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Editorial……

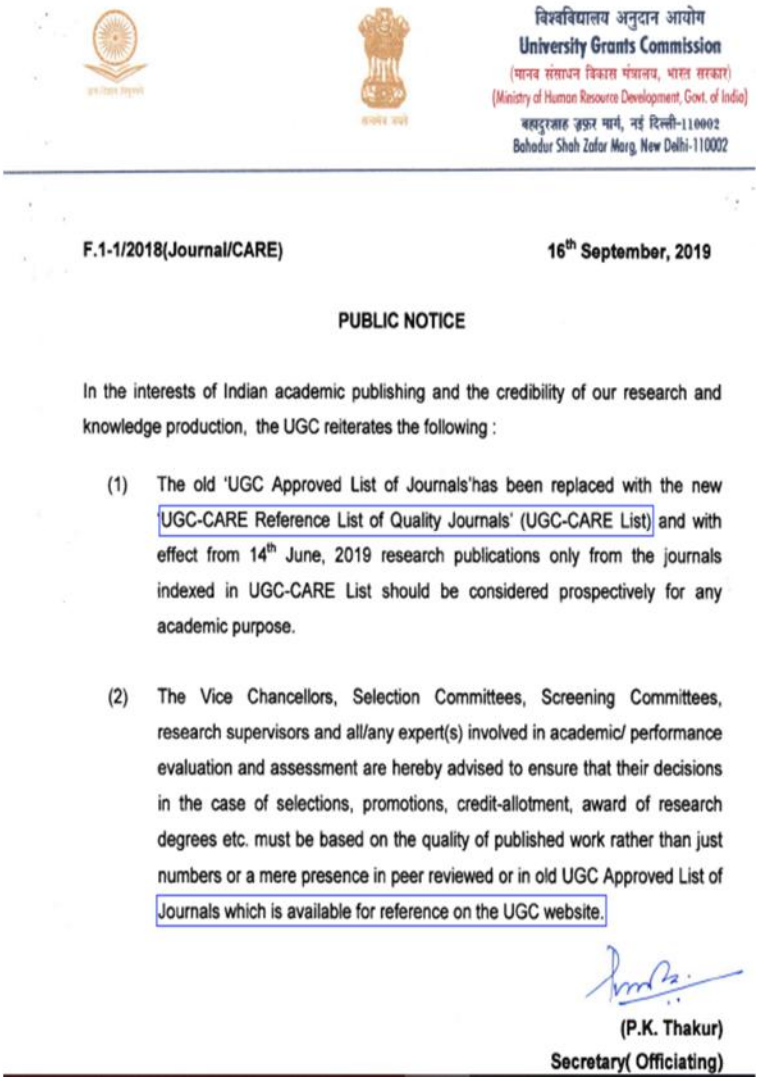
It is heartening to note that our journal is able to sustain the enthusiasm and covering various facets of knowledge. It is our hope that IJMER would continue to live up to its fullest expectations savoring the thoughts of the intellectuals associated with its functioning .Our progress is steady and we are in a position now to receive evaluate and publish as many articles as we can. The response from the academicians and scholars is excellent and we are proud to acknowledge this stimulating aspect.

The writers with their rich research experience in the academic fields are contributing excellently and making IJMER march to progress as envisaged. The interdisciplinary topics bring in a spirit of immense participation enabling us to understand the relations in the growing competitive world. Our endeavour will be to keep IJMER as a perfect tool in making all its participants to work to unity with their thoughts and action.

The Editor thanks one and all for their input towards the growth of the **Knowledge Based Society**. All of us together are making continues efforts to make our predictions true in making IJMER, a Journal of Repute

Dr.K.Victor Babu
Editor-in-Chief

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(1) The old 'UGC Approved List of Journals'has been replaced with the new 'UGC-CARE Reference List of Quality Journals' (UGC-CARE List) and with effect from 14th June, 2019 research publications only from the journals indexed in UGC-CARE List should be considered prospectively for any academic purpose.

(2) The Vice Chancellors, Selection Committees, Screening Committees, research supervisors and all/any expert(s) involved in academic/ performance evaluation and assessment are hereby advised to ensure that their decisions in the case of selections, promotions, credit-allotment, award of research degrees etc. must be based on the quality of published work rather than just numbers or a mere presence in peer reviewed or in old UGC Approved List of Journals which is available for reference on the UGC website.

(P.K. Thakur)
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FRESH START PROCESS UNDER IBC - A LOOK FORWARD TO A NEW BEGINNING

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Insolvency and Bankruptcy Code has provided the biggest missing piece in the existing jigsaw of laws by establishing a framework for defaulting debts. The foundation of the law is deep-rooted while its journey will be long lasting as the code will go a long way in bringing an element of certainty and predictability to commercial transaction in the country. The Code has not only provided an easy exit route to the Corporates who found the going tough for various reasons but has provisions for individuals as well which are yet to be notified.

It is difficult to establish the amount of credit from the banking sector that is disbursed to "individuals" as opposed to limited liability companies. It is likely that agricultural loans are mostly given to individuals, as are the ones to "micro and small industry" and "personal loans". In addition it is likely that some of the loans given for "services", "trade" and "NBFCs" are also passed on to individuals. This suggests that about 43% of bank loans are given to households.Though personal insolvency is not yet notified in IBC, but when notified, will become operational in a credit market that has evolved over several decades in response to an environment with weak creditor rights on recovery, and weaker debtor rights on stalling creditor enforcement. The credit market is also politicised, especially when it comes to agricultural lending and loan waivers. India has a long history of loan waiver programsThe largest of these was a Rs.760 billion farm debt waiver in 2008. The scheme was aimed at providing relief to farmers through a complete debt waiver to small and marginal farmers, and a partial relief to other farmers.[1]As per Credit Information Companies (Regulation) Act, 2005, the payment history on loans taken by individuals and corporates is reported to credit information companies and reflects in the borrower's credit report. When the loan is settled or written-off by a lender, it will show as such on the credit report and impact access to credit in the future.While providing this relief, borrowers must be made aware that this waiver may impact their credit report and score which, in turn, affects their access to credit in future[2]

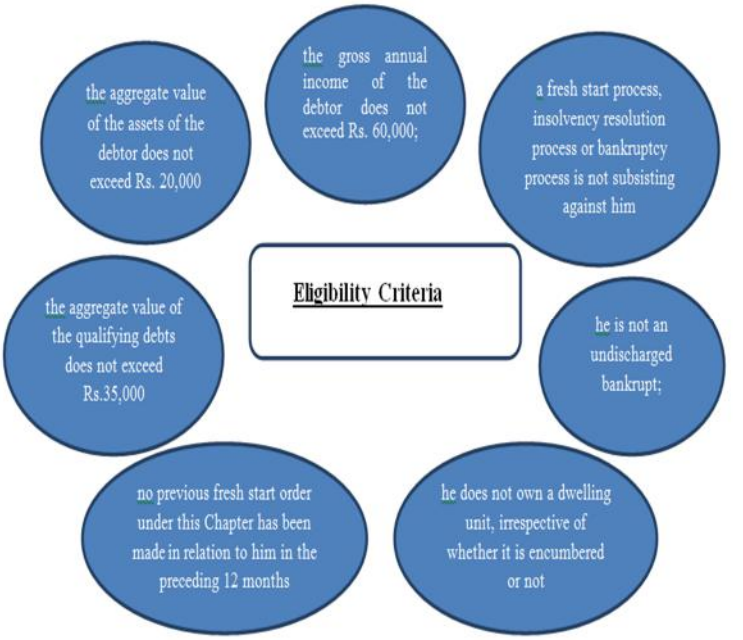
The Code could be a remedy to this credit market of Individuals. Insolvency and Bankruptcy Code provides three insolvency procedures for individuals.While the Insolvency Resolution and Bankruptcy process are available to all,**Fresh Start, a part of IBC is one such process that applies to low-income individuals who have small debts.**

[1]https://www.nipfp.org.in/media/medialibrary/2019/02/WP_251_2019.pdf;
[2]https://www.livemint.com/money/personal-finance/will-fresh-start-bankruptcy-law-for-small-debts-help-borrowers-1560967082875.html

Just like the words **'**Fresh Start' means'**to start something again in a completely new way.'** Similarly,fresh start process under the Insolvency and Bankruptcy Code, 2016 is envisaged as a solution for debtors to discharge their debts and start afresh without any liabilities.**The fresh start process is enshrined under Chapter II of Part III of the code which is yet to be notified.**Adjudicating Authority under Part III of the code means the Debt Recovery Tribunal.

Eligibility Criteria under Fresh Start Process[3]

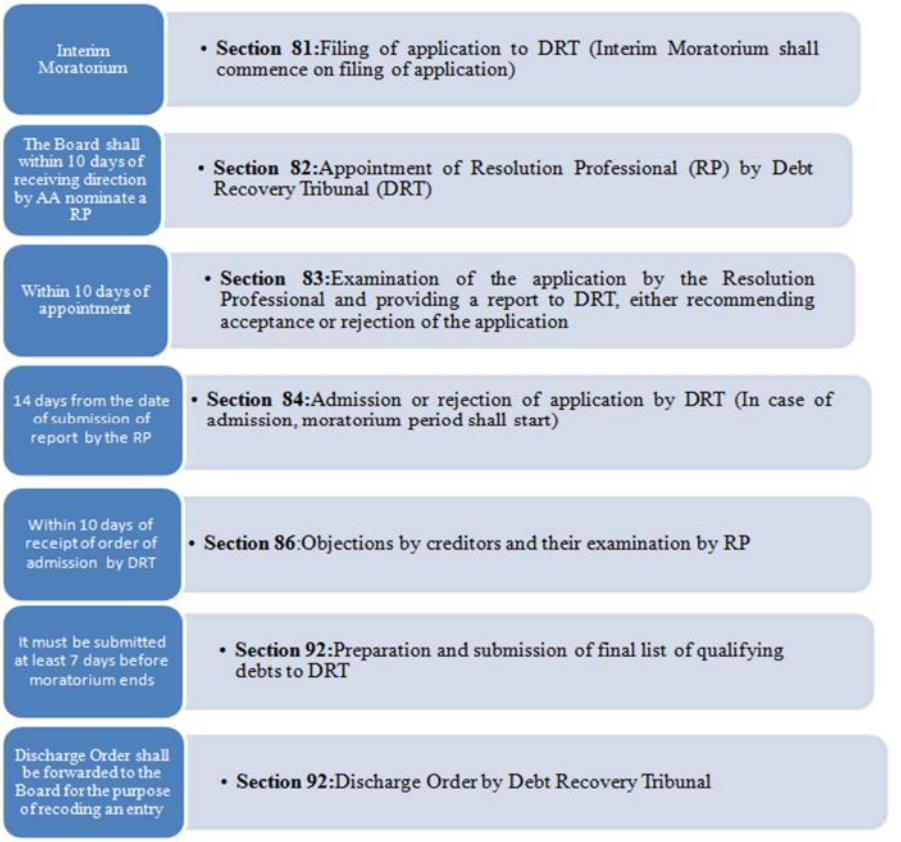
A debtor may apply either personally or through a resolution professional for fresh start to the Adjudicating Authority if he meets the criteria of eligibility stated in the Insolvency and Bankruptcy Code.The eligibility criteria for the FSP is based inter alia on 'qualifying debts' and not all debts. As provided in Section 79(19), qualifying debts exclude certain debts such as liabilities in relation to court or tribunal fines, student loans, maintenance, secured debts, etc



The proposed thresholds in the Code have been provided taking into account the relevant data and the Central Government shall have the power to revise the relevant assets and income test from time to time. These should ideally be increased at regular intervals in line with inflation measured by the Consumer Price Index (CPI). The homeownership clause is important, because if the debtor owns a home, then this should be available for sale, the proceeds of which can be used to repay the full (or partial) amount due to the creditor. This process is for bonafide negotiations between the debtor and the creditors for the purposes of repayment of debt by the debtor.

[3] Sec 80 of the Insolvency and Bankruptcy Code, 2016

Fresh Start Process under Insolvency and Bankruptcy Code[4]



Why Fresh Start Process (FSP)?

Fresh Start Process allows an individual to restart his life afresh. This process does not restructures the debts of the debtors but discharges the debtor from qualifying debts. What makes FSP different from other insolvency process is that where debtor does not have to proposea plan to pay back his creditors. FSP tries to pull debtors from the debt trap and enables debtors to be rehabilitated in the society.

It is an institutionalised process which would safeguard debtors from coercive practices that creditors may engage in to recover the debts. The safeguards in FSP include verification of eligibility, a cooling off period for re-applying for the FSP, penalties for false information, etc.This process not only aims to waive off the debt but it also aims to balance between creditors and debtors. Creditors have an opportunity to file objections

[4]https://ibbi.gov.in//uploads/legalframwork/2020-01-29-095154-5tg663b139ff2cf941a3422946c3a1d013b.pdf

prior discharge order passed by the Adjudicating Authority.The motivation behind the fresh start seems to be the difficulties in the transaction costs of the IRP-bankruptcy route being larger than the debt at stake for low-income, low-asset debtors.The Code provides a timely procedure for the process which is capped at 180 days. To boost the effectivity and accessibility of the said process, digitising the process will serve one of the best method.

This Fresh Start Process under the Insolvency and Bankruptcy Code, 2016 is similar to the Debt Relief Order Process of UK allows underprivileged debtors to apply for a debt recovery order to avail a discharge from their debts.

The Process of Debt Relief Orders in United Kingdom

Debt Relief Orders (DROs) came into force on 6 April,2009 under the Tribunals, Courts and Enforcement Act 2007 (TCEA 2007). Part 7A of the Insolvency Act, 1986 has provisions for debt relief orders.DROs can only be used by those people with relatively low liabilities, little surplus income and few assets who are unable to pay off their debts in a reasonable time.[5]A DRO is a way for a debtor to have his/her debts written off if they have a relatively low level of debt and few assets.It is low-cost alternative to bankruptcy. Although a DRO is a formal debt solution, the debtor doesn't need to appear in court. To apply for a Debt Relief order a debtor has to satisfy following conditions:

- The debtor is unable to pay his/her debts;
- The debtor's total unsecured liabilities must not exceed £20, 000 ;
- The debtor's total gross assets must not exceed £1000;
- The debtor's disposable income, following deduction of normal household expenses, must not exceed £50 per month;
- The debtor must be domiciled in England or Wales, or in the last 3 years have been resident or carrying on business in England or Wales; and
- The debtor must not have previously been subject to a DRO within the last 6 years.

The process flow of DROs are as follows:

- An online application is filed for DRO via an Approved Intermediary
- The application is received by an Official Receiver who investigates the affairs of the applicant.
- The Official Receiver may also refuse to make an order or can choose to delay the decision pending further information from the applicant.
- After the Official Receivershall make Debt Relief Order and 12 months moratorium shall apply
- Notice of DRO shall be sent to creditors and creditors can file objections, if any.
- If the financial position of the creditor does not change during 12 months moratorium period, then DRO is written off.
- There is a cooling-off period of 6 years under this process.

An approved intermediary means a trained debt advisor who has been approved to act as an intermediary by a competent authority. DRO ends after the period of 12 months.

[5]https://www.legislation.gov.uk/ukpga/1986/45/part/7A

The Official Receiver may revoke a DRO if the debtor is found to have failed to provide a full and accurate account of their financial affairs. He can alternatively make anapplication to the court for a Debt Relief Restrictions Order, whichwill extend the restrictions placed upon a person under a DRO for a period up to 15 years. In more serious cases, the debtor could be prosecuted and fined, sent to prison or both.The most important benefit of this procedure is that it is administrative rather than court based. Basically its aim is to provide a fresh start for vulnerable people trapped in debt.
Though objective of both Fresh start Process under IBC, 2016 and Debt Relief Order under UK Insolvency Act is to relieve debtor from its debts and they have a similar working model, there are certain points on the basis of which they are distinct from each other.

Comparison between Fresh Start Process and Debt Relief Order
▪ The cooling off period between two applications for Debt Relief Order is 6 years while under Fresh Start Process is 1 year.
▪ In Debt Relief Order process an application is filed either by debtor himself or through a debt advisor while under Fresh Start application will be filed by the debtor himself or Resolution Professional.
▪ The application under Debt Relief Order is sent to the official receiver reviews the petition and verifies the financial information provided by the debtor while there is no such concept under Fresh Start, application is examined by Resolution Professional only
▪ The Debt Relief Order usually lasts for a period of 12 months. The Official Receiver informs the creditors listed in Debt Relief Order regarding the moratorium while in Fresh Start Process moratorium is imposed for 180 days till the disposal of the application. In these 180 days the creditors cannot initiate any proceedings against the debtor with regard to their claims.
▪ Debt Relief Order is added to the Individual Insolvency Register – it is removed 3 months after the Debt Relief Order ends while under Fresh Start the discharge order of the debtor is forwarded to Insolvency and Bankruptcy Board of India to be recorded in a register that is to be maintained by them. The names of the debtor, unlike in UK, will not be automatically added on admission of the application.

Conclusion

"Fresh start" is a welcome step as it will free up the debtors from the archaic laws of the colonial era such as the Presidency-Towns Insolvency Act of 1909 and the Provincial Insolvency Act of 1920 but the debtors need handholding and counselling to prevent

any misuse. Many in the microfinance industry as well as commercial banks which lend to such institutions apprehend that such a law in India will encourage small unsecured borrowers to default and destroy the credit culture. Frequent farm loan waivers too affect the credit culture as those who can pay up refuse to pay. It is important to know that this process does not "erase" a debt; the discharge is an injunction that makes a debt uncollectible. Though this process will provide relief to small borrowers there are various concerns in its implementation. One of the major concern is to seek a fresh start, the insolvent borrowers need to move the debt recovery tribunals (DRT) and there are less than three dozens of DRTs across the country. It will be difficult at times for small borrowers to get relief and make a "fresh start." However, the government may consider setting up special benches or vesting jurisdiction with another judicial body. The biggest challenge for the government is to educate the borrowers about this process. The issues are being very well worked upon and the implementation of this new process would set new standards in the insolvency law of India.

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IMPACT OF PUBLIC POLICIES ON WORKERS IN UNRECOGNIZED SECTORS IN INDIA

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Abstract

In India most of the common people who are below the Poverty level are depended on the unrecognized sectors for their lively hood. As per the reports 43.7 crores of people are depended upon the unrecognized sectors. The impact of the Government Policies from time to time is making away from their income in recent days. The unemployment issues are arising due to the reforms brought by the government towards these sectors.

Globalisation is a multi-dimensional process of economic, political, cultural and ideological change. It has led to increasing violations of women‟s economic, political, cultural rights in large measure due to withering away of the welfares / development list State, the feminization of poverty, the expansion of religious fundamentalisms and new form of militarism and conflict.

This paper is taken up to study about the impact of the reforms taken up by the government towards the unrecognized sectors in the areas of labourers.

Keywords-- Globalization, Marginalised, Poverty

Introduction

Reforms in the Public Policies from time to time enhance the responsibility to the government towards the development of the society. The development of the society only depends upon the various Policies, Laws and Acts enacted by the government from time passes. The Reforms are very essential in all sectors towards achieving the required target and goals. The reforms can be bring a change in the activities of the government in taking effective policy implementation.

The public requires the change in the activities of the government towards their welfare activities and development. Even though the government is framing the policies for the recognized and unrecognized sectors. The impact of the these reforms will effects a lot on the unrecognized sectors. Because most of the people who are engaged in the unrecognized sectors are

basically are engaged in the daily wages works i.e., construction labour, daily wages labourers, vegetable venders, unemployed etc.,

Government Policies : Development

Government policies and interventions for development in various sectors and issues arising out of their design and implementation. India is developing country and has implemented growth strategies in different sectors to enhance its economic status. At global scale. It has continually shown high growth rate during the post-liberalisation period through the execution of economic reforms in the beginning of 1990s. After independence, development of the country and the community has always been the major objective of the government. It has attained excellence in several key areas that range from information technology and pharmaceuticals to automotive parts, and is currently considered as one of the rapidly growing economies of the world.

Though India has gained success in some areas and there is positive developments, it is still among the countries with some of the lowest indicators of human development. The levels of malnutrition, illiteracy and poverty are unsatisfactorily high in India. There are numerous issues like the increase in income disparities and regional discrepancies which disrupt the growth of nation. Though employment opportunities have increased but the jobs created are not of high quality. Although there has been an increase in several social services like health, nutrition and education, the quality of most of these services remains poor in most of the rural areas. Major issue is irresistible majority of the population deprived of basic social protection. Policy-makers are facing with inconsistency in the persistence of deprivations and increasing uncertainties among majority of public in growing wealth and prosperity for some groups.

Policies and Interventions for Development in various sectors:

In earlier period, there was more focus of government to accumulate wealth. Economic growth itself was regarded as the function of capital inputs in the decades of 80s. The main quest of economic policy was to organize the resources required for achieving a desired rate of growth. Acceleration in the rate of growth was supposed to take care of both economic and social problems. Several contemporary developmental economists such as Mahboob-ul-Haq, AmartyaSen, Joseph Stiglitz and others stressed the failures of governance in terms of human and social development in the developing world including India. When evaluating the various sector development, the social sector development involves the following constituents:

1. Poverty alleviation and employment generation

2. Access to education
3. Access to improved health services and public health
4. Development of critical rural infrastructure, e.g. rural roads, housing, sanitation, availability of safe drinking water, electricity etc.

Public Policies / Acts

All policies have been tracked over the decades and their evolution into present form captured as they were launched and modified. The choice of policies comes from my personal experience with engaging, reading and analysing the Indian economy. Some of the policies and Acts are mentioned below.

