a better understanding of reactants and reagents in order to introduce chirality in a symmetrical molecule i.e., an asymmetric synthesis. This area of synthetic organic chemistry has seen some of the most interesting developments over the last decade. Before 1940 optically active compounds could only be obtained in stereoisomerically pure form by isolation from natural sources, by resolution of recemic mixtures, or by a few laboratory controlled enzymatic reactions. Many of the chemical reactions lead to products which contain chiral centres, axes or planes but in which the isolated material is the optically inactive (recemic) form. This is a direct consequence of the fact that the reactants, reagents or solvents are achiral or are themselves recemic. In order to effect the preferential formation of one stereoisomer (either enantiomer or diastereomer) over the other, either the reactant, or the reagent or the solvent must be the pure enantiomeric form.

The four mainstream spectroscopic methods together have completely altered the face of organic chemistry in little over a decade and a half. UV-visible spectroscopy provides information about the extent of Pi-Electron systems, presence of conjugated unsaturation and conjuration with non-bonding elections. I.R. Spectroscopy enables detection of functional groups which have specific vibration frequencies such as C=O, NH₂, OH etc. Electron spin resonance (ESR) spectroscopy leads to detection of free radicals and the interaction of the election with, for example, nearby protons. Nuclear magnetic resonance (NMR) spectroscopy, say proton NMR, provides complete insight into the environment and the arrangement of atoms within a molecule. From the U.V., I.R., and NMR spectra of an unknown compound it is possible to determine its structure. Mass spectrometry involving electron beam impact is useful for the determination of molecular weight and deduction of molecular structure.

Chromatography is a modern technique available to organic chemists to separate easily the constituents of organic mixtures. It involves the separation of a mixture of two or more different compounds by distribution between two phases.
Based on the nature of two phases involved, solid-liquid absorption (column and thin layer), liquid-liquid partition (paper) and gas-liquid partition (vapour phase) chromatographic methods are available.

Thin layer chromatography closely related to paper chromatography is generally used to determine the number of components in a mixture and column chromatography is used to separate these components. With the development of new stationary phases, high pressure equipment and special detectors, the methods of classical liquid chromatography have evolved into what is commonly called High performance liquid chromatography (HPLC). Although the principles of separation are the same the use of HPLC results in greater resolution, speed and sensitivity compared to other liquid chromatography procedures.

Green Chemistry

It has already been stated that the developments in the 20th century brought about various benefits to the mankind, but all this was responsible for a number of environmental problems at the local and global levels. It is therefore important to formulate guidelines and pass strict rules for the practicing chemist. Bringing green chemistry to the classroom and the laboratory will have the desired effect. Green chemistry is basically environmentally benign chemical synthesis and is helpful to reduce environmental pollution. A large number of organic reactions were earlier carried out under anhydrous conditions and using volatile organic solvents like benzene which cause environmental problems and are also potential carcinogenic. Green chemistry focuses on a process (whether carried out in industry or chemical laboratory) that reduce the use and generation of hazardous substances or biproducts. With the advancements of knowledge and new developments, it is now possible to carry out large number of reactions in aqueous phase, using phase transfer catalysts, using sonication and microwave technologies. Some reactions have also been performed enzymatically and photochemically. It is now possible to carry out a number of reactions using versatile liquids and also in solid state. Green chemistry envisages that it is better to prevent waste than to treat or clean up waste after it is formed. Wherever possible, synthetic methodologies should be designed to use and generate substances that possess little or no toxicity to human health and the environment. Substances and the forms of a substance used in a chemical process should be so choosen so as to
minimize the potential for chemical accidents, including releases, explosions and fires.

Chemistry has been appropriately called the central science. It is both a deeply philosophical enquiry and an applied scientific endeavour and serves as a common interface between practically all of the other sciences, medicine, biology, engineering and geology. Chemistry is all around us. Right from the moment we get up in the morning till we go to bed at night, we come very close to chemistry and things related to it. The tooth paste, the toilet soap, the shampoo, plastic combs, plastic buckets, iodised salt, the dyes and a host of other items of daily use are all products of chemistry. We find chemistry in the foods we eat, the air we breathe, the drugs, fuels, fertilizers, pesticides and literally every object we can see or touch. That is not all. There would be no stainless steel, sugar-free soft drinks, CDs, DVDs and iPads, no Diwali fireworks and a host of other things without chemistry.

Everyone can and should understand basic chemistry. Apart from those wanting to become chemists, students wanting to become doctors, physicists, nutritionists, geologists and pharmacists all need to study chemistry.

With a view to celebrating the art and science of chemistry, the UN designated the year 2011 as the International year of chemistry with the focal theme “Chemistry–our life, our future”. The year also marked the hundredth anniversary of the Nobel prize in chemistry awarded to Madam Curie in 1911 for her discovery of radium.

It is to be understood by all that the importance of chemistry will not be diminished over time, rather it will continue to be a prominent career prospect. We must encourage young people to take up chemistry not only by making teaching interesting but also showing experimental demonstrations to them.

It is no longer a question of merely exhibiting the wonders and potentialities of chemistry (science). In fact it is necessary to deal with the very real suspicion and ever hostility to science that has been generated in recent years by the use of science for destruction and the universal fear of the further use of science in more and more horrible forms of destruction in the future. A widespread understanding to act on it will be needed before science can be made safe for the world. Once science forms part of general education active participation in science by all the working population becomes possible and indeed necessary.
It is through science in general and chemistry in particular that the transformation of society to one free from exploitation can be brought about.

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An Empirical Investigation on Financial Inclusion

Dr. Mamta Brahmbhatt
Associate Professor, National Institute of Cooperative Management, (Now known as Shri Jairambhai Patel Institute of Business Management and Computer Applications- SJPI-NICM) Gandhinagar, Gujarat

Introduction

Poverty reduction has been an important goal of development policy since the inception of planning in India. It has been found that financial services are used only by a section of the population. There is demand for these services but it has not been provided. The excluded regions are rural, poor regions and also those living in harsh climatic conditions where it is difficult to provide these financial services. The excluded population then has to rely on informal sector (moneylenders etc.) for availing finance that is usually at inflated rates. Financial inclusion could be the one of the remedies to avoid such problems.

Financial Inclusion: Conceptual Roots

According to Dr. C. Rangarajan, Chairman of the Committee on Financial inclusion, 2008: Financial Inclusion can be defined as the process whereby it is ensured that viable financial services & products are provided to the weaker sections at prices that are affordable, through a transparent and just Institution. In India financial inclusion has been started with opening ‘no frills’ account and issuing a few General Purpose Credit Cards for all. However, it is not the end of the story of financial inclusion. It emphasizes on the access to basic formal financial services at an affordable cost in a sustainable manner for the vulnerable people (NABARD, 2008). Therefore, Financial Inclusion refers to a situation where people, in general, have connection with the formal financial institutions through holding savings bank account, credit account, insurance policy etc. It may help the person to have affordable access to financial services like formal savings, credit, payments, insurance, remittance etc.

Why Financial Inclusion?

It mobilizes savings that promote economic growth through productive investment. It promotes financial literacy of the rural population and hence guides
them to avoid the expensive and unreliable financial services. This helps the weaker sections to channelize their incomes into buying productive resources or assets. In the situations of economic crisis, the rural economy can be a support system to stabilize the financial system. Hence, it helps in ensuring a sustainable financial system.

Literature review

Nitinkumar¹ (2013) examined status of financial inclusion in India. Branch network has unambiguous beneficial impact on financial inclusion. Both proportion of factories and employee base turn out to be significant determinants of penetration indicators. The findings reveal the importance of a region’s socio-economic and environmental setup in shaping banking habit of masses. Using test for convergence it is found that regions tend to maintain their respective level of banking activity, with no support for closing gap.

Nalinishah² (2013) said that financial inclusion is a tool for combating poverty. It is estimated that globally over two billion people are excluded from access to financial services, of which one third is in India. Access to various financial services enables the poor people to participate in the growth of the economy. Many banks are forced to adopt financial inclusion rather than their own interest. The banks have encountered various problems while adopting financial inclusion Viz. improper repayment, need for additional workforce, more time consumption, heavy work load, high cost etc.

P. Arulmurugan, P. Karthikeyan, and N. Devi,³ (2013) concluded that access to finance by the poor and vulnerable groups is a prerequisite for poverty reduction and social cohesion. More than 150 million poor people have access to collateral – free loans. However, there are still large sections of the world population that are excluded from the financial market. In India half of the poor are financially excluded from the country’s main stream of banking sector. The socio-welfare programs like the NREGA, Direct Cash transfer, National Old Age pension Scheme are focused on implementing financial inclusion.

¹ By, Nitinkumar, 2013, ‘Financial inclusion and its determinants: evidence from India’, vol No. 5
² By NaliniSubbiah, 2012, ‘Role of banks in financial inclusion’, Vol No. 4
Dr. Anupamasharma, Ms. Sumita Kukreja, 4 (2012), highlighted the basic features of financial inclusion and its need for social and economic development of the society. The study focused on the role of financial inclusion, in strengthening the India’s position in relation to other countries’ economy. It was concluded that undoubtedly financial inclusion is playing a catalytic role for the economic and social development of society but still there is a long road ahead to achieve the desired outcomes.

Tejani Rachana, 5 (2011), studied financial inclusion in rural areas, reasons for low inclusion, satisfaction level of the rural people toward banking services and to assess the performance of the banks which was working in the rural areas which mainly include the cooperative banks and regional rural banks. Recommendation and conclusion indicated that there is lot of opportunity for the commercial banks to explore the rural unbanked areas. Anirban Ghatak, 6 (2012), identified the various demand side factors of financial inclusion and to build a model for the same. The paper included Sample size of 500, by using simple random sampling. Study concludes that, accessibility, culture, assets literacy, and income are major factors.

IBEACHU E. HENRY, 7 (2010) stated that financial inclusion as a growth strategy for banking institutions. It also assessed the capability of the Nigerian banking industry with the use of Porter’s diamond model. With the use of questionnaires administration and several other data collection methods, the research compared the results from Nigeria and the UK.

Mandira Sarma, Jesim Pais, in 8 (2010) discussed that level of human development and financial inclusion in a country moves closely with each other. Among socio-economic and infrastructure related factors, income, inequality, literacy, urbanization and physical infrastructure for connectivity and information are important. Health of the banking sector does not seem to have an unambiguous effect on financial inclusion whereas ownership pattern does seem to matter.

5 Tejani Rachana, 2011, “Financial Inclusion and Performance of Rural Co-operative Banks in Gujarat” Vol. – 2
6 By Anirban Ghatak, 2012, ‘Demand side factors affecting financial inclusion’
Michael Chibba (2009) concluded that the chosen and conventional approaches to tackling poverty and other millennium development goals are useful and necessary, they are not sufficient to address the challenge. Financial inclusion (FI) offers incremental and complementary solutions to tackle poverty, to promote inclusive development.

Toxopeus, Helen S., Lensink, ‘Robert, said (2007) studied the effects of remittances in developing countries. Remittances, in terms of size, are not only one of the main capital inflows in developing countries, often even more substantial than ODA, but they also appear to have a robust positive effect on economic growth.

Research Objectives
The current research is aimed to investigate status of financial inclusion and to understand perception of rural people towards financial inclusion.

Sample Size
For determining the sample size, following formula was used.

\[ n = \frac{Z^2pq}{d^2} \]

Here \( Z = 1.96, p = 0.15, q = 0.85, d = 0.05, \)

\[ n = \frac{(1.96)^2(0.15)(0.85)}{(0.05)^2} \]

Researchers got response rate of 64.79%, with 127 usable questionnaires in final analysis.

Research Methodology
This is an analytical study based on the primary data collected through scientifically developed questionnaire. The questionnaire has been personally administered on sample size of 127 chosen on a convenient basis from the cities of

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Gujarat State. Single Cross Sectional Descriptive Research Design has been used in the research. Secondary research was conducted and instruments used to financial inclusion in different countries were collected. A questionnaire was constructed and piloted. Care was taken to minimize the possibility of wrong interpretation and biased views. Pilot study results were used to determine sample size. The five-point likert scale was used to analyze the different variables and their relationship. For the analysis of data statistical methods are applied with the aid of SPSS (Statistical Package for Social Science) software, version 16.0 and excel.

Sample Characteristics

<table>
<thead>
<tr>
<th>Particulars</th>
<th>Category</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Male</td>
<td>78</td>
<td>61.4</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>49</td>
<td>38.6</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>127</td>
<td>100</td>
</tr>
<tr>
<td>Age</td>
<td>Less than 18 Year</td>
<td>9</td>
<td>7.1</td>
</tr>
<tr>
<td></td>
<td>18 to 35 Year</td>
<td>55</td>
<td>43.3</td>
</tr>
<tr>
<td></td>
<td>35 to 60 Year</td>
<td>48</td>
<td>37.8</td>
</tr>
<tr>
<td></td>
<td>Above 60 Year</td>
<td>15</td>
<td>11.8</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>127</td>
<td>100</td>
</tr>
<tr>
<td>Education</td>
<td>Less Than 5th</td>
<td>25</td>
<td>19.7</td>
</tr>
<tr>
<td></td>
<td>6th to 10th</td>
<td>30</td>
<td>23.6</td>
</tr>
<tr>
<td></td>
<td>10th to 12th</td>
<td>43</td>
<td>33.9</td>
</tr>
<tr>
<td></td>
<td>Graduate</td>
<td>23</td>
<td>18.1</td>
</tr>
<tr>
<td></td>
<td>Post Graduate</td>
<td>6</td>
<td>4.7</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>127</td>
<td>100</td>
</tr>
<tr>
<td>Occupation</td>
<td>Farmer</td>
<td>33</td>
<td>26</td>
</tr>
<tr>
<td></td>
<td>Self Employed</td>
<td>19</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>Salaried person</td>
<td>30</td>
<td>23.6</td>
</tr>
<tr>
<td></td>
<td>Housewife</td>
<td>18</td>
<td>14.2</td>
</tr>
<tr>
<td></td>
<td>Student</td>
<td>20</td>
<td>15.7</td>
</tr>
<tr>
<td></td>
<td>Unemployed</td>
<td>7</td>
<td>5.5</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>127</td>
<td>100</td>
</tr>
<tr>
<td>Monthly Income</td>
<td>Less than 3000</td>
<td>30</td>
<td>23.6</td>
</tr>
<tr>
<td></td>
<td>3001 to 5000</td>
<td>24</td>
<td>18.9</td>
</tr>
<tr>
<td></td>
<td>5001 to 10000</td>
<td>38</td>
<td>29.9</td>
</tr>
<tr>
<td></td>
<td>More than 10000</td>
<td>25</td>
<td>27.6</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>127</td>
<td>100</td>
</tr>
</tbody>
</table>
Data Analysis and Interpretation

$t$-test: (Gender and satisfaction)

Ho: There is no significant difference between Gender of the Respondents with respect to overall opinion about satisfaction towards Bank account.

**Table No.2: $t$-test (Gender & Satisfaction level)**

<table>
<thead>
<tr>
<th>Expectation</th>
<th>$t$ Cal.</th>
<th>Sig.</th>
<th>Result</th>
<th>Hypo.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are you satisfied with services provided by Bank?</td>
<td>0.014</td>
<td>0.989</td>
<td>0.989 &gt; 0.05</td>
<td>Do Not Reject</td>
</tr>
<tr>
<td>Is govt. is doing satisfactory work for financial inclusion?</td>
<td>-0.329</td>
<td>0.743</td>
<td>0.743 &gt; 0.05</td>
<td>Do Not Reject</td>
</tr>
<tr>
<td>Are you satisfied with guidance provided by bank employees?</td>
<td>0.639</td>
<td>0.024</td>
<td>0.024 &gt; 0.05</td>
<td>Do Not Reject</td>
</tr>
<tr>
<td>Banks charges very high interest rates.</td>
<td>-0.925</td>
<td>0.357</td>
<td>0.357 &gt; 0.05</td>
<td>Do Not Reject</td>
</tr>
<tr>
<td>Financial Inclusion leads to social inclusion of rural people.</td>
<td>1.295</td>
<td>0.199</td>
<td>0.199 &gt; 0.05</td>
<td>Do Not Reject</td>
</tr>
</tbody>
</table>

Researcher is not able to reject the hypotheses as values of all results are less than 0.05. So, researcher can conclude that there is no significance difference between Gender of respondents with respect to overall opinion about satisfaction level towards Bank Account.

**Anova (F-test)**

Ho: There is no significant difference between Gender of the Respondents with respect to Overall opinion about satisfaction towards Bank account.

**Table No.3: Anova F-test (age & overall satisfaction)**

<table>
<thead>
<tr>
<th>Expectation</th>
<th>F Cal.</th>
<th>Sig.</th>
<th>Result</th>
<th>Hypo.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are you satisfied with services provided by Bank?</td>
<td>1.141</td>
<td>0.337</td>
<td>0.337 &gt; 0.05</td>
<td>Do Not Reject</td>
</tr>
<tr>
<td>Is govt. is doing satisfactory work for financial inclusion?</td>
<td>2.385</td>
<td>0.075</td>
<td>0.075 &gt; 0.05</td>
<td>Do Not Reject</td>
</tr>
<tr>
<td>Are you satisfied with guidance provided by bank employees?</td>
<td>1.273</td>
<td>0.289</td>
<td>0.289 &gt; 0.05</td>
<td>Do Not Reject</td>
</tr>
<tr>
<td>Banks charges very high interest rates.</td>
<td>0.756</td>
<td>0.522</td>
<td>0.522 &gt; 0.05</td>
<td>Do Not Reject</td>
</tr>
<tr>
<td>Financial Inclusion leads to social inclusion of rural people.</td>
<td>0.626</td>
<td>0.600</td>
<td>0.600 &gt; 0.05</td>
<td>Do Not Reject</td>
</tr>
</tbody>
</table>
Researcher is not able to reject the hypothesis as there is no significant difference among Age of the Respondents With respect to Overall opinion about satisfaction towards Bank account.

Chi-square test : Gender - interest rates awareness
There is no Association between gender & Interest rate awareness.

Table No.4.1: Cross tab (Gender- Interest rate awareness)

<table>
<thead>
<tr>
<th>Are you Aware of any of prevailing interest rates of Your Bank?</th>
<th>Gender</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>Yes</td>
<td>15</td>
<td>6</td>
</tr>
<tr>
<td>No</td>
<td>41</td>
<td>29</td>
</tr>
<tr>
<td>Total</td>
<td>56</td>
<td>35</td>
</tr>
</tbody>
</table>

Table No.4.2: Chi-Square (Gender- Interest rate awareness)

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>Asymp. Sig. (2-sided)</th>
<th>Result</th>
<th>Hypothesis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>1.128a</td>
<td>1</td>
<td>.288</td>
<td>0.288 &gt; 0.05</td>
<td>Do not Reject</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>1.162</td>
<td>1</td>
<td>.281</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>1.116</td>
<td>1</td>
<td>.291</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>91</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Researcher is not able to reject the hypothesis as there is no association between gender & Interest rate awareness. (0.288 > 0.05) Generally, people perceives that, female are not much aware of interest rate of market. But it is not reality. Male and Females are equally aware about it.

Major Findings
- Young generation in rural areas is much aware and active in terms of usage of financial services compared to older people.
- One of the major reasons of not availing banking services is behavior of bank employees. They are not able to give satisfactory answers to these people.
There are no gender differences in terms of awareness and perception of rural people. Generally people perceive that male is more aware and active in terms of financial knowledge. But it is not so.

- Rural people are satisfied with initiatives taken by government and they also believe that it should more focus on implication part of its decision.
- Rural people prefer their Friends/relatives as a source of borrowing against banks. This is due to availability in emergency, less documentation procedure. etc.
- Till now, government has focused on providing banking services to rural people. It should also focus on other financial services like Insurance, Mutual Funds. etc.

Limitations of Research

Rural Respondents may not able to understand financial terms even after explanation. Some Respondents may give Ambiguous answers for some of the questions. Respondents may not be ready to disclose their financial details. There is always a time constraint. It is very difficult to cover all the aspects of financial inclusion.

Conclusions & Implications

Financial Inclusion is needed for rural people of the economy. Rural ATMs, plastic cards and mobile payment technologies do have the ability to engage the unbanked sections. More steps must taken by the Government for the expansion of banking services and linking of opportunities among various segments of financial sector like capital markets, insurance, etc. in general financial inclusion will go a long way in removing poverty. It provides growth to individuals and businesses - with equality. It provides for security of income and savings, safety through health and life insurance and increased financial awareness.

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The Revival of Vipassana Meditation 
with special reference to S. N. Goenka

Pradeep Digambar Waghmare
Department of History, Ramnarain Ruia College, Matunga, Mumbai.

Introduction
India is a multi-religious, multi-lingual, multi-ethnic and multi-cultural country. It is filled with various types of diversities which lead to number of problems such as communalism, regionalism, linguism, casteism, poverty, unemployment, terrorism, corruption, drug addiction, severe stress, social insecurity etc. and our life has become miserable. Since these problems are universal therefore universal remedy is required. Thus Vipassana is the most scientific and practical path to end all these miseries to maintain peace and harmony and to develop happiness throughout the world.

Vipassana, the art of meditation, preached by Gautam Buddha during ancient period lost from India but it was again revived by S.N. Goenka during the second half of the 20th Century. S.N. Goenka established many centers in India to spread the technique of Vipassana meditation and tried to establish peace and harmony. In this paper, an attempt has been made, to trace the historical development of Vipassana and analyze the impact and significance of Vipassana in the present times and how it has brought about a cultural renaissance in India.

What is Vipassana?
The word Vipassana is derived from the pali word which means ‘insight’. It is described as “to see things as they really are, through the process of self-observation”. It is the true essence of the teaching of Buddha. It is one of India’s most ancient meditation technique which purifies the mind. It is a scientific process of self observation to concentrate the mind for inner peace. Vipassana is a non-sectarian meditation technique by which one can put to an end suffering and misery. Vipassana meditation aims at the highest goal of total liberation and total enlightenment. It has universal nature based on rationalism.

J. Krishnamurti says, “Meditation is the most marvelous thing”. He further says that Meditation is not the repetition of the words, the repetition of mantra but it is the movement of thought, put together in order to achieve a result.
Angaraj Choudhary states that Vipassana takes care of the whole mind with its deeper recess- an aspect, is responsible for a great part of our ills and miseries.