- **Factories Act, 1948 :** A legacy law operating since 1881, The Factories Act was comprehensively enacted on 23 September 1948 to protect workers in factories, by consolidating and amending the law that regulated condition of labour in factories. In tune with the thinking of the day, that all entrepreneurs are evil and all government good, it has provisions for penalties of up to seven 18 years' imprisonment for violations of hazardous processes and six months for minor violations, with a 'chief inspector' holding the power to prosecute.
- **Minimum Wages Act, 1948 :** As an idea, minimum wage was embedded in 9 the Constitution to ensure a decent standard of life, but in India, the law became a tool for control rather than regulation: there are 10 more than 1,200 minimum wage rates in India. Clearly, casual and politics-led implementation of minimum wages has reached stratospheric levels of inconsistency and shows signs of market failure in a policy of excessive control. But this is not the end of all 11 wages-related laws.
- **Industries (Development and Regulation) Act, 1951 :** India's infamous Licence Raj began here. Just four years after political independence, the future of the country's economic independence was sealed with the Industries (Development 72 and Regulation) Act, enacted by Parliament on 31 October 1951. The law declared "in the public interest"—a term that would get echoed over the next five decades for several laws and policies, to mean the curbing of all economic freedom—that the central government "should take under its control" the industries specified 73 in the First Schedule.
- **Industrial Policy Resolution, 1956 :** The government modified its hurriedly drafted 1948 policy and replaced it with the 125 Industrial Policy Resolution on 30 April 1956. By this time, the socialist pattern of development was etched in the minds of not just India's leaders but thinkers as well, who advised businesses to recognise that there would be no

reversals in the policy direction and that they needed to map out a course of action 126 consistent with the government

- **Bonded Labour System (Abolition) Act, 1976 :** The horrific system of slavery in the form bonded labour continues to exist in India even today. By lending a small amount of money at usury rates, a moneylender was able to get free and bonded labour, or slaves, for generations. The Act has three-year jail terms for those enforcing bonded labour or advancing bonded debt. And yet, the practice has continued.
- **Information Technology Act, 2000 :** Along with the rest of the world, 469 the Indian Parliament enacted the Information Technology Act on 9 June 2000, "to provide legal recognition for transactions carried out by means of electronic data interchange and other means of electronic communication, commonly referred to as 'electronic commerce', which involve the use of alternatives to paper-based methods of communication and storage of information, to facilitate electronic filing of documents with the Government agencies".
- **Mahatma Gandhi National Rural Employment Guarantee Act, 2005 :** India's struggle to provide rural livelihoods has been a long and tedious evolution, each step carrying its own problems. The first attempt came five years after Independence through the 533 Community Development Programme launched in 1952. A quarter century later, the government launched the Food for Work 534 Programme (renamed National Rural Employment Programme or NREP) in 1977 to create additional employment in rural areas with the use of surplus food grains available in the buffer stock for 535 payment as wages. MGNAREGA has been a gradual increase in the real wages of both farm and nonfarm works, while spawning numerous policy at the centre and amongst states, such as labour budgets, intersectoral convergence, information communication technology for data management and citizen feedback, and various ways of social mobilization.

Unrecognized Sector

"Unorganized workers consist of those working in the unorganized sector or households, excluding regular workers with social security benefits provided by the employers and the workers in the formal sector without any employment and social security benefits provided by the employers.As per the Economic Survey 2007-08, 93% of India's workforce include the self employed and employed in unorganized sector. The Ministry of Labour, Government of India, has categorized the unorganized labour force under four groups in terms of Occupation ,nature of employment, specially distressed categories and service categories.

In terms of Occupation,small and marginal farmers, landless agricultural laborers, share croppers, Fishermen, those engaged in animal husbandry,beedi rolling, labeling and packing, buildingand construction workers, leather workers,weavers, artisans, salt workers, workers inbrick kilns and stone quarries, workers in saw mills, oil mills etc. come under this category.

Unrecognized sector or unorganized sector mainly consists of casual workers, self employed persons and private households. The major portion of workforce in India is employed in the unrecognized sector. some of the features of unrecognized sector are as follows.

1) Workers working in this sector do not get fixed or regular wages and they are not entitled to pension.
2) There is no guarantee of job. It means that their services can be terminated at any time without prior notice.
3) The workers working in this sector are not eligible either for paid, sick or annual leave and no social security benefits are given by the employer.

The major characteristics of the unorganized workers :

The unorganized labour is overwhelming in terms of its number range and therefore they are omnipresent throughout India. As the unorganized sector suffers from cycles of excessive seasonality of employment, majority of the unorganized workers does not have stable durable avenues of employment. Even those who appear to be visibly employed are not gainfully and substantially employed, indicating the existence of disguised unemployment.

The unorganized workers are subject to exploitation signi- cantly by the rest of the society. They receive poor working conditions especially wages much below that in the formal sector, even for closely comparable jobs, ie, where labour productivity are no different. The work status is of inferior quality of work and inferior terms of employment, both remuneration and employment.

Problems of Unorganised Sector are:

I. Problems of the workforce- 90% of workforce in vast informal sector, little awareness of workplace hazards, living areas close to work areas, extended work hours, exploitation, no concept of occupational safety/services, lack of implementation of Health & Safety legislation, no concept of Trade/Labour Union.

II. Problems of women workers and 'beedi' workersDesperately poor low wages, fraudulent contractors, disease causing environments, child labour, and >50% women Deplorable social conditions

III. Problems faced by Govt. - Problem of definition and identification, workforce uneducated about the benefits of organized sector, scattered nature of sector, employers avoid any form of regulation, unorganized sectors contribute to almost 60% of GDP (apart from providing livelihood to population), same labour laws cannot be applied.

IV. Problems from the Organized Sector- Unfair competition (Walmart, Reliance), loss of employment Legal "bullying", buyer preference for the "cleaner" retail stores, financial aid not available to the unorganized sector easily to compete.

Impact of Reforms

In India the reforms are led towards brining a change from time to time. There is a need of reforms in the policies which can bring the scope towards the development in all sectors. But due to the reforms mostly the formal sectors are developed than compated to the informal sectors. The impact of these reforms towards the unrecognized sectors are positive and negative they are :

Positive Impact :

- As a result of the reforms that opened the borders to foreign goods, there was easier access to foreign technology. A good example of this is cell phone technology.
- The post 1991 era also saw an expansion of the automobile sector, easy availability of motor vehicles, increased competition in the sector and reduction in prices of motor vehicles
- Scope for Globalization as extended in all sectors. Specially in the formal sectors.

Negative Impact

- Information Technology as a great negative impact upon the unrecognized sector labourers in India. The man power is replaced with the latest equipment and machines. Which is creating unemployment to them.
- The reforms were largely in the formal sector of the economy, the agriculture, urban informal sector and forest dependent communities did not see any reforms. This led to uneven growth and unequal distribution of economic freedom among people.
- Economic liberalization in the organized manufacturing sector (subjected to rigid labor laws) has led to growth with very little additional employment.

- Market-based economic reforms also often lead to increasing disparities between the rich and the poor and between infrastructurally backward and more developed states.
- Social sectors like health and education have been neglected. These areas, though very important, were not focused upon and the result can be seen in the dismally low levels of education and health indicators today.

Conclusion:

The unorganized sector which include agricultural sector, construction, Fisheries, street vendors, petty service providers, salt pans, domestic work, reworks industries, beedi industries etc comprises the overwhelming majority of workers in the country. The unorganized workers work under extreme conditions without any proper benefits. Protection and support for the unorganized sector workers is very necessary for both economic and social development. The government laws protecting these workers should be strictly implemented and those who exploit these workers should be punished severely to bring real development.

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THE ROLE OF DALIT WOMEN IN TELANGANA MOVEMENT

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Abstract
Dalit women suffer from the interconnections of multiple oppressions of class, caste, gender and cultural at all levels by both men and women, from all castes and classes. Dalit women is downtrodden among downtrodden she suffers in the family, first, because she is a women; and then she has to face society as she is a Dalit. Sexual control and systematic rape of Dalit women by men of the dominant castes forced her into prostitution in the name of religion through Davadasi system which widely prevalent in the region. Dalit women not only grapple with the discrimination due to caste hierarchy and untouchability but they live in poverty coupled with political, legal and religion cultural discrimination. Access to resources such as land, water is out of reach to these women. The extreme perennial economic derivation has also resulted in illiteracy, malnourishment, poor health conditions, besides this they are also overworked, oppressed and victimized by a number of factors, including patriarchal attitude within the family and community.

Introduction
The historical and political importance of the Telangana region grew along with the rise of the Marathas. However, the Moghal rulers at Delhi appointed able governors to keep the Deccan under the control so that they could keep a watch on the development in south India and check the Marathas in Deccan. By the 18th century it was politically stabilized under the AsafJah dynasty for initiating development in the region thus a powerful bureaucracy was set up on the top creating various jagirs and the local chiefs were also integrated into the political set up and administrative.

Dalit women suffer from the interconnections of multiple oppressions of class, caste, gender and cultural at all levels by both men and women, from all castes and classes. Dalit women is downtrodden among downtrodden she suffers in the family, first, because she is a women; and then she has to face society as she is a Dalit. Sexual control and systematic rape of Dalit women by men of the dominant castes forced her into prostitution in the name of religion through Davadasi system which widely prevalent in the region. Dalit women not only

grapple with the discrimination due to caste hierarchy and untouchability but they live in poverty coupled with political, legal and religion cultural discrimination. Access to resources such as land, water is out of reach to these women. The extreme perennial economic derivation has also resulted in illiteracy, malnourishment, poor health conditions, besides this they are also overworked, oppressed and victimized by a number of factors, including patriarchal attitude within the family and community.

Dalit women are victims of social, religious and cultural practices like Devdasis and Jogins in Telangana region. In the name of these practices, village girls are married to god by their helpless parents. These girls are then sexually exploited by the upper caste landlords and rich men and directed in to trafficking and prostitution. A ritual called 'chira'. The literal meaning of the word 'chira' is to cut or break. In this ritual when a girl from the lower caste community reaches the age of puberty, an elderly prestigious man from the higher caste breaks the hymen of the girl child by sexual act. This ritual is performed in a way to make the girl accept this fact as a routine practice. Practices such as chira, Jogins, and Davadasi, which are prevalent even today, are harmful, threaten the dignity of Dalit women, and violate their human rights. Most of Dalit women in the Nizam state worked as manual scavengers and forced to earn their living through scavenging, cleaning dry latrines by using metal pans and a short broom to scoop up the night soil. The human excreta were carried in baskets on their heads. This kind of dehumanized practice has killed dignity of Dalit women at the same time these women believe that without this job they will be no where to their livelihoods.

The Dalit women in Telangana joined the armed struggle along with their husbands and sons to serve in the dalams (guerilla squads). Thus the Dalit women served the Communist cadres by providing food and shelter during the periods of the underground struggle. The Telangana women looked at their movement from the folk cultural perspective in order to gain for their psychological and social autonomy and acquired a different connotation in the history for their militancy and distinctiveness. For them struggle meant not just organization to get the people together or the structure of the leadership, but a complete involvement of entire life and family. Considering her position, she felt that it was a question of life and death, with a sense of sacrifice that puts together body and soul to bear physical torture and mental agony and further without having a position in organizational structure. For them it was collective fight against the goondas by publicly dragging them into streets by holding their hair and shirts. It was a resistance against the police raids, with slings and it were raids on landlord's godowns to seize food grains and credit documents and further women cooked and served food for squads, washed their clothes, treated the wounded men / women acted as informers and couriers. They sang songs of

velour sacrifices of martyrs in advocating the struggle culture. These actions and commitment produced culture of collective resistance and insaneness opposition with which they kept the people united and destroyed the regime of Doras. They wielded guns to lead squads in a spirit of gender equity. Their role was not minimal in opposing the land seizures and against landlord zulum (highhandedness), they joined the armed (dalams) squads and underground struggle and even conducted armed battles during the Telangan struggle. The real challenge to the ruling establishment was from these Telangana women. The position of Dalit women in this context was worst to that of Dalit men. In this context, the main aim of this study is to understand the role and place of women in this historical struggle in general and Dalit women in particular.

Telangana Armed Struggle: an Overview:

The subsistence agrarian system in Telangana region has undergone and gradually transformed into the new market or cash economy without any corresponding changes in the social arrangements. The "modes of production and exchange remained pre-capitalist or semi- feudal and emerged as the major source of dissent among the poor peasantry". However, the breakdown of the traditional pattern of extraction of work, the emergence of new relations of production based on profit- motivation further induced the labourers to take an antagonistic stand against the dominant in the villages. The people who were subjected to vetti took to various means of protests during the twentieth century as result the government passed a vetti Relief Act in 1923 and it received wide publicity during the height of the protest through pamphlets and newspapers published in vernacular language. Their protest and boycott of work, however, did not help them free; they were expected to serve the village for as long as they belonged to their respective castes. pward mobility.

Role of the Dalit Women in Telangana Armed Struggle:

Telangana peasant armed struggle has liberated thousands of villages from the autocratic rule of the Nizam. This historic struggle was also responsible for the liberation millions of vetti labors from the inhuman practice of vetti beggar. The Telangana peasants played an important role in building and carry forwarding the movement despite severe repression of the Nizam rule. All the more the contributions of the Telangana peasant armed struggle are illustrious and their sacrifices are immortal. According to PucchalapalliSundaraiah the ideologue and one of the hero of the movement says that the single biggest contribution of the Telangana revolt is that it brought to the forefront all the basic theoretical and ideological questions. And he says that it raised a series of issues and tried to resolve them on the ground. The role of peasants in people's democratic revolution, the place and significance of resistance, the rural revolutionary

bases, the concrete analysis of the classification among the peasantry and the role played by the different strata of the society, the specific role of working class and urban centre, the role of women all have been dealt in the struggle. All their problems and questions scientific and realistic practical solutions were found only in the people's struggle.

In this historic revolt, women participated and played an important role. They occupied front positions in demonstrations and processions whenever the party called such an act. However, the role of Dalit women played in this historic struggle was not depicted in a fitting manner. Dalit women the least of the oppressed in the hierarchical society played an important role. They took part in the land struggle, equal status and wages, they took up weapons along with men, they were part of the dalams as a guerilla, they acted as couriers, they provide shelter for their men folk when they were attacked by the police and private militia Razakars.

Resistance and opposition to unjust practices and domination are not unknown to history. The labour communities have tried to defend their customary rights when they were violated by anyone including kings. The break down of the traditional patterns of extraction of free work, the emergence of new relations of production of profit- motivation further induced the labourers to take an antagonistic stand against the dominant villages. They subjected to vetti and took various means of protests during the 20th century. To find a solution to the continues disturbances at work place, to halt the recurring boycott of work and regularize vetti extraction the government passed a vetti relief Act in 1923. It received wide publicity during the height of the protests through pamphlets and news paper published in vernacular language.

Caste subjected to vetti perceived their exploitation as inherent in the system as it was institutionalized on the basis of caste. Their protests and boycott of work however did not help them become free. They are expected to serve the village as long as they belonged to their respective castes. Therefore these out castes, found conversion to Islam as a way out of their exploitation. They thought that they would then be in a position to take revenge against their oppressors. Low caste and class Hindus who were converted to Christianity and to Islam was the subject of social boycott by village officials. It was alleged that these converts were deprived of their rights and that they were compelled by Deshmukhs to work for them and that they received practically no remuneration for their services. The conversions were thus form of class struggle between the vetti extracting landowners and the vettilabourers.

Conclusion

The Telanagana Dalit women understood the gender justice as conventional dharma from the folk, tribal and peasant point of view. Their objective being such human equity (not class equity), which they readily accepted the Communists talk of fairness (justice), and people's rajyam, and became part of the movement within a very short time. The women joined the movement and made their sons to join and serve in the movement. They served the Communist cadres by providing food and shelter during the periods of underground struggles. The women looked at the movement from the folk cultural perspective in order to gain for their physiological and social autonomy. Women acquired different connotation in history for their militancy and distinctiveness.

For them struggles meant not just organization to get people together or the structure of leadership, but a complete involvement of the entire life and family. It was question of life and death with a sense of sacrifice. It was a sacrifice that puts together body and soul to bear physical torture and mental agony, and further without having a position of organizational structure. For them it was neither a struggle for a position or fame. But it was collective fight against the goondas by publicly dragging them in to streets by holding their hair and shirts. It was a resistance against the police raids with slings and it were raids on landlords' gowdowns to seize food grains and credit documents. And further women cooked and served for squads, washed their clothes, treated the wounded men and women, acted as informers and couriers. They sang songs of valour, sacrifice of martyrs advocating the struggle culture. These actions and commitments produced culture of collective resistance and instantaneous opposition with which they kept the people united and destroyed the regime of Doras in 1946.

The root cause of the backwardness of the Dalit women was Caste system. But the Communist leaders did not focus and awakened the people against untouchability. So at the end the question arises that what Dalit women has got from the struggle as their positions remained the same except they are relived from the vetti. These Dalit women were main participants in the Struggle but they did not find any place in the main stream history.

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CORPORATE GOVERNANCE AND CRISIS OF ADIVASIS IDENTITY

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The Development Strategies aimed to expand social opportunities and economic conditions of the people, have seen to be socially exclusive as a significant portion of the people are deprived of the rights on community resources and food security. The present paper analyses the Development Policies of the Government, with reference to major irrigation projects, mining, roads, industrialization, its perceived impact on the local communities, and the assertion of rights by these communities and the political protest that ensued and lastly the efforts of the state to use coercive mechanism to bypass these protests.

The study tries to high light the socio-political movement against plundering resources and the resultant use of force to suppress this movement in collusion with corporate interests by the Indian State. It is analysed on the basis of personal interactions with native population, news paper reports, policy documents of the government and sharing experiences with the political activists and non-governmental organizations working in this agency area. The main concerns of the local population, larger issues like environmental impact and its adverse effects are officially ignored to promote Capitalist interests in the whole process. The Social Movements in general and Adivasi movements in particular are emerging with vibrant inclusive nature by attracting cross sections of people. Adivasis, marginal and small peasants, Backward Classes and Women in large numbers are participating in these movements. Their objective is to achieve a people's friendly strategy of Socio Economic Development by opposing the Corporate and Multinational advantaged exploitative strategies.

These Movements have successfully generated alternative politics within agenda to protect Rights, Resources and Identities. The Indian State, with its anxiety to expedite the process of Globalization, perceives this mounting public opinion and discontentment as criminal conspiracies against the State. Many innocent civilians implicated with false cases when they are fighting against Displacement, Destruction, Destitution and Death. Indian State with its powerful apparatus is making all efforts to global and local commercial interests

to exploit the mines and minerals. The Multi National Corporations like Vedanta, Posco, Tata, Jhindal, Laxmi Mittal and Essar are given freehand to penetrate in to reserved forest inhabitations of Adivasis and evacuate them in the name of Green Hunt to have free access over natural resources.

The present paper aims to study the discontent of the oppressed against the process of alienation perpetuated in the name of comprehensive development by the Indian State. It understands the problem in critical theory framework wherein the impact of collusion between the State and Corporate interests is analyzed. The paper also narrates the forms of coercion applied against the oppressed communities in deterring them from making any organized protest. The Adivasi Movements undertaken by various tribal groups and communities against the process of displacement resulting in alienation with the construction of a major irrigation projects, mining, roads, industrialization. It would also explain the negative impact of the project on life support systems of Adivasis and biodiversity.

The paper focuses on issues such as development and displacement, violation of Constitutional guarantees, Cultural invasion against Primitive Tribal Cultures, adopting coercive mechanisms by State against the democratic discontent and solidarity among the subaltern groups against violations and violence. The Study tries to integrate the micro level findings with the theoretical postulations of critical theory.

At the end of October 2015, a nation-wide team of women's groups, Rights Organisations and few academicians (including me) traveled to South Chhattisgarh to look into reports of harassment of women human-rights defenders, the arrests of local journalists and news of fake encounters. The group met with women from Peddagellur and surrounding villages of the Basaguda thana area, Bijapur district, while the women were returning from the weekly market. They reported that during a search and combing operation conducted in their villages between the 19th and 24th of October, several women, including a 13 year old girl and a four-month pregnant woman, were raped, molested and beaten. Rations and poultry were looted, abuses hurled, homes were wrecked and property was destroyed. The women traveled to Bijapur district headquarters and after days of grueling testimonies, were able to lodge the first ever FIR against rape by security forces. The issue was then taken up by the media, the local Congress and other rights groups. Despite investigations and reports by independent fact-finding teams and cognizance taken by the NHRC, no action has been taken. Troubled by the inaction and several new reports of encounters and killings in the area, another group of

rights organisations visited Bijapur in January 2016. In a chilling repeat of the violence reported in Peddagellur and around, we learnt of what happened in Kunna, Sukma and Bellam-Lendra (Nendra), Bijapur between the 11th and 14th of January, 2016. The similarity in scale and nature of violence made it all seem like a recurrent bad dream.

Rapes and Sexual Violence – an Integral Part of Search and Combing Operations?

"When I tried to stop them from taking my chickens, they dragged me into my house. One of them pinned my legs to the ground, another my shoulder, while the third sat on me and raped me"

Sexual violence has defined the grammar of warfare for centuries. But in the 21st century, when a nation has walked the streets protesting against the culture of rape, resulting in the amendment of the laws that govern sexual violence, how is it that the State itself repeatedly uses rape as a tool to "area dominate", and gets away with it scot-free.

Between the 11th and 14th of January, 2016, five batches of police and security forces entered the village of Bellam-Lendra (Nendra, as it is called) in the Basaguda thana area of Bijapur district, Chhattisgarh. They blindly fired a round of bullets into the surrounding hills. The men of the village and its surrounding paras fled. Making their way from the hills into the village – the police and security forces invaded people's homes – they caught their chicken, took their rations and cooked in their vessels. The ones who protested had it worse - "They took four kilos of rice from my home and promised to pay me. They also took four chickens. I told them we sell chickens to buy clothes and asked them not to take them. When I told them this and asked them for money for the rice, they threw a fishing net over my face and pushed me into my house. They took off my clothes and threw them. They even held my breasts. One of them held my legs down, another my shoulders. A third raped me. When I screamed for help, my mother-in-law came running and began hitting the person sitting on top of me. That's when they wore their clothes and ran." Said one of the women. Another was asked where the men had gone and why they had run. When she responded saying the men run because they fear what you would do to them, she was held by two men and taken into her house. "They threw me on the floor. They took off my clothes, tore my blouse and squeezed my breasts. One of them raped me and said You give food to the Naxals. We will set fire to your homes. You're lucky it's daytime. If it was night, we would kill you. My two children held me and began crying. That's when they let go of me and threatened me not

to tell anyone what they had done. They took my chickens and left." From the neighbouring para, Gotum, women share similar stories: I was working in the fields when they came. Four policemen took me and my mother-in-law to my house. I recognize two of them – one of them is from a village nearby. They used to work for the Naxals, but they were now in police uniform. They chased my mother-in-law away, and tied a cloth to my face. One of the men held my legs down, another my shoulders and another policeman raped me. I screamed and screamed, but they didn't listen. After raping me they threatened me and told me to keep my mouth shut. They said they'd shoot me the next time they come if I told anyone what they had done. My breasts and private parts still hurt. I also have difficulty walking..." Another woman from Gotumpara was in her backyard picking vegetables when two men silently entered – "They covered my face with a black cloth and pushed me to the ground. One of them held my chest down. The other raped me. They pressed my legs down with their shoes...Later, when we approached them at the boring well and asked them why they did such things, they told us not to falsely accuse them. They said they would do again what they did to us during the time of Salwa Judum. They also threatened to burn our houses with us and our children inside."

These are only a fraction of the testimonies that women gave to the police and the Sub-Divisional Magistrate (SDM) when 12 of them traveled to Bijapur District headquarters together with the fact-finding team. Eight of them were themselves rape survivors. The testimonies attest to several other rapes. At least 13 rapes have been testified to. There were several other instances of verbal sexual abuse and molestation. Many others were threatened and physically assaulted.

At exactly the same time, in the neighbouring district of Sukma, the women of Kunna village, Thana Kukanar were facing a similar horror. Many were stripped, their breasts were squeezed and verbal sexual abuses were hurled at them. Men from the troops made demands that the women sleep with them, tauntingly asking if they wanted to conceive. The breasts of several women and young girls were squeezed – in a test to see whether they were lactating or not. The test for lactation is done with the assumption that if a woman is not a breast-feeding mother, then she is of Maoist cadre. What kind of savage world allows acts of sexual violence to be tests for political allegiances or nature of work? In one instance, women were first stripped and then dragged to the school ground and paraded in their semi-nude state for over two kilometers until they reached the police vehicles in which they were taken to the camp. While walking, police and security personnel took turns to touch the women – squeezing their breasts, pinching their nipples, touching their stomach, back,

and thighs. They laughed mockingly as they did this. From the women's descriptions of the sexual torture that they were subjected to and phrases like "they sat on top of me", there is a strong sense that some women might even have been raped, but are afraid to explicitly say so.

Lawlessness in the Name of National Security: Blatant Refusal to Lodge an FIR

The women, together with the fact-finding team, first met with the Collector to bring to his notice what had happened in Nendra. Given the difficulty in registering an FIR in the Peddagellur case, the team requested the Collector to put pressure on the police to lodge an FIR without delay. The CEO of Bijapur Zila Panchayat, sat through the meeting, smirking. He even broke into a laugh every once in a while. When the matter of an FIR was brought up, he said it was a matter of National Security. Since when did rapes – even when the perpetrators are the police themselves – become a matter of national security, one wonders. The Collector, more cordial than his CEO, ordered immediate testimonies. Despite the chilling testimonies recorded both by the police and the SDM, however, the police initially refused to lodge an FIR. When we confronted the DSP Bairamgarh, he said they would first investigate the matter and then lodge an FIR. Section 154 of the CrPC makes it mandatory for a police officer to file an FIR on receipt of any information of a cognizable offense such as rape, molestation, or disrobing. Further, no preliminary inquiry is permissible in such a case. By refusing to file an FIR, any public servant, is himself culpable under Section 166A(c) the IPC. When we cited the law to the DSP himself, he said they would lodge an FIR, but when it came to actually filing it, he evaded the issue, saying that they would accept a complaint but not register an FIR, since his seniors were not in town. He was later joined by the Basaguda Thana-in-charge (TI). When the group of activists confronted them about the delay in lodging an FIR, they evaded the issue by talking of Naxalite violence, while the others made phone calls to their superiors. Eventually, the Basaguda TI exited the collectors office through the back gate, unable to come up with reasons for further delay, while the DSP left it to officials lower than himself to do what they saw fit. It was clear however, that despite the law, the power to file an FIR did not rest with thana-level officials. Later, in a meeting with the Collector, when the refusal of the police to lodge an FIR was narrated, the Collector himself said we should trust him and that he would see to it that an FIR was lodged once the Superintendent of Police (SP) was back in town. Earlier that day, a police official in Bijapur had said to us – "In Bijapur, there are no thana-in-charges. There is only one thana-in-charge. And that is the SP himself." We didn't realise that he wasn't trying to be funny. Two days of grueling testimonies

later, and another long day of negotiating with officials, there was no sign of the SP or an FIR. When we finally managed to contact the SP by telephone, he said he would first meet with us and then talk about filing an FIR. Citing bad weather conditions, he said his helicopter was unable to land that day. By the second phone call, he had flatly refused to order an FIR. "I have discussed it with my seniors... I will not give the order to file an FIR" he said, in no uncertain terms. On the fourth day, the SP finally called and asked the team to meet with him. By then, the media had already carried reports of the refusal to lodge an FIR, and people had begun calling, texting and emailing the collector, SP and Additional SP about the matter. The SP managed to return the next day, and seeing that a three-member team from the National Commission of Women (NCW) was visiting Bijapur with a view to investigate the Peddagellur sexual violence case the very same day, the SP hurriedly ordered an FIR from the gates of the circuit house, while all other officials made every attempt to prevent the fact-finding team from meeting the NCW delegation. Finally, the team was able to send in a letter requesting an audience. This put considerable pressure on the authorities. An FIR was finally filed just before midnight – four full days after the women of Nendra had traveled to Bijapur to register a complaint. On the fifth day, medical exams were conducted and the NCW delegation even met with 9 of the women complainants.

Women who had left their children behind had begun to worry for their safety. Sitting on the floor of the Collectorate, tired after having told and retold of the violence she had survived, one woman said she couldn't stay another day – What if the forces come again? Our men will run. What will happen to our children then? she said. Three children who had accompanied their mothers to Bijapur had also taken seriously ill. All three were diagnosed with malaria, which is endemic in the area. As though the violence of what they had already been put through was not enough, the women of Nendra had to spend five grueling days braving the callousness of bureaucracy, negotiating with and testifying before authorities just to register a simple FIR – something that authorities are compelled to do immediately, by virtue of law. Through delays and refusals, the State and the police in particular, seemed determined to harass the women further. Such blatant disregard for the law compels one to ask which, if any, of the States own institutions can people turn to with the hope of demanding justice? Are those two grand words – national security – enough to allow for complete lawlessness, or to grant those in positions of power complete impunity?

Pitting People Against People

While a few members of the team were waiting to meet with the NCW delegation, a large mob of a couple hundred individuals identifying themselves

as victims of Naxal violence had gathered around the circuit house. While representatives from the group presented their grievances to the NCW delegation, others continued shouting slogans demanding the human rights team to leave Bijapur. While this carried on for some time, the crowd later disbursed without much of a confrontation. However, the next day, when the women and the team together waited to meet with the NCW delegation, a smaller section of the same mob reappeared at the circuit house and confronted the team and the women. They engaged in a discussion with some of the activists who were part of the team, hurling allegations at them of being "Maoist supporters" for taking up issues that pertained to violence by the forces but not violence by the Maoists. Some mob members questioned the women directly for registering an FIR against the forces and even threatened them, demanding that they leave Bijapur immediately. This altercation was extremely upsetting and intimidating for the 12 complainants, including the 8 rape survivors.

A week after the FIR was filed, the group even staged a rally in Bijapur, targeting individual members of the team, and also shouting slogans against Arundhati Roy, who had nothing to do with recent visits to Bijapur. If what genuinely troubles this group is Naxal violence, then rather than seeking more active protection from the State, why is it that they are targeting rights activists? Of what use would it be to them to do so? It would serve the police well however, to begin such a campaign to malign those who dare to question the atrocities they commit.

The team stands clear in its wish to dialogue with victims of violence, irrespective of the perpetrators. However, it is also concerned that such actions encouraged by the police create an atmosphere of fear – one in which people will be afraid to speak out about the wrongdoings of the State and security forces.

It is also important to note that, contrary to the picture being painted by the police and large sections of the mainstream media, the adivasi civil society in Chhattisgarh (Adivasi Mahasabha, Sarva Adivasi Samaj) as well as other political parties have been raising concern over the daily illegal murders of innocent people masked as encounter killings, and the systematic use of sexual violence as a tool in this war against the Maoist movement.

Attack on lawyers representing Adivasis

Two lawyers – Adv. Shalini Gera and Adv. Isha Khandelwal – who, together, were members of the Jagdalpur Legal Aid Group– a group established to represent indigenous people adversely impacted by the Common Law-oriented

criminal justice system which offer scant space for indigenous voices to be heard before the Law, have been harassed and hounded out of Jagdalpur, the district headquarters of Bastar. Adv. Khandelwal and Adv. Gera have been facing harassment for some time now, starting with a resolution being passed by the Bastar Bar Association that they cannot practice in the trial courts there, followed by calling these two lawyers to police stations to show their credentials as advocates, and followed by a series of harassments perpetrated by the police,
instigated by Inspector General of Police, Bastar Range, to the owner of the accommodation that these two lawyers had rented – which led to these lawyers being left with no choice but to leave Bastar and the numerous cases they had to defend numerous tribal – those who are facing grave criminal charges of sedition – of the region.

Harassment and attacks against journalists

Malini Subramaniam, a journalist with Scroll, an online news portal, has been harassed and forced to leave Bastar district for her reportage of police excesses in the region. Malini Subramaniam was the first to report on mass sexual assaults by armed forces in Bastar district. Stones were thrown at her house, and the domestic worker who works at her residence was summoned by the local police and made to stay at the police station for hours.

Even in the wake of continuing atrocities by paramilitary forces on tribals, journalists, advocates and even as these are being highlighted by the print, electronic media and Civil Society, yet another acid attack on Soni Sori an adivasi activist has been committed unabashedly.

Attack on Adivasi activist

On 20th February, 2016, notable Adivasi activist Soni Sori was attacked. An unknown chemical substance was thrown in her face, causing a severe allergic reaction for which she is still undergoing hospitalization. This attack occurred when she was about to file a complaint against the Inspector General of Police, Bastar Range – viz. – for atrocities committed by this person and his forces against indigenous people. Soni Sori has previously been brutally tortured and sexually assaulted by the Chhattisgarh Police in custody for her alleged connections to Maoist insurgents.

Concerns Regarding Further Investigation

Two days after having personally listened to the women of Peddagellur narrate their experiences of violence, and having seen the wounds on their bodies for themselves in November last year, the ASP (Naxal Operations) and SP were

quoted as saying that it was all mere propaganda to slander the forces. Few days later, the Bastar Inspector General of Police (IG) repeated their claim, saying it was all done to reduce the morale of the forces. This time round, even before the FIR had been filed and investigations initiated, the DSP, Bhairamgarh and TI, Basaguda who were present at the Collectorate, were already claiming the same thing. It is difficult to conceive that there is scope for a fair police inquiry given this evident bias.

Since the women had already spent five days in Bijapur having left their homes and children, the police have said that they would travel to the village to record testimonies. However as has happened in the past, investigation conducted in the village is carried out by the police who go there accompanied by a convoy of security forces. Given that the accused are the security forces themselves, it is inconceivable that the survivors of violence will be able to participate in such a process free from fear and intimidation.

Investigations must be sensitive to the survivors and have to be carried out with care and empathy. Under Section 157 of CrPC, investigations in case of rape must take place at a place of the survivors choosing. Given recent developments such as the presence of the mob that followed the team, we are concerned for the safety of the women and demand that further investigation take place in an atmosphere of security and comfort for the women. They must be assured that they will be free from intimidation from any source – the police or private groups. In addition we demand that investigation in such cases, and in particular this case, be moved from the accused police to an independent investigating agency, in order to ensure fairness and transparency.

We also call upon both parties – the security forces as well as the Maoists – to ensure an atmosphere in which an independent and neutral investigation is possible.

Of Malice and Power, Violence and Impunity

Paying closer attention to the abuses hurled by the police and security forces to the people of Nendra, the language used and the mundane acts of violence reveal a deep malice that often accompanies the relish of power. It is particularly disturbing that not only did the troops loot rations and poultry to consume – they even killed goats that they did not eat, spilled rations that they did not take. They even tore up lungis and blankets, making survival more difficult than it is for those who already live on the margins of society. Where does this malice come from? What allows it to exist?

"Like the falling leaves of a tree, we shall drop all your men" one of them said. Several others threatened to destroy the hand-pump - "We'll destroy your hand-pump. Where will you drink water from then?" they said. Others made references to Salwa Judum times, threatening people with a repeat of the brutal wave of violence and terror unleashed then. As was revealed in one of the women's testimonies, one of men from the security forces even warned "If Narendra Modi gives orders, then we'll even burn down your village." When she was asked who Narendra Modi is, she said she didn't know. Is it the faith of the police and security forces in the people of power that grants them this impunity, this relish of power over the most vulnerable people of our society? Is this what the special training and "better co-ordination" of the forces has resulted in – is this daring impunity what the Inspector General of Police, Bastar Range, talks of when he speaks of the "morale" of security forces? Is this then, the same morale he accuses the villagers and rights activists of 'reducing' when they bring to light the rapes and looting?

In the face of such extreme violence perpetrated by a State that is intolerant of any form of dissent, where and to whom must we turn in search of justice?

Need for a Powerful Democratic Movement

It is high time for the democratic and progressive forces to come forward and join hands in tearing away the smoke screen of irrigation and development behind which the Central and State rulers are perpetuating this ghastly crime of destruction of the lives and livelihoods of lakhs of Adivasis, permanently robbing scheduled area of its rightful share of adivasis and to launch a powerful movement of people from all walks of life, particularly of the people of Central India, to stop this outrage.

In this context, it is the compelling obligation of all the intelligential, scholars, researchers and others to show their solidarity and express sympathy towards their problems. The initiatives like the GREEN HUNT that creates liquidation, insecurity and displacement among adivasis should be dispersed with. The natural rights of adivasis over the forest and forest products should be acknowledged. They should have the rights on land, resources and culture.

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THE IMPACT OF GLOBALISATION AND FARMERS' SUICIDES IN INDIA

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Abstract
In India, the Farmer suicide is a post-liberalisation phenomenon. It started and has intensified since 1995. Neo-liberal economic policies pursued by successive governments led to devastating changes in the country's agricultural policy. As a result, public investment in agriculture gradually declined. Newly-adopted fertiliser policy caused the closure of public sector manufacturers and dependence on import which resulted in continuous increase in its prices. New patent policy allowed big multinational companies to capture our seed and pesticide markets leading to unprecedented rise in their cost. Declining investment in irrigation promoted private irrigation system which increased water prices. Massive increase of diesel and petroleum prices only added to the cost of pump irrigation and transportation. Costlier electricity also contributed to the rise in pump irrigation cost.

The government's surrender in WTO also did away with quantitative restriction and our farmers were thrown into the wild competition with agricultural products from advanced countries. Not only that, Free Trade Agreement with several developed countries heightened the stiff competition. The change of policy from production for consumption to production for export also brought new problems for cultivators. All these contributed to the increase of import cost and massive increase in the cost of agricultural production. Along with that, the government procurement policy failed to pay remunerative price to the farmers for their produce. This made farming continuously a loss-making venture. As there was no cheap institutional credit, farmers were also forced to borrow money from private moneylenders at exorbitant interest rates. All these factors pushed farmers to mounting debt and failure to repay the loans forced them to end their lives.

In 2014, the National Crime Records Bureau of India reported 5,650 farmer suicides. The highest numbers of farmer suicides were recorded in 2004 when 18,241 farmers committed suicide. The farmer's suicide rate in India has ranged

between 1.4 and 1.8 per 100,000 total populations, over a 10-year period through 2005. India is an agrarian country with around 60% of its people depending directly or indirectly upon agriculture. Farmer suicides account for 11.2% of all suicides in India. Activists and scholars have offered a number of conflicting reasons for farmer suicides, such as monsoon failure, high debt burdens, genetically modified crops, government policies, public mental health, personal issues and family problems. There are also accusations of states fudging the data on farmer suicides.[1]

Impact of Globalisation on Farmers

The Boundary with Globalisation Globalisation, essentially means transformation in social and economic geography, marked by the growth of supra territorial spaces (Scholte, 2000). Economic globalisation is a further distilled component of aggregate globalisation, but generally, the arguments in the literature focus only economic globalization and therefore the discussion is directed towards that. The concept emerged in the process of development thinking immediately after the Second World War but remained active below the surface for a long time to re-emerge prominently during nineties. The process began vigorously after the end of the Cold War, and due to the widespread macroeconomic failures in developing economies and consequent interventions by the world institutions like the IMF, World Bank and WTO. Free flow of goods, services, capital and technology under a competitive market was the core ingredient that provoked and spread globalisation in the world. India was certainly not an exception in this exodus of policy changes.

At the same time as in the defense of Globalisation Bhagwati re-emphasises the benefits of free trade and the ways to emerge out of the embargoes of the controlled regimes. But he also cautions in no uncertain words that “And so, in these different ways globalisation must be managed so that its fundamentally benign effects are ensured and reinforced’ (Bhagwati, 2004, p 35). He further raised concern about the plausible vulnerability in the process of globalisation saying – “the sense of vulnerability or economic insecurity is arguably greater today than in the earlier periods because the growing integration of nations worldwide into the international economy has intensified competitive pressures from actual and potential rivals elsewhere” (Bhagwati, 2004, p 12). This statement clearly brings out the link between the two fortified arguments which are seemingly opposite but worried about similar possibilities.

[1] https://en.wikipedia.org/wiki/Farmers%27_suicides_in_India

The process of globalization in the world began simultaneously with the demand and supply side pressures. Many of the developed nations vied for the access to the huge markets in developing economies. Till nineties many developing economies were following a strict protective policy in their international trade. Their trade was rather dictated by the domestic demand and the surpluses generated in the economy, than an engine of growth. Nevertheless, at the same time a number of developing economies were looking out for growth opportunities based on trade. As a result the policy originated taking advantage of the economic conditions prevailing then in the two parts of the world.

Decline in Public Investment in Agricultural Research and Extension and Irrigation

Historically, public investment in Agricultural research and extension in India has been seen as creation of 'public goods'. Vaidyanathan (2000) opines that the widespread specialized statefunded agricultural research centres under the India Council for Agricultural Research and the Agricultural Universities, working with and through the National Extension Service, have contributed historically to the growth of agricultural productivity by specifically developing and diffusing knowledge, skills, better varieties of seeds and practices. This trend reversed during the phase of economic reforms. Liberalization led to a drastic decline in the growth rate of public spending on agricultural research and extension. The growth rate of public spending on agricultural research and extension during 1980s to 1990-2005 has fallen from 6.3 and 7 per cent to 4.8 and 2 per cent respectively (see Table 10). To compensate the decline, private sector investment in research and extension was encouraged; 100 per cent foreign equity was allowed in the seed industry, and import of seeds was permitted for research purposes under the Open General License (OGL). The government withdrew subsidies on extension services to create a favourable field for private players in seed industry and biotechnology firms. The gradual declining of state-support also means that several state-run agricultural institutions or corporations which had provided support including skills to farmers, particularly small and marginal farmers, disappeared or became largely inactive due to shortage of funds.

However, decline in public investment in agricultural research and extension and consequent changes have proved to be disastrous for agriculture in India. According to a Planning Commission review, the sluggish growth in Indian agriculture during the phase of economic reforms was significantly caused by 'unresponsive agricultural research, nearly broken down extension [and] inadequate seed production, distribution and regulation' (Government of India

2005: 197). A commission, constituted by the state of Andhra Pradesh, has also noted that the collapse of public agricultural extension services has been one of the most important contributory factors to the generalised agrarian crisis in the state (see Government of Andhra Pradesh 2004). Though there has been a clear shift in cropping patterns towards cash crops that requires more water for cultivation, the total net irrigated area remained stagnant (GoI 2007). Referring the situation in Andhra Pradesh, Posani writes that 'it actually declined from 43.5 lakh hectares in 1990-91 to 37.1 lakh hectares in 2004-05 (GoAP 2007). Successive state governments have grossly neglected investment in surface irrigation infrastructure. Consequently there has been an increase in private investment in exploiting ground-water sources (mainly bore wells), which have been growing relative to canal and tank irrigation' (Posani 2009: 29). This has added heavily to the cost of irrigation or cultivation, made agriculture a highly risky enterprise, and 'led to overexploitation of ground-water and a falling water table, forcing farmers to deepen their wells every few years' (Posani 2009: 29).

Magnitude and trends in Farmers' Suicide in India:

The Official Data The main source of data on farmers' suicide is the annual reports on accidental and suicidal deaths published by National Crime Records Bureau (NCRB) of the Ministry of Home Affairs, Government of India. The reports consist of a range of tables; one of them is on the distribution of suicides by profession that includes a category for self-employed persons in farming/agriculture. An all India-wise consistent and complete data on farmers' suicide or suicide by persons employed in farming/agriculture is available for ten years from 1997 to 2006.

This period covers the largest part of the economic reform period in India. Regarding the data pertaining the suicide rate among farmers, which is defined as number of farmers' suicides per 100,000 farmers, Nagraj rightly claims that it 'can be calculated on a reliable basis only for the year 2001 because that is the only year for which we have reliable data on the number of farmers in country, and in different states, from the Census of India' (Nagraj 2008: 7). Given this, we have calculated and tabulated the farmers' suicide rates only for the year 2001. NCRB data show that during these ten years as many as 166,305 farmers committed suicide in India.

It is also clear from the Table that every seventh suicide in the country was a farm suicide during this period. However, this distressful number is considered by many as an underestimation of the actual number of suicides by farmers in the country because, as Nagraj writes, These data published by the National Crime Records Bureau, as we have noted above, are put together from the

police records from different states. Our experience during our field visits in Andhra Pradesh as a member of the Farmers' Commission set by the state government in 2004 was that the police often adopted a rather strict and stringent definition of a farmer in identifying a farm suicide. The title to land was taken as the criterion for identifying the farmer and this often left out a genuine farmer from the count. For example, a tenant farmer who leased in land and hence did not have a title to the land could be denied the status of a farmer; so also a farmer if the title was in his father's name (Nagraj 2008: 3-4).