William Hart says, “Vipassana is not blind faith or philosophy and has nothing to do with sectarian religion. It is the way of life, art of living”.

**Historical Background**

During ancient period the art of Vipassana meditation was re-discovered by the great philosopher and religious reformer, Gautam Buddha in India. He taught this technique to all his disciples, household teachers and ordinary people including men and women for their inner peace and happiness. We find discussion on almost all points of religion of the Buddha including Meditation in Majjhima nikaya. He preached the scientific path to end the desires and misery include Morality (Sila), Meditation (Samadhi) and Wisdom (panna).

After the death of Gautam Buddha, King Ashoka during 3rd Century B.C. kept Buddhism alive including art of Vipassana meditation. After seeing the slaughter and suffering of people during Kalinga war (261 BC), King Ashoka renounced war as a matter of state policy and turn to the pursuit of Dhammavijaya. He summoned the Third Buddhist council at Patliputra in 250 B.C. and decided to send missionaries not only within India but also to other countries of the world to make Buddhism a world religion. He sent his son Mahindra and daughter Sanghamitra to Ceylon (Sri Lanka), Sona and Uttara to Burma, Myanmar (South East Asia) to spread the gospel of Buddha and the art of Vipassana which continued there in its pure form for thousands of years.

However it was lost to India after the death of Ashoka. Buddhism once again revitalized in India by the great Indian leader Dr. B.R. Ambedkar, the messiah of Dalits. He converted to Buddhism with nearly five lakhs of his followers on 14th October 1956 at Nagpur and set the wheel of the Buddha’s Dhamma in motion once again, spreading the message of his master to all corners of the world. He declared that he would himself campaign to the propagation of the Buddhist faith in India. Before his conversion, he visited Burma (Myanmar) to attend the Third World Buddhist Conference (Dec. 1954) in which he pointed sadly to the fact that Buddhism had disappeared from the place of its birth. However, his conversion created conducive social and religious atmosphere for the revival of Vipassana in the second half of the 20th century in India.
S. N. Goenka’s revival of Vipassana Meditation in India

Though the art of Vipassana lost in India within 1000 years after the death of Buddha, it was preserved in Burma (Myanmar) in its original form for nearly thousands of years through the Teacher - Student Tradition. This art of Vipassana meditation was once again revived in India, the land of its origin, by the great Vipassana teacher S.N. Goenka during the second half of the 20th century which has been considered as the greatest contribution to the world peace.

Satya Narayan Goenka was born and brought up in Hindu conservative family in Myanmar. With great hesitation S.N. Goenka attended 10 day Vipassana course in 1955 and he was deeply influenced by the teachings of Buddha. He was taught by his teacher, the late Sayagyie U Ba Khin of Burma, who was taught Viapassana by Saya U Thetgyie, a well-known teacher of meditation in Burma in the first half of 19th century. In turn, Saya U Thetgyie was a pupil of Ledi Sayadaw, a famous Burmese Scholar-monk of the late 19th and early 20th centuries/ Further back there is no record of the names of the teachers of this technique, but it is believed by those who practice it that Ledi Sayadaw learned Vipassana meditation from traditional teachers who had preserved it through generations since ancient times, when the teaching of the Buddha was first introduced into Burma.

S.N. Goenka re-introduced the technique of Vipassana in its land of origin in 1969 and started courses for all people in India. He established the Vipassana International Academy at Igatpuri near Nasik (Maharashtra) in 1947. Now more than 150 centers are established not only in India but also in number of foreign countries such as Myanmar, USA, UK, Australia, Thailand etc.

He also organized and participated in number of seminars and conferences in which he gave insight on need of Vipassana. He gave special talk on “The Meaning of happiness” at the World Economic Forum held at Davos, Switzerland in Jan 2000. He was invited to give talk on “world Peace and Vipassana” by United Nations at Millennium World Peace Summit held on 29th August 2000. He also delivered the Keynote address on the occasion of the celebration of the international recognition of the Veshaka on 29 May 2002 at the United Nations. He was invited to deliver lectures at world Buddhist Summit held at Yangon, Myanmar on 9 to 11 December 2004.
Significance of Vipassana Meditation

Vipassana does not involve any rites, rituals, cult and dogma. It is just the purification of mind for peace and happiness. Vipassana is for all. There is no discrimination on the basis of race, religion, caste, sex or place of birth. It helps to unify the society and country for peace and harmony because in the meditation hall, people from all religions, castes and countries sit together to practice this ancient scientific path of becoming a good human being. Thousands of Hindus, Muslims, Christians, Sikhs, Buddhists, Jains, etc have taken Vipassana courses.

Along with the followers of various religions, religious leaders from all communities have willingly taken Vipassana courses. Many of the times they consider this teaching and philosophy belongs to their own religion. Because truth, non-violence, self-purification, morality are common in all. Most of the times Vipassana courses have been conducted in temples, mosques, churches and monasteries. Thus he is playing the great role for establishing peace and communal harmony in India.

The importance of Goenka lies in the fact that he taught this practice not only to ordinary people but also to jail inmates. Vipassana is a positive reform measure enabling criminals to become wholesome members of society. He conducted courses at Jaipur jail, sabarmati and most important in Tihar jail in 1995 where more than 1000 inmates were given the insight of Vipassana to lead a good and honourable life.

In order to publish literature and disseminates information related to Vipassana, he established Vipassana Research Institute at Dhammagiri, Igatpuri, Nasik in 1985. On 29th October 2008 S.N. Goenka inaugurated the World’s Biggest Stone Monument for meditation, Global Pagoda in Mumbai in which more than 10000 meditators can meditate at one time. According to Goenka, “the global Pagoda is an ideal bridge for peace, tolerance and harmony across all the communal and regional divides splintering India as well as the entire world today. The global Pagoda will be a vehicle for the spread of the Buddha’s true teaching that emphatically opposes any dogma based on sect, caste and religion.” The Global Pagoda was inaugurated with the hands of President of India Shrimati Pratibha Patil in 2011 and it was attended by thousands of people from different religions and the religious gurus and it was considered as the important milestone in the establishment of peace in India.
Conclusion

To conclude one can say that S.N. Goenka in true spirit spreading the essence of Buddha’s teaching which brought about the cultural renaissance in India. Earlier this art was only limited to more privileged and religious minded people now it has reached to every common man. Now a day’s Vipassana has become the very important coping mechanism to avoid stress and insecurity. In order to overcome the darkness of ignorance and negativity, we must generate love, compassion and goodwill. According to the Preamble of the Constitution of UNESCO, “Wars begin in the minds of men and therefore it is in the minds of men that defenses of peace must be constructed”.

Vipassana helps to establish peace, harmony and happiness in the world. An ordinary citizen can derive the benefit from this technique which will lead to peace, progress and development of any country. Vipassana has given mental strength which can be applied in daily life for one’s own benefit and for the good of others. Life becomes more harmonious, fruitful and happy. Such practices helps a lot for national integration and communal harmony and it promotes unity in diversity which lead to harmonious, peaceful and happy life for all. Thus it can be considered as the greatest contribution of S. N. Goenka for the establishment of peace and harmony in India.

References

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EMOTIONAL INTELLIGENCE OF HIGH SCHOOL TEACHERS IN CHENNAI EDUCATIONAL DISTRICT

Mr. K. Uma Giridhar
Asst. Professor in Psychology, SCSCVMV University, Kancheepuram.

Introduction
Quality education depends on teachers who exhibit qualities that concern with the teaching profession. A teacher needs to imbibe, develop and possess the sound strength of being emotionally intelligent. It is inevitable, in order to provide, enhance and maintain the so called nurturing climate in the educational institutions in providing quality education where learners are the prime concern of every educational institutions, to fulfill the aims and objectives of teaching learning process a teacher requires to be emotionally intelligent, which enables the teachers to understand the students’ mind, to decide accordingly to the demands of the individual students need in the teaching learning process. Teachers deal and relate with children, colleague, supporting staff, parents and with the management. In order to maintain a smooth conduct and be effective in her profession in all his or her activity she or he needs to be emotionally intelligent. It is this quality that safe guards the well beings of oneself and of others and in this context safe guarding teachers and students. The higher the degree, a teacher possesses the emotional intelligent the better it is to be successful in life and in the profession.

Emotional intelligence links strongly with the concepts of love, personality, commitment, quality of life and spirituality of every individual. A teacher in the real class room becomes an executive of love and affection, sets examples by life and takes care as she or he deals with every individual student. She or he can only exhibit the emotional intelligence to the degree she or he possesses. Emotional intelligence is seen as a skill, ability to manage the emotions of self and of others. It’s inevitable that a teacher is able to manage her emotions in order to cater to the emotional needs and psychological needs of the students. It is the emotional intelligence that indicates and enables how successful we are or a teacher is. Success requires EQ more than Intelligent Quotient (IQ), which has tended to be the traditional measure of intelligence, ignoring essential behavioural character elements. One can come across with people who are academically brilliant and yet
are socially and inter-personally inept, despite possessing a high quality of IQ rating, success does not automatically follow.

**Significance of the Study**

According to Goleman (1998), the key dimensions of emotional intelligence are the compendium of Self-Awareness, Self-management, Social awareness and Relationship management.

Education along with the knowledge was seen as the only significant phenomenon for the growth and development of a person and the society. Although Plato and Aristotle defined education as bring out the best from human. Only in bringing out the best from human development can be expected. The requirement in bringing the best depends on a person’s optimism towards life. Goleman (1996), states “Optimism, like hope, means having a strong expectation that, in general, things will turn out all right in life, despite setbacks and frustrations” The degree of optimism that a person possesses depends on the amount of EI.

**Statement of the Problem**

**Emotional Intelligence of High School Teachers in Chennai Educational District**

**Objective**

1. To find out the level of emotional intelligence of high school teachers.

2. To find out whether there is significant difference between male and female high school teachers in their self-awareness, self-management, social awareness and relationship management and emotional intelligence.

**HYPOTHESES**

1. There is no significant difference between male and female high school teachers in their self-awareness, self-management, social awareness and relationship management and emotional intelligence.

2. There is no significant difference between rural and urban high school teachers in their self-awareness, self-management, social awareness and relationship management and emotional intelligence.

**Method Used for the Study**

The investigators have adopted the survey method to study the emotional intelligence of high school teachers.
Sample
In this pilot study the investigators selected 50 high school teachers teaching in Thiruvallur educational district. The samples were collected through simple random sampling technique.

Statistical Techniques Used
Percentage Analysis and ‘t’ test were employed to analyze the data.

Data Analysis

Table 1. Level of Emotional Intelligence and its Dimensions of High School Teachers

<table>
<thead>
<tr>
<th>Dimensions of Emotional Intelligence</th>
<th>Low</th>
<th>Moderate</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>Self-awareness</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>4</td>
<td>30.8</td>
<td>7</td>
</tr>
<tr>
<td>Female</td>
<td>5</td>
<td>13.5</td>
<td>26</td>
</tr>
<tr>
<td>self-management</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>7</td>
<td>53.8</td>
<td>5</td>
</tr>
<tr>
<td>Female</td>
<td>4</td>
<td>10.8</td>
<td>29</td>
</tr>
<tr>
<td>social awareness</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>1</td>
<td>7.7</td>
<td>11</td>
</tr>
<tr>
<td>Female</td>
<td>6</td>
<td>16.2</td>
<td>29</td>
</tr>
<tr>
<td>Relationship management</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>3</td>
<td>23.1</td>
<td>7</td>
</tr>
<tr>
<td>Female</td>
<td>9</td>
<td>24.3</td>
<td>25</td>
</tr>
</tbody>
</table>

Table 2. Difference between Male and Female High School Teachers in their Emotional Intelligence and its Dimensions

<table>
<thead>
<tr>
<th>Emotional Intelligence and its Dimensions</th>
<th>Male N = 13</th>
<th>Female N = 37</th>
<th>Calculated value of “t”</th>
<th>Remark at 5% level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-awareness</td>
<td>Mean 13</td>
<td>Mean 37</td>
<td>-1.287</td>
<td>NS</td>
</tr>
<tr>
<td>Self-management</td>
<td>Mean 13</td>
<td>Mean 37</td>
<td>-2.469</td>
<td>S</td>
</tr>
<tr>
<td>Social awareness</td>
<td>Mean 13</td>
<td>Mean 37</td>
<td>2.063</td>
<td>S</td>
</tr>
</tbody>
</table>
Is it inferred from the above table that there is no significant difference between male and female high school teachers in their self awareness, relationship management and emotional intelligence. But there is significant difference between male and female high school teachers in their self management, social awareness and emotional intelligence.

Table 3. Difference between Rural and Urban High School Teachers in their Emotional Intelligence and its Dimensions

<table>
<thead>
<tr>
<th>Emotional Intelligence and its Dimensions</th>
<th>Rural N = 10</th>
<th>Urban N = 40</th>
<th>Calculated value of “t”</th>
<th>Remark at 5% level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-awareness</td>
<td>50.67</td>
<td>49.33</td>
<td>1.96</td>
<td>NS</td>
</tr>
<tr>
<td>Self-management</td>
<td>43.33</td>
<td>49.83</td>
<td>-2.425</td>
<td>S</td>
</tr>
<tr>
<td>Social awareness</td>
<td>55.00</td>
<td>49.00</td>
<td>1.914</td>
<td>NS</td>
</tr>
<tr>
<td>Relationship management</td>
<td>47.67</td>
<td>52.08</td>
<td>-1.171</td>
<td>NS</td>
</tr>
</tbody>
</table>

(At 5% level of significance the table value of ‘t’ is 1.96)

Is it inferred from the above table that there is no significant difference between rural and urban high school teachers in their self awareness, social awareness, relationship management and emotional intelligence, but there is a significant difference between rural and urban high school teachers in their self management and emotional intelligence.

Findings and Conclusion

The percentage analysis reveals that male high school teachers have low level of self awareness and self management than female high school teachers (15.4 and 16.2, 7.7 and 10.8) respectively. But the male high school teachers have high level of social management and relationship management female high school teachers (7.7 and 5.4, 23.1 and 8.1) respectively.

Since female high school teachers have self awareness therefore they are able to have better self management than male high school teachers due to a strong mental power. Male high school teachers are better in social awareness and relationship management because they have better socialising and relationship.
Reference


THE ROLE OF HAPPINESS IN THE FAMILY USING COMBINED DISJOINT BLOCK FUZZY COGNITIVE MAPS (CDBFCMS)

R. Sridevi
Asst. Professor in Mathematics, Loyola College of Education, Chennai

Introduction
“Rejoice with your family in the beautiful land of life!” says Albert Einstein.

We analyze how the happiness plays a vital role in the families. We are aware that the family is a haven in a heartless world. We use the fuzzy model to find out this relation. We see the causes that are hindering and enhancing the families to be happy.

The happiness clearly has a strong and complex influence upon the family in which all of us live. In the given situation that is, globalization and modernization, a good number of people prefer to have nuclear families. Both husband and wife are forced today to work for the livelihood and for the smooth functioning of the family. It is not just in the urban also in the rural areas people experience the similar today. The growing individualism and the other influence within the world, arise a host of psychological and social, familial and individual questions that need to be addressed.

We study to find out the major causes that are hindering/affecting the happiness in family using Combined Disjoint Block Fuzzy Cognitive Maps (CDBFCM). We find that happiness is strongly correlated with perceived good health. This method is introduced by W.B. Vasantha Kandasamy, is analyzed in this study. The Combined Disjoint Block FCM is defined in this method becomes effective when the number of concepts can be grouped and are in large numbers. This project work has five chapters, namely Introduction, Fuzzy Logic, basic notations and definitions of Fuzzy Cognitive maps and Combined Disjoint Block Fuzzy Cognitive Maps, method of determining the hidden pattern, the concepts of problem and conclusion based on our study and a brief discussion of implications close the study.

Fuzzy Logic
Fuzzy logic starts with and builds on a set of user supplied human language rules. The fuzzy systems convert these rules to their mathematical equivalents.
This simplifies the job of the system designer and the computer, and results in much more accurate representations of the system behave in the real world.

Additional benefits of fuzzy logic include its simplicity and its flexibility. Fuzzy logic can handle problems with imprecise and incomplete data, and it can model nonlinear functions of arbitrary complexity. “If you don’t have a good plant model, or if the system is changing, then fuzzy will produce a better solution than conventional control techniques,” says Bob Varley, a Senior Systems Engineer at Harris Corp., an aerospace company in Palm Bay, Florida.

You can create a fuzzy system to match any set of input-output data. The Fuzzy logic Toolbox makes this particularly easy by supplying adaptive techniques such as adaptive neuro-fuzzy inference systems (ANFIS) and fuzzy subtractive clustering.

Fuzzy logic models, called fuzzy inference systems, consist of a number of conditional “if-then” rules. For the designer who understands the system, these rules are easy to write, and as many rules as necessary can be supplied to describe the system adequately (although typically only a moderate number of rules are needed).

In fuzzy logic, unlike standard conditional logic, the truth of any statement is a matter of degree (How cold is it? How high should we set the heat?). We are familiar with inference rules of the form $p \rightarrow q$ ($p$ implies $q$). With fuzzy logic, it is possible to say $(.5*p) \rightarrow (.5*q)$. Fuzzy inference systems rely on membership functions to explain to the computer how to calculate the correct value between 0 and 1. The degree to which any fuzzy statement is true is denoted by a value between 0 and 1.

Not only do the rule-based approach and flexible membership function scheme make fuzzy systems straightforward to create, but they also simplify the design of systems and ensure that you can easily update and maintain the system over time.

Fuzzy logic is a form of many-valued logic or probabilistic logic. It deals with reasoning that is approximate rather than fixed and exact. Compared to traditional binary sets (where variables may take on true or false values) fuzzy logic variables may have a truth value that ranges in degree between 0 and 1. Fuzzy logic has been extended to handle the concept of partial truth, where the truth value may range between completely true and completely false.
Furthermore, when linguistic variables are used, these degrees may be managed by specific functions.

Fuzzy logic is a problem-solving control system methodology that lends itself to implementation in systems ranging from simple, small, embedded microcontrollers to large, networked, multi-channel PC or workstation-based data acquisition and control systems. It can be implemented in hardware, software, or a combination of both. FL provides a simple way to arrive at a definite conclusion based upon vague, ambiguous, imprecise, noisy, or missing input information. Fuzzy Logic's approach to control problems mimics how a person would make decisions, only much faster.

**Unique Features of Fuzzy Logic**

Fuzzy logic offers several unique features that make it a particularly good choice for many control problems.

1) It is inherently robust since it does not require precise, noise-free inputs and can be programmed to fail safely if a feedback sensor quits or is destroyed. The output control is a smooth control function despite a wide range of input variations.

2) Since the Fuzzy Logic controller processes user-defined rules governing the target control system, it can be modified and tweaked easily to improve or drastically alter system performance. New sensors can easily be incorporated into the system simply by generating appropriate governing rules.

3) Fuzzy Logic is not limited to a few feedback inputs and one or two control outputs, nor is it necessary to measure or compute rate-of-change parameters in order for it to be implemented. Any sensor data that provides some indication of a system's actions and reactions is sufficient. This allows the sensors to be inexpensive and imprecise thus keeping the overall system cost and complexity low.

4) Because of the rule-based operation, any reasonable number of inputs can be processed (1-8 or more) and numerous outputs (1-4 or more) generated, although defining the rule base quickly becomes complex if too many inputs and outputs are chosen for a single implementation since rules defining their interrelations must also be defined. It would be better to break the control system into smaller chunks and use several smaller Fuzzy Logic
controllers distributed on the system, each with more limited responsibilities.

5) Fuzzy Logic can control nonlinear systems that would be difficult or impossible to model mathematically. This opens doors for control systems that would normally be deemed unfeasible for automation.

**Fuzzy Cognitive Maps**

Fuzzy Cognitive Maps are fuzzy structures that strongly resemble neural networks, and they have powerful and far-reaching consequences as a mathematical tool for modeling complex systems. A mathematical model called Fuzzy Cognitive Maps, introduced by L.A. Zadeh in the year 1965 and Political scientist R. Axelrod in the year 1976, is used to study decision making in social and political systems. FCMs can successfully represent knowledge and human experience, introduced concepts to represent the essential elements and the cause and effect relationships among the concepts to model the behavior of any system. Prof. Bart Kosko, the guru of fuzzy logic, introduced the Fuzzy Cognitive Maps in the year 1986. It was a fuzzy extension of the cognitive map pioneered in 1976 by political scientist Robert Axelrod, who used it to represent knowledge as an interconnected, directed, bilevel-logic graph. Till today there are over a hundred research papers which deal with FCMs, and the tool has been used to study real-world situations as varied as stock-investment analysis to supervisory system control, and child labor to community mobilization against the AIDS epidemic. It is a very convenient, simple and powerful tool, which is used in numerous fields such as social, economical, medical and so on.

**Combined Disjoint Block FCM**

A factor to be worth mentioning is that each every family faces challenges of maintaining and nurturing the happiness in the families. The feeling of each and every individual is so sensitive and intricate to be given any mathematical expression other than fuzzy mathematics. As it is the only tool that can give complete expression to such feelings, we are justified in approaching this problem using fuzzy mathematics theory. Here we approach the problem via attributes using the notion of Combined Disjoint Block FCM (CDB FCM).

Let $C_1, \ldots, C_n$ be $n$ nodes / attributes related with some problem. The $n$ may be very large and a non prime. Even though we have C- program to work
finding the directed graph and the related connection matrix may be very unwieldy. In such cases we use the notion of combined disjoint block fuzzy cognitive maps. We divide these \( n \) attributes into \( k \) equal classes and these \( k \) equal classes are viewed by \( k \)-experts or by the same expert and the corresponding directed graph and the connection matrices are got. Now these connection matrices are made into a \( n \times n \) matrix and using the C-program the results are derived.

This type of Combined Disjoint Block FCM is known as Combined Disjoint Equal Block FCM. Now some times we may not be in a position to divide the ‘\( n \)’ under study into equal blocks in such cases we use the technique of dividing the \( n \) attributes say of some \( m \) blocks were each block may not have the same number of attributes, but it is essential that there \( n \) attributes are divided into disjoint classes. We use both these techniques in the analysis of the problem.