Durkheimian Analysis of Farmer Suicides in India

Emile Durkheim has identified broadly four types of suicideegoistic, altruistic, fatalistic and anomic. He explains these types and their causes on the basis of two important variables: social integration and social regulation. Of the four types, fatalistic suicide is of least importance. According to Durkheim, fatalistic suicide occurs due to excessive and oppressive regulation. The examples of this type include the suicide among the feudal slaves and the death among the barren married women. The pressure exerted upon them by the society compels them to do so. However, along with Durkheim, recent sociological scholars also lay very less importance to this type because they argue that examples of fatalistic suicides have become rare in recent times. Altruistic suicide occurs out of excessive integration of the individual with the society. The individual always feels that it his duty to sacrifice his life for the collective good and he feels privileged and honoured to do so. Some scholars argue that altruistic suicide is a basic feature of the primitive society. In contemporary societies, this type of suicide is committed mostly by the military personnel, who sacrifice their life with a sense of patriotism. Egoistic suicide occurs when the tie between the individual and society is weakened and there is a lack social integration. The greater the social isolation, the lesser the individual participates as a social being. He feels meaningless and unwanted by the society. He develops a sense of apathy and detachment from life. The social ties get diluted that binds the members of the society together. This is called egoism. Durkheim believes that family protection against suicide because it represents a higher degree of social cohesion due to greater sentiments. Therefore, suicide rate is higher among the unmarried people and among the widows, divorcees and childless women. Anomic suicide occurs when social regulation is too weak and disrupted. According to Durkheim, individuals are regulated by collective conscience and when this regulation weakens, the individual is driven towards suicide. The incompatibility between the goals set and the means to achieve these goals creates frustration within the individual and are driven by a sense of failure. This compels the individuals to commit suicide.

Agriculture in India is not only an economic activity but also a way of life. Despite concerted industrialization in the last six decades agriculture occupies a place of pride. There is a strong chance that India will be a predominantly agricultural country in the near future. Indian agriculture experienced a very slow growth during the first half of the 20th century before independence. On the eve of independence, the agricultural sector was the dominant sector both in terms of domestic product and in providing employment. Therefore the fortunes of a large majority of people in India were basically linked with agricultural performance. For many years attempts were made to reduce Indian agriculture's dependence on monsoons by building a reliable irrigation infrastructure in the country. The development of irrigation was instrumental in reducing the incidence of famine through increasing the food grains. Tea, sugar, oil seeds, tobacco, spices, etc. constitute the main exports of India. Agriculture is the main support for India's transport systems, securing bulk of their business from the movement of agricultural goods. Purchasing power of the farmer leads to greater demand for industrial products and better prices. Bad crops lead to depression in business. Prosperity of the farmer is a necessary precondition for the progress of all industries. Rural areas are the biggest market for consumer items. In short agriculture has always been the backbone of the Indian economy. The liberalization of the Indian economy in 1991 has caused fresh challenges to Indian agriculture. The contribution of agricultural exports to total exports has declined sharply from 20.5% in 1950-'51 to 10.5% by 2004-2005 (1). Agricultural imports have also recorded a rise after the liberalization of the economy in 1991.

Summing Up

The process of liberalization in fact proved more disastrous for agriculture and peasantry in India because it was adopted without resolving the fundamental agrarian problems or contradictions such as an absolute inegalitarian land structure, depeasantisation, and abysmal condition of agricultural labour, tenants and small peasants. Though India chiefly inherited most of these problems or contradictions from the British rule, it did too little to resolve them after independence. During the period of economic reforms, state did nothing to transform the depressed traditional institutional framework of agriculture because it believed that the barrier to lifting up agricultural surplus or growth and consequently to rural development could be surmounted with following the structural adjustment programme of neo-liberalism. But in reality the opposite happened, and the traditional agrarian contradictions in effect acquired bigger shape by getting associated with the new contradictions generated by the liberalization process.

The Farmers' suicide requires to be seen in the path of capitalist development that the regimes or the state introduced during the post-colonial/post-independence period. Capitalist development initially created euphoria however on later date it translated into massive agrarian crisis. This is the reason why beginning of agrarian crisis should be seen or located much earlier to the decade of globalization. In fact globalization further sharpened the crisis, which led to the large-scale suicide of farmers in other parts of India, including Karnataka. Globalization also carried the inbuilt fear of loosing identity- the identity of "New Farmers or Market Oriented Autonomous Farmers" (MOAF). Suicide is the new technique employed by the farmers. At the all India level more than one lakh farmers' have committed suicide. At present the suicide is restricted to some states- there is no guarantee that it will not spread to such other states as BIMARU. It is in this there is a need to redraw preferences, rework on policy measures, otherwise there is a danger that suicide might envelop the whole of India. Now the crisis is not only manifested in the increasing suicide but also in other forms such as throwing up the agricultural produce on the roads, demand to delink from the global market, demand to come out from the WTO regime etc. However one cannot negate its political implications.

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GAYL JONES: A BLACK AFRO-AMERICAN NOVELIST

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Abstract
Gayl Jones (1949-), an Afro-American woman novelist, is a "hot red" name in the second half of the twentieth century writings. Her writing is the masterpiece of black women's movement. Being a true artist she has explored the depths of brutal realities of sex, clash and racial problems in the lives of black people in particular. She is a recipient of a number of prizes—Western Australian Premier's Book Awards for Fiction in 1993 four times, FAW Barbara Ramsden Award Book of the Year, 1992, T.A.G. Hungerford Award for an unpublished work of Fiction by a Western Australian Writer, 1991, Steele Rudd Award 2003, Nita Kibble Literary Award, 2003, ALS Gold Medal, 2005, and shortlisted for many Awards and Prizes like—International IMPAC Dublin Literary Award, 2008, Victorian Premier's Award, 2008 and 2019, Miles Franklin Award, 2019, and longlisted for The ALS Gold Medal, 2019.

Key Words: Hot-Red, Black Women Movement, Brutal Realities, Sex.

"Slavery is terrible for men; but it is far more terrible for women. Superadded to the burden common to all, they have wrongs, and sufferings, and mortifications peculiarly their own."
(Santamarina, 232)

Jones is among the many U.S. writers who have looked beyond the southern borders of this country, particularly toward Brazil, in search of a clearer understanding of the plight and the legacy of Africans in their diaspora. She is an original presence among scholars who have explored Brazilian slavery and its abolition. Her version of history has the point of view and the artistic and cultural specificity of a black woman writer. With identification and a solidarity based on gender and race, Jones brings out of forgetfulness voices of black women abused in the Brazilian past. She joins them with black female voices of today in a single chorus of collective memories. Together, they embrace the struggles and the oppression of black men in the tragedy that slavery and segregation have signified in the history of the continent.

Because of its large size and its position as largest importer of slaves in the New World, Brazil has constantly played the role of foil to the U.S. system. Brazil was "by far the largest single participant in the traffic, accounting for 41% of the total" of the approximate number of 9.9 million Africans who "were forcibly transported across the Atlantic," while the United States accounted for only seven percent of that number (Coser, 123). By contrast, the slave population in the United States expanded from the original 600,000 Africans to the approximate number of 4.4 million by 1860, which made the United States "the nation with the largest number of slaves in the nineteenth century," with a very small percentage of free blacks (ibid, 123). Jones' own historical research undoubtedly showed her that blacks are oppressed today much as they were yesterday, all over the Americas; and that they have been kept voiceless for too long. Her stories are imaginative accounts of the personal dilemmas encountered by black women under slavery and afterward, an attempt to give them a voice.

Although she is a versatile writer—novelist, playwright, short stories writer, poet, essayist and critic, she has started journey from "slavery to freedom, from slave ship to political protest" (Brown, 75). Unlike other black writers, she has produced work in original black speech that has offended some readers but elicited admiration even from serious critics, including responsible members of the black community. In fact, her controversial subject makes her unique and original from others. She prefers violence, vitality, sex, slavery to beaten track to illustrate the consequences of slavery for twentieth-century Afro-American family. The then families are engulfed in racism, and sexism where are present even in the most intimate sphere of life, it leads to humiliation of women and degradation of men. This scenario compels Jones tells the story of the continuing destructive effect of slavery on the successive generations Afro-Americans. Described herself as an improviser, Jones' works brought her out into the literary screen. Her attention to brutality and its effect on the psychology and personality of black women has earned her the reputation of a unique literary voice. However, she is one of prolific women writer, she explores black female sexuality and the remnants of slave brutality that faster in black male-female relations. Her works especially novels, have brilliantly fused two great stands in the tradition of Afro-American writings. They explore the psychic scars of slavery as manifested in sexual abuse and forms of violence; they also experiment with ways to infuse the written word with the qualities of oral storytelling. Her works are replica of her strong thoughts. In an interview, she reveals, the just like most people, she felt "connections to home territory-connections that go into one is ideas of language personality, and landscape" (Baker, 25). Jones, born in 1949 in Lexington, Kentucky, is a writer of inbuilt talent. Her father Franklin Jones and mother Lucille Jones play an important

role for her nourishment. The closeness/affection of the Jones with their child affected Jones' writing career. Her early connection with the South strongly visible in her personal life along with her writing. She was strongly influenced by the maternal grandmother, Linda Wilson. It was her maternal grandmother who gave wings to her desire to write. Her maternal grandmother was a play writer. She wrote plays for Church production. Even she was motivated by her mother, Lucille Jones. She had also literary taste of writing. She used to write short stories. She wrote to entertain Jones and her brother Franklin Jr. G. Jones once says," I have to say that if my mother hadn't written and read to me when I was growing up, I probably wouldn't have even thought about it at all" (Bell, 35), Jones received primary education from an elementary school. The instructors of the school were amazed to see the talented author blooming within her. They encouraged her to continue writing with a stop. After finishing high school, she moved to a new place, Connecticut, Connecticut College she completed graduation in English. For higher education she moved to Brown University, where two years later she earned her master degree followed by Doctorate of Arts in creative writing.

Time spent at Brown University, Jones' dream was put on air. She also got a chance to study a poet named Michael Harper. He later on introduced her first novel Corregidora to Toni Morison, who became the editor of the novel. She then joined as an assistant professor at Wellesley College and later took some position and started teaching Afro-American and African studies at the University of Michigan. Working at Michigan University, She wrote collection of short stories entitled White Rat, a volume length poem Songs for Anninho, and another volume of poetry titled The Hermit Woman. Her popularity leads her to receive fellowships first from the National Endowment for the Arts and another form the Michigan society of fellows. Now, her name is well known to every love of literature Brown University. Jones has a very successful marital life. She met Robert Higgians a politically active student at Brown University, and married him. However, they lived happily but very soon they had to leave United States on the early 1980 due to some legal problems. They went to Germany. Her writing taste was still strong, and she authored a novel Die Volgelfaengenin (The Birdwatcher) as well as collection poetry titled Xarque and other poems while staying in Germany she wrote and published her books hiding herself. Once again, she and her husband returned to United States of America in 1988. Jones lived privately in Lexington for ten years; they did not expose to anyone even to the media. Realizing the need of media support and help Jones came again into the media spotlight for the release of a new novel, The Healing (1998) which became a finalist in the National Book Award Competition. Unlike the other issues of the then period, the success of her (Gayl Jones) new novel (The Healing) was overshadowed by the media attention

given to a confrontation involving her husband committed suicide, and she was put in a mental institution under suicide watch for a short time but was soon released without incident. In the beginning I used a term "inbuilt talent" for Jones. Once again she proved herself after the publication of her latest novel Mosquito (1999). Although, she has touched almost all genres such as poetry, short stories, and critical essays, Jones is widely known for her novels.

Nonetheless, Jones is one of the first writers to focus on the violence of slavery, brutality, sexism and racism from a feminist perspective. Here it is important to peruse the way white writers confess, and mirror what is taking place within the "black individual and the scene" (Cooke, 2). Keeping aside the doubtful and unexpected precedent to be found in Jones, with her African faith, we may talk about Baldwin here. Baldwin's Go Tell It on the Mountain, has the theme that generally Jones weaves in her novel, deals with the religious conversion of a black adolescent who on his fourteenth birthday accepts his family's faith in a "Harlem storefront church" (ibid, 88). Similarly, attention to brutality and its effect on the identity of African-American women have earned her the reputation of a distinct and important literary voice. Critics note that her use of first person narrative is reminiscent of slave accounts and that her use of vernacular language and speech patterns is outstanding. Thematically, Jones' works are carefully wrought narratives developed from her determination to relay a story entirely in terms of the mental processes of the main character, without any authorial intrusion. Jones insists her task is to record her observations with compassion and understanding, but without judgment. Her style and method reflect her mastery in combining improvisational storytelling and sophisticated formal techniques, so that the stories do not appear contrived or to be relying on obtrusive narrative devices. Ironically, while the Southern-born Jones's often esoteric and radically experimental work has rarely been compared to other authors in a sustained manner, the Midwestern Morrison, who wrote a master's thesis on Faulkner and Virginia Woolf, has been almost obsessively measured against Faulkner, in part for her similarly "modernist" narrative bent; incorporation of universalist themes interwoven through the rubric of classical allusions and folk elements; focus on family legacies in relation to the panorama of American history; and analogous analysis of the "sin" of slavery and racism on both the collective American unconscious and the laws and mores that inform it. Morrison, in turn, has famously nixed the correlation with a firm: "Critics of my work have often left something to be desired, in my mind, because they don't always evolve out of the culture, the world, the given quality out of which I write. . . . I am not like James Joyce: I am not like Thomas Hardy; I am not like Faulkner. I am not like in that sense" (McKay 408). We would respect that assertion. Rather than perceive the works of Morrison and Jones as an inevitable dialogue or those of Faulkner and Jones-

Morrison as a cross-generational exchange, both paradigms with hierarchal implications, we would posit that all exhibit a shared obsession with history and the text, with how her story gets told and retold, recalled and reproduced. In short, with how history is fashioned out of the rich and convoluted topography of the American racial landscape, which is, in turn, mobilized by these hybridized, performative novels. Jones' first and perhaps most widely known novel, Corregidora was published when Jones was only twenty six years old. The plot begins in 1947 and centers on Ursa Corregidora, a blues singer who continues her familial legacy of "making generations," "passing it on," and "bearing witness" through the medium of singing. Charged with passing down her family's history of slavery and abuse, Ursa takes the role of a storyteller. Her character often relates the terrible, bone-chilling events that happened to her grandmothers: the slaves, concubines, and prostitutes of Corregidora, a nineteenth-century Brazilian plantation owner. Ursa uses traditional oral storytelling techniques in delivering her stories. Jones herself has commented on her use of this type of narration in an interview with Roseanne P. Bell in Sturdy Black Bridges. "One of the things I was consciously concerned with was the technique from the oral storytelling tradition that could be used in writing. A story is told to someone in much the same way when Ursa sings. She picks out someone to sing to. The book has layers of storytelling. Perceptions of time are important in the oral storytelling tradition in the sense that you can make rapid transitions between one period and the next, sort of direct transitions" (Bell, 45).

Much of Jones' work also explores a theme of contradictory, coexisting emotions. This theme, specifically of love and hate, is especially visible in Corregidora when Ursa and her mother discuss the Grandmothers' relationships with their former owner and lover, Corregidora:

> I think what really made them dislike Martin
> was because he had the nerve to ask them
> what I never had the nerve to ask.
> "What was that?"
> "How much was hate for Corregidora and
> how much was love."
>
> (Corregidora 131)

Jones comments on the use of this theme in an interview with Claudia Tate in Black Women Writers at Work: "I was and continue to be interested in contradictory emotions that coexist . . . I think people can hold two different emotions simultaneously" (ibid, 87). Her next novel was published only one year later and is perhaps the most controversial work she has written. Eva's Man is the story of a young woman, Eva Medina Canada, who because of a long

history of severe sexual and emotional abuse, ends up in a mental institution for murdering her lover and castrating him with her teeth.

The subject of controversy surrounding the novel centers upon positive race imagery. Some African-American women authors have criticized the novel by stating that it creates characters that perpetuate negative stereotypes about African Americans and women. June Jordan commented on this in a May 16, 1976 article in The New York Times Book Review by stating: ". . . there is the very real, upsetting accomplishment of Jones in this, her second novel: sinister misinformation about women—about women, in general, about black women in particular, and especially about young black girls forced to deal with the sexual, molesting violations of their minds and bodies by their fathers, their mothers' boyfriends, their cousins and uncles. . . . As for the Eve/Medusa/Queen Bee facets of the tale. . .rather than renew or revise ideas about the female, these chapters perpetuate "crazy whore"/ "castrating bitch" images that long have defamed black women in our literature" (ibid, 88).

Jones herself responds to this kind of criticism in her interview with Claudia Tate: "I put those images in the story to show how myths or ways in which men perceive women actually define women's characters." She further justifies her position by stating: "Right now I'm not sure how to reconcile the things that interest me with 'positive race images.' . . . For instance, how would one reconcile an interest in neurosis or insanity with positive race image?" (Rowel, 65).

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JOHN UPDIKE'S THE POORHOUSE FAIR: A STORY OF LONELY CROWD

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Abstract
The Poorhouse Fair, Updike's debut novel treating society on a wider canvas, published in 1958. It is he who inaugurates his experimentation with the form of the novel. Hitherto his popularity had rested on a handful of short stories published in the New Yorker. To Updike, "My sense of myself was of a sort of a sprinter," he confessed in an interview, years afterwards. He was a novice in novel writing. Writing a novel was a trial of his resources as is evident in the brevity of this opening address. It was a highly volatile and impressionable age of America. So The Poorhouse Fair has to be treated as a product of its milieu—the American fifties. The idea that America was turning into an other-directed state was shared by literary giants, social thinkers, men of letters, etc. On the other hand, McCarthyism in politics has imposed a spirit of conformity in the intellectual community. It was in vogue but none dared to react against it. Their dissenting voices were noted with suspicion. It became the matter of their loyalty to the American Government. Thus it is called the "age of conformity" (Howe 15). It was declared that America was becoming a nation of conformists who are "other-directed" while their ancestors are "inner-directed."

Key Words: Society, Milieu, Age of Conformity, Inner-Directed, Other-Directed.

Updike's The Poorhouse Fair is based on the concept of other-directed. It is a story of lonely crowd. It pictures a society scientifically structured, highly mechanized and a sterile future welfare state. Its artistic purpose does not interfere in any way with the projection of fictional time into future. It aims at the slavishly conformist state to which America has fallen. So the novel tries to prescribe the remedies for the society itself. John Kenneth Galbraith, the economist, prolific writer, and Updike's contemporary, commented on the wholesome nature of post war American society in The Affluent Society (1938). He warned the America and the American about the danger involved in misreading social implications. He remarks:

> The rich man who deludes himself into behaving like a mendicant may converse his fortune although he will not be very happy. The affluent contry which conducts its affair in

> accordance with rules of another and poorer age forgoes opportunities. And in misunderstanding itself it will, in any time of difficulty, implacably prescribe for itself the wrong remedies. (Galbraith 16)

The influence of Galbraith's warning is seen in Updike's novel The Poorhouse Fair. The society Updike portrays in the novel is a highly organized and well-ordered "affluent society" (16). Even the poorhouses are perfectly managed aiming at health, hygiene and longevity of the inmates, resorting to update health care. The spirit is altogether forgotten in attempts to reinforce the body. Consequently, in due course it leads to disintegration and chaos.

Updike is an unconventional novelist. This is evident from his very first novel The Poorhouse Fair which is anti-utopian and set in future, like George Orwell's Nineteen Eighty Four and Aldous Huxley's The Brave New World, heralding the world's doom. Updike calls it an anti-novel, thus indicating Nathalie Sarraute's description of the modern novelistic predicament. By modeling his first novel on "the cool surface of some contemporary French novels," Updike's attempt is "to give inanimate or vegetable presence some kind of vote in the democracy of narrative" (Samuels 116). Henry Bech regards this novel as Updike's masterpiece (Picked-up Pieces 10). One tends to agree with Updike's remark that authors write their best novels first or virtually first (ibid 39). The Poorhouse Fair is surely Updike's best. Updike's selection of subject for this novel also reflects his unconventionality as well as his maturity as a novelist. It was really astounding and daring on the part of a young novelist of only twenty-eight to have thought, felt, imagined, and written about the dying old people. Updike skillfully dramatizes their active sense of individual and corporate life, the life of meaning, order and faith, and their anguish and noble anxiety at the attempted elimination of their hope of an afterlife, the thought of which is their only last comfort, by the barren socialistic ideals of a microcosmic welfare state which proposes to build a heaven on earth itself where there will be only health and happiness. The dying old people come to the reader as fully rendered creations. This reveals another facet of Updike's art—the truthful presentation of material. In fact, realism is a very important constituent of Updike's art, perceptible in all his novels. In an interview Updike confesses:

> My connection with Christianity is unremarkable. I believed that realism even in its darkest aspect formed homage to the God of Creation, and a gesture of trust in Him. My work, as I fallibly understand it, concerns itself with issues of religion and belief from the first novel, The Poorhouse Fair, which houses

> an extended religious debate and latter day version of the stoning of St. Stephen. (Christianity and Literature 484-85)

In the novel, however, Updike also dramatizes the Christian myth of St. Stephen's stoning. The epitome of an ideal welfare state, the young atheistic liberal idealist and the director of the poorhouse where the old people are languishing under the weight of his blasphemy, Conner is stoned by the angry and anguished inmates. The re-enactment of the old myth is meant to render artistically the futility of the present and the sacred glory of the past which also represents faith. The aged regard the past and death as holy and ennobling and toy with these two fascinations as these open the gate to the immortality of the soul. All that Conner believes in is in the present and thinks of no one as God but himself.

The setting of the novel, the "Diamond County Poorhouse," is a poorhouse for the aged in a future welfare state. It is surrounded with shallowly concave farm plains tilled in scientifically, small hills, typical of New Jersey and presiding above, a ribbed sky, pink betokening rain. The Poor Home is getting ready to welcome visitors for its annual Fair. People are excited to mingle with different generation. The place becomes a convenient sociological terrain for the interaction of the opposites—the old and the young, America's past and present, the inner-directed and the other-directed, theist and atheist. The fair is organized for a single day from morning to evening—the day set apart for the Poorhouse Fair. They come from the nearby town to visit the House on this day. And the old display and sell the fruits of their labours though the year: "hand-made quilts, hand-carved toys and other artistic or useful things" (34). The story of the novel is divided into four parts. Preparation for the fair followed by fireside discussion among the old men after lunch, the order of Conner, a twenty five year young and the antagonist of the novel, for the cleaning of heap of earth and stones caused by the demolished wall, and finally is the fair. The preparation for the fair in the story is the first part. The old inmates of the poorhouse setup booths fix coloured lights and arrange their wires in the lawn despite the clouded skies threatening heavy rain. The very opening scene of the novel shows the strong dislike of the inmates for their new administrator—Conner. Conner has placed name tags on their chairs. This causes the antipathy of the inmates and gives vent to their rebellious spirit. They felt that they are managed by the administrator. It can be made out in Gregg's explosive reaction: "What birdbrain scheme is this now of Conner's. Is he putting tags on us so we can be trucked of to the slaughterhouse?" (4) Later the soft drink for the fair arrives in the morning, and the truck driver, goaded on by Gregg, a poet and the man of passion, and his old inmates, backs the truck right in the poorhouse wall demolishing a part of it. At the end the old men disperse as the rain begins to pour at that moment. Rain is the breakthrough of the

second movement in the story that begins with the fireside discussion among the old men after the lunch. Hook, protagonist of the novel and a ninety four year old "man of thought, shares nineteenth century political reminiscences with younger old men like Lucas—man of flesh and Gregg—a poet and man of passion" (146). He gets undivided attention of the whole company. Meanwhile, Conner, the prefect of the poorhouse, enters uninvited into their discussion which gradually develops into a debate between Conner and Hook on religio-political issues. Conner is an atheist. He believes neither God nor Heaven. He believes in perfect state of existence on this earth in a scientifically structured community. The inmates are shaken in their faith. The discussion embarrasses them a lot. It is the arrival of the band from the town which interrupted their discussion. They feel thankful to it. The musicians play indoors. Later, as the rain stops, they go ahead with plans to hold the fair. The third part of the story starts with Conner's instructions to Lucas. Conner orders the cleaning of the heap of the earth and stones caused by the demolished wall. He loves cleanliness. He wants the repair done before the fair begins. Some are carrying the stones; Conner himself handles the wheel-borrow but Gregg who is slightly drunk, shows a rebellion. Gregg deliberately aims a stone at the prefect which hits him on the legs and back consecutively. Conner backs out alarmingly. But the old people, men and women alike, as though caught by some mass hysteria join in the acting letting out their dormant animosity. Conner is humiliated without hurt. He reaches the safety of his room. Hook was suspected of the attack. Though Hook was not in the vicinity when the pelting took place yet in Conner's mind he was the instigator. Authoritatively, he asked:

> What made them do it? My patience is not limitless. Any repetition of mass defiance, and there will be measures taken. I promise that. In the meantime I suggest, Mr. Hook, that you yourself stop endangering your own health and the safety of the wooden buildings with cigars and matches? More than suggest it, I order it. (108)

Last but not least, fair is the last part of the story. It is the time for mingling. The young and the old visitors from the town come first to the fair having needs and thoughts. The old come for talk; and the young for candy. The younger generation has nothing to do with the "concept of America" (High 195). It is "dead in their skulls" (127). They are here in the recollection of an older America, "the America of Dan Patch and of Senator Beveridge" (126). The young visitors have no vision of the past. They talk on the present; try to construct new sags; create instant history in the absence of visions of the past. In instance of this is given in the vulgar story they religiously recount about a pregnant girl and her escapades. The

arrival of the night brings conclusion to the Fair and the story. In the silence of the band the visitors are getting the thoughts of disperse. It is not true that everyone is going home. The adults form group of three and four just to warn each other. The principal characters are back with their usual occupations. Conner has recovered from the shock and is back at his desk. The old Hook remains unsleeping and has feeling of some urgency to talk to Conner for whom he feels sympathy. An intimacy takes place in their heart. A sigh of satisfaction reflects on Hook's face. It was the satisfaction of religion over modern and scientifically structured world. The story ends with "what was it?"(147).

Thus religion as a fundamental human passion for man's intense belief in God for his own spiritual sustenance occupies the focal point of Updike's vision in The Poorhouse Fair. In unequivocal terms, the novel states that religion is in great peril at the hands of demonic science which proposes to extinguish it "by measuring quantities of nothing" (90). That is to say, the rational explanation of the phenomenon runs contrary to the very concept of religion as can be seen in the following explanation of creation outlined by Conner in the novel:

> Lightning stirred certain acids present on the raw earth. Eventually protein molecule occurred, and in another half-billion years the virus, and from then on its evolution. Imagine a blind giant tossing rocks through eternity. At some point he would build a cathedral. (90)

To begin the discussion of the characters of the novel it would be appropriate to outline the novelist's presentation. Broadly speaking, he creates basically two types of characters, two contrasted sociological types—"inner-directed" and the "other-directed." The inner-directed symbolizes the men of older America, men of faith and vision, is represented in the novel mainly by John F. Hook, Mendelssohn, and their associates, through some of the other old inmates, and is sometimes prone to the temptations of the culture of consumption and leisure. But Hook, represented as autonomous individual, is free of anxieties, not losing his bearings in the midst of temptations. On the other hand, it is, other-directed people who represent America of the future, presented in the novel chiefly by Conner—the administrator of the Poorhouse, Buddy—Conner's assistant, Dr. Angelo of the West Wing, and insensitive young visitors to the fair. To Conner, "heaven means a scientifically structured, well-ordered, healthy and homogeneous community on this earth itself." He is a non-conformist; he thinks of the welfare of the community where he lives. He, too, asks for the same conformity from the people under his charge. It would be right to say that Conner is a rational thinker with a scientific approach to an irrational world. So we find the conflict—the conflict of religion and faith, between the young administrator and the old inmates in the story. Updike

tactfully succeeds to establish the conflict between America's individualistic past and the conformist present, the older and the younger generation, the inner-directed and the other-directed men through the characters of the novel. The novel, The Poorhouse Fair, opens instantly with the inmate, Hook's discovery of evidence of Conner's attempts to order the world:

> What is this?
> What is what?
> Why, look.
>
> > Onto the left arm of the chair that was customarily his in the row that lined the men's porch the authorities had fixed a metal tab, perhaps one inch by two, bearing MR, printed, plus, in ink, his latter name. (3)

The above lines show the Linnaean Classification of seats and chair. It is presented directly at odds with the realities of life. The chair or seat is chosen by its convenience to the user in which there is no right or wrong chair. Confusion of ownership for the chair takes place and sets the conflict between the ideal and the real, between the what should be and what is, between the artificial order of soybean plastics and the natural and organic order of personal craftsmanship, and between the man who is a part of the wholeness of life and the man who is apart from it. Here, Updike skillfully selects the registers of the arguments that might have the ring of the cliche, but the sources of the argument are certainly human community. It proves unlikely source for the workings of his empirical philosophy. He is willing to make adjustments in his behavior looking up the "radar screen." He represents the evolving new type whose organ of gregariousness is overdeveloped while the rugged individualistic traits have dwindled out of sight. In fact, these types of conformists have appeared occasionally in American history. Emerson and Thoreau have already raised their voice against this type of trait of character more than a century ago. But in the 1950s, conformity has become the norm while it had been an exception in the earlier century. Conner never really acts in the world. The first introduction to his character is well illustrated here:

> > Conner's office was approached by four flights of narrowing stairs, troublesome for these old people. Accordingly few came to see him. He intended in time to change this; it was among the duties of the prefect, as he conceived the post, to be accessible. It had not been he but his predecessor Mendelssohn who had chosen to center the executive in the cupola. (11)

It had not been he but his predecessor Mendelssohn who had chosen to centre the executive in the copula. He brings no changes and remains isolated in his own world of the poorhouse. Conner thinks of "no one—as God" (12). He has

lost all senses of omen. Broadly speaking, Conner is the lover of purity and cleanliness. He wants "things clean" (51). His strong desire, somehow, creates a tension between the ideal and real world; leads to impurity and disorder to erupt from beneath. This is well seen not only on the inmates; attack on their leader, but in the motif of underlying imperfection that runs through the novel. Deliberately, it was Gregg, a seventy year old retired electrician who flipped one stone that struck Conner's his left thigh unhurt and expecting such errors from feeble man like Gregg, he automatically bent to retrieve it, and Gregg threw another one which stung Conner's lock. Conner got frightened and felt a sort of opaque menace.

Moreover, The Poorhouse Fair is clearly a product of its socio—cultural environment. The conflict between the young administrator and the old inmates of the poorhouse is symptomatic of the greater conflict between America's individualistic past and the conformist present, between the culture of labor and production and that of consumption and leisure and between inner-directed and other-directed men. The solution to the problem is to be found in "autonomous individuals," who can waive aside temptations and cope with a world of vast choices.

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URBAN POVERTY AND ITS IMPACT ON CHILDREN'S EDUCATION PARTICULAR TO SLUM AREA

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Abstract

This paper discuss the various problems facing by slum children at Odisha, here the researcher selected four major slums in the capital city of Odisha. Despite various governmental scheme till this marginalized group facing lots of problem for getting education. Not only education but also health problems, the study tries to evaluate the socio economic status of the slum dweller and its impact to their children's education, and check the dropout rate of slum children and try to find out the pragmatics solutions for above issue.

Keywords: Slum dweller, Education, Bhubaneswar, Children.

Introduction

Importance of education tells us the value of education in our life. Education provides the skill and knowledge of the world, it helps for good carrier. It gives the foundation of stronger nation. Education makes man completeness. In the word of Plato, "[1]Education not only provides knowledge and skill but also inculcate values training of instincts, fostering right attitudes and habits."[2]Constitution of India, Art 21A right to education which offer the state shall provide free and compulsory education to all children of the age of six to fourteen years in such manner as the state may by law, determine. While we look at the slum children they are always neglected and backward in the field of education. State and Central government implement good number of policies but this urban poor's are far away from this. There are many reasons behind this because of illiteracy, ignorance of the parent are one the major cause. The second one is Poverty of urban poor. If we deeply look at the matter we came to know that population of growth rate in slum areas are more high than other urban places, [3]World Bank Group, "Poverty is not only a problem of low income; rather it is multi-dimensional problem that includes low access of

[1] Plato, The laws Joweet,644.
[2] Inserted by the constitution(eighty six amendment act 2002)
[3] World bank Group, policy research Working paper2018

opportunities for developing human capital and to education" So education is the important tools which control high growth of population.

The concept of slum is a highly populated urban residential area consisting mostly of closely packed, incomplete infrastructure; unplanned houses and very unhealthy places. Thousands of children in the slums of Bhubaneswar, who live uncared, under nourished since birth are denied a piece of bread. Education and health facilities are dreams of slum children. They are the children whom everyone tries to forget or ignore. They are the children whom nobody protects, and nobody comforts. Slum children are involved in either wage earning outdoor or working at home. Distrust in the society frequently makes them gang leaders on the street, alcoholics, drug addict, narcotic peddler or part of harmful gangs even if they do not need to be so. Employers abuse them when they are young, they neither have negotiating capability nor do they have any support arrangement. Parents are often uneducated, unaware and no direction is given to their children. Appreciating the growing and allegedly hazardous challenges tackled by the children of the slums and those who live on the street is very crucial.

[4]Bhubaneswar city census "Total no. of Slums in Bhubaneswar city & it's Out Growth numbers 42,277 in which population of 163,983 resides. This is around 18.52% of total population of Bhubaneswar city & its outgrowth which is 885,363." The increasing trend in slum population from 2001 to 2011 leads to worse living condition due to the absence of planned economic activity and physical infrastructure. In the absence of suitable monetary action, the ongoing urbanization can lead to economically weaker sections of the migrant population settling in slums.

Most slums exist in countries struggling to rise from colonial manipulation, economic separation, and political disorder. Poverty is the main cause of slum people they are facing lot of trouble while getting food and daily maintenance of their livelihood. They don't have any future plan. Among the various problems faced by the slum dwellers it will affect their children's education.

Methodology:

Here the researcher used Descriptive research design, the sample size is 400. Unit of the study was the head of the households and the children from five slums. The universe of this study were Sikharchandi Custer, Bikash Parisad Basti, Nilachakra Nagar, Santi Palli, laxmisaghar Uppar Sahi at Bhubaneswar, capital of Odisha. Here the researcher used interview schedule for collecting data.

[4] Bhubaneswar city census 2011

Discussion:

Table No-1 Distribution of Respondent Number of Members in family

Family Member	Frequency	Percent
2-3	67	16.75
4-5	180	45.00
6-8 (Above)	153	38.25
TOTAL	400	100

The data in the Table No- 1 reveals that 16.75 percent of the population has 2-3 family members and 45 percent have 4-5 family members and 38.25 percent have 6-8 family Members. Here the data reveal that the highest number of population have 6-8 family members. Above data reveals that very high percent people have joint family system; here more than two brothers and their children and parents are staying together. And 45 percent families have parents and their children. As far as the family member and housing facilities in the slum is very much congested. It is one of the major problems because in a few rooms more persons are residing, it is very difficult for children to concentrate on studies. It is generally a very crowded atmosphere. Definitely the self study is affected in his family.

Table No- 2 Distribution of Respondents on the basis of Health issue in last Year

Health	Frequency	Percentage
Acute Diarrhea	43	10.75
Respiratory Infections	78	19.5
Fever	122	30.5
Worm Infestation	110	27.5
Skin Conditions	33	8.25
No Health Problem	14	3.5
Total	400	100

Most of the children were found to be under nourished and suffered from various diseases due to malnutrition and because of parental unawareness regarding health and hygiene and the importance of vaccination. Above data reveals that only 3.5 percent of children had no health problem, 30.5 percent children have suffered from fever and 10.75 percentage of children affected in Diarreha, 19.5 percentage of children have respiratory infection so health is a major problem in slum areas, it also affected children's education. Weak

health diseases and malnutrition were common health problems and they don't have sufficient money for treatment, sometimes it has major impact of access education.

Table No-3 Distribution of Respondent on the basis of Seasonal Migration

Migratiation	Frequency	Percentage
3-6	35	19.5
8-10	82	45.5
1yr	63	35
Total	180	100

Table No-3 shows that 19.5 percentage of respondents are migrated to cities for some seasonal business and 45.5 percentage of respondents are migrated for 8-10 month, only 35 percentage respondents are migrated for 1 month it will affect their children's education when they migrate they took their children with him, if they move without their children they did not get proper assistance for study so it affect children's education.

As the study is conducted in Odisha so majority are Odia people are residing in the slum but except it 30 percentage of population is out of state they can speak Odia but they cannot read Odia so the same thing also happened with their children also because they can understand Oriya but they are facing difficulties to read properly so language is one of the major problem of the slum children.

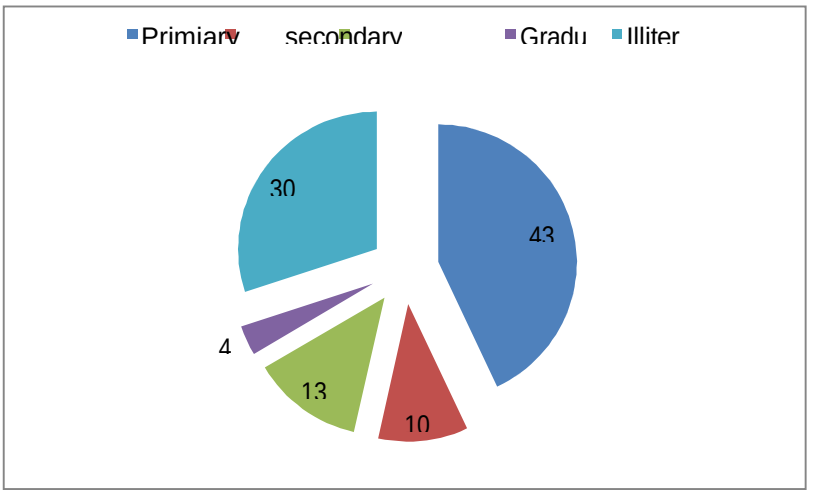
Table No-4 Unstable Occupation and Economic Condition

Respondents	Frequency	Percentage
Seasonal Business	175	43.75
Construction work	63	15.75
Daily Wage Labour	162	40.5
Total	400	100

Table No-4 shows that 43.75 percentage of respondents depend upon seasonal work, 15.75 depend upon construction work 40.5 depend upon daily wage labour. A large family size implies higher dependency ratio. In a family consisting of father, mother and three or four children of school going age, where father is the only earning member, working in an unorganized sector with poor and unstable income and where all family members dependent on him meet the basic necessities becomes a quite a tough job. In such situation the chance of providing quality education to their children or even helping them to continue their studies gets affected.

Chart No-1

Educational Background of the Parent



30 percent parent are illiterate 10 percent of respondents have secondary education 13 percentage have higher secondary education 4 percentage respondent have graduation, so due to below level of education, parent are not given proper guidance to their children so it's one of the problems faced by slum children. A large number of children residing in slums are first generation learners and even in those cases where parents are just literate the children hardly gets any help from parents regarding studies at home. There is also a firm belief among slum dwellers that children cannot learn from school alone. They need additional support and the best option available is that of private tutor. This is again an economic burden on parents. Moreover the private tuition that they avail is of much inferior quality and as a result it hardly makes an improvement in their achievement level.

Table No-5

Distribution of Respondent on the basis of Room

Room	Frequency	Percentage
Single	314	78.5
Two	72	18
Three	14	3.5
Total	400	100

Majority of the families 78.5 percentage were found to occupy small single

room without proper ventilation provision which serves them for multi-purpose activities living, dining, sleeping, storing, cooking etc. Bunk system is often used to accommodate all family members and their varied activities. A peaceful environment for concentrating and studying at home is almost missing. The entire surrounding environment was found to be dirty, unhygienic and susceptible to various diseases like malaria, jaundice, dysentery, tuberculosis, asthma, respiratory infection and so on. Small room without any window where bunk like arrangement has been made to accommodate all family members, clothes, utensils buckets, cooking ingredients and whatever else they possess. In these small rooms on an average six people resides. Different activities are carried on simultaneously in such condition is not at all favorable for studying at home.

Children join the workforce at an early age, thereby losing any chance of receiving education. The findings of the present study however is different from this as it shows that children not attending school does not mean that they are engaged directly in any economic activities to earn a living or to support its family Earning of children of 6-14 years age group who were engaged in some sort of economic activities mostly ranged between Rs. 250 to Rs. 300 per month. Children were found to be engaged in elementary activities like working at tea stall and road side eateries, working as apprenticeship etc. Because of their hard work slum children have less opportunity for basic education so it affects them for their future carrier. Sometimes they try to overcome all these activities but they fail to do so because of poverty and hunger again they compel to do so, it affects their education venerably.

Table No-6

Distribution of Respondents on the Number of Teacher

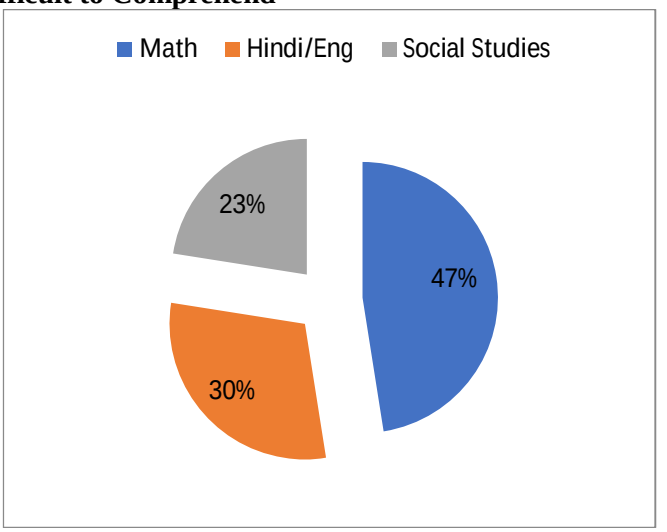
Respondents	Frequency	Percentage
Single Teacher	126	31.5
Two Teacher	180	45.0
More Than Two Teacher	94	23.5
Total	400	100

Table No-6 shows that Teachers and schools infrastructure itself is the biggest hindrance to teaching-learning. The researcher in her study also found problem in these schools in urban areas also. Near about 31.5 schools were run by single teacher while about 45percent schools had two teachers. Average number of teachers in schools surveyed was found to be 23.5 percent teacher in school is more than three. Hardly few schools were identified where there were sufficient numbers of teachers to fulfill the requirement of one teacher per class or section. Thus, it becomes unmanageable for the teacher to control the class and carry on

with the teaching-learning activities smoothly. Student's attendance falls as they find the classes uninteresting. Guardians hesitate to admit their children to such schools fearing that classes will not be held properly. Another important cause for drop-out for boys was found to be a lack of interest in studies while among girls, it was found to be domestication and household work. Household Work and baby care were the main causes of girls dropout. Elementary education a fundamental right, but on the other hand it is absolutely true that the mere passing of an act will not change the existing scenario of elementary education overnight.

Chart No-2

Subjects Difficult to Comprehend



Around 47.5 percent children reported that they found Mathematics to be the most difficult subject. Around 22.5 per cent children replied that they found social studies to be the most difficult subject. Only 30 per cent children found Hindi/English language to be the most difficult. The curriculum planners need to develop and manage the material in a simpler and interesting way so that it could be easily understood by the children who basically depend upon the school and teachers for learning the basic concepts and competencies.

The analysis of the student profile clearly indicates that students find it difficult to understand the mathematical concepts and is operations. Less than half of the students are able to afford private tuitions and more than half does not have any academic support from their families.

The household profile indicates that accessibility is still a major problem in the urban slum areas. Most of the children do not receive any academic assistance and help from their families. More than half of the children were overage, which

could be due to late admission or high repetition rate.

Conclusion

From the above discussion it is found that sum children have suffered lot there are lot of factors responsible for it. So the policies makers try to more concentrate and eradicate poverty in slum areas. Implement some welfare policy for the marginalized group. There should be particular organization to motivate and stimulate slum dwellers to give education to their children. Slum dwellers should be aware of the policies and programs which are already implemented by the state and central government. Government should give Scholarships and free supply of text book which encourage deprived children for getting more education and minimize the dropout rate. Government should recruit high specialized skilled teacher which always motivate the student and encourage achieving their future goal and minimizing the dropout rate. Once in a month there should be teacher and parent meeting regarding various issues related to children facing problem for getting education teacher should motivate their parent and encourage about the governmental skims and motivate them the value and importance of education. Children are exaggerated by various adjustment problems like family, social, educational, financial and emotional problems. Appropriate corrective measures should be taken to assimilate them and stimulate them to decrease the adjustment problem. Individual counseling should be given to all the children who are living in slums. The intellectual development of children is much vital for future development of the Nation.