Attributes

This is the case when \( n \) happens to be a prime number. Using the linguistic questionnaire and the expert’s opinion we have taken the following sixteen attributes \( \{A_1, A_2, \ldots, A_{16}\} \).

Before we proceed on to apply the Fuzzy Cognitive Map model to this problem we define or precisely recall what we mean by the 16 attributes given by the expert. With it we will have no confusion in noting each attribute and in analyzing them via the directed graph and its connection matrices.

\( A_1 \) - Loneliness

Loneliness is a complex and usually unpleasant emotional response to isolation. Loneliness typically includes anxious feelings about a lack of connectedness or communality with other beings, both in the present and extending into the future. As such, loneliness can be felt even when surrounded by other people. The causes of loneliness are varied and include social, mental, emotional, and spiritual factors. Research has shown that loneliness is widely prevalent throughout society among people in marriages, relationships, families and successful careers. It has been a long explored theme in the literature of human beings since classical antiquity. Loneliness has also been described as social pain – a psychological mechanism meant to alert an individual of isolation and motivate him/her to seek social connections.
People can experience loneliness for many reasons and many life events may cause it, like the lack of friendship relations during childhood and adolescence, or the physical absence of meaningful people around a person. At the same time, loneliness may be a symptom of another social or psychological problem, such as chronic depression. Many people experience loneliness for the first time when they are left alone as infants. It is also a very common, though normally temporary, consequence of a breakup, divorce, or loss of any important long-term relationship. In these cases, it may stem both from the loss of a specific person and from the withdrawal from social circles caused by the event or the associated sadness.

A2 - Frustration

In psychology, frustration is a common emotional response to opposition. Related to anger and disappointment, it arises from the perceived resistance to the fulfillment of individual will. The greater the obstruction, and the greater the will, the more the frustration is likely to be. Causes of frustration may be internal or external. In people, internal frustration may arise from challenges in fulfilling personal goals and desires, instinctual drives and needs, or dealing with perceived deficiencies, such as a lack of confidence or fear of social situations. Conflict can also be an internal source of frustration; when one has competing goals that interfere with one another, it can create cognitive dissonance. External causes of frustration involve conditions outside an individual, such as a blocked road or a difficult task. While coping with frustration, some individuals may engage in passive-aggressive behaviour, making it difficult to identify the original cause(s) of their frustration, as the responses are indirect. A more direct, and common response, is a propensity towards aggression.

A3 - Economic Conditions/Status

This term when we accept as a fuzzy node has a very different meaning from the term “Economic status” in general. This will be explained shortly. This does not imply the economic conditions under which the family is living namely as poor, very poor, middle class, lower middle class, upper middle class, rich, very rich, or the hereditary richness or economic status of a family or community. But here by the term the economic status of a person we mean the individual economic status.
Economic hardship is a stressor that affects large numbers of children and their families. This study estimated a model that included pathways linking economic conditions to the internalizing and externalizing symptoms of a multiethnic sample of urban adolescents. Similar to other prominent models, this model included parental distress and parenting as key constructs, but the expanded ecological model also included stressors outside the family and adolescents' associations with deviant peers as possible explanatory factors. Data from 300 adolescents and their parents were consistent with a model that showed linkages between economic conditions, parental depressive symptoms, supportive parenting, and internalizing symptoms. Stressors outside the family were associated with deviant peer affiliations which, in turn, predicted internalizing and externalizing symptoms.

A4 - Conflicting thoughts / misunderstanding

Conflict brings negative thoughts in one's life. It doesn't resolve issues. Instead, it polarizes and inflames them. It makes one's life worse and steals his/her job as one fight battles that should never be fought. Conflict is one of the plausible self-deceptions of life. I think fighting will make my life better, but when the battle is over, my life is worse. Conflict leaves a trail of destruction, and I lose more than I gain. When I add up the benefits of fighting with other people, the sum is always zero. I am my own worst enemy when I take the path of conflict. It doesn't matter if the conflict is personal or on a global scale, the result is the same. Conflict is the road to exhaustion and a mind full of negative thoughts.

A5 - Social and religious values

Social Values form an important part of the culture of a society. Social values, norms and institutions explain the way in which social processes operate in a given society. They are the social sources of patterned interaction. Values account for the stability of the social order. They provide the general guidelines for conduct. In doing so, they facilitate social control. Values are the criteria people use in assessing their daily lives, arranging their priorities, measuring their pleasures and pains, choosing between alternative courses of action. Values provide the general guidelines for the behaviour of the people.

Religion is an organized collection of belief systems, culture systems, and world views that relate humanity to spirituality and, sometimes, to moral values. Religious values are ethical principles founded in religious traditions, texts and
beliefs. In contrast to personal values, religious-based values are based on scriptures and a religion’s established norms. The term religious values historically refer to the values derived from the teachings of the founder and the traditions and taught throughout the history of the religion.

A6 - Faithfulness /fidelity

Fidelity is the quality of being faithful or loyal. Its original meaning regarded duty to a lord or a king, in a broader sense than the related concept of fealty. Both derive from the Latin word *fīdēlis*, meaning “faithful or loyal”. The term faithfulness/fidelity in the family plays a vital role in keeping the family united and happy. The growing unfaithfulness to each other in the families changes the situation and joy of the family. During my interview, I could come across this kind of situations.

A7 - Physical Illness (heart attack, diabetics, ulcer, etc)

A disease is an abnormal condition that affects the body of an organism. It is often construed as a medical condition associated with specific symptoms and signs. Illness and sickness are generally used as synonyms for disease. However, this term is occasionally used to refer specifically to the patient’s personal experience of their disease. The physical illnesses often make the families stand still financially and psychologically. In those moments, the individual needs the moral support of the family to overcome.

A8 - Loss of dear ones /significant other

The loss of a loved one is an event that all of us are likely to experience during our lifetimes, often on numerous occasions. The sudden loss or leaving behind makes the person sometimes in the family to feel loneliness and frustrated. Often the unattended people are left behind with grief and sorrow in the families. Actually People need to talk a lot about the loss of their loved one. The more they talk, the more they process the reality. The family members must be in touch with the person who is undergoing the struggle or the experience of the loss of the significant ones.

A9 - Faultlessness

Faultlessness is one of the biggest problems the families could face in the modern and fast growing scenario of the world. The family break-ups, misunderstandings among couples and with children have their base in this category. He/she must understand and talk with the other and the situation. No
proper understanding of one person in the family leads to the extreme of losing the happiness.

A10 - Negligence

Negligence (Lat. negligentia, from neglegere, to neglect, literally "not to pick up something") is a failure to exercise the care that a reasonably prudent person would exercise in like circumstances. The area of tort law known as negligence involves harm caused by carelessness, not intentional harm. According to Jay M. Feinman of the Rutgers University School of Law, "The core idea of negligence is that people should exercise reasonable care when they act by taking account of the potential harm that they might foreseeably cause harm to other people."

A11 - High expectations

This is one of the biggest challenges faced by the younger generation of the time. The expectations of the family in particular the parents are not met by the children. The huge and unrealistic expectations of the parents bring lots of stress and unwanted situations in the family. This often leads the individuals to the extreme of loneliness and frustration.

A12 - Family pressure

Pressure can drive us to do better. Like, family financial crisis can give pressure to the kids in doing better in school so they can get a better job, more money, etc.. Pressure can sometimes lead the people make more friends so that they can be more popular. Socializing is healthy and in the process, they get into sports and get positions in clubs. One of the disadvantages is that of peer pressure for students to be popular. They feel the need to do things they don't want to do so they can fit in. Pressure and expectations from parents can also be bad. They compare their kids to their relatives and friends' kids. So their children are driven to do better but it can either make or break them. Some can't handle the stress and eventually break under the pressure. They give up and start acting rebelliously, smoke, take drugs or they become suicidal, cut themselves.

A13 - Family Status /background

Family status or background is another issue or prestige for everyone in the family and outside. Everyone wants to show that their status good. Above all, the stress of keeping their status in the society, the parents often forget to help their
child grow in all the walks of life. The demand to keep the family status often shatters the dreams of the family and the individuals.

A_{14} - Child rearing issues

Parenting (or child rearing) is the process of promoting and supporting the physical, emotional, social and intellectual development of a child from infancy to adulthood. Parenting refers to the aspects of raising a child aside from the biological relationship. Parenting is usually done by the biological parents of the child in question, although government and society take a role as well. In many cases, orphaned or abandoned children receive parental care from non-parent blood relations. Others may be adopted, raised in foster care, or placed in an orphanage.

A_{15} - Lack of tolerance

In general, tolerance or toleration is a fair, objective, and permissive attitude toward those whose opinions, practices, race, religion, nationality, etc., differ from one’s own; freedom from bigotry. When we speak of tolerance in the families, it opens up ocean of questions to reflect upon. Though people live under one roof as one family, everyone differ with their own temperament and behaviours. This brings to the notice that we need to develop acceptance and understanding of ‘give and take’ policy with would surely help the families to experience the happiness in the life of everyone.

A_{16} - Adamant character

Adamant character is another aspect in the family which often disturbs and divides the members. This character again calls for the understanding one another and live happily. This character is often considered to be very dangerous for the family which looks for a happy family life.

Application of Combined Disjoint Block Fcms to the Study

These 16 attributes are divided into 4 classes C_1, C_2, C_3 and C_4 with 4 in each class. Let C_1 = \{A_1, A_7, A_{12}, A_{13}\}, C_2 = \{A_3, A_5, A_{11}, A_{16}\}, C_3 = \{A_2, A_6, A_8, A_{15}\}, and C_4 = \{A_4, A_9, A_{10}, A_{14}\}. Now we take the expert opinion for each of these classes and take the matrix associated with the combined disjoint block FCMs. The experts opinion for the class C_1 = \{A_1, A_7, A_{12}, A_{13}\} in the form of the directed graph.
According to this expert, the attributes are Loneliness, Physical Illness (heart attack, diabetics, ulcer, etc), Family pressure, and Family Status/background. The related connection matrix $M_1$ is given by

\[
A_1 \ A_7 \ A_{17} \ A_{13}
\]

\[
\begin{array}{cccc}
0 & 0 & 0 & 1 \\
1 & 0 & 1 & 1 \\
1 & 1 & 0 & 1 \\
1 & 0 & 1 & 0 \\
\end{array}
\]

The directed graph is given by the expert on \{A_3, A_5, A_{11}, A_{16}\} which forms the class $C_2$.

According to this expert, the attributes are Economic conditions, Social and religious values, High expectations and Adamant character. The related connection matrix $M_2$ is given below:

\[
A_3 \ A_5 \ A_{11} \ A_{16}
\]

\[
\begin{array}{cccc}
1 & 1 & 1 & 1 \\
0 & 1 & 0 & 0 \\
0 & 0 & 0 & 0 \\
0 & 0 & 0 & 0 \\
\end{array}
\]
Now we give the directed graph for the class $C_3$ as given by the expert $C_3 = \{A_2, A_6, A_8, A_{14}\}$

According to this expert, the attributes are Frustration, Faithfulness / fidelity, Loss of dear ones / significant other and Child rearing issues. The related connection matrix $M_3$ is given below:

$$
\begin{bmatrix}
0 & 0 & 0 & 0 \\
1 & 0 & 0 & 0 \\
1 & 0 & 0 & 0 \\
0 & 0 & 0 & 0
\end{bmatrix}
$$

The directed graph is given by the expert on $\{A_4, A_9, A_{10}, A_{15}\}$ which forms the class $C_4$

According to this expert, the attributes are the expert Conflicting thoughts / misunderstanding, Faultlessness, Negligence, and Lack of tolerance.

$A_4, A_9, A_{10}, A_{15}$
The Combined Disjoint Block connection matrix of the fuzzy cognitive maps $B$ is given by

\[
\begin{align*}
A_1 & 0 1 1 \\
A_2 & 0 0 1 \\
A_3 & 1 0 1 \\
A_4 & 0 1 0 \\
A_5 & 0 0 1 \\
A_6 & 1 0 1 \\
A_7 & 1 1 0 \\
A_8 & 1 0 1 \\
A_9 & 1 1 0 \\
A_{10} & 0 1 0 \\
A_{11} & 0 0 1 \\
A_{12} & 1 0 1 \\
A_{13} & 1 1 0 \\
A_{14} & 0 0 1 \\
A_{15} & 1 0 1 \\
A_{16} & 0 1 0 \\
A_{17} & 0 0 1 \\
A_{18} & 1 0 1 \\
A_{19} & 1 1 0 \\
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A_{26} & 0 1 0 \\
A_{27} & 0 0 1 \\
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A_{106} & 0 1 0 \\
A_{107} & 0 0 1 \\
A_{108} & 1 0 1 \\
A_{109} & 1 1 0 \\
A_{110} & 0 0 1 \\
A_{111} & 0 1 0 \\
A_{112} & 0 0 1 \\
A_{113} & 1 0 1 \\
A_{114} & 1 1 0 \\
A_{115} & 0 0 1 \\
\end{align*}
\]

Suppose we consider the ON state of the attribute loneliness and all other states are OFF the effect of $X = (1000000000000000)$ on the CDBFCM is given by

$XB = (1001000000000000)$ = $X_1$ (Say)

$X_1B = (1011000000000000)$ = $X_2$ (Say)

$X_2B = (1111000000000000)$ = $X_3$ (Say)

$X_3$ is a fixed point of the dynamical system. Thus when one experiences loneliness in the family, he/she gets frustrated. Misunderstanding and conflicting thoughts are also very much present in the person. Economic conditions of the person or family leads the person to feel loneliness in the human society.
Suppose we consider the on state of the attributes social and religious values and the loss of dear ones or significant other and all other nodes are in the off state. Now we study the effect on the dynamical system B.

Let \( T = (0001001000000000) \) state vector depicting social and religious values and the loss of dear ones or significant other, passing the state vector \( T \) into the dynamical system \( B \).

\[
TB = (0000111100000000) = T_1 \text{ (Say)}
\]

Here \( T_1 \) is a fixed point of the dynamical system. Thus social and religious values lead the person to be faithful in the family and the experience of the loss of dear ones or significant other leads to physical illnesses. When the social and religious values are not followed, fidelity to the life partner and children is lost.

Suppose we consider the ON state of the attributes conflicting thoughts/misunderstanding, physical illness, family pressure and family background and all other nodes are in the OFF state. Now we study the effect on the dynamical system \( B \). Let \( G = (0001001000011000) \) state vector depicting conflicting thoughts/misunderstanding, physical illness, family pressure and family background, passing the state vector \( G \) into the dynamical system \( B \).

\[
GB = (1011101010011000) = G_1 \text{ (Say)}
\]

\[
G_1B = (1111111110011111) = G_2 \text{ (Say)}
\]

Here \( G_2 \) is a fixed point of the dynamical system. Thus conflicting thoughts/misunderstanding leads the person to experience loneliness and frustration though all are present in the family. This shows us the lack of tolerance among the family people. Faithfulness and fidelity is lost once the misunderstanding takes the upper hand in the family. The physical illnesses scar the economic conditions of the family. Child rearing issues give pressure to the family.

We analyzed what are the causes that are hindering/affecting the happiness of the family using CDBFCM model. The limit point of the dynamical system reveals that the attributes \( A_1, A_2, A_3, A_4, A_5, A_6, A_7, A_8, A_{11}, A_{12}, A_{13}, A_{14}, A_{15}, \) and \( A_{16} \) are the major causes that are hindering/affecting the happiness of the family. This means, loneliness, frustration, economic conditions, conflicting thoughts / misunderstanding, social and religious values, faithfulness / fidelity, physical illness...
(heart attack, diabetics, ulcer, etc), loss of dear ones /significant other, high expectations, family pressure, family Status /background, child rearing issues, lack of tolerance and adamant character.

Suggestions

From the above observation, we suggest that in happy families, husbands and wives do not stop being a couple once they become a mother and a father. Successful families recognize and accept that getting angry with each other is normal. They know that a bunch of people of different ages living under one roof are bound to get on each other's nerves now and then, so they are quick to forgive and forget and to make up and apologize. Family dinners are essential and it's a time to connect. Have a minimum of four family dinners per week. Have one or two unifying activities that the family does together on a nightly basis. We suggest bedtime stories for young children or reading a chapter from a novel to an older child. Pacing and timing of events can make a world of difference for older relatives. Let us not forget that small modifications can make a big difference.

References

OPENING UP OF RETAIL SECTOR IN INDIA-A SOCIO ECONOMIC ANALYSIS

Dr. T. Sudha

Assistant Professor, Department of Economics, Annamalai University
Annamalai Nagar, Chidambaram.

This study makes an attempt to bring out a socio-economic analysis of an opening up of Retail sector in India. The talk on FDI on retail sector is a hot cake now, which mooted heated arguments among politicians, economists, consumers, small businessmen, middlemen, sociologists etc.

Foreign Direct Investment (FDI)

The term FDI refers to capital inflows from abroad that is invested to enhance the production capacity of the economy. Developing countries, particularly those in Asia, have been witnessing a massive surge of FDI inflows during the past two decades. Even though India has been a latecomer to the FDI scene, its’ significant market potential and a liberalized policy regime has sustained its attraction as a favourable destination for foreign investors. India’s FDI inflows exhibit a healthy trend. Since it is recognized as one of the biggest global consumer markets, India is targeted at various levels for FDI inflows.

FDI in cash & carry wholesale trading was first permitted, to the extent of 100% under the government approval route in 1997. FDI in single Brand Retailing was, permitted in 2006, to the extent of 51%. Of late, FDI in single brand retail is allowed to 100% and to multi brand retail it has been allowed to 51%. FDI flows in the retail sector have never been free from controversies and simultaneously have been an issue for unsuccessful deliberation ever since the advent of FDI in India.

Retailing in India

Retailing can be said to be the interface between the producer and the individual consumer buying for personal consumption. This excludes direct interface between the manufacturer and institutional buyers such as the government and other bulk customers. Retailing is the last link that connects the
individual consumer with the manufacturing and distribution chain. A retailer is involved in the act of selling goods to the individual consumer at a margin of profit.

The term retail means a sale to the ultimate consumer. The retail industry is mainly divided into Organized and Unorganized retailing. Organized retailing refers to trading activities undertaken by licensed retailers those who are registered for sales tax, income tax etc. Unorganized retailing refers to the traditional formats of low cost retailing like owner manned general stores, convenience stores etc.

The Indian Retail Industry is the 5th largest retail destination and the second most attractive market for investment in the globe after Vietnam as reported by AT Kearney’s seventh annual Globe Retail Development Index (GRDI), in 2008. The growing popularity of Indian Retail Sector has resulted in growing awareness of quality products and brands.

Retailing is being perceived as a beginner and as an attractive commercial business for organized business i.e. the pure retailer is starting to emerge now. Indian organized retail industry is one of the sunrise sectors with huge growth potential. AT Kearney, the well known international management consultancy, recently identified India as the second most attractive retail destination globally from among thirty emergent markets. It has made India the cause of a good deal of excitement and the cynosure of many foreign investors’ eyes.

Foreign companies’ attraction to India is the billion-plus population. Also, there are huge employment opportunities in retail sector in India. India’s retail industry is the second largest sector, after agriculture, which provides employment. In India there are more than 1 crore small shopkeepers and more than 4 crore people depend on retail. The sector contributes about 10% in GDP of the country. The food sector accounts for 70% of the total retail trade in terms of value and 95% of the retail trade takes place in the unorganized sector. The retail sector has witnessed 15% growth rate with indigenous capital.

Discussion on FDI in Retail sector

There is no policy or framework which focuses on retail sector. Until 2011, Indian central government denied foreign direct investment (FDI) in multi-brand retail, forbidding foreign groups from any ownership in supermarkets, convenience stores or any retail outlets. Even single-brand retail was limited to 51% ownership and a bureaucratic process.
In November 2011, India announced retail reforms for both multi-brand stores and single-brand stores. These market reforms paved the way for retail innovation and competition with multi-brand retailers such as Walmart, Carrefour and Tesco, as well single brand majors such as IKEA, Nike and Apple. The announcement sparked intense activism, both in opposition and in support of the reforms. In December 2011, under pressure from the opposition, Indian government placed the retail reforms on hold till it reaches a consensus.

In January 2012, India approved reforms for single-brand stores welcoming anyone in the world to innovate in Indian retail market with 100% ownership, but imposed the requirement that the single brand retailer source 30 percent of its goods from India. Indian government continues the hold on retail reforms for multi-brand stores. In June 2012, IKEA announced it has applied for permission to invest $1.9 billion in India and set up 25 retail stores. Fitch believes that the 30 percent requirement is likely to significantly delay if not prevent most single brand majors from Europe, USA and Japan from opening stores and creating associated jobs in India.

On 14 September 2012, the government of India announced the opening of FDI in multi-brand retail, subject to approvals by individual states. This decision has been welcomed by economists and the markets, however has caused protests and an upheaval in India's central government's political coalition structure. On 20 September 2012, the Government of India formally notified the FDI reforms for single and multi-brand retail, thereby making it effective under Indian law. On 7 December 2012, the Federal Government of India allowed 51% FDI in multi-brand retail in India. The Feds managed to get the approval of multi-brand retail in the parliament despite heavy uproar from the opposition. Some states will allow foreign supermarkets like Walmart, Tesco and Carrefour to open while other states will not.

State Wise Support for FDI in Retail Sectors
- Andhra Pradesh, Assam, Delhi, Haryana, Kashmir, Maharashtra, Manipur, Rajasthan, Uttar Pradesh, Daman & Diu and Dadra and Nagar Haveli.

States which Oppose for FDI in Retail Sectors
- West Bengal, Gujarat, Bihar, Karnataka, Kerala, Madhya Pradesh, Tamil Nadu, Tripura and Orissa.

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Indian retail reforms - Present scenario
The government announced on 24 November 2011 the following:

- India will allow foreign groups to own up to 51 per cent in "multi-brand retailers", as supermarkets are known in India, in the most radical pro-liberalisation reform passed by an Indian cabinet in years;
- single brand retailers, such as Apple and Ikea, can own 100 percent of their Indian stores, up from the previous cap of 51 percent;
- both multi-brand and single brand stores in India will have to source nearly a third of their goods from small and medium-sized Indian suppliers;
- all multi-brand and single brand stores in India must confine their operations to 53-odd cities with a population over one million, out of some 7935 towns and cities in India. It is expected that these stores will now have full access to over 200 million urban consumers in India;
- multi-brand retailers must have a minimum investment of US$100 million with at least half of the amount invested in back end infrastructure, including cold chains, refrigeration, transportation, packing, sorting and processing to considerably reduce the post harvest losses and bring remunerative prices to farmers;
- the opening of retail competition will be within India's federal structure of government. In other words, the policy is an enabling legal framework for India. The states of India have the prerogative to accept it and implement it, or they can decide to not implement it if they so choose. Actual implementation of policy will be within the parameters of state laws and regulations.

The world’s largest retailer by sales, Wal-Mart Stores Inc and Sunil Mittal’s Bharti Enterprises have entered into a Joint venture agreement and they are planning to open 10 to 15 cash- and-carry facilities over seven years.

Carrefour, the world’s second largest retailer by sales, is planning to set up two business entities in the country one for its cash-and-carry business and the other a master franchisee which will lend its banner, technical services and know how to an Indian company for direct-to-consumer retail.

The world’s fifth largest retailer by sales, Costco Wholesale Corp (Costco) known for its warehouse club model is also interested in coming to India and waiting for the right opportunity.
Tesco Plc., plans to set up shop in India with a wholesale cash-and-carry business and will help Indian conglomerate Tata group to grow its hypermarket business.

Investors would have to put in at least $100 million to set up multibrand retail stores and would only be allowed to operate in cities with at least one million people. The proposal to more fully open up the Indian retail market, whose annual sales are estimated at around $450 billion. The move would mark one of the biggest reforms by India’s Congress-led government. India’s tight foreign investment rules are aimed at protecting small “mom-and-pop” stores in the sector where less than ten percent of consumers shop in bigger, well-known department stores. The policy change would mean foreign retailers could start selling to Indian shoppers through partnerships with Indian retailers and be allowed to hold up to a 51 percent stake in local joint ventures. India has already allowed 51 percent foreign investment in single-brand retail operations such as Nokia or Reebok and 100 percent in wholesale cash-and-carry operations.

“Step-by-step, we’re moving closer to opening multiple brand retail in India to foreign direct investment. This will invite a lot of interest from retailers the world over,” said Kishore Biyani, chief executive of leading Indian retailer Future Group. Policies formulation is a dynamic process and it can only move in the forward direction. Indian model on FDI in retail will be different as compared to other nations. The Indian economy is passing through ‘a difficult phase’ currently and it is important to ‘retail the trust and confidence of foreign investors in the country’s investment regime’

**Socio-Economic Analysis (SWOT Analysis)**

Jagdish Bhagwati, (2010) Professor of Economics and Law at the Columbia University analyzed the relationship between growth and poverty reduction, then urged the Indian parliament to extend economic reforms by freeing up of the retail sector, further liberalization of trade in all sectors, and introducing labor market reforms. In such reforms, Professor Bhagwati argued that it will accelerate economic growth and make a sustainable difference in the life of India’s poorest.

Socio Economic Analysis in the form of SWOT ANALYSIS-(Strength, Weakness, Opportunities, and Threats) on FDI in Retail sector would lead the policy
makers to frame the policy according to benefits of the economy. The following are the strengths of Indian economy.

**Strengths**
- Over population of the country.
- Abundance of natural resources.
- Abundance of labour force.
- Ever rising demands for goods.
- Abundance of highly qualified persons.
- Trade policy of the government.
- Fifth largest retail market in Asia.
- Rising trend in the share of retail market in GDP.

**Weakness**
The weakness which are listed below have to be closely observed by the policy makers.
- Access to the shelf or product storage area is limited.
- The product typically has no price label in these small retail shops.
- Two consumers may pay different prices for the same product on the same day. Price is sometimes negotiated between the shopper and shopkeeper.
- Farmers and producers had to go through middlemen monopolies.
- The logistics and infrastructure was very poor, with losses exceeding 30 percent.
- Geographically dispersed population, small ticket sizes, complex distribution network, little use of IT systems, limitations of mass media and existence of counterfeit goods.
- Indian potato farmers sell their crop for Rs.2 to 3 a kilogram, while the Indian consumer buys the same potato for Rs.12 to 20 a kilogram.
- Indian small shops employ workers without proper contracts, making them work long hours. Many unorganized small shops depend on child labour.
- Indian farmers realize only 1/3rd of the total price paid by the final consumer, as against 2/3rd by farmers in nations with a higher share of organized retail.
- Export non-competitiveness of India’s horticulture produce to its weak supply chain. The average price that the farmer receives for a typical horticulture
product is only 12-15 per cent of the price the consumer pays at a retail outlet.

- The absence of a ‘farm-to-fork’ retail supply system has led to the ultimate consumers paying a premium for shortages and a charge for wastages
- Inability of MSME sector to access latest technology and improve its marketing interface.

Opportunities

The Economist forecasts that Indian retail will nearly double in economic value, expanding by about $400 billion by 2020. The projected increase alone is equivalent to the current retail market size of France. The opportunities of FDI in Retail are much more than that of the weakness as discussed by the economists. They are

- The opening of retail industry to free market competition, will enable rapid growth in retail sector of Indian economy.
- Increase in per capita income which in turn increases the household consumption and improvements in the standard of living.
- Change in patterns of consumption and availability of low-cost consumer credit.
- Improvements in infrastructure and enhanced availability of retail space. The retail reform would open enormous opportunities and lead to much-needed investment in cold chain, warehousing and contract farming.
- Entry to various sources of financing.
- The biggest beneficiary would be the small farmers who will be able to improve their productivity by selling directly to large organized players.
- Consumer will get variety of products at low prices compared to market rates, and will have more choice to get international brands at one place.
- Competition within the host country sector is a critical driver of improvements in sector performance as a result of FDI.
- Industry restructuring enables global growth as companies reduce production costs and create new markets.
- For the large developing countries, integrating into the global economy through foreign direct investments improves standards of living by improving productivity and creating output growth.
With 51% FDI limit in multi-brand retailers, nearly half of any profits will remain in India. Any profits will be subject to taxes, and such taxes will reduce Indian government budget deficit.

It will bring modern technology to the country, improve rural infrastructure, reduce wastage of agriculture produce and enable our farmers to get better prices for their crops.

The differential that exists today between wholesale and retail prices will reduce and consumers will get commodities of daily use at reduced prices.

It will increase competition and quality while reducing prices helping to reduce India's rampant inflation that is close to the double digits.

Modern retailer can ensure food safety for the consumer. That can go long way in reducing the health care cost in the country.

FDI in retail will free farmers from the middleman and will get the remunerative price for the produce to the consumers.

Threats

According to the non-government cult, FDI will drain out the country’s share of revenue to foreign countries which may cause negative impact on India’s overall economy. The serious discussion if threats are

- The domestic organized retail sector might lose its market share.
- Doing away with the ‘middleman’: The first to be devastated will be that poor ‘middleman’- the vendor who daily provides our towns and cities with fresh produce. She did not push up the prices and has her modest margin squeezed each time they rise. That women carrying that huge basket to your doorstep, on her feet 14-16 hours a day to feed her family. She’s the first ‘middleman’ target.
- The Independent stores will close, leading to massive job losses.
- Walmart’s efficiency at supply chain management leads to “direct” procurement of goods from the supplier. In addition to eliminating the ”middle-man”, due to its status as the leading retailer, suppliers of goods also bend over backwards to drop prices in order.
- small retailer and the middle man present in the retail industry plays a large part in supporting the local economy, since they typically themselves procure goods and services from the area they have their retail shops in. This leads to
increased economic activity, and wealth redistribution. With large, efficient retailers, the corporate profits are not spent in the areas where they're generated, hence killing the local economy.

- Walmart will lower prices to dump goods, get competition out of the way, become a monopoly, then raise prices.
- Work will be done by Indians, profits will go to foreigners.
- FDI investors are known for acquisitions and mergers. They will in due course take over companies having operations or market presence in multi states. By this route, they automatically reach the no entry zones or states not interested in FDI in retail sector.
- FDI in retail will lead to cultural invasion as the foreign players will push their country's products or produce
- Our farmers are not aware of the code and standard, so summarily reject the produce probably from the second year.

Critical Examination of FDI in Retail sector

Apart from SWOT analysis critical examination of the FDI on retail sector in India can also be studied by the following tabular analysis.

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Table - 2: American economy is growing

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Table - 3: Equal situation

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Table - 4: Indian Economy is growing

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Table 1, showcases the situation of India and America before globalisation. As there is no trade between countries the requirements of American consumers and Indian consumers are fulfilled by the American organisation and Indian organisation respectively inspite of comparative advantage of America in producing Iphone and India in software goods. Both have equal capacity in providing education and health services.

After globalisation when American economy is in higher growth rate (Table 2), America supplies Iphone to Indian consumers and India supplies software goods to America. Not only that, America provides education and health services to Indians regardless of equal capacity of providing these services by Indian organisation. Table 3 reflects that India provides software goods to America and America provides Iphone to Indians and education and health services are provided by the concerned countries to the concerned people. Here both countries are in equal stage. Table 4, explains that when India is in higher growth rate India provides education and health services to America and it would gain through trade. In the light of above it is clear that when India is a seller, it can gain; when it is a buyer of these services it will lose its gain.

Policy Directions

Based on the above discussion, the following policy directions are recommended
- Quality literacy movement for the farmers.
- Awareness campaign for the rural people
- Monitoring the cost and benefits of the retail shops (modern retail shops)
- Laws to check unfair trade practices like misleading advertisements.
- Policy of competitiveness with inclusiveness like Germany competition policies
- Setting up of Retail Regulatory Authority to look into problems of retail shop owners.
- Effective utilisation of Monopoly Restricted Trade Practices

Conclusion

To conclude, FDI in Retail sector has to be evaluated at different levels. Farmers are expecting bright future whereas business men and women are in
threats. Economists are supporting for the welfare of the economy where as politicians are opposing it as it destroys domestic culture and retailing. Consumers are in dilemma whether to accept or not. The rational behaviour of them will determine the fate of the economy. Furthermore, Our country is a signatory of reform agenda of World Trade Organization which envisage dismantling trade barriers to open up various sectors and treat foreign capital at par with the domestic. Thus sooner or later the permission of FDI in various sectors would be a reality and multi brand retail is no exception. The vehement opposition by various groups could only delay the process but cannot prevent it. But since the issue is related with the livelihood of millions in retail and farm sector, it must be dealt with utmost caution. Certain policy frame work and arrangements are required so that a win-win situation is designed.

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SOCIAL AND ENVIRONMENTAL CHALLENGES OF SLUM CHILDREN IN INDIA

V. Krishna Jothi
Research Scholar, Department of sociology, Madurai Kamaraj University, Madurai

Abstract
Poverty is the root cause of all socio economic problems. It is a worldwide phenomenon. the growing population pressure as well as existence of extremely poor groups, may bring a situation, where in the means available in the poor people may not be sufficient for them to stay alive or to live a life that is considered normal in the society. Once poverty comes in to existence it tends to perpetuate itself from generation to generation because of its effect on the children. Slums are the creation of urbanization process which necessitates the rural poverty to urban environment. Lack of resources with the local level agencies results in non provision of basic services and accordingly large number of slums grow in cities. In recent years, almost all of the urban problems including poverty have been converging into environmental issues. Children living in urban slums of India are utmost underprivileged. They are facing many social and environmental problems which are the most visible symptoms of the challenges facing informal and slum settlements. The main objective of this paper is to introduce the social and environmental challenges and made suggestions to overcome the challenges of urban slum children in India.

Key words: Social, Environment, challenge, Slum Children

Introduction
Urbanization will spread out across India affecting almost every state. For the first time in Indian history, the nation will have five large states Tamil Nadu, Gujarat, Maharashtra, Karnataka and Punjab that will have more of their population living in cities than in villages. The combination of both industrialization and urbanization are leads to migration from rural to urban areas. As a result, slums are increasing in urban areas and people living in these areas are unable to access even the minimum necessary needs like healthy living environment, adequate food, clean drinking water and proper accommodation.
According to WHO literature review “slum residents suffer from higher rates of mental illness and suicide than other urban residents. Children exposed to slum settings may also suffer from behavioural and emotional problems and poor school performance. Child labour is also more frequent among children in slums and exposes them to work-related and traffic related injuries, and other abuses like sexual exploitation. It has deleterious effects on the well-being of children and adolescents. They are also affected by communicable and non communicable diseases such as cholera, malaria, tuberculosis, bronchial congestion, HIV AIDS and malnutrition”. So the conditions of children dwelling in slums are still worse, uncared, unattached, uneducated and underfed. Many children die at the infant stage due to lack of medical facilities. Child mortality rates have doubled in India's slums. Slum children are facing many social and environmental problems which are the most visible symptoms of the challenges facing informal and slum settlements. The main objective of this paper is to introduce the social and environmental challenges of urban slum children in India.

Definition and types of slums - Census 2011

(i) All notified areas in a town or city notified as ‘Slum’ by State, Union territories Administration or Local Government under any Act including a ‘Slum Act’ may be considered as Notified slums

(ii) All areas recognised as ‘Slum’ by State, Union territories Administration or Local Government, Housing and Slum Boards, which may have not been formally notified as slum under any act may be considered as Recognized slums

(iii) A compact area of at least 300 populations or about 60-70 households of poorly built congested tenements, in unhygienic environment usually with inadequate infrastructure and lacking in proper sanitary and drinking water facilities. Such areas should be identified personally by the Charge Officer and also inspected by an officer nominated by Directorate of Census Operations. This fact must be duly recorded in the charge register. Such areas may be considered as Identified slums. In India majority of the slum people exist in metro-cities.
Characteristics of Slums

1. Appearance is one of the main universal marks of the slum; its aspect of neglect and disorder with respect to building, yards and streets.
2. Low Economic Status of inhabitants.
3. Over-crowding and Uninhabited spaces are occupied by undesirable occupants and use it as junkyards.
4. The Population is heterogeneous in nature
5. Poor health and sanitation
6. Morals in slums are questionable one because slums may be an area of delinquency, Crime but this is more likely to be true of the socially disorganized slum
7. Way of Life in slums are differ widely with respect to the social organization of their inhabitants.
8. Slum are Socially Isolated areas because every residential area within the modern city tends to be socially isolated from others, partly by choice and partly by location, the slum is especially so. It is the area of lowest status inhabited by slum dwellers.

Factors Responsible for Creation of Slums

1. Industrialization leads to large-scale migration from rural to urban due to employment opportunities and advantages offered by the city.
2. There is a housing shortage in urban areas due to low level of income among the economically weaker sections of the society, underprivileged sections of the society, etc.,
3. Proximity of their houses, close to the source of employment for economic reasons especially due to the low level of transportation cost.
4. There is often absence of comprehensive developmental planning in the existing socio economic conditions and requirements of the economically, politically weaker sections in the society.
5. There is always inadequate and insufficient municipal civic amenities which increase to the problems of the slum squatters and cause many other problems.
Review of Related Literature

Jyotirmoy Mukherjee (2005) Studied Urban Environmental Problems: A Framework For Action. This paper mainly focused on the major urban environmental problems and challenges to solve those problems for better urban environmental management and about major pollutions such as Air, Water, Noise and Solid Waste and the sources of those pollutions. Author clearly pointed out some Mitigation Measures to manage the complex and difficult of urban environment. In this study author scrutinize the major challenge to foster healthy urban environment and how it can be solved through better urban environmental management.

Rajiv Sarkar, Prabhu Sivarathinaswamy, Bhuvaneshwari Thangaraj, Kulandaipalayam Natarajan, Chella Sindhu, Sitara Swarna Rao Ajjampur, Jayaprakash Muliyl, Vinohar Balraj, Elena N Naumova, Honorine Ward. (2013) Studied Burden of Childhood Diseases And Malnutrition In A Semi-Urban Slum In Southern India. The main aim of the study is to examine the morbidity experience of children living in semi-urban slums of Vellore in southern India, who participated in a quasi-experimental study on the effect of bottled drinking water on transmission of cryptosporidium infections.

yuko Tsujit (2009) Studied Deprivation of Education in Urban Areas: A Basic Profile of Slum Children In Delhi, India. This paper showed the basic educational status of slum children between 5 and 14 years old, the attendance ratio of the slum children is much lower than that of children in Delhi as a whole. parental perception of education and financing education are major constrains even if the children are attending the schools, the majority them are over aged. There are both demand and supply side reasons of discouraging slum children from attending schools.

A. R. Desai and S. Devadas Pillai in their book entitled ‘Slums and Urbanization’ expressed following theories of slums;

1. The slum develops within the zone surrounding the central business districts.
2. The slum develops in to an area of high land values but cheap rents, a curious contradiction that results from the lands of being held ‘in pawn’ to so to speak on the assumption that the central business district will expand bringing in to the area of new business firms, manufacturing establishments and high priced rental units like hotels and apartment hotels.
A modification of this theory based on the city growth is that of the city pattern as a pie, divided into wedge shaped sections. According to this theory, industrial areas follow river valleys, water courses and rail road lines out from the center and working men’s houses cluster along them with factories tending to locate even at the outer fringes of the city.

Durkheim was one of the initial writers to state clearly that urbanization inevitably results in a high rate of crime and juvenile delinquency and it has been validated by later research. Many sociologists and criminologists have agreed that the crime is much more commonly found in urban than rural environment.

**Magnitude of the problem**

Since the 1950s, the number of urban population living in slums has continued to grow in the cities of developing countries the world over. The Government of India has identified urbanization as a key priority area to meet growth targets for the Twelfth Five Year Plan. It points out that over 300 million will be added to India’s urban population in the next 20-25 years. About 7.6 million children are living in slums in India and they constitute 13.1 per cent of the total child population of the urban areas of the 26 States/Union Territories reporting slums. This proliferation of slums affects the children. Migrant poor children are the victims of this urbanization process. Their social and environmental conditions are very pathetic. They are voice less and their rights are denied. So this paper identifies the challenges faced by the slum children.

**Slum Children in urbanizing world**

Children were seen as people who were dependent, had few responsibilities, had limited cognitive abilities, or had child-like behavior. Children whose needs are greatest are also those who face the greatest violations of their rights. The most deprived and vulnerable are most often excluded from progress and most difficult to reach. They require particular attention not only in order to secure their entitlements, but also as a matter of ensuring the realization of everyone’s rights. Children living in urban poverty have the full range of civil, political, social, cultural and economic rights recognized by international human rights instruments. The most rapidly and widely ratified of these is the Convention on the Rights of the Child. The rights of every child include survival; development
to the fullest; protection from abuse, exploitation and discrimination; and full participation in family, cultural and social life.

Challenges of poor children in Indian slums

Social Challenges of Innocent slum dwelling children in India

Hunger and Ill health

Social determinants may affect child and adolescent in various ways. Two million slum children die every year as India booms. Child mortality rates have doubled in India's slums. India's growing status as an economic superpower is masking a failure to stem a shocking rate of infant deaths among its poorest people. Nearly two million children under five die every year in India - one every 15 seconds - the highest number anywhere in the world. More than half die in the month after birth and 400,000 in their first 24 hours.

Diseases prevailing in slum areas

- Water-borne and vector-borne diseases
  Slums concentrate many known risk factors for parasitic, water-borne and vector-borne diseases, including: flooding, poor water drainage, open sewers and overcrowding. These characteristics of the physical environment are exacerbated by poor hygiene practices and high rates of malnutrition in children, and affect the burden of intestinal parasites and diarrhoeal diseases, such as persistent enter aggregative, Escherichia coli diarrhoea.
Vaccine-preventable and respiratory diseases
Vaccine-preventable and respiratory diseases. Lower immunisation coverage contributes to more frequent outbreaks of vaccine-preventable diseases, such as pertussis, measles and diphtheria, and they cluster in areas of high population.

HIV/AIDS
Studies have previously suggested that poverty was protective against risk of HIV infection in urban areas. Urban poverty and residence in informal settlements have also been associated with poor prenatal care and prevention of mother-to-child transmission in areas of high HIV prevalence and less access to antiretroviral therapy. Lastly, families weakened by illness and poverty are also limited in their ability to diminish the impact that HIV/AIDS has on affected children.

Non-communicable diseases

- **Malnutrition**
  Malnutrition makes a central contribution, up to 56%, to child mortality worldwide and is a recognised problem in informal settlements.

- **Accidental and non-accidental injuries**
  The built and natural environment in informal settlements is frequently dangerous for children. Slums are vulnerable to natural disasters from the combination of poor material and construction, overcrowding and precarious geography, as was dramatically demonstrated in the earthquake in Haiti in 2010. Children are extremely susceptible to injury and death, and can account for up to one-third of the victims of disasters.

- **Mental illness**
  Living in slums presents children and their families with various stresses, including overcrowding, noise and environmental pollution, domestic and community violence, scarce formal employment opportunities and limited future prospects. Slum residents emphasise the negative impact of these stresses on the quality of their lives. There are important links between conditions of slum life and mental health, and a WHO literature review found that slum residents suffer from higher rates of mental illness and suicide than...
other urban residents. Children exposed to slum settings may also suffer from behavioural and emotional problems and poor school performance.

**Educational Disparities of slum children**

A large number of projects and programmes were launched to reduce the gender and regional disparities but the problems faced by urban slum dwellers were by and large ignored. As the World Bank rightly recognized, “Poverty is not only a problem of low incomes; rather, it is multi-dimensional problem that includes low access to opportunities for developing human capital and to education”. Slum children too face educational deprivation in terms of accessibility and quality as well. Many children from slum areas do not have access to schools with adequate facilities and teachers who are tuned for teaching the underprivileged. It is the settlement structure, social stratification and the population density that play critical role in the demand for amenities and facilities. A major administrative problem is the location of schools at the demand points. Therefore, overcrowding in schools has emerged as a major issue in urban settings especially in the schools serving the urban poor. The implications of the medium of instruction have not been adequately examined especially from the viewpoint of learning styles of slum children. The specific educational problems of the slum children as enunciated above needs to be addressed through appropriate interventions and strategies.