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KINETIC DETERMINATION OF THIOSULPHATE IN TRACE AMOUNTS

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Abstract

Thiosulphate is a sulphur containing ligand which has quite evident in its chemical formula as$Na_2S_2O_3$. The sulphur atom present in thiosulphate inhibits the Mercury catalyzed substitution reaction between hexacyanoferrate (II) and Phenanthroline [Phen]. The inhibition of the reaction takes place since the catalyst has a strong affinity to bind with the inhibitor.This inhibitor-catalyst reaction thus competes with the ligand substitution reaction between the hexacynoferrate (II) and the phenanthroline. The reaction was studied spectrophometricallyat528n.m in aqueous medium and a dark green coloured complex compound, $[Fe(CN)_5Phen]^{3-}$ was formed. The chosen reaction conditions were : pH= 3.0±0.02, temp. = 25.0±0.1^oC, lonic strength (μ)= 0.05M (KNO_3). Linear calibration graphs were recorded at different times (A_t) and several concentrations of thiosulphate , under the chosen reaction conditions. The detection limit for thiosulphate was recorded at $6x10^{-7}M$, equilibrium constant for the complex of inhibitor and catalyst i.e.K_{CI} ,the Michaelis-Menten constant i.e.K_m and equilibrium constant for the complex of substrate and catalyst i.e.K_s were calculated from the datas so obtained kinetically . A general mechanism of the reaction has also been proposed.

Keywords: Thiosulphate, Inhibition Effect, Kinetic, Phenanthroline, Hexacyanoferrate (II)

Introduction

Thiosulphate is a colourless compound and is used as a chlorine neutralizer in swimming pools. Its Medical uses comprise as an antidote to cyanide poisoning. Thiosulfate serves as a sulfur donor for the conversion of cyanide to thiocyanate and therefore it can then be safely excreted by urination, this reaction is catalysed by the enzyme rhodanase. For this purpose it is used together with sodium nitrite. Apart from such utilities it can also become toxic and it's toxic range for humans when injected intravenously is 0.2 to 1.5 g/kg. Secondly Ingestion of 12 g of sodium thiosulfate was virtually non-toxicexcept

for producing violent catharsis. Therefore, it needs to be monitored in such cases.

Numerous kinetic studies of metal catalysed N- Heterocyclic ligand substitution reaction of hexacyanoferrate (II) have been studied[1-3]. Trace determination of many inorganic ions have also been investigated[4-15]. Addition of a complexing agent to a metal catalysed reaction may result in either promotion or inhibition of the reaction . Linear relation of the added ligand can often be obtained by simple empirical treatment of rate data. This forms the basis of determination of small amounts of complexing agents by the Method Known as "Kinetic Method" developed by us here.

We have already studied the Kinetic determination of Hg (II) at trace levels using its catalytic effect on ligand substitution reaction between hexacyanoferrate (II) and Phenanthroline[2]. The reaction was followed spectrophotometrically at 528n.m. (λmax of a dark coloured complex $[Fe(CN)_5Phen]^{3-}$. The above cited indicator reaction is used for determination of sulphur containing ligands like cysteine[7]. These ligands have high formation metal constants than those of the ligands containing N and O atoms even at low pH values and are thus best suited for the study. Like Cysteine ,thiosulphate also forms chelates with Hg (II) and inhibit the rate of the indicator reaction. The optimum conditions for the indicator reaction like concentration of reagents, temperature, pH and ionic strength have been studied here.

There is limited in formation available in literature to determine these complexing agents [23,24] by metal catalysed reactions [15-22]. Moveover, the analysis requires expensive instruments of voltametry and others [25,26] . Therefore, the need for a simple and less expensive technique is always required. The present paper describes the determination of thiosulphate in trace levels based on its inhibitory effect of the Mercury catalysed ligand substitution reaction between hexacyanoferrate (II) and Phenanthroline .

Experimental

Materials

Double distilled water was used throughout to prepare all solutions. All the chemicals used in this study were of analytical reagent grade. The solution of $K_4[Fe(CN)_6]. 3H_2O$ (AR,E. Merck, Germany) was prepared by weighing a desired amount and kept in dark in coloured bottles. The fresh solutions of Phenanthroline (S.D. Fine Chemicals) was prepared in double distilled water everyday before starting the kinetic run. A stock solution of $HgCl_2$ (BDH) was prepared by weighing and dissolving $HgCl_2$ in water. Dilute solutions of $HgCl_2$ were also prepared daily in order to prevent loss due to its adsorption on glass surfaces. KNO_3 (A.R. Glaxo) was used to maintain ionic strength in reaction medium. Thiosulphate was standardized iodometrically against standard

$K_2Cr_2O_7$ solution[27]. The pH of the reaction mixture was maintained at a desired value using potassium pthalate(A.R. Qualigens Fine chemicals) -sodium Hydroxide buffer [28].

Apparatus

All the reactant solutions were equilibrated at 25°C by keeping them inside environmental chamber in order to maintain the desired temperature within the accuracy of ± 0.1°C , Genesis model No. 10UV was used to record the spectra of the reaction. The pH measurements were made on a digital pH meter of Sio-global pH meter.

Procedure

1 ml of Hg^{+2} solution of a fixed concentration was taken and 1ml of inhibitior or complexing agent of various concentrations were mixed and kept for 10 minutes to ensure formation of CI. Then 3ml of buffer followed by 1ml of phenanthroline of specific concentration was added. The reaction was started by adding 1ml of Ferrocyanide solution. The reaction mixture was shaken vigorously and then transferred to a cuvette of 1cm path length kept in a cell compartment maintained at 25.0±0.1°C. A fixed time procedure at 528 n.m. was used for mearusing the initial rate to establish the calibration curves.

The chosen reaction conditions are $[Fe(CN)_6]^{4-}$ = $2.0x10^{-3}$M, [Phen]= $2.0 x10^{-5}$M, $[Hg^{+2}]$= $7.0x10^{-3}$ pH= 3.0±0.02, temp.=25.0±0.1°C, lonic strength (μ) =0.05M (KNO_3).

Results And Discussion

The Phenanthroline substitution of the co-ordinated cyanide in hexacyanoferrate (II) is homegenoslycatalysed by (Hg^{+2}) ions in acidic medium at normal temperature. A detailed kinetic and mechanistic study of this reaction has already been studied. Traces of (Hg^{+2}) ions enhance the rate of the reaction to a very good extent and the reaction rate was followed spectrophotometrically at 528nm, due to the formation of product $[Fe(CN)_5Phen]^{3-}$ .The studies show that there is no interference from the reactants $[Hg^{+2}]$, K_4 [Fe (CN) $_6$], [Phen].The concentration of thiosulphate was varied from mole ratio 0.1 to 5. The absorbance changes observed for cysteine system after a fixed time interval are given in Table1.

Table 1. Determination of cysteine by its inhibitory effect on Hg^{2+}catalysed substitution of cyanide in $[Fe(CN)_6]^{4-}$ by phen,

Thiosulphate taken $x10^6$M	A_t Absorbance after t minutes	
	A_{15}	A_{20}
18.32	0.169	0.176
14.51	0.182	0.195

10.46	0.199	0.201
8.32	0.210	0.215
6.02	0.238	0.252
4.21	0.272	0.331

Under conditions:$[Fe(CN)_6]^{4-}$= 2.0x10^{-2}M, [Phen]= 2.0x10^{-4}M, $[Hg^{2+}]$ = 7.0x10^{-7}M,pH= 3.0±0.02, temp.= 25±0.1^{o}C, I = 0.05M

Effect of pH on the Reaction rate.

The pH dependence of the reaction rate was studied in the pH range 1-8 at 3 time points at A_t (where t= 10,15,20 min). The change in absorbance at 528 nm as a function of pH is shown in Fig 1.Here, the rate of the reaction is slow at lower pH, attains a maximum value at pH= 3.0±0.02, then falls off again. This decrease is attributed to the deficiency of protons needed to regenerate the catalytic species or due to decrease in $[Hg^{+2}]$ as a result of hydrolytic precipitation. Thus, pH value of 3.0±0.02 becomes critical for this system and should be maintained at optimum value to losing sensitivity required for the determination using phthalate – sodium hydroxide buffer [28].

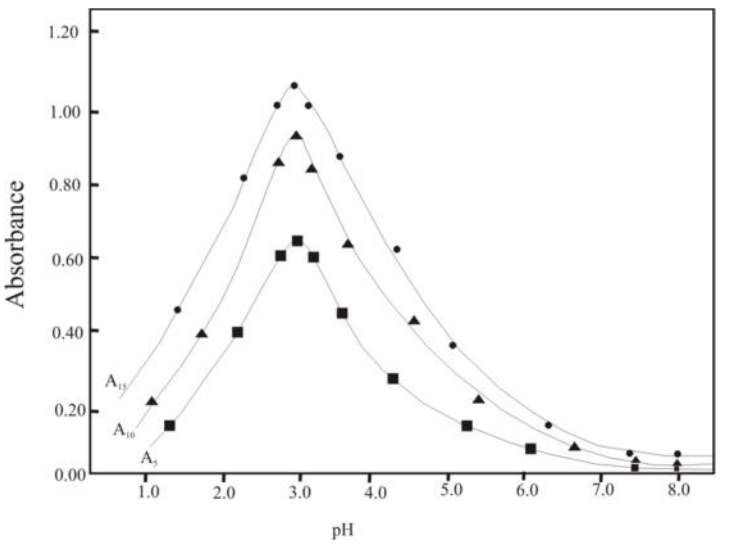


Fig 1. Effect of pH on the Hg(II)- catalysed substitution of CN^- in hexacyanoferrate(II) by [Phen]:Conditions: $[Fe(CN)_6]^{4-}$ = 1.50×10^{-2}M, [Phen] = 1.50×10^{-3}M, $[Hg^{2+}]$ = 1.5×10^{-5}M, μ = 0.03M (KNO_3) and temperature = 25.0 ± 0.1ºC

Effects of Reagent Concentration, Temperature and Ionic strength

The effect of phenthroline concentration was studied at the optimum pH and a [Phen] range $2.0x10^{-4}$M, to $3.5x10^{-3}$M. On the basis of studies done, it was revealed the rate of reaction increases linearly up to the concentration $2.0x10^{-3}$M and then finally levels off at [Phen]≥ $2.0 x10^{-3}$M.Thus, the [Phen] of $2.0x10^{-3}$M was selected as optimal.

The effect of $[Fe (CN)_6]^{4-}$ on the initial rate was studied in the range$1.5x10^{-4}$ to $2.5x10^{-2}$M, keeping all other values constant. The plot of log initial rate vs log $[Fe (CN)_6]^{4-}$ shows a variable order dependence on $[Fe (CN)_6]^{4-}$ changing from first order at lower concentrations to a fractional order at higher concentrations but certainly not tending towards zero. A $[Fe (CN)_6]^{4-}$ of $2.0x10^{-3}$M was chosen optimal.

The influence of temperature on the rate of the catalysed and uncatalysed reaction was studied in the range of 20-50^oC. The reaction obeyed Eyring equation and maximum rate was achieved at 25^oC which was selected for further studies. The effect of ionic strength (μ) on the rate of catalysed reaction in the range 0.02 to 0.05M, showed increase an then decrease in the reaction rate. An ionic strength of 0.05M gives measurable change in absorbance values, which was selected for further studies.

For analytical applications, the catalytic effect of $[Hg^{2+}]$ on the rate of catalysed reaction was studied in the range $2.5x10^{-7}$ M to $9.0x10^{-7}$M under the conditions, $[Fe (CN)_6]^4$-=$2.0x10^{-4}$M, [phen] = $2.0x10^{-3}$M, pH= 3.0±0.02, temperature = 25±0.1^oC ,μ=0.05M (KNO_3). The plot of absorbance after 10min (A_{10}) vs. $[Hg^{2+}]$ was found to be linear in the $[Hg^{2+}]$ range of $4.5x10^{-7}$ M to $9.5x10^{-6}$M. A $[Hg^{2+}]$ of $7.0x10^{-7}$M provides sufficient absorbance change, and hence was used for determination of. Thiosulphate.

Kinetic Role of inhibiting ligands

Based on the consideration that Inhibitor cysteine is competitive with the catalyst [29] and is reversible, for the Mercury catalysed reaction between phenanthroline and hexacyanoferate (II), thereby depleting the concentration of catalyst and reducing the rate of the reaction . The reaction scheme proposed earlier [30] and modified to include the rate of inhibitor denoted by I, is outlined below:

If we take $[Fe (CN)_6]^{4-}$ present in non-rate limiting excess condition as S and its initial concentration by $[S_0]$, it is simple to derive the rate expression by comparing it with enzyme catalysed reaction of a single substrate in presence of an inhibitor. The reaction rate in presence of catalyst can be given by equation (1)

$$\frac{1}{V_0} = \frac{1}{V_{max}} + \frac{K_m}{V_{max}} \cdot \frac{1}{[S_o]}$$

This equation can be transformed to Line Weaver-Burk [31]form as Equation (2) as under

$$V_0 = \frac{V_{max}}{1 + \frac{K_m}{[S_o]}}$$

Here, Vo is the reaction rate in presence of catalyst only V_{max} is the maximum attainable rate at a particular catalyst concentration in presence of a non-rate limiting quantity of substrate and K_m is the Michaelis-Menten constant, which is roughly equivalent to the dissociation constant of the catalyst substrate complex. In presence of inhibitor, the rate of the reaction can be represented as equation (3)

$$V_i = \frac{V_{max}}{1 + \frac{K'_m}{[S_o]}}$$

Where K'_m is the new apparent Michaelis-Menten constant in presence of the inhibitor. It can be shown that

$$K'_m = K_m \left[1 + \frac{[I_o]}{K'_{CI}}\right]$$

Substituting this value is Equation (3) we get

$$V_i = \frac{V_{max}}{\frac{K_m}{[S_o]}\left[1 + \frac{[I_o]}{K'_{CI}}\right]}$$

Here, $V_i$is the reaction rate in presence of inhibitor (at a fixed catalyst concentratiion), and K'_{CI} is the dissociation constant of the catalyst inhibitor (C-I) complex.

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Equation (5) can also be transformed to equation (6) in Line Weaver – Burk form as

$$\frac{1}{V_i} - \frac{1}{V_{max}} = \frac{K_m}{V_{max}[S_O]} + \frac{K_m}{V_{max}[S_O]} \cdot \frac{[I_O]}{K'_{CI}} \qquad (6)$$

In the above equation, V_{max} in not an experimental quantity, but it is obtained from the intercept of the plot of $1/V_o$vs $1/[S_0]$ from equation (2) in absence of inhibitor as shown in Figure 2. The slope of this plot gives the Value of K_m as 72.71 .

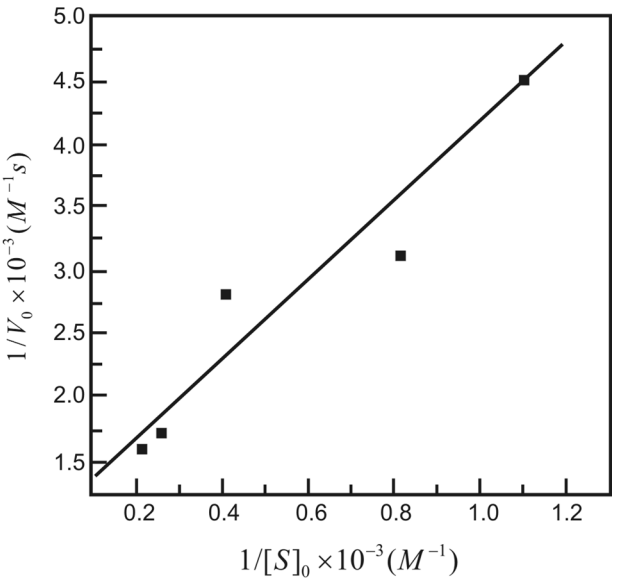


Fig. 2. Linear plot of $1/V_O$Vs $1/[S_O]$:Conditions: $[Hg^{2+}] = 1.5\times10^{-6}$M, [Phen] = 2.5×10^{-2}M, pH = 3.0 ± 0.02, temperature = 25 ± 0.1°C, μ = 0.03M(KNO_3).

Equation (6) also works when the inhibitor 'I' forms a C-I type chelate with the catalyst 'C' and for this reaction no substrate inhibitor is seen. Under these conditions a plot of $\left[\frac{1}{V_i} - \frac{1}{V_{max}}\right]$vs $[I_0]$ gives a straight line as shown in Figure 3. The intercept of this plot give a K_m that agrees with the value calculated here by plotting $\frac{1}{V_o}$ vs$\frac{1}{[So]}$ the slope of which gives a K'_{CI} that corresponds to the cysteine complex of Mercury, as listed in Table2.

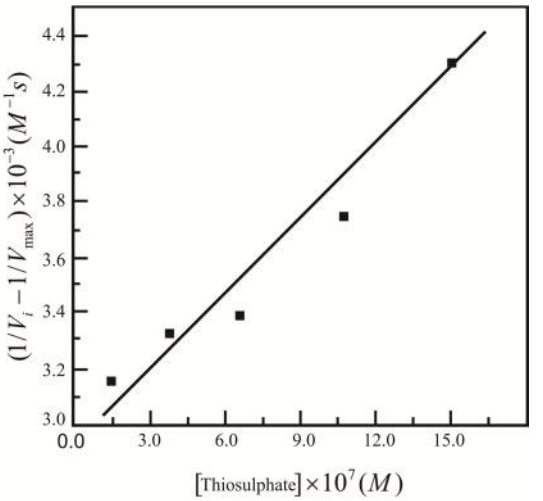


Fig. 3 Determination of K'_{CI} and K_m in presence of inhibitor thiosulphate: Conditions: $[Fe(CN)_6]^{4-}$ = 3.0×10^{-2}M, [Phen] = 1.5×10^{-3}M, $[Hg^{2+}]$ = 7.5×10^{-7} M, pH = 3.0 ± 0.02, μ = 0.05 M(KNO_3) and temperature = 25 ± 0.1ºC.

The reciprocal of this Km is approximately equal to the stabitity constant K_s (log K_s = 1.91±0.98)of the catalyst substrate complex. The values of the stability constant (K_{CI}) of the CI complexes and its reciprocal K'_{CI} are also given in Table 2. The competitive, non-competitive and incompetitive behavior of inhibiting ligands can also be differentiated, although this is beyond the scope of this study.

Table2. Conditional Formation constants under optimal conditions.

A.	Mercury - inhibitor Complex Inhibitor – Thiosulphate	Log K_{CI} 6.12 ±0.02
B.	Michaelis - Menten Constant Inhibitor – Thiosulphate	Log K_m 1.79 ± 0.02
C.	Catalyst - Substrate Complex	Log K_S 1.91 ± 0.03

Analytical Applications

The validity of the proposed method was tested by the recovery experiments performed on synthetic mixtures (SMs) of water sulphide ions as shown in Table 3. The synthetic mixture analysis results in a reasonably good recovery. Under the specificd conditions, the detection limit for thiosulphate was $4.8\text{x}10^{-7}$ M.

Table 3.Determination of micro amounts of thiosulphate in Synthetic Mixtures

Synthetic Mixtures (SM)	Composition of SM (µM)	Found (µM) proposed Method	Recovery %
SM1	Cys (0.4) + S^{2-} (0.4)	0.40	100.0
SM2	Cys (0.4) + S^{2-} (1.0)	0.42	102.2
SM3	Cys (0.5) + S^{2-} (1.0)	0.51	101.7
SM4	Cys (0.9) + S^{2-} (1.0)	0.92	102.2

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CYBER PSYCHOLOGY AND ITS IMPACT ON 10TH AND INTERMEDIATE STUDENTS IN WEST GODAVARI DISTRICT OF ANDHRA PRADESH

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Abstract
The present investigation was an attempt to determine the cyber psychology and its impact on 10th and intermediate students in west godavari district of Andhra Pradesh .Various Indian and foreign studies were reviewed .The present study deals with the influence of internet, computers, websites etc. on the student behavior. The study conducted on a sample 200 students among them 100 boys and 100 girls studying 10 th and intermediate education from selected high schools and junior colleges of west Godavari district of Andhra Pradesh. The data were analyzed by way of mean , standard deviation and correlation for testing the various hypotheses were framed. The results were discussed and the conclusions were drawn for the study.

Keywords: Cyber Psychology, Impact

Introduction:

Cyber Psychology can be broken down into two parts, Cyber and Psychology. Cyber deals with computers and Psychology deals with psychology of mind and human behavior. Therefore cyber psychology is the study of mind and human behavior and its interaction with one's self and others while on computers .The use of computer on the internet facilities interaction with other people, not just with computers.

Cyber space is experienced in a virtual reality with actual communities and interaction. The study of cyber space and human mind and behavior is what constitutes cyber psychology. Childhood and adolescence are foundational developmental stages in the formation of habits, attitudes and beliefs. Experiences that distort or constrain health development or affect a person's long term success in marital and family relationships need to be top priorities for parents, policy matters and educators to address. Internet Pornography may be considered one such priority with regard to youth.

Need of the Study:-

Computers and Internet facilitated rapid communication and information access across the world. Today, people can be reached faster the jobs can be done faster and more number of activities can be completed in shorter period of time due to this global connectivity, in numerable changes and development are seen in all spheres of human life. Internet has crept into the lives of many users and brought with it a variety of entertainment by keeping them occupied day and night however, along with its applications, Internet has also brought excess of information through certain absorbing, tempting and luring sites that can hold users attention and interest to a great extent thereby making them loose contact with reality at given time and space. Prolonged and a continuous involvement with entertainment on internet may lead to disturbance in psychological well being of these users .Use of Computer and internet has been rapidly increasing in India. Keeping in view the adverse affects of "Cyber World" on the internet users the present study was taken up to explore "Cyber Psychology and its impact on 10th and Intermediate students" in west godavari District of Andhra Pradesh .

Objectives of the Study:-

- To find out the difference between emotional adjustment of boys and girls of 10th and intermediate students who use internet.
- To find out the difference between Social adjustment of urban and rural students of 10th and intermediate students who use internet.
- To find out the difference between enjoyment aspect of government and Private management students of 10th and intermediate who use internet
- To find out the difference between education aspect of government and private students of 10^{th} and intermediate
- To find out the difference between Knowledge aspect of government and private students of 10^{th} and intermediate

Limitations of the Study:-

Keeping in view of the limit of time the researcher confined the study to certain small group of sample in west godavari district of Andhra Pradesh .The study aimed at an investigation of Cyber Psychology and its impact on 10^{th} and intermediate students.