**Child labour and abuse**

Child labour problem is not unique to India. New global estimates published by the Unicef in 2012 indicated that, in 2008, 215 million children were involved in child labour all over the world, 115 million of them in a hazardous work. The 2001 National Census of India estimated the total number of child labour aged 5.14, to be at 12.6 million, about 0.12 million children in a hazardous job. UNICEF estimates that India has the highest number of labourers in the world under 14 years of age. In India majority of children work in industries, such as cracker making, diamond polishing, glass, brass-ware, carpet weaving, bangle making, lock making and mica cutting and etc., Child domestic labour is predominantly an urban phenomenon; children who work in rural areas tend to be involved in agricultural work as unpaid family members. Domestic workers, most of them girls, are isolated and subject to the whims and arbitrary discipline of their employers, from whom
they may suffer abuse. Sexual abuse is frequent but seldom prosecuted. Child domestic workers can also suffer from psychological problems. At any given time, nearly 2.5 million people are in forced labour as a result of trafficking - 22 to 50 per cent of them children. A 2001 study of sexually exploited girls aged 9-17 in major cities of the United Republic of Tanzania found that many had been trafficked from the country’s interior. Some had been recruited as domestic workers and abused within their employers’ homes; others were trafficked directly into prostitution or recruited into it by peers. An another study indicates that most trafficked girls are put to work as sex workers, for example, in the major Indian cities of Mumbai, Delhi and Kolkata. In Bangladeshi cities, large numbers of girls and boys are exploited in street sex markets.

Child Protection

The children of South Asia are among the most vulnerable in the world. One of every three child deaths globally occurs in South Asia. Nearly half of the world’s undernourished children live in South Asia. More than a third of the world’s children without basic education are from South Asia. When compare to other countries of southern Asia India has less protection over the children and their rights. Now a days the vulnerability of children are increasing especially in urban settlements of metropolitan cities due to overcrowding and unsafe poor environment. The susceptibility of children is exacerbated during disasters, and children have suffered disproportionately in almost every natural disaster and manmade crimes in the region. It is very important to Rescue of Children in Disasters, food Security and Nutrition for Children, medical Care and Health services for Children, mental Health Services and Psycho-social Support for Children.

Water, sanitation and hygiene

Sanitation is a composite concept which involves waste disposal system, water supply, sewerage and prevention of environmental pollution. It has been variously described, by different sanitation experts, to finely state down, to the concept of human waste disposal and supply of potable drinking water. Though India has made significant investment for development and provisions of basic services, still, a sizeable section of population does not access to these services.
Article 24 of the Convention on the Rights of the Child commits States parties to strive to ensure the highest attainable standard of health for every child. This extends to providing clean drinking water and eliminating the dangers of environmental pollution. Unsafe water, poor sanitation and unhygienic conditions claim many lives each year. An estimated 1.2 million children die before the age of 5 from diarrhoea. Poor urban areas where insufficient water supply and sanitation coverage combine with overcrowded conditions tend to maximize the possibility of fecal contamination globally. In the poorest urban districts, many people are forced to walk to collect water from other neighborhoods or to buy it from private vendors. Congested and unsanitary conditions make urban slums particularly high-risk areas for communicable diseases, including cholera. Since it is a challenging and difficult task as it involves massive investments, wide coverage, people’s cooperation and government support. Adequate sanitation is not only a prerequisite of an acceptable standard of living for the people in the urban areas but it is also an effective measure to reduce health risks due to polluted environment.

Education

Education is a progressive discovery of our own ignorance -Will Durant, Education is a basic human right and a significant factor in development of children, communities and countries. In Article 28 of the Convention on the Rights of the Child, States parties recognize children’s right to education and commit to “achieving this right progressively and on the basis of equal opportunity.” Urban inequities profoundly undermine children’s right to education. Article 19 of the Convention on the Rights of the Child commits States parties to “take all appropriate legislative, administrative, social and educational measures to protect the child from all forms of physical or mental violence, injury or abuse, neglect or negligent treatment, maltreatment or exploitation, including sexual abuse, while in the care of parent(s), legal guardian(s) or any other person who has the care of the child.”

Environmental Challenges

In recent years, India facing many of the common environmental problems which are yet to receive proper attention from the politicians as well as administrators in the town. A major part of these environmental problems have arisen out of the steady increase of population, harsh topography as well as lack of
proper planning for the development. This has obviously led to an ever-growing demand for the basic civic services and amenities. On the other hand, provision for housing and shelter, water supply, sewage and sanitation, health care services, transport facilities etc. are becoming scarce and costly for dwellers in India. This has a direct effect on the living conditions of the urban poor dwelling children who were already subsisting on the margins of their existence. These slums and squatters not only create environmental pollution through their unorganized and unsystematic waste and sewage disposal, congested and unplanned houses as well as through unethical socio-cultural habits and values, but they are created only on already polluted places due to people’s lack of conscience in occupying unauthorized land at almost no cost. Air and water pollution, lack of personal hygiene, noise and cultural pollutions are among most considerable environmental problems in the area.

Substandard Housing and Construction

Good environments promote social interaction, limit psychological stress and bolster health. The best national and municipal policies recognize that the urban poor need not only housing, but also basic services. Inadequate living conditions are among the most pervasive violations of children’s rights. Families cannot adequately support their children if they live in precarious circumstances or under threat of eviction. The lack of decent and secure housing and such infrastructure as water and sanitation systems makes it so much more difficult for children to survive and thrive. Studies suggests that more children want for shelter and sanitation than are deprived of food, education and health care, and that the poor sanitation, lack of ventilation, overcrowding and inadequate natural light common in the homes of the urban poor are responsible for chronic ailments among their children. Many children and families living in the urban slums of low income countries are far from realizing the rights to “adequate shelter for all” and “sustainable human settlements development in an urbanizing world” enshrined in the Istanbul Declaration on Human Settlements, or Habitat Agenda, of 1996. Since children have the rights to survival, adequate health care and a standard of living that supports their full development, they need to benefit from environmental conditions that make the fulfillment of these rights possible. One of the targets of MDG - to ensure environmental sustainability - focuses specifically on improving the lives of at least 100 million of the world’s slum dwellers by 2020. This is only a
small percentage of those who live in slums worldwide; the target does not address the continuing growth in the number of new slums and slum dwellers. We need to have more attention on situation of children in urban settings and considers in particular their rights to health; water, sanitation and hygiene; education and protection.

Exploitation of Biomass Fuels

Biomass is biological material derived from living, or recently living organisms. It most often refers to plants or plant-derived materials which are specifically called lignocellulosic biomass. As an energy source, biomass can either be used directly via combustion to produce heat, or indirectly after converting it to various forms of bio-fuel. Due to lack of energy supply, most of the dwellers in slums and squatters burn biomass fuel for domestic cooking. Burning of this huge amount of biomass creates several problems for city environment. Some parts of these dwellings have access to Liquefied Petroleum Gas (LPG) but still prefer biomass fuel. Some of key problems arising from this issue include deterioration of outdoor air quality, reduction of vegetation coverage, indoor air pollution and deterioration of health especially the migrant children’s wellbeing. If it assumes that at least 2 million people residing in the slums and squatters of Dhaka city burn biomass at a rate of 0.25 kg/day/person, this results in 500 tons of fuel burning in a day. The reality may be a little more or less than the assumption, but the amount is still high. So imagine the condition of the little innocent children inhaling this dangerous polluted air. The government may find them alternatives to biomass fuel for slums and squatters considering the above situation. Liquefied Petroleum Gas (LPG) can be used in slums for domestic cooking and burning of agro waste as an industrial fuel should be banned.

Evidence of Antisocial activities

People in urban areas lead sedatic life which is compounded by the habits of drinking gambling, smoking and prostitution which are undoubtedly affects the growth of a child. Conflict (quarrel, clash, fight) in the slums and squatters is a regular phenomenon. This creates noise and violence that disturbs the city dwellers, particularly the nearby residents, office workers, and school children. Besides, many of the slum residents are involved in prostitution, drug trafficking,
hijacking, mugging etc. These activities influence the social behavior of the children and make them as juvenile delinquents. The government should enforce law and order to improve the overall environment of the city through the reduction of anti-social activities.

**Suggestions**

- Efforts would be made to minimize migration from rural to urban areas by creating appropriate level of infrastructure and opportunities for gainful employment in rural settlements.
- In order to achieve maximum growth of small and medium towns and to induce desirer level of population.
- Planning of human settlement would be done in such a manner that it minimizes the travel needs of the people living therein.
- Minimizing travel and use of vehicle would lead to creation of human settlements which are highly energy efficient and would have minimum pollution due to reduced use of petrol driven vehicles.
- Informal sector would be considered an essential part of human settlements because of its considerable contribution to city economy and gainful employment, So It would be properly planned.
- Burning of agro waste as an industrial fuel would be banned, So as to minimize pollution. Appropriate mechanism and safeguards would be provided to check this menace.
- Planting of trees on large along the roads, with in the open spaces provided in the urban areas and around the settlements.
- State would discourage they setting up of highly polluting, hazardous, chemical and other units so as to minimize adverse impact on urban environment.
- All environment - related laws would be made more simple and effective and would be strictly enforced for minimizing pollution n the state.
- Allocation and creation of a fund with annual contribution , for income generating activities and provision of infrastructure for urban poor.
- Urban shelter related programs should be community -based so as to involve the users in the programme.
Close monitoring would be implemented for all programmes for the slum dwellers.

A greater community participation is the most important criterion without which other activities would fail.

Appropriate focus on the role and involvement of women in the development of children in urban slums.

Strong research is essential to effective programming to assess the capacities, vulnerabilities, and needs is the first step in formulating appropriate responses targeted at reaching excluded slum children.

Detailed situation analyses of the plight of these children, and its root and proximate causes, are vital complements to statistical information.

Child-focused budgets draw growing interest across the world. On a more optimistic note, there is growing worldwide interest in child-focused budgets. In most cases, this does not imply a children’s budget separate from the main financial programme outlined by a government. Instead, it entails detailed and expert analysis of mainstream budget measures in order to allocate child affairs and welfare as a % of the national budget.

Capacity building empowers marginalized children, families, and communities.

The media has a unique and vital role in raising awareness and monitoring progress on commitments to children. Media scrutiny can provide public and independent monitoring of a government’s progress towards keeping their commitments to children. Through their work, media professionals can shape public opinion and influence behaviour. They can encourage governments, civil society organizations, and individuals to effect change that will improve the quality of people’s lives.

Conclusion

With the growing urbanization and industrialization, the challenges facing our cities have also increased. Although the government has been undertaking several initiatives to solve the problem, the challenge is immense. Ultimately it is not only through government’s policies and actions, but also through the committed actions and initiatives of the community, and individuals who will refuse to turn the magnitude of the problem into an excuse for inaction, that the problems of our children can be resolved. Reporting on children’s issues must be
undertaken with sensitivity and understanding the dignity and rights of every child are to be respected in every circumstance. Special attention is to be paid to each child’s right to privacy and confidentiality.

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GRAMSCI’S CONCEPT ON MODERN PRINCE

Dr. S. Balakrishnan
Editor of Roots: International Journal of Multidisciplinary Researches, Madurai.

Abstract

Gramsci’s concept of hegemony has been interpreted in a wide variety of ways including a theory of constant, of political unity, ‘anti-politics’ and a geopolitical competition. These interpretations are united in hegemony as a general theory of political power and domination, and as deriving from particular interpretations of the concept of passive revolution. Building upon the recent intense season of philological research on the Prison Notebooks, this article argues that the concept of hegemony is better understood as a ‘dialectical chain’ composed of four integrally related ‘moments’: hegemonic as the social and political leadership, as a political project, as a hegemonic apparatus, and as the social and political hegemony of the workers’ movement. This alternative typology of hegemony provides both a sophisticated analysis of the emergence of modern state power and a theory of political organization of the subaltern social groups.

This project is encapsulated in Gramsci’s notion of the formation of a ‘modern prince’, conceived as both political party and civilization process, which represents an emancipatory alternative to the dominant forms of political modernity.

Key words: Machiavelli, Modern Prince, Hegemony, Organic Intellectuals, Dialectics, Historism, Revolutionary Parties.

*Gramsci is the Marxist theorist par excellence of the Intellectuals. Marx and Engels sketched out perspectives for a theory of the social position and efficiency of intellectuals with their analysis of the historical emergence of the division of labour and critique of the deleterious role of ‘ideologies’ as (conscious or unconscious) defenders of the status quo (most notably in the German ideology). The communist manifesto went on to note the class transition of certain types of intellences in periods of revolutionary upheaval. However, writing before the Dreyfus affair in which the term ‘Intellectual’ was established for the first time as a key word of modern political discourse, Marx and Engels did not offer a
comprehensive role of intellectuals in modern societies. Other Marxists have
developed themes related to specific aspects of the question of the intellectuals.
Brecht’s entire intellectual practice, for example, can be regarded as developing a
multifaceted aesthetic co-philosophical meditation on the potentials for Denken
(intervening thought) by a new type of intellectual engaged on a practice of
dialectical pedagogy; Sarte, from a different perspective, saw the contradictions
between the class origins of a certain types of intellectual and their ostensible
commitment to truth as being resolved in practices of political commitment and
solidarity; Critical Theory, varying forms, from Adorno and Horkheimer to Marcuse
to Habermas, positioned the intellectual as the privileged site of critique and
repository of the best elements of the Marxist tradition in an epoch dominated by
the failure of the revolutionary project and the emergence of an increasingly
totalitarian and repressive post war society. No other theorist, however, whether
consciously affiliated to the Marxist tradition or not, has offered such
comprehensive theorizations of the question of the intellectuals as Gramsci’s
ranging from detailed historical analyses of their emergence and function in
modern societies, their economics and political determinations and their relation
to other social practices and categories. These are all united within not only a
proposal for the future development of Marxist theory and politics, but a new
definition of the historical determinations and political efficacy of all philosophy
and intellectual practice. Viewed from this perspective, we could go beyond the
initial affirmation of this easy and declare Gramsci to be the theorist of the
intellectuals throughout court.

**Gramsci’s concept of the ‘modern Prince’ cannot, therefore, be reduced
to a mere metaphor for already existing political institutions or parties. Rather,
like Machiavelli’s ‘concrete “fantasy” it was positioned as the non existing element
necessary to fill the constitutive lack of the present, in order it to the future. The
political party, Gramsci argues, was the historically given form in which the
decisive elements of organisation, unification and coordination had already begun
to occur. Its re-elaboration, into a non-bureaucratic instrument of proletarian
hegemony, however, required an on-going dialectical exchange with the popular
initiatives from which the modern prince emerged and into which it sought to
intervene. ‘The modern Prince, the myth-Prince cannot be a real person, a
concrete individual. It can be only an organism, a social element in which the
becoming concrete of a collective will, partially recognised and affirmed in action, has already begun. This organism is already given by historical development; it is political party, the modern form in which gathers together the partial, collective wills that tend to become universal and total’.

Introduction

In the prison Notebooks of Gramsci, the question of the party throws a study of Machiavelli’s The Prince. The significance of Machiavelli for Gramsci is that he represented a pioneering attempt in Italy to show how to create a national collective will for the foundation of a new through the myth-figure of ‘the Prince’ set out the political leadership, the strategy and the tactics necessary for the achievement of this end. The foundation of a new workers’ state also requires such political leadership - a ‘modern prince’. But Gramsci argues:

“The modern prince... cannot be a real person, a concrete individual. It can only be an organisation, a complex element of society in which a collective will which has already been recognised and has to some extent asserted itself in action, begins to take concrete form. History has already provided this organism, and it is the political party - the first cell in which there together germs of a collective will tend to become universal and total”.

Just as Machiavelli shows the necessary characteristics of a successful prince, so Gramsci proceeds, basing him throughout on the philosophical position we have outlined above, to discuss the necessary characteristics of the revolutionary party. Unfortunately this is not done systematically, but in a series of very rich and complicated observations which are more or less disconnected and in which prescriptions for the Marxist party intermingle with analytical points about parties in general. Thus any relative brief exposition of these ideas, such as this study, much necessarily attempt to pick out the main themes and give them a structure not present (at least explicitly) in the original. This must to some extent be a arbitrary and unsatisfactory process, but it is unavoidable. A useful starting point for understanding the originality of Gramsci’s theory is his notion of the ‘dual perspective’ with which the party must operate. The term itself actually derives from Section XI11 of the Theses on Tactics adopted under the inspiration of Zinoview by the Fifth World Congress of the Committee but it is clear that Gramsci
invests the concept with much greater universal significance and deeper content than its originator intended.

**Machiavelli and Gramsci**

In discussing the Modern Prince, Gramsci first explains why Machiavelli’s prince cannot automatically be applied to the modern world. In that regard, Gramsci argues that the modern Prince, which is both the expedition and the carrier of the national-popular collective will, cannot be a real person, a concrete individual. The Modern Prince “can only be an organism; a complex element of society in which a collective will, which has already been recognised and has to some extent asserted itself in action, begins to take concert form. History has already provided this organism, and it is the political party- the first cell in which there come together germs of a collective will tending to become universal and total”.

Furthermore, Gramsci says that “if one had to translate the notion ‘prince’, as used in Machiavelli’s work, into modern political language, one would have to make a serious of distinctions: the ‘prince’ could be a Head of State, or the leader of a government, but it could also be as political leader whose aim is to conquer a State, or to found a new type of State: in this sense, ‘Prince’ could be translated in modern terms as ‘political party’.

But how does Modern prince come into existence? What is the relationship between the social classes and the political parties? As Habsbawn explains, Gramsci, like the later Marx, conceives the party as the organised class.[3] In that regard, Gramsci argues that “classes produce parties, and parties form the personnel of the State and government, the leaders of civil and political society”.

“Parties come into existence, and constitute themselves as organizational, in order to influence the situation at moments which are historically vital for their class; but they are not always capable of adapting themselves to new tasks and to new epochs, nor of evolving pari passu with the overall relations of force (and hence the relative position of their class) in the country in question, or in the international field. In analyzing the development of parties, it is necessary to distinguish: their social group; their mass membership; their bureaucracy and General staff. The bureaucracy is the most dangerously hidebound and conservative force; if it ends up by constituting a compact body, which stands on
its own and feels itself independent of the mass of acute crisis it is voided of its social content and left as though suspended in mid-air”.

Gramsci argues that “in fact, if it is true that parties are only the nomenclature for classes, it is also true that parties are not simple mechanical and passive expression of those classes, but react energetically upon them in order to develop, solidify and universalize them. ”A party, according to Gramsci, is the expression and the most advanced element of a social group and this shows the relationship between a certain party and the social classes in the society. In that regard, the history of a political party actually the history of a particular social class.

In the existence of a single , totalitarian(“It is important to realize that Gramsci does not use this word in the pejorative sense which it has acquired in bourgeois ideology today- it is a quite neutral term for him, meaning approximately ‘allembracing and unying’. We have sometimes translated it by ‘global’). Governing party, Gramsci argues that there actually exits no political party. This is mainly because, for Gramsci, political party can also be defined in terms of its functions, thus, a totalitarian party, in that regard, does not have directly political functions but merely technical ones, such as propaganda, public order and moral and culture influence. Furthermore, when looked from a functional perspective, according to Gramsci, the definition of the political party can be extended to the other organizations in the society which in one way or other performs a political action or function. In that regard, Gramsci argues that “this function can be studied with greater precision if one starts from the point of view that a newspaper too (or group of newspapers), a review (or groups of reviews).is a ‘party’ or ‘fraction of ‘party’ or a ‘function of a particular party’

However, this doesn’t mean that the existence of political action or function is the only determinant when talking about parties. For instance, Gramsci argues that “there seem to be two types of party which reject the idea of immediate political action as such”. One is the party which is constituted by elite men of culture whose function is to provide leadership of a cultural and general ideology nature for a great movement of interrelated parties, and the second is a type which is constituted by masses whose function is of a military kind.
Conclusion

It is necessary; however, to carry out work in relation to non-proletarian intellectuals, through again Gramsci is clear about the limitations of this.

“The intellectuals develop slowly, much more slowly other social group, because of their own nature and historical role...To think it possible that this type can, as a mass, and not only as individuals. It is certainly important and useful for the proletariat that one or more intellectuals, individually, adhere to its programmes and its doctrine, merge themselves with the proletariat, and become and feel themselves an integral part of it ... But it is also important and useful that a break of an organic kind, characterized historically, is caused inside the mass of intellectuals: that there is formed, as a mass formation, a left-wing tendency, in the modern sense of the word, that is one which is orientated towards the revolutionary proletariat”.

This is necessary not only because it undermines the exercises of bourgeois hegemony in genera, but because Gramsci considers that the intellectuals play a key role in maintaining the system of alliances constructed by the ruling class with subordinate strata, and therefore can play a corresponding role in the system of alliances that must be constructed by the party of the proletariat. With regard to Italy, Gramsci analyses the role of intellectuals in the southern agrarian bloc, where they a left tendency among the intellectuals is one of the prerequisites for breaking this bloc and securing the alliance of the peasantry with the proletariat. in this connection Gramsci notes that the more developed the stratum of organic intellectuals of the proletariat, the greater the pole of attraction the revolutionary party will constitute for the intellectuals in general, and that such intellectuals are likely to be repelled if presented with a vulgar materialist version of Marxist theory.

Bibliography


EDUCATION! Is it a mirage to the poor?

B.P. Pereira
HR/Soft Skills Trainer
Speech Point, Madurai.

Abstract
“Education is not received, it is achieved. It is the movement from darkness to light. It is not in history but it, itself is history of life and humanity, since man’s destiny is Life, hence education has an unavoidable duty to man, who is same everywhere” – proclaims Jose Marti, a Cuban writer, poet, journalist and revolutionary independent leader.

The history of education is the history of teaching and learning. Each generation, since the beginning of human existence, has sought to pass on cultural and social values, traditions, morality, religion and skills to the next generation. The passing on of culture is also known as enculturation and the learning of social values and behaviours is socialization. The history of the curricula of such education reflects human history itself, the history of knowledge, beliefs, skills and cultures of humanity.

In pre-literate societies, education was achieved orally and through observation and imitation. The young learned informally from their parents, extended family and grand parents. At later stages of their lives, they received instruction of a more structured and formal nature, imparted by people not necessarily related, in the context of initiation, religion or ritual.

“We want that education by which character is formed; strength of mind is increased, the intellect is expanded and by which one can stand on one’s own feet” - Vivekananda.

Introduction
Education is a natural right, and by being born, every one acquired “the right to be educated, and then, in turn, the duty of contributing to the education of others.” Education is the one fundamental necessity for democracy and freedom, for “an educated country will always be free”
The Indian system of education dates back to 1823, with schools in most regions of the country. The subjects taught included Reading, Writing, Arithmetic, Theology, Law, Astronomy, Metaphysics, Ethics, Medical Science and Religion.

The current system of education, with its western style and content, was introduced and founded by the British during the British Raj, following recommendations by Lord Macaulay. Traditional structures were not recognized by the British government and have been on the decline since Gandhi, in a speech in London on October 20, 1931, described the traditional educational system as a beautiful tree that was destroyed during the British rule. Literacy rate in India has grown from 12% in 1947 to 74.04% in 2011, which is still well below the world average literacy rate.

Constitution of India is more than an epic and an ethical responsibility rather than a tool for peaceful social changes and developments. Article 45 of the Constitution provides a free and compulsory primary education to all the children of our nation. Various educational commissions and committees were set-up to evolve the multi-dimensional aspects of education. The National Policy on Education has been implemented.

The District Primary Education Programme (DPEP) is running in full swing. Inspite of all these efforts and money spent every time, the literacy rate gas not improved very significantly, the percentage of education has barely crossed 50%, the percentage of drop-outs remain the same or higher, the problem of female education continues, the deprived children remain on the same status. We have to give a second thought to the method adopted so far for improving out educational quality to a considerable position.

There is no doubt that the first and foremost need of the nation is primary education, particularly in villages, specifically to the uneducated farmers’ clusters. Many methods to move towards the goal of total literacy or primary education, have failed. These include both the traditional and the non-traditional methods besides the customary.

Can we make some improvements in the traditional methods of teaching in our village? India has more than seven lakh villages which make the urban and metro people stomock filled. Most of the villages have primary schools. These schools have not changed in their physical structure but now have two teachers
in place of one. The child’s social status remains the same even though
teachers are well salaried. The only change is that it has classes from standards
I-V and has two teachers. Both the teachers are rarely available in school and
more often than not, one teacher looks after all the five classes

School is not merely a physical or civil structure. It is a place of learning,
building one’s destiny. If this path is smooth and pleasant; it will be more
attractive to students. Therefore if the recommendations of the Operation
Black Board (OBB) are implemented immediately it would be a timely help.
School surroundings have to be improved with the help of community services.
These are the unavoidable physical/ infrastructural needs which are to be
taken care of urgently, as education must be a planned procedure always.

More important is the psychological make-up of a teacher to deal with more
than one class at a time. In normal cases the teacher allows other students to
play inside the class room or asks the monitor to check the work done by the
other students. No doubt the students are engaged, but does this fulfill the
desired goal of access and success in educating the children? This increases the
numbers of drop-outs and the minimum level of learning (MLL) is never
achieved, and the system and Government’s plan fail ultimately. The most
important aspect will be the activity based teaching. If the children are given
activities of their choice, they could learn several things without the help of
the teacher. This requires some visionary planning by the teacher, with the
wholesome supports of the school authorities towards a better teaching-
learning process which can be imbibed by the students with curiosity and
interest, and no possibility of drop-outs.

Prior to 1947, education in India was conducted according to the
educational system introduced by the British government. At that time, India
was centrally administered, and the Centre and the State governments worked
in their own respective spheres. By the enactment of 1935, autonomous
administration had come to existence in the states, as a result of which in
1937, Congress governments were established in 7 out of 11 states, while in the
remaining, rule by the majority was introduced. It was at this time that
education was given certain constitutional provisions. In 1937, the Wardha
Scheme was accorded recognition for the purpose of creating universal, free
education. Attention was given every aspect of education.
On January 26, 1950, the people of India faithfully dedicated their Constitution to themselves, with its provisions regarding the rights pertaining to culture and education: Article 39: Protection of the Interests of Minorities, Article 30: The Right of Minorities to set up and administer educational institutions, Article 45: Provision of free and compulsory education for children, Article 46: Promoting the educational and economic interests of the Schedules Castes, Tribal groups and other weaker sections, and Articles 345, 346 and 347 express the views of the frames of the Constitution on the regional languages.

In short, we the Indians have a very strong and result-oriented constitutional provisions and backup for empowering and enhancing education to enrich its quality and standard.

From Maria Montessori’s Nine senses system, Friedrich Wilhelm Froebel’s Kinder Garten Nursery Schooling System, the present Sarva Shiksha Abhiyan (Education for All), Universalisation of Elementary Education (UEE), to Virtual Class rooms comprising Smart class, Video Conferencing system, EDUSAT/SITE provisions have made the renaissance in Indian Education system. But regret to record that the plans and projects are documented in papers and crawling on the tables of the concerned heads and officials for the support of Ministers and Politicians to reach to the needy and deserving, especially to rural mass and specifically to the backward class and the downtrodden.

Education and educating system in India is flourishing and reaching to the rich people who seek private schools and colleges having all amenities and facilities compared to government schools and colleges. They guarantee for best result, discipline and prosperous employability in India or abroad immediately after the completion of the scheduled education or in the final year of the tenure. Some people avail the opportunity to send their children abroad for some years to learn and earn and come back to home town with a hefty sum of money and quantum of qualitative experience and expertise. They will easily get jobs here, or go for entrepreneurship or even well place by becoming the owners of their family organizations or industries.

Somewhere it is said that seventy percent of welfare for sustainable life is from villages and farmers are the backbone of the whole population of India. In India, Elections are not time bound but seasonal. The villagers get time see the...
political contestants leading or representing some political parties during this season.

The villagers are hired or bought for a day to cast their votes to make the Contestants, leaders or ministers, who orally promise a lot besides building a school or college, constructing a hospital, free town buses, providing sweet drinking water throughout the day, diverting rivers to canalize water for irrigation and so on. That is all for them to get their votes. They never turn up after they are elected or selected, even chosen in ministerial status.

Either government department officials or politicians should look after the education system of the village children. Even though we have free education and compulsory education plans, the accessibility is a question due to several reasons. The prime cause is poverty which leads the children to go laboring for survival. Introduction of noon-meal scheme made a lot to attract children in rural areas, which too went out to the backdrop of the poverty in family and jobless parents.

There are some villages where the children have to walk more than ten miles a day to reach their schools. In some villages even though we can see school building without top and roof, arrival of teachers depends on the fortune of the students and feasibility of the Head Master. These children are not dreaming to go for CBSE or Matriculation Schools; rather they need education to lead a life without depending others. It is not their expectation to go abroad and come back with lip-style English and a foreign Post Graduate Degrees. Majority of ministers are indirect owners of so many colleges of Arts, Science, Engineering, Medical and other disciplines. Do they have a mindset to offer some seats for the poor or the backward class children of their constituency free of fees?

If not so, then what is the simple meaning on redefining the words ‘Equality of Status and opportunity” in our Constitution, which is the foundation of developing / shining India?

Conclusion

In reality, what has happened is that practical politics has turned to ridicule the educational provisions of the Constitution. We have neither achieved the objective of providing compulsory education nor succeeded in providing free
education. The governments of the country too have been playing games with education, as the governments are not stable on its own sustainability. It is essential and unavoidable that our Political leaders, educational planners and administrators make meticulous plans according to the instructions explicit and implicit in the Constitution. So that the Constitution may get due respect and the country may move towards progress with the backup and backbone of the poor people who are left aside without proper timely education due to the lethargy and carelessness of the concerned heads and officials.

“Let every man learn to make something which others need” - Jose Marti.

Few References
DECONSTRUCTION OF GENDER ROLES: A STUDY OF MAHES DATTANIS’ SELECTED PLAYS

Dr. K. Anbuselvi
Head and Associate Professor of English, A.P.A. College of Arts and Culture, Palani-624601

Introduction
Gender and sexuality, though agonizingly interchangeable, is as complex and dynamic in theory as its rendition in creative works and in life itself. The late 1900's witnessed an explosion of queer culture in every field of life and attempts were made to define and categorize the many divisions that arose within the discourse of Queer theory. During the 1980's critical theorists became increasingly fascinated with the notion of ambiguity and, in particular, with bodies, genders, sexualities and practices which appeared to defy traditional forms of categorization. This focus on ambiguity continues in Queer Theory's concern with transsexual or transgendered bodies which, it is often claimed transgress, and thus help to dismantle binary oppositions such as male/female, nature/culture, heterosexual/homosexual and so on.

The term transsexual was first used by David O. Caudwell in 1949, to describe those who "desire to live as a member of 'the sex to which one does not belong', as a pathology or psychological disease which it may be possible to 'cure.' bin which is ultimately better to somehow prevent".

Due to the possibility of cure for the 'condition' of being a transsexual and the radical politics within the debates over transsexualism, it caused much uproar among the theorists themselves which led to the formulation of the notion of transgender.

This term was originally coined by those who did not feel that the term cross-dresser was appropriate, given their commitment to full-time gender bendering, but who did not desire to undergo sex reassignment surgery and thus did not seem 'qualify' as transsexuals. It is now used to refer to a wide range of gender-ambiguous identities including crossdressers, drag queens and kings, intersexed people, hennaphrodykcs, people who modify their bodies in a variety of ways and to varying degrees with or without hormones and/or surgery, butch dykes, fairies, she-males, bi-gendered
individuals, those who see themselves as belonging to a ‘third sex’, androgynes, transsexuals, cyborgs, queers and so on. In a sense, the term transgender provides an identity category and a sense of belonging to all those who have been excluded from gender identity programmes and denied access to surgery and to all those who have felt marginalized by heteronormative values and institutions more generally. This collective sense of transgender could be said to inform and be informed by queer politics and the celebration of ambiguous and non-unified subject positions. It also allows people to identify as other than a man or a woman and question the binary gender system that generates them.

It is crucial to understand that transgender are different from homosexual; in their psychological and biological framework and therefore their needs pertaining to the sentiments of love, family and social life would be divergent from those of the gay community. In the context of the above categorization of individuals that fall under the term ‘transgender’, it is pivotal to comprehend the fact that transgenders are not opting for a biological transformation alone but they hope to establish an emotional and psychological connection to the gender they wish to ‘attain’. For them the manner in which they change themselves into the gender they wish to, be it through surgery or cross-dressing, is an en route to their path to attain perfection and fullfilment more traditional in their approach to the notions of femininity and masculinity and they crave to be part of the traditional framework of society through marriage, family and social work. Nikki Sullivan, in an article titled "Transsexual Empires and Transgender warriors" quotes Thomas Kando to show that transsexuals are involved constantly in reinforcing the traditional conception of the masculinity/femininity.

Unlike militant homophiles, enlightened therapists and liberated women, transsexuals endorse such traditional values as heterosexuality, domestic roles for women, the double standard of sexual morality, the traditional divisions of tasks and responsibilities, and the discreditation of deviant sexuality. Unlike various liberated groups, transsexuals are reactionary ... they are the Uncle Toms of the sexual revolution. With these individuals, the dialectic of social change comes full circle and the position of greatest deviance becomes that of greatest conformity.
The debate about the transgenders have been predominant in the field of Queer theory for decades now but they still have a long struggle in from oIThcin to mum social acceptability, the right to marry, the right to adopt children and while the transgender community lobby for greater changes to be made to their cultural, political and social standing, they feel its imperative to be heard, "to speak in their voices rather than 'passing' into silence and invisibility".

Hijra is the term used to denote a male who have feminine characteristics and the presence of hijras are quite common in the Indian society. They suffer die oppression of the worst kind from the society and are marginalized for who they arc or most importantly for who they are not. The conventions of the society which dictate very specific behavioural patterns for its male and neither female popular him can well accommodate hijras who can neither be categorized as males nor females. Society refuses to acknowledge their presence in the contemporary world and seem content in feigning ignorance regarding their every day woes of survival amidst a hostile social and cultural milieu. Through many queer support groups and related organizations, the hijra community in India has obtained some visibility for themselves in the mainstream cultural and social activities. The gay parades organized every year to encourage the queer-community of India to interact with other members within the community are an opportune platform for the hijra community to make themselves visible to media and the rest of the society. Due to their growing popularity amidst the modern Indian urban populous, they are featured often in theatre and popular culture, especially in the film industry. Needless to say, they were caricatured or ridiculed and presented to the viewers as a source of humour and pathos. There were almost invisible in the theatre until the last decade. Mahesh Dattani is a major English Indian dramatist who endorses their cause on stage and gives them the space and visibility they really deserve.

The chapter focuses on the depiction of the transgender in the play Seven Steps Around the Fire and subverted notions of masculinity in the play Dance Like a Sum. The chapter which deals with two different concepts within the discourse offender is about the performance of gender roles that occur in the society. Be it a transgeucier, a feminine man or a masculine woman, the society views them us deviations hum the gender rules that it has prescribed for those who Telong' to the society. Thus they are ostracized and marginalized for deciding to life a life on their terms. In the play Seven steps around the Fire, the transgender characters
that Dattani introduces for audience scrutiny represents a section of society which has been oppressed for decades for their sexual choice and in the play *Dance like a Man*, the rigid rule of feminity is broken and subverted by the playwright to expose the double standards on which society functions.

**Analysis of Seven Steps around the Fire**

In his popular radio play, *Seven Steps around the Fire*, first aired in 1999, Dattani brings forth the transgender community of the modern Indian society into the limelight. Anarkali, Champa and Kamla are prototypes of that section of society who have been oppressed and subjugated for centuries by the Indian culture. Hijras or eunuchs have a cultural history of their own that speaks of their anguished and humiliating existence amongst the mass. They are only 'welcome' into the lives of the other members of the society at the time of a wedding or child birth, ironically the two privileges denied to them by the society.

In the play, the narrator and the central character Uma Rao is working on hijras as part of her thesis and she dwells deeply into the history and the current state of their presence in the society. The empathetic and compassionate nature with which she approaches her 'subject' Anarkali paves way to the perception of the hijra or transgender existence in a newer light. They are seen as human beings and then- trauma on facing antagonistic social and cultural practices that are forbidden to them. Like marriage and child birth, is shown by the dramatist through the character of Kamla. Kamla, a beautiful eunuch gets murdered because of her marriage to son of the minister, Subbu, and Anarkali, another eunuch is blamed for the murder. Uma, finally, helps Anarkali acquitted of Kamla's murder at the same time earn the undying gratitude and love of the hijra community. As a prologue to her case study, Uma recounts the history of the hijra community and their present oppressed state in actuality.

... A brief note on the popular myths on the origin of the hijras will be in order, before looking at the class-gender based power implications. The term hijra, of course, is of Urdu origin, a combination of Hindi, Persian and Arabic, literally meaning 'neither male or female'. Another legend traces their ancestry to the Ramayana. The legend has it that God Rama: was going to cross the river and go into exile in the forest. All the people of the city wanted to follow him, he said, 'Men and women, turn back. Some of his male followers did not know what to do. They could not disobey him. So
they sacrificed their masculinity, to become neither men nor women, and followed him to the forest. Rama was pleased with their devotion and blessed them. There are transsexuals all over the world, and India is no exception. The purpose of this case study is to show their position in society. Perceived as the lowest of the low, they yearn for family and love. The two events in mainstream Hindu culture where their presence is acceptable—marriage and birth—ironically are the very same privileges denied to them by man and nature. Not for them the seven rounds witnessed by the firegod, eternally binding man and woman in matrimony, or the blessings of ‘May you be the mother of a hundred sons’.

In the play, Dattani creates an intense space of debate and clash between the individual self, a projection of Dattani’s self into his character, and between the collective self, the characters that represent the established and conventional norms of the society and is constantly trying to gain hegemony over the individual self who endorses a novel and compassionate attitude towards the oppressed section of the society marginalized for their gender, sexuality, caste and class. While Uma is inclined to look upon the hijra community with compassion, Suresh, her husband, Munswamy, Mr. Sharma, the Minister and almost every other character in the play regards the existence of the transgender beings as a social evil. For Suresh, “They are all just castrated degenerate men”. Munswamy, “who is a police constable working under Suresh, looks upon hijras with utter contempt and disgust. Though he himself belongs to a lower class, he believes he is much better off than a hijra and feels superior in the presence of one. Kamla, the beautiful eunuch Subbu was married to, was murdered for her lowly status in the society. It was impossible for Mr Sharma, Subbu’s father and a Union Minister, to accept Kamla into the Sharma household as his daughter-in-law. In the end of the play, when Subbu takes his own life or. die day of his marriage to a girl of his father’ choice, the audience wonder whether Mr. Sharma’s pride was worth the agony Subbu and Kamla had to suffer.

The hijra community is a mystery that Uma is trying to solve through her thesis and Dattani takes the audience through a journey that reveals the ‘life style’ of the most oppressed section or the society. Their past, present and future look bleak empty and devoid of hope, love and social acceptance. They had remained in the shadows for so long that their presence is forgotten until they
show up quite unexpectedly at weddings and birth ceremonies. They seem to live for these occasions, the two privileges that society and nature had denied them. The title of the play, *Seven Steps Around the Fire*, is very appropriate and symbolic where the playwright puts the hijras in the limelight who are forbidden to take those seven steps around the fire, binding two people in holy matrimony in the presence of Firegod.

*UMA (thought)*. Nobody seems to know anything about them. Neither do they. Did they come to this country with Islam, or are they part of our glorious Hindu tradition? Why are they so obsessed with weddings and ceremonies of child birth? How do they come to know of these weddings? Why do they just show up without being invited? Are they just extortionists? And why do they not take singing lessons?"

(Pause.) Is it true? Could it be true what my mother used to say about them? Did they really put a curse on her because they did not allow them to sing and dance at their wedding? Or was their explanation for not being able to have children of their own? Or ... a reason to give to people wanting to adopt me?

While on the journey to uncover the secrets of the hijra community, Uma deconstructs many social taboos associated with them through Anarkali. For the hijras who exist outside the structure of society, they have their own ways of living, forming a community of their own and bonding with each other. "We make our relations with our eyes. With our love. I look at him, he looks at me, and he is my brother. I look at you, you look at me, and we are mother and daughter". When asked about herself, Anarkali says, "I sing with other hijras at weddings and when a child is born. People give us money otherwise I will put a curse on them. (Laughs). As if (ion is on our side". The sarcastic, yet honest, words of Anarkali gives the audience an insight into the life of a hijra and can't help but wonder at the constructed evilness of hijras in the society. They are forced to rum into beggars and prostitutes for their survival and thus if they have turned themselves into criminals, it is hardly fair to blame them when it is a life or death situation for them.

The play, as mentioned earlier deals with the clash between individual himself and the collective self, where the individual self is always in a constant struggle to free itself from the clutches of the societal self and liberate itself so as
to live a life of its own choice. Uma and the hijra community are similar in their social predicament but clearly being a part of the upper social class gives Uma an advantage over the hijras. Hijras are considered lower than the lowest class. Uma, a woman with a will of her own, finds it difficult to have a happy marriage with a husband who is self centered, patronizes her and construes her as a wife rather than an intelligent individual. Suresh uses Uma for his sexual gratification while Uma wants more respect and consideration from her husband. When she asks him to visit their doctor with her for a test of his sperm count, Suresh flatly refuses as though he believes himself to be ‘flawless’. The character of Suresh is crucial in the understanding of hijras from a different perspective than that adopted by Uma or any other character in the play.

The positioning of hijras is significant when we come to him. The story moves by indirection. It places Suresh not in the biologically correct but amongst the biologically defensive. For meaning and signification is latent not in the former but in the latter. Uma speaks at random about Suresh going for a medical check-up for a sperm count. The contradiction lies in the apparently productive and fecund being barren and sterile. The story posits the opposition between the seminal and the sterile. There is a subtle indication in Uma of her infatuation with the sexless, the neuter, the infertile. In Suresh’s case the male, libido has failed; phallocentrism has been overcome by a kind of deconstructive feminism. A tension is generated by valorizing the eunuch over the human, underlining the sterile over the seminal.

A close reading of the play reveals the fact that the plot is built on a series of incongruities and contradictions that expose the antagonism and the social conflicts between these oppositional forces existing in the modern Indian society. The constant juxtaposing of Uma and the hijras with Suresh and the society has been an interesting and effective technique in understanding the oppositional forces at play. The diametrical forces of nature, of man and woman, are at conflict here and the presence of a hijra or a transgender contribute to the complexities within the discourse of gender occurring in the play. Consider the issue of addressing a hijra. A hijra is a ‘she’ for Uma, ‘it’ and ‘they’ for Munswamy and Suresh respectively.
The human and the ‘un-human’ are co-existant. The transformation of ‘it’ into ‘She’ and then to ‘they’ is a psychic transformation of the ego into the ‘feminine’ a symbol of sacrifice and devotion and thence into selflessness. The portrayal of Uma as one torn between the demands of her thesis and the inadvertent ‘collapse’ into social work thus serves as a foil to the projection of self and the selfless. The opposition between the self and the selfless is striking; while Uma is on a struggle to selflessness, the selfless self is already crystallized in Champa, Anarkali and Kamla. Thus what has been traditionally labelled and treated as potent and human, and what has been defined impotent and ‘un-human’ are reversed and placed in contrariety. The eunuchs are shown to be rational, emotional, human and selfless; the human beings are displayed as irrational, inhuman and selfish.

Seven Steps around the Fire analyzes human relationships within the institution of marriage. It undermines the sanctity that society places on marriage. It questions the relevance and validity that matrimony has in the contemporary society. The focus is placed on the ‘powerless’, the wife, women and the transgenders, and thus the margins, the eternally subjugated by patriarchy, is brought into the centre. The paradigm shift in the theme within the play is reflective of the change that the society undergoes in the present world. Dattani deliberately foregrounds the underdog and the male centric society is criticized for the injustices meted out to the oppressed. By lending voice to the transgenders and women characters, Dattani gives them an opportunity to face the audience and recount their miseries, the physical abuse, sexual abuse, violence and other discrimination they had to suffer and thereby making their concerns ‘mainstream’.

Analysis of Dance like a Man

The most popular and most performed among the plays of Dattani is Like a Man. It is a powerful human drama that provides not only an insight into the contemporary social scene in an Indian family with an artistic background but also how the past drives forward and negotiate with the present of an individual. As the title suggests, the play looks into the power politics that occur within the society and how the traditionally conceived notion of masculinity and femininity is under erasure in the present world. Dance Like a Man is a play that shows how past ‘conditions the present and perhaps the future too. It is a play about how difficult it is to breaks away from the bonds of family and society and choose to be the
individual of your choice rather than what society and filial expectations expect you to be.