- The study is limited only to the following variables.
  a) Male/Female
  b) Urban/Rural
  c) Government/Private
  d) 10^{th} class/ Intermediate

Method of the study:

For the present study the standardized tool; Questionnaire is administered on 200 students of 10th and intermediate students belonging to different schools and Colleges in west Godavari district for collecting data. The questionnaire for the present study consists of fifty statements against each statement two alternatives 'Yes' or 'No' are provided.

The researcher has divided the questionnaire into five areas. They are items related to enjoyment, education, more knowledge, Social adjustment, and emotional adjustment aspect.

A preplanned and well described method will provide the researcher a scientific and feasible plan for attacking and solving the problem under investigation the present research normative survey methods is used.

Result and Discussion

- Private institution students use more internets when compared to Government institution students.
- Private institution students use internet for gathering knowledge than Government students.
- Urban students use internet more when compared to rural students to gather knowledge
- Boys enjoy more when compared to girls in the usage of internet.
- Urban students use internet more for enjoyment than rural students who use internet
- More government institution boys are facing social adjustment compared to government institution girls, due to the influence of internet.
- Girls use internet as the major source of knowledge than boys.
- Girls tend to access more relative educational information from internet when compared to boys.
- Under the influence of internet, more girls are facing emotional adjustment compared to boys.

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A BRIEF OVERVIEW OF FUZZY LOGIC THEORY

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Abstract

Uncertainty is a time period used in subtly one of a kind approach in a wide variety of fields, inclusive of philosophy, statistics, economics, finance, insurance, psychology, engineering, and science. It applies to predictions of future events, to physical measurements already made, or to the unknown. Uncertainty needs to be taken in an experience radically distinct from the acquainted idea of risk, from which it has in no way been desirable separated.

Keywords: Fuzzy logic, Fuzzy systems, Fuzzy set theory, Fuzzy application

About Research Methods/Methodology (of this paper)

The current paper focuses on the integral fact is that 'risk' means in some instances a volume prone of measurement, while at other instances it is something enormously not of this character; and there are far-reaching and quintessential variations in the bearings of the phenomena depending on which of the two is sincerely present and operating. It will appear that a measurable uncertainty, or 'risk' proper, as we shall use the term, is so far one-of-a-kind from an immeasurable one that it is no longer in impacts an uncertainty at all. In this paper, I supply a short overview of Fuzzy Based Logic and its properties.

Introduction

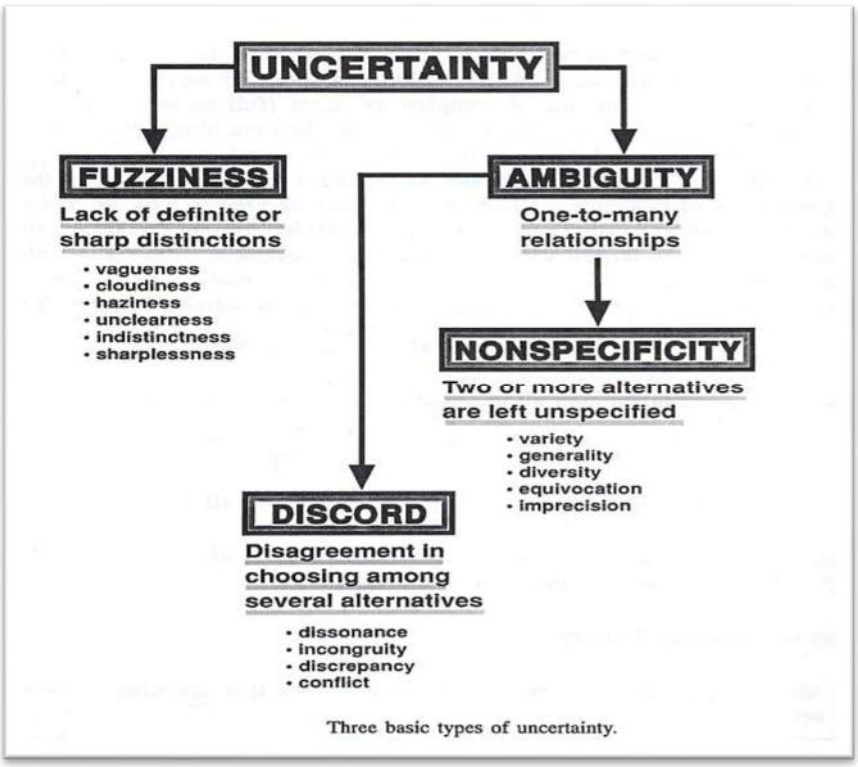
What is the relationship between uncertainty, probability, vagueness, and risk? Risk is described as uncertainty based on a well-grounded (quantitative) probability. Formally, Risk = (the chance that some event will occur) X (the penalties if it does occur). Genuine uncertainty, on the other hand, can't be assigned such a (well-grounded) probability. Furthermore, proper uncertainty can often now not be decreased significantly by using trying to gain more information about the phenomena in question and their causes. Moreover, the relationship between uncertainty, accuracy, precision, preferred deviation, widespread error, and self-assurance interval is that the uncertainty of size is referred to by giving a range of values which are likely to enclose the actual value. This may additionally be denoted by error bars on a graph, or as fee ± uncertainty, or as decimal fraction (uncertainty).

I. Fuzzy Based Logic

Often, the uncertainty of a measurement is found by way of repeating the dimension ample instances to get a proper estimate of the preferred deviation of the values. Then, any single fee has an uncertainty equal to the widespread deviation. However, if the values are averaged and the mean is reported, then the averaged dimension has uncertainty equal to the popular error which is the standard deviation divided by using the rectangular root of the variety of measurements. When the uncertainty represents the standard error of the measurement, then about 68.2% of the time, the proper cost of the measured volume falls inside the mentioned uncertainty range.

Therefore no matter how correct our measurements are, some uncertainty constantly remains. The opportunity is the diploma that component happens, but the probability is the chance that things occur or not. So the strategies that we deal with uncertainty are to avoid the uncertainty, statistical mechanics and fuzzy set (Zadeh in 1965).

(Figure from Yuan&Klir)



Three basic types of uncertainty.

Fuzzy Sets

Fuzzy units have been presented by methods for Lotfi A. Zadeh (1965). What Zadeh proposed is exceptionally a decent arrangement a change in outlook that originally gotten acknowledgment in the Far East and its effective application has guaranteed its selection around the globe. Fuzzy sets are an expansion of old-style set thought and are utilized in fluffy rationale. In the old style set idea, the participation of components in connection to a set is evaluated in twofold expressions as per a fresh circumstance — a perspective either has a place or does now not have a place with the set. On the other hand, fuzzy set idea endorses the progressive assessment of the enrollment of components in connection to a set; this is portrayed with the asset of a participation include esteemed in the genuine unit interim [0, 1]. Fluffy units are an expansion of traditional set rule since, for a positive universe, an enrollment trademark may go about as a marker work, mapping all components to both 1 or 0, as in the old style idea.

Also, A fuzzy set is any set that enables its individuals to have various evaluations of participation (enrollment work) in the interim [0,1]. A fuzzy set on a classical set X is defined as follows:

$$\tilde{A} = \{(x, \mu_A(x)) \mid x \in X\}$$

The membership feature $_A\boldsymbol{\mu(x)}$**{**we may represent $_A\mu(x)$ in place of $\mu_A(x)$**}** quantifies the grade of membership of the factors x to the quintessential set X. A component mapping to the cost zero skill that the member is not covered in the given set, 1 describes an absolutely covered member. Values strictly between 0 and 1 represent the fuzzy members.

Membership function terminology

- Universe of Discourse: the universe of discourse is the range of all feasible values for an entry to a fuzzy system.
- Support: the assist of a fuzzy set F is the crisp set of all factors in the universe of discourse U such that the membership function of F is non-zero.

$$\text{Supp}A = \{x \mid \mu_A(x) > 0,\ \forall x \in \text{X}\}$$

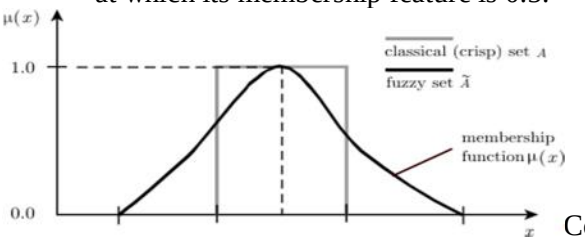
- Core: the core of a fuzzy set F is the crisp set of all factors in the universe of discourse U such that the membership function of F is 1.

$$\text{core}A = \{x \mid \mu_A(x) = 1,\ \forall x \in \text{X}\}$$

- Boundaries: The boundary of a fuzzy set F is the crisp set of all points in the universe of discourse U such that the membership characteristic of F is between 0 and 1.

$$\text{Boundaries} A = \{x \mid 0 < \mu_A(x) < 1,\ \forall x \in X\}$$

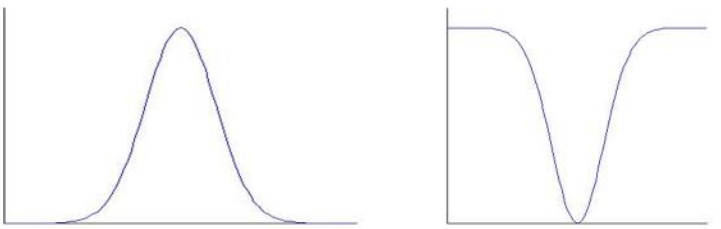
- Crossover point: the crossover factor of a fuzzy set is the element in U at which its membership feature is 0.5.



$$\forall \lambda \in [0, 1]$$

Convex fuzzy set: A fuzzy set A is Convex, if for

$$X \in R \quad \mu_A(\lambda x_1 + (1-\lambda)x_2) \geq \min(\mu_A(x_1),\ \mu_A(x_2))$$



Type of membership functions

1. Numerical definition (discrete membership functions)

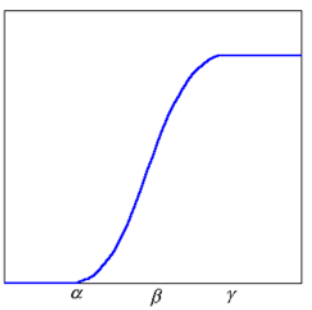
$$A = \sum_{x_i \in X} \mu_A(x_i) / x_i$$

2. Function definition (continuous membership functions)

Including S function, Z Function, Pi function, Triangular shape, Trapezoid shape, Bell shape.

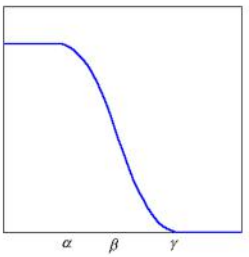
$$A = \int_X \mu_A(x) / x$$

(1) S function: monotonically increasing membership function



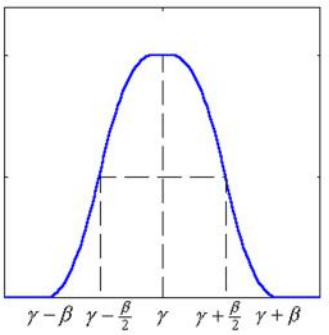
$$S(x;\alpha,\beta,\gamma) = \begin{cases} 0 & for\ x \leq \alpha \\ 2(\frac{x-\alpha}{\gamma-\alpha})^2 & for\ \alpha \leq x \leq \beta \\ 1-2(\frac{x-\alpha}{\gamma-\alpha})^2 & for\ \beta \leq x \leq \gamma \\ 1 & for\ \gamma \leq x \end{cases}$$

(2) Z function: monotonically decreasing membership function



$$Z(x;\alpha,\beta,\gamma)=\begin{cases}1 & for\ x\le\alpha\\ 1-2(\frac{x-\alpha}{\gamma-\alpha})^2 & for\ \alpha\le x\le\beta\\ 2(\frac{x-\alpha}{\gamma-\alpha})^2 & for\ \beta\le x\le\gamma\\ 0 & for\ \gamma\le x\end{cases}$$

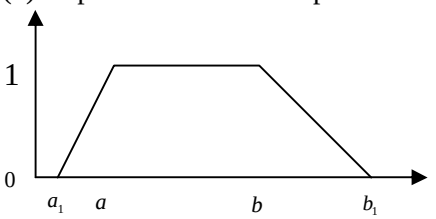
(3) Πfunction: combine S function and Z function, monotonically increasing and decreasing membership function



$$\Pi(x;\beta,\gamma)=\begin{cases}S(x;\ \gamma-\beta,\ \gamma-\frac{\beta}{2},\ \gamma) & for\ x\le\gamma\\ 1-S(x;\ \gamma,\ \gamma+\frac{\beta}{2},\ \gamma+\beta) & for\ x\ge\gamma\end{cases}$$

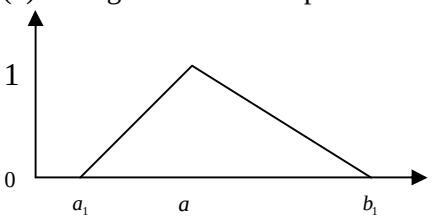
Piecewise continuous membership function

(4)Trapezoidal membership function



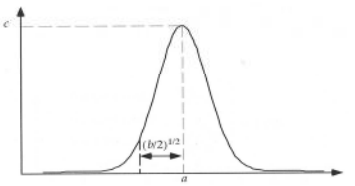
$$\mu_A(x)=\begin{cases}0 & for\ x\le a_1\\ \frac{x-a_1}{a-a_1} & for\ a_1\le x\le a\\ 1 & for\ a\le x\le b\\ \frac{b_1-x}{b_1-b} & for\ b\le x\le b_1\\ 0 & for\ b_1\le x\end{cases}$$

(5) Triangular membership function



$$\mu_A(x)=\begin{cases}0 & for\ x\le a_1\\ \frac{x-a_1}{a-a_1} & for\ a_1\le x\le a\\ \frac{b_1-x}{b_1-a} & for\ a\le x\le b_1\\ 0 & for\ b_1\le x\end{cases}$$

(6) Bell-shaped membership function



$$A(x) = ce^{-\frac{(x-a)^2}{b}}$$

Before illustrating the mechanisms which make fuzzy logic machines work, it is essential to understand what fuzzy logic genuinely is. Fuzzy good judgment is a superset of traditional (Boolean) logic that has been prolonged to cope with the notion of partial truth- truth values between "completely true" and "completely false". As its title suggests, it is the common sense underlying modes of reasoning which are approximate instead than exact. The significance of fuzzy logic derives from the truth that most modes of human reasoning and especially frequent feel reasoning are approximate in nature.

The integral characteristics of fuzzy common sense are as follows.

• In fuzzy logic, actual reasoning is viewed as a limiting case of approximate reasoning.
• In fuzzy good judgment, everything is a rely of degree.
• Any logical machine can be fuzzified.
• In fuzzy logic, understanding is interpreted as a collection of elastic or, equivalently, fuzzy constraint on a collection of variables.
• Inference is viewed as a technique of propagation of elastic constraints.

II. Applications of fuzzy set theory:

An innovative method based on fuzzy set theory has been developed that can precisely predict market demand on goods. Based on the fuzzy demand function and fuzzy utility feature theories, two real-world examples have been given to display the efficacy of the theory.

Example:

I. **On Consumption Theory**

1. Consumer Behaviors and Preference - One client would in popular have exceptional consumption behaviors or preferences from another. He might also spend money on computers and technical books, while the difference may additionally spend on clothing and food. Availability of these facts on purchaser preference will be of extremely good fee to a marketing company, a bank, or a credit card company that can use these records to goal one of a kind businesses of customers for multiplied response price or profit. By the identical token, statistics on consumption choice of the residents in one particular vicinity can assist companies in planning their operations in this vicinity for multiplied profit. There are, it is very important to have a tool that

can help analyze consumers' behaviors and forecast the modifications in buy patterns and adjustments in purchase trend.

2. Fuzzy Consumption Utility Functions-based Utility Theory In studying superior methodology for consumption behaviors, AI researchers at Zaptron Systems have developed the so-referred to as fuzzy utility functions that can mannequin and describe the consumption behaviors of a target client group.

3. Consumption Utility - it is a criterion (or index) used to evaluate the effectiveness of customers' consumption. A low value of consumption utility, say 0.15 indicates that a purchaser is no longer blissful with the consumption of a sure commodity; while high value, say 0.96, shows that the customer is very satisfied. There are formal theories on utility, such as ordinal utility, cardinal utility and marginal utility.

4 Consumption utility characteristic - The behavioral traits of human beings can be represented by means of the thought of consumption utility, and consumption utility characteristic is the mathematical description of this concept. Two,In addition, human consumption behaviors are decided via the following two kinds of factors:

(1) Objective factors - the physical, chemical, biological and creative houses of goods;

(2) Subjective elements - consumer's interest, preference, and psychological state.

5. Because of the objective and subjective factors, the fuzzy utility feature for consumption can use the fuzzy set-theoretical approach -- in fact, consumption utility is a fuzzy concept. To mannequin the above subjective factors, fuzzy set principle is used to describe one-of-a-kind tiers of consumers' satisfaction with admire to a number consumption plans (spending patterns), such as "not satisfied," "somehow satisfied," "very satisfied," and etc. two Mathematically, the fuzzy utility characteristic is a more correct measure on the consumption utility. It can describe the relationships among spending, price, consumption composition (decomposition), choice and subjective measure on commodity or carrier values.

II. Background related to Demand Theory

1. Consumer need have Demand - it is the quantity of consumption on items (purchase amount). In general, it is associated to the objective factors of commodities (such as physical, chemical and inventive characters) and the subjective price of the patron (preference, non-public habits, fitness conditions, etc.). Demand is affected by using the complete spending capability and populace of a consumer group, as properly as the patron prices.

2. Consumption Function of Demand - the behavioral traits of the financial market can be represented by way of the concept of consumption demand and the consumption demand function is the mathematical description of this concept. Two,In addition, consumer demand can be determined by way of the following kinds of factors:

   (1) Objective elements - the physical, chemical, biological and creative properties of goods;

   (2) Subjective factors - consumer's interest, preference, and psychological state;

   (3) Group factors - populace and wealth of the buyers (consumer group);

   (4) Comparative elements - the ratio of costs of specific goods, ratio of exclusive preference, and ratio of subjective values on

   (i) Different items (comparisons of extraordinary consumption can at once affect the consumption demand);

   (ii) Fluctuation elements - wealth, populace and rate fluctuations.

3. Because of the objective, subjective, team and comparative factors, the fuzzy consumption demand features can use the fuzzy set-theoretical approach-- in reading superior methodology for the analysis of consumer demand; AI researchers at Zaptron Systems have developed technological know-how and software program device based totally on the so-referred to as fuzzy demand functions. They can model and describe the market demand, or consumer demand, on a number of commodities or services, based on consumption statistics available. The fuzzy demand functions mentioned here are

developed based on the fuzzy consumption utility function concept developed by means of Zaptron scientists.

4. In fact, consumer demand is a fuzzy common sense concept. Mathematically, the fuzzy demand characteristic is a more accurate measure of the consumption demand, in contrast in opposition to a traditional (non-fuzzy) demand function. It can describe relationships among wealth, price, consumption composition (decomposition), desire and subjective measure on commodity or carrier values. Computation of fuzzy demand features and parameters - primarily based on the maximum utility principle, they can be computed by way of solving a set of complex mathematicalequations. From the above examples, a progressive technique primarily based on a fuzzy set idea has been developed that can precisely predict market demand on goods. Based on the fuzzy demand characteristic and fuzzy utility function theories have been given to demonstrate the efficacy of the theory.

III. **Transient Background on choice Theory**

1. Choice rating model: the foremost economical alternative fee has been wont to figure by the binomial model (1979) or the Black-Scholes mannequin (1973). However, volatility and trustworthy interest charge area unit assumed as constant in those models. Hence, several ensuant studies emphasized the calculable secure diversion rate and volatility. Cox (1975) brought the thought of Constant-Elasticity-of-Variance for volatility. Hull and White (1987) launched the belief that the distribution of the speed of underlying plus and volatility area unit constant. Wiggins (1987), Scott (1987), Lee, Lee, and dynasty (1991) free the belief that the volatility is constant and assumed that the volatility determined Stochastic-Volatility. Amin (1993) and Scott (1987) regarded that the Jump-Diffusion technique of inventory value and therefore the volatility was random method. Researchers have up to now created widespread effort and gain massive consequences relating to the rating of selections (e.g., Brennan and Schwartz, 1977; Geske and Johnson, 1984; Barone-Adesi and Whaley, 1987). research has shown that given their straightforward assumptions, existing rating model seem to own issue in properly handling the uncertainties inherent in any investment method.

2. There are a unit most vital components poignant alternative costs. These area unit inserting value, newest stock value, time, dependable diversion rate, and volatility. Since the putting rate and time until choice expiration area unit every determined, newest stock fees mirror on ever amount, however secure activity charge determined the diversion value of the forex market, and volatility can't be discovered directly, however, may be calculable through historical statistics and state of affairs analysis. Therefore, secure interest value and volatility area

unit calculable. the concept of opaqueness may be wont to estimate the 2 factors safe diversion fee and volatility.

3. Fuzzy different rating model: as a result of most of the studies have centered on a way to launch the assumptions within the CRR model and therefore the B-S model, including: (1) the short safe diversion rate is constant, (2) the volatility of a stock is constant. Once loosening these assumptions, the fuzzy set plan applies to the selection rating model, so as to exchange the sophisticated fashions of previous studies. (Lee, Tzeng and Wang, 2005).

4. As derivative-based financial product return to be a principal section of the trendy international monetary market, it's integral to hold the basic principles of choices, specifically the rating technique to a stage of standardization so as to lose viable human negligence within the content material or structure of the chosen market. The fuzzy pure mathematics applies to the choice rating model (OPM) may be presenting cheap degrees of choice costs, that several traders will use it for arbitrage or hedge.

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ORGANIZATIONAL CHANGE AND OCCUPATIONAL STRESS: A STUDY ON TEACHING FACULTIES OF HIGHER EDUCATION IN INDIA

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Abstract
The need to expand the higher education has introduced marked changes in the Indian higher education system. Autonomy is one of the widely used constructs in education policy and practice in India. Several institutes of higher education have been converted from non autonomous to autonomous. This conversion has made a big change in the institutions. According to available literature it is evident that in changing work environment, occupational stress is one of the major issues.