The play has a dancer couple as the central characters. The wife is an accomplished artist with fame and a career to remember by. The husband, who was an exceptionally talented dancer, may be more talented than the wife once, has a failed career, a failed marriage and no future prospects to look forward to. His father, a social reformer and an aristocrat, did not want his only son to be a dancer, perform what he thought to be a woman’s art. He wanted the husband to be redeemed of his dancing obsession and be made a ‘man’. For this purpose, he sought the wife’s help and made her understand that for the wife to continue dancing with the permission of the father, it is imperative to make the husband choose some other profession other than dancing. Since the husband and the wife were staying with the father in his home, she consents to the father’s plan so she could dance. Eventually the husband loses his popularity as a dancer due to the manipulative tactics of the wife and resorts to alcoholism and self pity.

The play begins at that juncture in the couple's life where their daughter is about to have her solo dance performance as part of a prestigious cultural event and the couple, mostly the wife, does everything possible, like planning the whole dance performance to perfection and even bribing the critics, to ensure a successful career for the daughter. The dance performance is a huge success and at this point the husband and the wife speak of their past, in the middle of a fight, and try to be honest with each other and the audience is treated with the past incidents in their lives where the father of the husband is introduced on stage. The father is the most crucial and influential character in the couple's lives and the events that ensued irrevocably changed both their lives. The play ends with the death of the couple and at last they show the humility to admit their faults to each other. “We were only human. We lacked the grace. We lacked the brilliance. We lacked the magic to dance like God”.

The play is one of the most popular plays in the modern Indian tradition with its unique treatment of the concept of gender and the intricate fashion in which it is woven into the tradition of dance. The play is a graceful performance through the lives of Jairaj, Ratna, Amritlal Parekh, Lata and Viswas. Ratna and Jairaj is the dancer couple; Amritlal Parekh, Jairaj’s father; Lata, Ratna and Jairaj’s daughter and Viswas, the prospective groom of Lata.
The most crucial factor for the commercial success of the play is the discussion of gender and sexuality in the context of classical dance, which is familiar for the Indian audience and the inhibitions to a man to choose a career in a field considered to be meant for women is a challenge that many men face. The play is equally popular abroad for its artistic excellence and the interwoven irony and pathos that constitute human condition has a universal appeal. Even the audience, with their own biased notions about the art, is troubled when they counter such common place yet socially relevant scenario on stage.

The play, though exalts the personal choice of Jairaj to be a dancer, with the title *Dance like a Man*, it also shows how difficult and arduous is to dance like a man. Jairaj considered himself a man when he danced and he stopped being a man to himself when he was unable to dance and what helped him to live with his failed life was alcohol and self pity. He understands his predicament in life but feels helpless and hopeless about his life, his future. He sees only contempt for him in his wife's eyes. Ratna, though equally responsible, for the failure of Jairaj as a husband and dancer, tries to veil her guilt and woes by concentrating on the career of their daughter Lata. She tries to relive her life and past as an accomplished dancer through Lata. She is afraid to confront herself without the mask of a dancer for the fear that she would find a failed human being just like Jairaj. Her desperation is discernible in her attempt to fill her dance album with the reviews and photos of her daughter, making herself believe that she deserves them for herself, for her efforts to make sure Lata has had a perfect performance. Ratna's ambitions and dreams were made true in the expense of her husband's love and her child's life. Her guilt on the death of Shankar, their son still haunts her and she tries to divert her thoughts from Shankar by immersing herself in the life of her only daughter.

The unequal gender relations between Jairaj and Ratna.is a contribution of Amritlal Parekh and he attempted to make a man out of Jairaj by manipulating Rat.ra. Ratna, being an ambitious dancer understood what the stakes were if she refused Jairaj's father, who had the power to stop her from doing what she loved best, dancing. The playwright juxtaposes Jairaj and Amritlal Parekh in an attempt to compare and criticize two different interpretation to being a man. Jairaj feels a complete man when he dances and he believes that he has the talent to choose
dancing as a profession. For his father, it was impossible to let his only son be a dancer which he thought was not fit for a man.

AMRITLAL. A woman in a man's world may be considered as being progressive. But a man in a woman's world is pathetic.

RATNA. Maybe we aren't ‘progressive’ enough.

AMRITLAL. That isn't being progressive, that is ... sick.

The father and the son represent contrasting perspectives to the notion of masculinity. For Amritlal Parekh, the rules of the society regarding masculinity a. J rigid and inflexible and those who deviate from the guidelines of sexuality laid out by the society are considered un-manly and effeminate. Jairaj respected anyone for his or her talents and wisdom and therefore he was constantly in conflict with his father, whom he recognized to be hypocritical, condescending and arrogant in his attitude towards life and people.

AMRITLAL. Your guru. What kind of a family is he from?

JAIRAJ. His mother is not a devadasi, if that's what you wanted to know.

AMRITLAL. Why does he wear his hair so long?

JAIRAJ. Why do you ask?

AMRITLAL. I have never seen a man with long hair.

JAIRAJ. All sadhus have long hair.

AMRITLAL. I don't mean them. I meant normal men.

JAIRAJ. What are you trying to say?

AMRITLAL. All I'm saying is that normal men don't keep their hair so long.

JAIRAJ. Are you saying that he is not... (Realizes the implication) Are you saying...?

AMRITLAL. I've also noticed the way he walks.

JAIRAJ (angrily). This is disgusting! You are insane!

The relationship between Jairaj and Ratna fell apart after she managed to sabotage the dancing career of Jairaj, as per his father's instructions. Jai lost all self esteem and dignity he had when he realized that even his wife fails to consider him a man. He feels he had disappointed both his father and his wife by resorting to alcoholism to drown his self pity.

JAIRAJ. You mean he would sooner watch me turn into a drunkard than see me dance?
RATNA. This is your own doing. He regrets it happened this way-and so do i. JAIraig. Do you? I think you prefer it this way. He lets you do what you want and you have me out of your way. He in turn is grateful to you. My father is always asking me to grow up. Well, this is a perverse way of thrusting me into adulthood.

RATNA. To each his own perversity.

JAIraig. And what is yours?

RATNA. Agreeing with your father. Letting you off so that he could shape you into whatever shape he thinks a man should have. I should have guessed the result. When I say I regret it, I really mean that Jai.

Jai lives his entire life, more or less, in the shadow of his father's domineering presence. His father managed to end his career as a dancer but his real failure lies' with the fact that he deprived Jai of his self esteem and self respect for life and the Jairaig that the audiences are presented with at the beginning of the play is an individual with no hopes and expectations from life. He performs the act of a content husband and a proud father to perfection but the instances when he forgets to act are those moments the audience get a glimpse into the person he has grown into. Not a 'man' as his father hoped, but a performer who performs not what he loves best but what he is supposed to perform in accordance with the expectations of the society. The setting of the play, the living room of the home of Jairaj and Ratna, is described as "an antique shop" by Viswas when he sees the room furnished exactly the way it us done by Jairaj's father. Even the shawl that was given to Amritlal Parekh by the Mysore Maharaja is preserved in the memory of Jai's father. But when Jai decides to give away the shawl to Viswas, he actually feels relieved and anxious to have his father's memory erased from the home, from himself.

Jairaj (to himself). Your last memory. Soon i'll be rid of you too. Then i won't see you wearing this shawl, walking about this room. (Flute, followed by mridangam) I won't see you wearing this shawl. I won't sec you walking about this room. (Paces up and down while the lights dim.) I won't see you wearing this shawl walking about this room. Walking about-wearing this shawl.

Dattani, through the play Dance Like a Man exercises strong on the audience, multiple layers of truths regarding the Indian society with the paradoxes
of stereotypical gender roles as performed in the play. In the play, the playwright challenges the construction of 'Indian', as they have been traditionally defined by the modern Indian theatre and on doing so; he deconstructs the social and cultural perception of the essence of being a man or a woman. Dattani understands that heterosexuality, with its rules on thought and behaviour, is unquestionably oppressive to those who refuse to define themselves with the parameters of gender and sexuality prescribed within the societal framework. Seven Steps Around the Fire and Dance Like a Man are two different interpretations of the same social scenario and through these plays, the playwright highlights the prime importance of personal choice over a collective choice, be it a choice of sexuality or profession, and all his plays are affirmation of the playwright's attitude towards the choices that life provides every individual with. Dattani believes that everyone is entitled to a life of his or her own, living it on their own terms. He himself asserts that, "my characters are simply personifications of my perception" and in the light of that comment, we can affirm that all his plays, especially the plays selected for this study Do the Needful, Bravely Fought the Queen, On a Muggy Night in Mumbai, Seven Steps Around the Fire and Dance Like a Man are testimonies to his theory and continuance on life itself.

References
A STUDY OF ENVIRONMENTAL AWARENESS AMONG THE HIGHER SECONDARY STUDENTS

Dr. S. Indira
Principal, Kongunadu College of Education, Tholur patti, Thottiyam (TK), Trichy (DT)

Abstract
Environmental AWARENESS MUST BE THERE IN EACH AND EVERY PERSON. Man like animals gets himself adjusted with the environment, he even changes it to suit his needs. It is there, where disaster enters. The present study tried to prove that the environmental awareness exists in all. Difference in location, sex, subjects of study or socio-economic status matters little.

Introduction
It has been rightly observed that man is his own enemy. All his inventions and discoveries have improved his lot but at the same time, they threaten his very existence. Animals adapt themselves to their environment. But man, besides making such adaptations, alters the nature of his environment to suit his immediate needs, Which spells disaster. The Human Environment is spoiled by pollution of various kinds and any education worth the name should create awareness in pupils of their living environment and the ways and means to keep it tidy and healthy.

Gupta et al. (1981) made a study of the environmental awareness among children of rural and urban schools and non-formal education centers in Bhopal, They found that the rural pupils belonging to formal stream had more environmental awareness than the urban pupils of the same stream. In respect of others they found no significant difference in their environmental awareness in another study, teachers were found to have a favorable attitude towards environmental education (Gupta, 1986)

Objectives
The present investigation is intended to find out if there is any significant difference between (i) urban and rural students (ii) boys and girls (iii) science students and humanities students; and (iv) students of high and low socioeconomic status in respect of their environmental awareness.
Sample

468 higher secondary students of trichy Town were involved in this study. Stratified random sampling technique was used in the selection of the sample. This sample comprised 266 Urban Students and 202 Rural students. In terms of sex, it comprised 252 boys and 216 Girls. In terms of the optional subjects of the sample, it comprised 251 science students and 217 humanities Students. further, this sample had 20 students with high socioeconomic status and the remaining 267 students with low socio economic status.

Tools

An Opinionnaire, with 50 items, constructed and standardized by sudhakar (1981) was used to find out the environmental awareness of the higher secondary. The items deal with the following problems of the environment: (i) water pollution, (ii) air pollution , (iii) Land pollution ,(iv) Noise pollution (v)Solid waste and its effects , (vi) Misuse of natural resources, (vii) Effects of ecological imbalance , (viii) Energy crisis, (xi) Effects of population explosion and (x) protection and preservation of environment.

Against each item alternate responses of “Yes” or “no” are given and the subject are to put a tick-mark under one of the two columns, which they think is suitable for a particular item. The “Yes” response indicates environmental awareness while the “No” response indicates a lack of it. A score of 2 is given for the “Yes” responses and a score of 0 is given for the “No” response. Thus the score ranges from 0 to 100 in the direction of increasing environmental awareness.

In order to measure the socioeconomic status of the students, “The socioeconomic Status Scale “(SESS) constructed and standardized by Bharadwaj et.al.(1980)was used

Statistical Treatment and Interpretation

The means and the standard Deviations of the environmental awareness scores of the various sub-samples were calculated. The following null Hypotheses were framed for the purpose of verification.

i. There is no significant difference between the urban and the Rural Students in respect of their environmental awareness.

ii. There is no significant difference between the Boys and girls in respect of their environmental awareness

iii. There is no significant difference between the science Students and the Humanities Students in respect of their environmental awareness.
iv. There is no significant difference between the Students with High Socio-economic Status and students with Low socio-economic status in respect of their environmental awareness.

The test of significance was used to find out the significance of the difference between the Means of the environmental awareness scores of the above four pairs of sub-sample and the details of the calculations are given in table 1.

Table 1: The significant of the difference between the means of the environment Awareness of the Pairs of Sub-samples

<table>
<thead>
<tr>
<th>S.No</th>
<th>Sub-samples</th>
<th>CR</th>
<th>Significance at 0.01 level</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Urban and rural Students</td>
<td>1.02</td>
<td>Not significant</td>
</tr>
<tr>
<td>2</td>
<td>Boys and Girls</td>
<td>1.04</td>
<td>Not significant</td>
</tr>
<tr>
<td>3</td>
<td>Science and Humanities Students</td>
<td>0.98</td>
<td>Not significant</td>
</tr>
<tr>
<td>4</td>
<td>Students with High and Low SES</td>
<td>0.97</td>
<td>Not significant</td>
</tr>
</tbody>
</table>

In respect of the environmental awareness, Means of the Urban and the rural Students, the CR is found to be 1.02 and it is not significant at the 0.01 level. Therefore, the Null hypothesis is retained and it is concluded that there is no significant difference between them in respect of their environmental awareness.

In respect of the environmental awareness, Means of Boys and Girls, the CR is found to be 1.04 and it is not significant at the 0.01 level. Therefore, the Null hypothesis is retained and it is concluded that there is no significant difference between them in respect of their environmental awareness.

In respect of the environmental awareness, Means of the science Students and the Humanities Students, the CR is found to be 0.98 and it is not significant at the 0.01 level. Therefore, the Null hypothesis is retained and it is concluded that there is no significant difference between them in respect of their environmental awareness.

In respect of the environmental awareness, Means of the Students with a High Socio- Economic Status and those with a Low Socio-economic Status, the CR is found to be 0.97 and it is not significant at the 0.01 level. Therefore the null Hypothesis is retained it is concluded that there is no significant difference between them in respect of their environmental awareness.
Conclusion

This study has revealed that the environmental awareness of their High Secondary students in Tamil Nadu has not been influenced by the locality to which they belong or by their sex. No significant difference have found between them in respect of their environmental awareness, similarly no significant difference is seen between them in their environmental awareness on the bases of their subjects of study or their socioeconomic status.

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The Representation of Coolie Trade: A Study of Natacha Appanah’s Les Rochers De Poudre D’or

Dr. C. Thirumurugan
Department of French, Pondicherry University, Puducherry.

The studies on Indian Diaspora in the Indian Ocean countries start with an examination of the issue of collie trade and the studies related to the exploitation of the rich Indian labor in the sugarcane fields with these countries. Mauritius was one of the countries which imported a lot of cheap Indian labor as coolies to work in the sugarcane fields.

Many francophone Mauritian writers have recorded in an authentic way the poor state and the sufferings of the Indian coolies recruited under the name of the engaged laborers. The Mauritian writers like Abhimanyu Unnuth (in the Hindi novel Lal Passina, published in 1977, gives an account of the traverse and Indian coolies in the island of Mauritius. This novel was translated into French as Sueurs de Sang) describes the traumatic life of the indentured laborers.

Natacha Appanah, a Mauritian woman writer, recalls in her novel Les Rochers de Poudre d’Or the tragic life of the Indian indentured laborers who had come to Mauritius on the hope of harvesting gold. This quasi historical novel describes how these Indians who were looking for a paradise in Mauritius end up in a hell with no escape.

This paper is been divided into three parts.

In the first part, we would like to introduce the Indian Diaspora in Mauritius. In this section, we discuss about the arrival of the first Indian immigrants, the slaves and the Indian indentured laborers and their socio-economic life. However, we would like to discuss only about the issue of the Indian coolie until the end of the nineteenth century as the novel that we are going to discuss talks about the issue and the sufferings of the laborers in the pre-twentieth century period.

In the second part, we will try to make a critical study of this novel to see how Natacha Appanah has uncovered in detail the disturbing trajectory of the indentured laborers. We will also examine how the optimism of these coolies who were hoping to find gold under the rocks, becomes an illusion as soon as they come to this island.

In the third part, we will try to see to which level this novel corresponds to historical reality.
The Indian Diaspora in Mauritius:

Mauritius is known to a large extent as an island of the colonists. Uninhabited until the arrival of the European colonizers, this country had its first human settlement in 1598 when the Dutch finally decided to have an establishment there. However, they gave up the idea to establish a permanent settlement in this country because they were frequently threatened by pirates and apart from that, the island was full of rats and the Dutch were afraid of them.

For the French and the British empires Mauritius was an important land from the strategic point of view as this island was located between the two large continents, Africa and Asia. The French colonial period starts in 1715 and ends with the capture of power by the British in 1810. The English ruled this country till its independence in 1968.

However the Indian presence in this island started with the introduction of the Indian slaves. The Indian slaves were introduced here since 1598 when an Indian slave was brought by the Dutch from Madagascar and he was converted to Christianity with the name as Lawrence.

After Mauritius came under the control of the French, migration of the Indians started to increase and the French government encouraged the movement of craftsmen, soldiers and slaves from its Indian territories as these Indian laborers were ready to put in very hard work. The slave trade and the subsequent import of the slaves from the French establishments of India, particularly from Pondicherry started since 1720. Towards the end of the 18th century, it is estimated that there was more than 20,000 slaves of the Indian origin who were transported to these islands. As the sugar cane plantation was not in full swing during that time, the majority of these slaves were engaged with the development of road infrastructure and the construction works. For the development of these islands the colonizers were in need of craftsmen, masons, carpenters, dockyard workers, sailors, and it was difficult to bring these skilled people from Europe as it required a big investment and so the French colonizers turned to their settlements in India particularly to Pondicherry and to Karaikal for the cheap labor. The Indian skilled laborers and the slaves started to settle down in close proximity in Mauritius island and this vicinity helped the Indian slaves to turn to their compatriots in the event of any disputes.

In the 18th century, the owner - slave relationship started to dilute as far as the women slaves are concerned. In 1738, Sheik Ally released his own slave Amina and he married her. During the period of the French revolution, certain women slaves of Indian origin were released from their contract of slavery and the
Europeans or Indians skilled workers married these women and they have also recorded their marriage officially. Mary, an Indian slave, attached to a European tradesman, was released from her contract and she was married to Félicien Jérôme, an Indian craftsman from Karaikal.

The French colony of Mauritius encouraged the import of immigrant women, and the Indian women who have signed the contract or those without the contract and who have accepted to migrate from their home country were made to settle down there. Some of these women have become in the due course owners of lands. Marie Rozette, a woman of Indian origin released from her slavery had earned an enormous wealth, a vast land and twelve slaves in 1790. Later, she became one of the richest women of the island.

In 1806, four years before the British captured the island, the population of the island was composed of 6,768 white people, 17,514 colored people (which included the free Indians), and 60,646 slaves including 6,162 Indians.

When Mauritius was captured, the British brought many Indians as prisoners, coolies, tradesmen and cipayes. Thousands of Indian troops settled in Mauritius to avoid possible risks of further conquests since these Indian soldiers were known for their bravery and confidence. In this connection, a Tamil man by name Veliavel Annasamy held a very important administrative position in the colonial government and in 1822 he owned a large sugarcane field along with Charles Telfair. In 1827, Annasamy had 80 slaves. Another Tamil person by name Rama Tiroumoudy was joint owner of the land by name Bon Espoir. These Tamil chiefs helped in the good governance of the colonial regime as they were able to establish better contacts with the creole population of the island.

In 1836, while Charles Darwin stayed in Mauritius, he had observed that: Before knowing these people, I did not have any idea that the inhabitants of India were so noble people; their skin was extremely dark and among them the old men had large snow white moustache and beards; with that they had the fire in their expressions and it gave them a rather imposing feature.

According to the recommendations of the anti-slavery society, the law to curb the slavery system was promulgated in 1835. This legislation released all the slaves from their masters.

It is during this period the practice of engaging the cheap Indian labor came into effect. The system of the engaging the coolies replaced in an impeccable way the then slavery system. But the mentality of the sugarcane land owners didn’t change much as they considered the coolie trade as a sort of an extension of the slavery system and for them the system of indentured laborers became a sort of a
The neo-slavery system. The slaves who were released were not willing to work in the sugarcane fields because for them the sugarcane fields were nothing but a symbol of the slavery system.

The contractual Indian coolies continued to work very hard and they were forced to bear the suffering even in the post-slavery period. The possibility of paying fewer wages to the Indian coolies than the slaves, who were freed, encouraged the European owners to prefer the Indian laborers and these owners solicited the colonial government to import more coolies from India.

Nevertheless the mindset of the owners didn’t change much. They do not even provide the basic necessities like food, dwelling and medical care to the Indian coolies. Mr. C. Anderson, Superintending Special Magistrate of Port-Louis has noted that certain immigrants were treated with large and unjust severity, and by an excessive work load and corporal punishments.

Considering the pathetic condition of the Indian indentured laborers who were treated like cattle the State Government intervened not only once but twice. The local government banned in 1839 and 1842 the import of the Indian laborers into Mauritius. But these bans do not improve the life and the living conditions of the coolies. Succumbing to the constant pressures from the land owners, the government relaxed the restrictions and the engagement of the coolies started once again and thus the suffering of the coolies continued.

The agony of the Indian laborers which did not reach at the ears of their owners, reached their native country and hence a great number of Indians didn’t show much interest for this type of contractual migration. But in India, the starvation provoked by the successive famines forced the poor people to leave their home country in search of green pastures and they were the easy prey and they were lured to move towards Mauritius. Without knowing their fate, the newly recruited coolies accepted to migrate.

As per the contract, the coolies can free themselves from the contract after a period of five years of work at the employers’ place but in majority of the cases the owners never let them after their term is complete and these owners continued to extract work from the laborers because they wanted to exploit the matchless experience of these coolies.

In 1875, the Mauritius colonial government constituted the Royal Commission to study the problems of the Indian laborers. The recommendations of this commission were accepted and in 1878 the Government promulgated the recommendations in the form of the laws. These laws were effective for 42 years.
Gandhi, when he was in South Africa heard the sufferings of the Indians in Mauritius and while returning to India. He stayed in Mauritius for twenty days in 1901. He met the Indians there and he understood their problems. On the 13th of November 1901, when he addressed the Indians, he said “the Indians who live in Mauritius have all the rights like the English. Only the hard work and the perseverance of the Indians are responsible for the prosperity of Mauritius. The Indians should take part in the politics of the country since they are the citizens of this country and political participation is the right and the implication of the Indians.”

In spite of the anguish experienced by the coolies, one cannot deny the fact that some of them, freed from the system of slavery, without returning to their native land, preferred to stay in the migrated country and started to lead a successful their life by taking to agriculture and by their hard work they later became the remarkable citizens of Mauritius. They are often called Indo Mauritian. Aunauth Beejadhur says that some immigrants who were freed went to the extent of purchasing a part of Crown Lands (Government Lands) and made them to bear fruit. From 1862 to 1871, they had bought 120 arpents of land.

Apart from this, there were also some Indian tradesmen who were interested in agriculture. The Tamil families like Marimootoo Pillay, Sreenivassan Chetty, Nagappa Chetty, Mootayan Padayachy, Sinnatambous, Tiroumoudy, Arlanda owned agricultural lands and some of them took part in the business activities. The other Indian tradesmen followed them and started to establish companies there and they moved together into certain specific zones like Memane Bazaar and Surtee Bazaar. The businessmen from Gujarat played an important role in the development of the economy of the Indians both the freed laborers and the migrants. Thus these businessmen from Gujarat lend money to them to buy sugarcane fields and they were also involved in the export of sugar.

These rich Indians introduced their religions and religious practices in Mauritius. The Tamil sirdar Songor Itty and his Bengali wife donated a piece of their land for the construction of a Hindu temple and they were also helped by other Tamil philanthropists like Sinnatambou and Soobramanya Pyneeeandee from Port Louis where the latter donated the bronze statues. The introduction of these religious practices brought certain hindu ceremonies like Kavadi and Timidi. The Muslim merchants constructed mosques in the island.

The social celebrity of these Indo-Mauritian merchants made them to take part in the political activities of the Island. Annasamy was a nonofficial member of the Colonial Committee in 1827. In the middle of the 19th century, the famous
Tamil leaders like Sinnatambu Chettiyar and Munisamy Mudaliar were appointed in the District Committees. Gyanadicrayan Arlanda was appointed in the council of the Government in 1886. The beginning of the XXe century saw the rise of several intellectuals of Indian origin and some took part in the general elections of the Island and they occupied the most important offices of the Independent State of Mauritius. We can quote as example Chacha Ramgoolam, the son of a sirdar of Bihar, who became the first Prime Minister of Mauritius.

The Indians, especially the slaves and the coolies’ underwent a great suffering for the development and the prosperity of the country. If the Indians were not there, this small Indian Ocean island would not have become so fertile and rich. However their serious work pays the rich dividends today. The Indians could praise themselves for having built a nation.

The story of the novel

Les Rochers de Poudre d’Or which could be translated in English as “The Rocks of Gold Powder” is Natacha Appanah’s first novel. She wrote this novel in 2003. This novel received the RFO prize in 2003 and Rosine Perrier prize in 2004.

The history of this novel is quite simple. The writer evokes the adventures or the mishaps of four young Indians: Badri, Chotty Lall, Vythee and Ganga, who leaves for Mauritius with an intention to collect as much gold as possible from underneath the rocks.

To facilitate our study we have divided this novel into three parts. The first part was set in India where the author introduces to the personal happy life of these characters and the idea which draws them to go as indentured laborers to Mauritius.

The second part evokes the tragic trajectory of these laborers.

The last part speaks about the suffering of these coolies in the hands of the British landowners in Mauritius.

The whole novel is a testimony of the atrocious system of the coolie trade. Throughout the novel, we could listen to the human cries and howls caused by the inability to act against this inhuman practice.

Here is the summary of the novel.

The story of this novel was set in the year 1892. Four Indians decide to leave their country and they accept to go to Mauritius as per the contract in the boat by name Atlas. They are:
Badri is a young man of eighteen years of age, and he is the only son of the family. He is interested to play cards with his friends. One of his friends tells him that they can earn much if they work in the port of Calcutta.

He had said to Badri that coolies load rice bags onto the large boats “vast like their fields” and that the English gave “enormous tips” to those which transported their bags. Badri was very impressed. Boats, tips, large bags, the kala pani... what convinced him to see all these things through his own eyes!

He was in need of money to go in Calcutta. So he steals five rupees of his mother and he started to play cards with this money so that he can make more money. Unfortunately it loses all and afraid of returning at his house, Badri begins his way towards Calcutta. He wanted to make more money in Calcutta. His destiny takes him to a maistry who made him to sign a contract. Without knowing the contents, it signs the contract.

Chotty Lall is a poor farmer who lives in Raniganj, a small village in Bihar. He works in the house of a zamindar. He was force to work in the fields of the Zamindar as a bonded laborer as his father had borrowed from the Zamindar a small amount of money. Chotty Lall has to pay the debts of his family and for this he was in need of more money and to earn more he flees in from the zamindar’s house, hoping to repay the debts and to release all the members of his family from this system of slavery. He leaves for Calcutta and there he boards the boat Atlas.

Vythee is a young man who lives with his family with Manavelli, a village located very close to Madurai. He wants to join his brother Jay who is working in one of the sugarcane fields in Mauritius since five years. He meets a maistry by name Roopaye to help him to join his brother in Maurice. He awaits Atlas in Madras.

Ganga, born in an aristocratic family, learns since his young age various arts such as hunting, horse riding etc. Young, pretty and a courageous noble girl, she was forced to marry a son of the Rajah of Bangalore.

The young couple lived happily. One day Ganga hears the sad news that her husband was killed by a white tiger in the forest.

According to the royal social practice, the wife of the dead should be burnt alive along with the pyre of the dead husband. The whole kingdom prepares for the sad ceremony. To avoid this Ganga flees from there and goes to Bangalore and from there she leaves for Madras, meets Roopaye and prepares to go to Mauritius.

Roopaye registers Vythee and Ganga as a couple.

Atlas begins its nightmarish travel along with these travelers on board.
The 42 days travel with 138 Indians on board, is been narrated by an old doctor since the boat started from Calcutta port till it reaches Port-Louis in Mauritius. This doctor didn’t like the Indians. He says: I hate Indians. Sometimes, as much as the flies, sometimes more... I never bleed the Indians. This is my rule in this profession. I make my sub staffs to do this type of work.

The Indians were asked to take shelter in the hold of the boat. The hold was dark, wet and there were hundreds of rats.

There are hundreds of rats, some are very big, and they squeak and they appear to be like a carpet on the ground. We, Indians, we do not have the right to touch the rats. It is very bad for our karma.

One old man, finding difficult to live with the rats jumps into the sea and kills himself.

Having no other alternative, the Indians continue to stay in the hold. According to the doctor’s testimony the hold smelt like a rancid store, the piss, the filth. I thought that if torture were to have an odor, it would be that one.

Water and cookies were distributed to them, they were cookies meant for dogs, says the doctor. He continues, I believe that the cookies were hard because I saw that some of them tried to break these cookies with their closed fist but without any success. So, they soaked them in water and swallowed by making a grimace.

During the time of their voyage, Chotty Lall becomes sick and his body starts to decompose when he is still alive. William, the captain of the boat orders that Lall be thrown into the sea.

Many of the travelers were suffering from diarrhea and vomiting. Many perish during the voyage. At the end on the voyage there were around thirty of them who died.

In the whole boat, only Ganga could communicate with the English because she could speak good English. The physical beauty, the courageousness and the communicative skills of this young girl attracts the doctor who once during his medical visit tries to rape Ganga but he was not successful.

However the doctor, haunted by deaths of the Indians in the boat especially by the death of an old man, dies towards the end of the voyage in the circumstances little known.

The boat arrives at Port-Louis in the night. The Indians are placed in a depot close to the port.

The next morning, the owners of the sugarcane fields come and they try to take their share of the laborers.
Before sending them with their owners, the Protector of the immigrants of Port-Louis, George Pratt makes his official and a ritualistic discourse.

Each one will be given a number, a photograph and their pass which they should always have with them, if they were out of the sugarcane fields. Husbands and families would remain together but they do not have the right to refuse to work for anyone. It was written in the contracts. If they had any problem, they could call upon him, George Pratt, the Protector of immigrants.

Vythee, which waited since he boarded the boat to meet his brother, is sent to a different owner from a remote place because the laborer has no right to choose his employer.

Another Indian who came with all his family members loses one of his sons in the sharing of laborers. He had six sons but now he lost one of his sons who were just four years of age.

Their residences were nothing but a series of huts. Their “apartments” were a series of huts aligned, back to back, in about thirty meters and some of them had some light. There they meet the old ones - Roy and Das who help the newcomers to stay and it is also a moment for the old to recollect their arrival to Mauritius. However they could recollect only the sad moments. Roy and Das start to discuss between them.

Those sad things. Tell me, how old we were, that year?

- Heu... twenty-five years, I believe.
- Twenty-five years! I feel tired like an old man, my bones are cracking ... my ribs protrude out of my body. I am tired.

The next day, early in the morning when the sun still lies down, the sound of a bell awakes them. Tools were distributed to them and one they were asked to get into the cart drawn by an ox. They go towards the sugarcane fields. Vythee, without knowing what was happening to them requests Roy, the old one.

- Where are we going?
- We are going to the fields, my little one. We are going to cut the sugarcane.
- Why in the night?
- To take the sugar cane by surprise, while it still sleeps.

In the field, they were ordered Indians to cut the canes. The old ones do it with agility and facility, as they were experienced. The new ones find difficult to cut the cane, but they do not succeed as the canes were like thick bamboos.
The sidar Ferblanc which supervises them comes near Badri and strikes him with a whip on his shoulders and on his back and forces him to cut the cane quickly. The sidar didn’t even give him something to eat as he says “no work no food”. Here, it is like that. They work until the sun sets, and later the supervisor gives different kinds of orders. They have to cut grasses for the horses.

The coolies return at night towards their camp where the same yellowish rice that they had the previous day awaits them.

The women do not stay in peace on their huts. They have to prepare food for their men and after that they have to go to clean the stables.

Ganga, the daughter of the Rajah de Sira, the widow of the Rajah de Bangalore, protests. For the first time in her life she kneels in front of Mrs. Rivière. She says:

I request you, Madam.

And why? Do not tell me that you are from a higher caste, like the others have told me so before, you little devil.

Yes, Madam. I have no right...

No right? Listen! No right! Every time, one of you comes and makes such nasty stories of karma, caste, bloody Brahmin... Listen to me, little devil, here, you are our servants, you were paid for that, you are given food, given accommodation...

The laborious work continues with the field. Badri who cannot bear the whiplashes which he has been receiving since one week thinks of committing suicide.

He looks at the sky, the blue sea and he has an idea, perhaps he will find a boat there where somebody can help him to escape from here. One day, he escapes from the field and starts to run; his feet hardly touched the ground. He runs for a long time from Sunday till Monday. Towards the end of the day, it meets other coolies, supervised by an Indian sirdar. Badri hopes for a moment that he had found someone who could save him and help him to reach his native land. Unfortunately, even the Indian sirdar started to whip a coolie there. Badri comes to a conclusion that this country has made even the Indians as bad as the White!

After having lost hope, it continues to walk for two more days in the forest where it meets the hubshis. They are the black slaves who have been freed from their bond.

The English finds Badri and he will be put behind the bars for at least a year because he has become a marron - a marron is somebody who has escaped from the sugarcane field.
Vythee still requests Mr. Rivière to permit him to join his brother who is working in Mont Trésor, on the other end of Mauritius. With the red eyes Mr. Rivière shouts:

Take this to your brain, malabar.... You have signed for me, you will remain here.... You are a number in the files. You will work for me for five years.... Not a day less... after that you can see whom you want....

Meanwhile in Mr. Rivière house, in one of the rooms, Ganga is been made to lie on the bed and Mr. Rivière forces on her.

The illusion of these Indians to find a better living condition slowly disappears.

The whole story narrates the tragic life of the Indian coolies in Mauritius. This novel not only represents the pathetic condition of the Indian coolies in Mauritius but also the condition of these Indians in the other countries where they were transported as indentured laborers.

Les Rochers de Poudre d’or and the historical reality:

Natacha Appanah wrote this novel in 2003. She says that the story of this novel occurs in 1892.

As this novel deals with the subject of the coolie trade, we would like to discuss only the historical reality connected with the coolie trade in Mauritius. We have already seen that the engagement of the Indian coolies starts shortly after the abolition of the slavery system.

Atlas was the first boat which carried the Indian coolies to Mauritius reached the port of Aapravasi Ghat in 1834 with 36 coolies, men and women, who came mainly from Bihar. It is the beginning of the 450,000 Indian indentured laborers who entered Mauritius till 1924.

The coolies whom we were discussing in this novel were coming from among this mass. The names of the characters: Badri, Chotty Lall, Vythee or Ganga can be imaginary but they are representative of the thousands of immigrant workers who landed in this island. Natacha Appanah says in one of its interviews: I wanted to give a face to these people, to say that they had a life before and that nobody was prepared for this voyage, for this exile, even those who have chosen to...

In this novel, the description of the voyage was almost true since all the documents which describe the movement of the coolies do not fail to record the pathetic condition under which the laborers made the travel. These documents also describe the death of the laborers due to various reasons, during the time of
their travel. Even in this novel, almost half of indentured laborers do not arrive at their destination.

The division of the laborers is also well explained by the novelist in accordance with the real practice. Actually, at the time of the division, they usually were made to make a queue of men along with their wives and children. The choice of the laborers was made according to their body fitness and figure. According to law family member should not be disintegrated, but in practice nobody bothers about this law. Natacha Appanah discusses in this novel a situation where a four year old child was separated from their parents and she also says that this child will die soon. This child was refused any food and was left in a corner since its arrival with the new workers. The child was alone and it had cried for one whole week. It cried till it died.

The history of Mauritius says that the laborers who fled when they were engaged as coolies were treated seriously and they are called as marrons and there was also a team to drive out the marrons. We have given below a copy of the circular sent in this connection by the Superintendent of Police.

Driving Out the Vagabonds
There will be a general hunting exercise next Saturday, on the 5 of the current month. The hour of the departure, distribution of meals etc will be left with the discretion of the inspectors themselves.

(S) J.A. Spencer, Superintendent, 1.6.1869

Badri, one of the characters, was a victim of this hunting and when he was caught by the police, he was sent to prison and moreover it must resume the work as an indentured laborer after having spent his punishment period in prison.

The general view of the novel ensures us that the story is not based on only one episode or an individual event which occurred in 1892. We could come to this conclusion because according to the details available in the documents, nobody went to Mauritius from India as a coolie in 1892. This means to say that Natacha wanted to give the said year without any real significance but rather like a loose reference without worrying about the authenticity.

So, we can conclude that this novel which includes all the real events related to the coolie trade but without attributing to specific historical details of Mauritius. In this connection, Natacha Appanah says that: I did not do any ground work. I read a work of a researcher who had worked for a long time in Maurice on
the Indian coolies, and this gave me some interesting details on the duration of the boat travel for example... If not, the oral narratives of my people helped me a lot. I have heard many stories of the coolies throughout my childhood...!

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Contemporary Sculptor Prof. Vidya Shankar Sthapathy: A Silhouette

Dr. P. V. Prabhakaran
Assistant Professor, Department of Visual Arts, Bharathiar Palkalaikoodam, Puducherry

Among the contemporary sculptors from Tamilnadu, Shri Vidya Shankar Sthapathy stands distinguished as an artiste extraordinaire. He has been a leading and distinguished creator, engaging in the domain of contemporary sculptures, for more than half a century. Having crossed his 80’s, he still carries on tirelessly with his passion: the art of sculpting and imparting knowledge, drawing from his rich insights and expertise. He presently resides in the renowned Temple Town of Kumbakonam, Tamilnadu, India.

Generally, sculptors retire after a certain age owing to the high level of physical stamina demanded by this art. There is also another consideration: if one focuses more on summoning physical energy, the creativity element suffers. However, Shri Vidya Shankar Sthapathy, endowed with these two aspects in good measure, is indeed, unique and different from the rest. One might wonder what makes him distinguished and different. Among the contemporary sculptors, he is the pioneer and role model in blending traditional techniques and contemporary perspectives in creating sculptures of enduring artistic value. He is also the first to create metal sculptures using copper sheets.

In a sense, Prof. Vidya Shankar Sthapathy is, in fact, a custodian and torch bearer of a rich legacy: he learnt industriously the technical formulae and metaphysical conceptualizations of a pre-Christian Art, handed down through the patrilineal practice of generations. Names remembered go back from father Gowrishankar Sthapathy, grandfather Muthuswamy Sthapathy, to great-grandfathers and ancestors Duraiswami Sthapathy, Annaswami Sthapathy, Ramaswami Sthapathy, Sadasivam Sthapathy and so on to thirteen generations. Oral accounts place eminent sculptors Swamimalai Aghora Virabhadra Sthapathy and Swaminatha Sthapathy among his ancestors, also further tracing back to unsung great sculptors, the descendants of Raja Raja Perumthachan, the one who had constructed the Brihadishwara Temple at Thanjavur.

Inheritor of a great legacy in the Sculpting Art, Vidya Shankar Sthapathy, was born in Karur in 1938 and had his early education there. Later he completed his formal training in the family tradition of sculpting in the temple town of Srirangam.
Observing his father Gowrishankar Sthapathy, a sculptor with strong traditional moorings, young Vidya Shankar developed a keen interest in this art. He would watch, awe-struck, as his father chiselled granite and wood, transforming them into exquisite divine forms of gods and goddesses, complete with all paraphernalia, with meticulous attention to details of attires and ornaments. In particular, his father’s work pertaining to sculpting Temple Cars (rath-s), with such divine forms carefully embedded in them, deeply fascinated him and further fuelled his passion. As a child, he spent hours enjoying the beauty of the sculptures in the Vaishnavite Temple of Sri Rangam. He would also keenly and joyfully observe the various festivities in the temple. The Temple Cars (rath-s) studded with glorious sculptures, the circumambulations they would make around the Holy Temple to the accompaniment of divine melody and rhythm, the colourful festivities, the living traditions which were a part of all such festivities - all this made a deep impact on him. It was this rich ambience that proved exceedingly conducive for the young Vidya Shankar to appreciate, absorb and internalize the spirit of Art and Culture. As a result, his passion for the art of sculpting got stronger day by day.

With such a celestial fire steadily growing in him, there occurred a truly turning point in his life: he joined the Government College of Arts & Crats, Chennai. This renowned institution was responsible for rejuvenation of Arts among the southern states in a big way; it also earned reputation and glory by giving to the world, some of the finest Artistes of all times. Great stalwarts such as D.P. Roy Chowdhary, K.C.S Panicker and S.Dhanpal taught there; indeed, the institution was witnessing what might be termed as the “golden era”. It is the education and training he received there, at that time, that made Prof.Vidya Shankar soar up to attain great heights in Contemporary Sculpting.

In Contemporary Sculpting, he started using his rich experience in the traditional sculpting art, inherited from his family. In particular, he applied in Contemporary Sculpting, highly sophisticated skills employed to make silver, copper and golden shields (kavacham-s) for the traditional Divine Forms. This novel approach gave an altogether new dimension to the Indian Contemporary Sculpting: it gained a distinctive character and indeed, a phenomenal stature.

From 1985 onwards, he began a series “Yuvathi” - making sculptures with copper and bronze. These are in different postures: standing, sitting relaxed with legs stretched and so on. Instead of making these as relief structures, he created them as three-dimensional figures. This series won him critical acclaim, appreciation and glory from India and all across the globe. In the various Sculpting Camps he participated, Prof Vidya Shankar had mostly sculpted the “Yuvathi.”
forms. In the “Yuvathi” series he sculpted maidens presenting a variety of exquisite poses and expressions: some in a state of tranquil, some expressing boundless joy and some, with bounteous breasts, reposing with languid grace. He had also used terracotta for creating “Yuvathi” figures.

In 1988, he began another sculpture series “Vidhuna” where the man-woman forms were depicted in reposeful, sleeping posture. These sculptures were presented in various Art Exhibitions, fetching even more recognition and glory for Prof. Vidya Shankar. After this, he created a marvel of a sculpture – “Suhasini” depicting a young maiden pleasantly lost in “teen-dreams”. The sensuous pose - half-sleeping and reclined - has a magical beauty that simply allures the viewers.

In the creations of Prof Vidya Shankar, there is a marked inspiration of “Indian-ness”. In all his creations, one can trace indications revealing that he hails from a family of rich traditional sculptors. His creations have a find blend of contemporary perspective and classical moorings. There are numerous such creations to his credit.

His creation “Maiden on the Swing”, in particular, has all the above aspects in full measure. This sculpture won him critical acclaim and appreciation from all corners of the globe. Let us examine this in some detail.

It shows a beautiful tree, with green leaves, colourful flowers and fruits. Also shown are the birds crooning sweet-nothings and picking the fruits, indicating that it is the best of the seasons. The young maiden on swing shown near the tree is a typical Tamil girl: raised eyebrows, mark on the forehead, ear studs, neck laced with a traditional ornaments, the anklet on her legs and her dress slightly about the shins. All this gently remind us of a typical Tamil village ambience. The sculpture, in a sense, is a voyage into hoary past and culture. In this, Prof Vidya Shankar Sthapathy has employed two techniques: while the tree and young maiden have been created as relief sculpture, her limbs have been created using “casting” process, giving life to the sculpture as it were.

Prof Vidya Shankar Sthapathy’s extraordinary finesse in tapping on the copper sheet to bring out the beauty of the tree, is something that merits a special mention here. The tree giving shade akin to a huge umbrella and the maiden on the swing below that, with limbs done using the casting technique, present a certain completeness and perfection to the sculpture.

The blissful expression of the young maiden, her long nose and beauteous smile remind us of the timeless marvels in temples. The ornaments adorning her hands remind us of the exquisite copper sculptures from the Chola Period. The
meticulous details on her dress bring out the charm and grace of the typical Tamil village traditions of attire.

Prof. Vidya Shankar continues to turn out creations that have such elements of Tamil Culture. A National Award winner, he had earlier served as professor and principal of Government College of Arts & Crafts, Kumbakonam. While he has retired from government service, he has not yet retired from the deep engagement with the Art of Sculpting. And he does not intend to so either!