The purpose of this paper is to understand the phenomenon of occupational stress due the change of work environment among faculty members of autonomous colleges in Madhya Pradesh state of India. Data from 400 respondents including both the government and private autonomous colleges have been collected. The result of the study has confirmed that there is moderate stress level due to change in work environment. A comparison of stress level between faculty of government and private autonomous colleges and between male and female faculties is also presented. t-test has been applied to test these hypotheses. The result shows that there is no significant difference on stress level between faculty of government and private autonomous colleges and between male and female faculties.

Keywords: Autonomy, Higher Education, Occupational change, Organizational stress

Introduction:

Occupational stress and organizational change are now widely accepted major issues in organizational development. The occupational diversities and changes such as the organizational changes, payment and salary changes, occupational optimization, reduction or increase of human forces as well as the social shifts and changes can be subjected to those issues that they can make the high potential pressure on the people's behavior bringing the more panic, anxiety and worry over the life (Stephen Robbins, 2008).

Change can be defined as any alteration occurring in the work environment that affects the ways in which employees work. The literature of organizational

change suggests that stress and resistance are two immediate and natural reactions to organizational change. The change process may be perceived as adifficult task in some organizations like in higher education institutions.

According to Senthil Kumar et al. (2013), "The purpose of higher education is not static; rather it is adaptive and changes according to the systems of provision and the vision of institution. Teachers must adapt their skills suitably to the technological changes, otherwise they have to face stressful situation."

Autonomy is a widely used concept in education policy and practice. The concept is derived from the Greek word 'autonomos' means 'having its own laws' (Oxford Dictionaries, 2015). Autonomy has been a key idea in education policy in India. The move towards autonomy started in the early 1970s due to suggestions and considerations of the Kothari Committee Report. Grant of autonomy to potential colleges by the universities concerned has been the new trend in Indian higher education since the implementation of the National Policy on Education to ensure quality and excellence.

The UGC defines autonomy to be a functional status conferred upon colleges by it, granting them greater flexibility towards purely academic development for the upliftment of academic standards and excellence. India today has 708 autonomous colleges affiliated to 108 universities in 25 States as of June 6, 2019 (University Grants Commission [UGC], 2019).

The department of higher Education of Madhya Pradesh started giving the status of autonomous to colleges from year 1985-86. According to UGC latest list, there are total 41 various colleges having the status of autonomous colleges. During the course of this research work, 30 autonomous colleges in Madhya Pradesh have been considered for this study.

Autonomous institutes are those which are affiliated to a government university but not follow its syllabus and curriculum. These autonomous colleges are empowered with academic freedom to frame their own curriculum and syllabus, admit students by conducting entrance examinations, innovate and experiment with new methods of teaching and learning. Examinations are conducted by the institution itself. But the degrees are awarded by the affiliated University.

Occupational stress has become increasingly common in teaching profession largely because of increased occupational complexities and increased global competitions. The circumstances due to the change in the organizational context

may impact every individual and may be experienced in terms of work stress, dissatisfaction or burn out.

According to American Psychological Association's annual work and well-being survey (APA,2017), American workers experiencing recent or current change were more than twice as likely to report chronic work stress compared with employees who reported no recent, current or anticipated change (55% vs. 22%), and more than four times as likely to report experiencing physical health symptoms at work (34% vs. 8%).

Review of literature reveals that no systematic and comprehensive study has been conducted so far in India to assess the impact of college autonomy on faculty responses to this change particularly in terms of occupational stress. That is why the present study has been undertaken on the faculty of autonomous colleges in Madhya Pradesh state of India.

Literature Review:

Vakola and Nikolaou (2005) studied the linkage between employees' attitudes towards organizational change and two of the most significant constructs in organizational behaviour; occupational stress and organizational commitment.A total of 292 participants completed the questionnaire.The results of the study showedthat there is negative correlation between occupational stressors and attitudes to change. Highly stressed individuals demonstrate decreased commitment and increased reluctance to accept organizational change interventions.

Tavakoli (2010) suggested a model of organizational change that views the stress as a mediator between organizational change and resistance to change. According to this model, stress and resistance are not inevitable reactions to organizational change. Rather, what makes organizational change stressful or susceptible to resistance of employees is the way people are treated during implementation of the change.

Dahl Michael S. (2011)analyzed the relationship between organizational change and employee health. The study described the potentially negative outcomes of change at the level of the employee. A comprehensive panel data set of all stress-related medicine prescriptions for 92,860 employees working in 1,517 of the largest Danish organizations was analyzed. The findings of the study revealed that the risk of receiving stress-related medication increases significantly for employees at organizations that change, especially those that undergo broad simultaneous changes along several dimensions. Thus,

organizational changes are associated with significant risks of employee health problems.

Ahmad Anis (2013) studied the job stress towards organizational change with special reference to textile industries. For this study, the data was collected from all individual employees working in textile industries in different districts of Northern India. Data is obtained from 450 blue-collar employees of textile industries and tabulated and analyzed by standard multiple regression analysis. The results revealed that responsibility for persons, intrinsic impoverishment, low status and unprofitability are the dimensions of job stress and found as real predictors of organizational change.

Harikrishnan G. (2014) performed a comparative study of autonomous and non-autonomous system of higher education. The study was conducted among the teachers, students and the university employees in Kerala. The study was based on the factors such as the condition of institutions before and after the implementation of autonomy and the effectiveness of the same. Most of the students and teachers of higher education institutes in Kerala responded against autonomy. They had a lot of confusions and are in a state of fear of implementing autonomy without any serious discussions among them.

In their study, Rahoo et al. (2017) identified the work related occupational stress factors like pace and intensity of change. It was also found that high degree of uncertainty about work contributed maximum stress.

Fleming (2017) examined the effects of organizational restructuring on university employees' behavior. A purposeful sample of 130 employees at a small land grant university who had experienced 2, 3, or 4 recent restructurings was targeted. 66 respondents answered the open-ended survey. After the analysis, four themes were emerged: Employees were reluctant to embrace the change; employees were not satisfied with the communication process; employees experienced low motivation, attitude change, and dwindling morale; and employees perceived that there were no significant changes in the effectiveness of the institution.

Objectives of the Study:

The following objectives have been defined for this study:

1. To study level of occupational stress due to organizational change among faculty of autonomous colleges in Madhya Pradesh.

2. To compare the level of occupational stress between male and female faculty of autonomous colleges in Madhya Pradesh.

3. To compare the level of occupational stress of the faculty working in Government and Private autonomous colleges in Madhya Pradesh.

Hypotheses of the Study:
The following hypotheses have been formulated to support the objectives of the research work.
Ho 1- There is no significant difference between faculty of Government and Private autonomous college in their level of occupational stress.
Ho 2- There exists no significant difference between male and female faculty of autonomous colleges in their levels of occupational stress.

The Sample and Instrument: In the present study, random sampling method has been used. The 400 respondents (faculty members) of autonomous colleges completed the questionnaire. A self designed structured questionnaire has been used to collect the data.
The questionnaire consisting of 6 items using a 5-point Likert Scale for measurement, where 1 indicated Much less stressful and 5 indicated Much more stressful. t-test, standard deviation and mean have been used to test the hypothesis.

Table 1: Questionnaire Items

Item No.	Factor
1.	How much your job has become stressful in **recent 5** years?
2.	After moving to autonomous college, your job has become
3.	Due to implementing semester system, your job has become
4.	Due to introducing continuous comprehensive evaluation (CCE) of the students, your job has become
5.	Due to pressure of Quality assurance and accreditation process, your job has become
6.	Due to the demand of official work after college time, your job has become

Scoring procedure:
Agreeability Index: In the questionnaire, the scores allotted to the answers range from one to five. There are total six items (factors) in this section. The minimum score for this entire section is 6 and the maximum score is 30 for a single respondent.Score obtained by each faculty is divided by 30 and

multiplied by 100 to convert it into an index. This index is called 'Agreeability Index' (Senthil Kumaret al., 2013).

Thus the formula for calculating the Agreeability Index (A.I.) for each respondent is
A. I. = Score / maximum score X 100
Similarly, the score obtained for each factor is divided by the maximum score 2000 (i.e. 400 X 5) and multiplied by 100 will give the 'Agreeability Index' for each factor.

The Rank has been assigned based on the value of A.I. to analyse which factor is more prominent.

Measuring level of Stress: Total scores of A.I. from all the respondents on each of the item under each stress effect, were calculated. Then Mean (M) and Standard deviation (SD) were calculated for each stress effect category to form a basis for level of stress effect as follows Kumar Anita(2011):
i) Low level: Scores below: Mean - SD
ii) Medium level: Scores between: Mean - SD and Mean + SD
iii) High level: Scores above: Mean + SD

Reliability testing using Cronbach's alpha:
Cronbach's alpha test is applied for testing the reliability of instrument. The value of Cronbach's alpha is 0.902586i.e. the internal consistency is excellent for this.

Response Analysis:

Overall Responses:
The following table 2 shows the over all responses from the respondents.

Table 2: Total Scores and A.I. of respondents for each factor

Item No.	Much more stressful (X 5)	More stressful (X 4)	About the same (X 3)	Less stressful (X 2)	Much less stressful (X 1)	Total Score	A.I.	Rank
1.	122	150	66	43	19	1513	75.65	2
2.	69	177	82	50	22	1421	71.05	5
3.	102	180	60	36	22	1504	75.2	3
4.	70	158	111	40	21	1416	70.8	6
5.	73	158	110	38	21	1424	71.2	4
6.	110	149	105	29	07	1526	76.3	1

Calculation of Stress level:
The mean and standard deviation of A.I. for all the respondents (400) for each factor are calculated which are found 76.36 and 2.60 respectively.
Here mean – SD = 76.36 – 2.60 = 73.76

Mean + SD = 76.36 + 2.60 = 78.96
As per above description given above, the level of stress are further classified as low level, moderate level and high level based on the value of A.I.
Low level: less than 73.76 i.e. item no. 4, 2 and 5
Moderate level: between 73.76 and 78.96 i.e. item no. 1, 3 and 6
This analysis shows that the stress due to changes in work situation has low to moderate level of stress among faculties of autonomous colleges.

Rank Calculations:
For better analysis of the responses, the A.I. of all the items is given a rank. From the above table, it is clear that among all the factors, the rank of item no. 6 is the highest which is 76.3. It shows that among all the factors, the factor "Due to the demand of official work after college time" has been rated as the most prominent factor causing the job stress among faculties of Autonomous colleges.The item no. 1 has been rated the second highest factor. That is, this confirms that their job has become stressful in recent 5 years. The item no. 3, 5 and 2 ranked third, fourth and fifth respectively. The item no. 4, "Due to introducing continuous comprehensive evaluation (CCE) of the students" has been rated as least noticeable factor for this.

Hypothesis Tests:
Testing of H01: There is no significant difference between faculty of Government and Private autonomous college in their level of occupational stress.

Table 3:t-Test: Two-Sample Assuming Equal Variances for Ho1

	A.I. Government Colleges	A.I. Private Colleges
Mean	73.81701613	72.63223684
Variance	256.6137838	219.6685724
Observations	248	152
Pooled Variance	242.596882	
Hypothesized Mean Difference	0	
df	398	
t Stat	0.738435359	
P(T<=t) one-tail	0.23034257	
t Critical one-tail	1.648691174	
P(T<=t) two-tail	0.460685141	
t Critical two-tail	1.965942324	

Result: Here, the t-test of two samples assuming unequal variance has been applied to test the hypothesis. The analysis is based on the agreeability index calculated over the responses of faculties from government and private autonomous colleges. Table 3 shows the result.The t-test analysis was performed as given in the table 3. The value of t (stat) = 0.73 and table value of t = 1.96. Since the value of t (t-stat) is less than the table value of t (t-critical). Therefore, t-test is not significant. Similarly, for a test that have a type I error rate of 5%, the difference is significant if the p-value is lower than 0.05. In this case, the p-value is 0.46 which is more than 0.05. So it isconcluded that there is not enough evidence of rejecting the null hypothesis, which means there is no significant difference on occupational stress between government and private college faculties. Here null hypothesis is accepted.

Testing of H02: There exists no significant difference between male and female faculty of autonomous colleges in their levels of occupational stress.

Table 4: t-Test: Two-Sample Assuming Equal Variances for Ho2

	A.I. Female Faculty	A.I. Male Faculty
Mean	73.40545946	73.33353488
Variance	224.0177238	259.1872351
Observations	185	215
Pooled Variance	242.9279636	
Hypothesized Mean Difference	0	
df	398	
t Stat	0.046016507	
P(T<=t) one-tail	0.481660086	
t Critical one-tail	1.648691174	
P(T<=t) two-tail	0.963320173	
t Critical two-tail	1.965942324	

Result: Here, the t-test of two samples assuming equal variance has been applied to test the hypothesis. The analysis is based on the agreeability index calculated over the responses of Male and Female faculties from autonomous colleges. Table 4 shows the result.The value of t (t-stat) = 0.046 and table value of t = 1.96. Since the value of t (t-stat) is less than the table value of t (t-critical). Therefore, t-test is not significant. Similarly, for a test that have a type I error rate of 5%, the difference is significant if the p-value is lower than 0.05. In this case, the p-value is 0.96 which is more than 0.05. It indicates weak evidence against the null hypothesis, so it is concluded that there is not enough evidence of rejecting the null hypothesis, which means there is no significant difference

on occupational stress between male and female college faculties due to organizational change.

Conclusion:

An emerging topic of interest in organizational development is higher education.In this contemporary world, the role of teaching professionals are ever changing and evolving. The new teaching learning environment creates new challenges on teaching professionals. The present study investigates the impact of college autonomy on teaching faculty in relation to their occupational stress. It is the first time exploration in this area of work.

The result of the study shows that faculty of autonomous colleges has moderate level of work stress due to organizational change. No significant difference in occupational stress between government and private autonomous colleges has been found. Similarly there is no significant difference on occupational stress between male and female college faculties due to organizational change.

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EMOTIONAL WELLBEING OF ADOLESCENTS LIVING IN SINGLE PARENT FAMILIES

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Abstract
Adolescence period is the formative stage in every one's life. In this stage, their social and emotional wellbeing are to be well developed and maintained. This can achieve through the positive family structure. Whereas children living with single parents are prone to get more emotional breakdowns. The quality of parenting is relatively less for the adolescents. Economic and social factors are highly disruptive which affect the adolescent's wellbeing. Hostile feelings keep them to be stressed due to less parental control. This study adopted descriptive design. 40 respondents were interviewed to analyze their emotional maturity. More than half (55%) of the respondents are being punished by their parents and the respondents economic condition is also relatively less. Single parenting is challenging for both parents as well as children. Parenting style and adoptive family structure keep the child to grow positively. Teachers are also playing a vital role in monitoring the child's behavior. When the environment is being favorable for the child during the adolescence period, their mental health can be strong in adulthood.

Key Words: Adolescence, Single Parenting, Emotional Wellbeing, Mental Health, Family Environment

Introduction
The period of adolescence is always considered as storm and stress. They transform from childhood to adulthood.During this transition, children may go through challenges in their physical, psychological and social condition. This transformation makes them to be matured in facing the life challenges. Adolescents feel more independence and expect less restriction from parents. This may affect sometimes directly and indirectly. When adolescents are in positive emotion, this will help them to enhance their skill to meet out the required tasks and needs. Many factors are associated with positive emotional wellbeing such as being positive oneself and maintaining healthy relationship with family and peers.

Family Environment and Adolescents Wellbeing

Parents are playing a major role in promoting wellbeing among the adolescent children. Maintaining a positive relationship with their children will help the child to keep low conflict. Parents who achieved a maximum marital satisfaction can possess good parenting skill. Parents' communication and monitoring are highly associated with their children's mental health. Parenting style is directly linked with wellbeing of the child.

Challenges of adolescents with single parents

Many studies proved that, children with single parent are likely to be feeling alone, high conflict and minimize the communication with others. Martin Beckford (2008) found in his study that, children who are living with single parents are more prone to have emotional problems than children living with both parents. Responsibility of single parent is being increased and also burdened, when a child feels hostile. In this condition, anger can be expressed to only one person and proper guidance will not be given at this point. Adolescence period is another milestone for children's socialization patterncomplemented by both the parents. In single parent families, children are denied with certain rights and some necessities are not met out, this may impact the child psychologically as well as socially.

Methodology

Objectives of the study

1. To study the socio-demographic profile of the respondents
2. To understand the level of emotional maturity of the respondents
3. To study the family environment of the respondents

Descriptive study is defined to study the characteristics of the population and to collect the quantifiable date. Descriptive research design was adopted.The researcher adopted simple random sampling method by using lottery method to carry out the study. 40 samples were taken. Questionnaire for socio-demographic profile and emotional maturity scale were used for this study.

Results and Discussion

Table No: 1 Distribution of Respondents by their Socio-Demographic Profile

S.no	Socio-demographic Profile	No.of Respondents	Percentage
1	**Age**		
	15-17 years	22	55
	Above 17 years	18	45
2	**Gender**		
	Male	21	53
	Female	19	47
3	**Siblings**		

	0-2 Above 2	33 07	83 17
4	**Annual Income** 100000-200000 Above 200000	 28 12	 70 30
5	**Residence** Own Rented	 03 37	 7 93

The above table determines that, more than fifty percentage (55%) of the respondents are in the age group of 15-17 years. and less than fifty percentage (45%) of the respondents who were in the age group of above 17 years. A study revealed that, children who are distrusting their parents at this age, they are likely to be manifested with social and academic problems.

53 percentage of the respondents are males and 47 percentage of the respondents are females. Majority of respondents (83%) are having 0-2 siblings and 17% of the respondents are having siblings above 2. 70% of the respondents' annual income is between 100000-200000. 30% of the respondents' annual income is above 200000. Single parent families are having physical environmental conditions due to low income. More than ninety (93%) percentage of the respondents are in rented house.

Table No: 2 Distribution of Respondents by their Family Environment

S.no	Family Environment	No.of Respondents	Percentage
1	**Get well along with parents** Yes No	 24 16	 60 40
2	**Parent strictness** Yes No	 27 13	 68 32
3	**Fighting with their siblings** Yes No	 32 08	 80 20
4	**Receiving parents support/guidance in studies** Yes No	 21 19	 53 47
5	**Punishing by parents** Yes No	 22 18	 55 45

More than half (60%) of the respondents are having cordial relationship with their parents and less than fifty (40%) percentage of the respondents are not having cordial relationship with parents. Najman et al., found their study that, when there is a change in the family structure during the young age of children, children are tended to have problematic behavior. More than sixty (68%) of the respondents' parents are being strict with strict with their children and less than

forty (32%) of the respondents are not having strictness from parents. Milevsky et al., 2007 opined that parents who are following authoritative style toward their young children, there is an increase in self-esteem and life satisfaction among the children. More than half (55%) of the respondents are being punished by parents and less than fifty (45%) of the respondents are not being punished by parents. Few studies revealed that, physical punishment increases to adopt delinquent behavior by the children. Physical punishment gives different effects to the boy child and girl child.

Table No: 3 Association between the Share Problems with Family Members of the Respondents with regard to various dimension of Emotional Maturity among Respondents

S.NO	DIMENSIONS	SHARE PROBLEMS WITH FAMILY MEMBERS		STATISTICAL INFERENCE
		Yes	No	
1	**EMOTIONAL STABILITY**			X^2=17.808 Df=1
	Low level	28	69	
	High level	123	100	P<0.05 **Significant**
2	**EMOTIONAL PROGRESSION**			X^2=10.804 Df=1
	Low level	34	67	
	High level	117	102	P<0.05 **Significant**
3	**SOCIAL ADJUSTMENT**			X^2=30.597 Df=1
	Low level	23	77	
	High level	127	93	P<0.05 **Significant**
4	**PERSONALITY INTEGRATION**			X^2=6.920 Df=1
	Low level	45	29	
	High level	105	141	P<0.05 **Significant**
5	**INDEPENDENCE**			X^2=39.777 Df=1
	Low level	99	51	
	High level	51	119	P<0.05 **Significant**
6	**Overall**			X^2=35.286 Df=1
	Low level	39	102	
	High level	111	68	P<0.05 **Significant**

Emotional Stability

The above table indicates that respondents who were sharing problems with family members have high level of emotional stability (38.43%). The X^2 value is 17.808, thus the observed difference is statistically significant at 0.05 level. Thus it is inferred that respondents do differ with regard to Emotional Stability in accordance with sharing problems with family members.

Emotional Progression

The table 03 indicates that respondents who were sharing problems with family members have high level of emotional progression (36.56%). The X^2 value is 10.804, thus the observed difference is statistically significant at 0.05 level. Thus it is inferred that respondents do differ with regard to Emotional Progression in accordance with sharing problems with family members.

Social Adjustment

The table 03 shows that respondents who were sharing problems with family members have high level of social adjustment (39.68%). The X^2 value is 30.597, thus the observed difference is statistically significant at 0.05 level. Thus it is inferred that respondents do differ with regard to Social Adjustment in accordance with sharing problems with family members.

Personality Integration

The table 03 shows that respondents who were not sharing problems with family members have high level of personality integration (44.06%). The X^2 value is 6.920, thus the observed difference is statistically significant at 0.05 level. Thus it is inferred that respondents do differ with regard to Personality Integration in accordance with sharing problems with family members.

Independence

The table 03 shows that respondents who were not sharing problems with family members have high level of Independence (37.18%). The X^2 value is 39.777, thus the observed difference is statistically significant at 0.05 level. Thus it is inferred that respondents do differ with regard to Independence in accordance with sharing problems with family members.

Overall Emotional Maturity

The table 03 shows that respondents who were sharing problems with family members have high level of Emotional Maturity (34.68%). The X^2 value is 35.286, thus the observed difference is statistically significant at 0.05 level. Thus it is inferred that respondents do differ with regard to Emotional Maturity in accordance with sharing problems with family members.

So it is clearly indicated that the respondents who were not sharing problems with their family members had low level of emotional maturity.

Recommendations and conclusion

Family structure creates a greater significance in child's development. Single parents are responsible to give positive family environment which will help the

child to avoid delinquent behaviors. Parents should support the child in each and every aspect. This enables the child to enhance the self-esteem during their adolescent period. Economic condition is another factor to increase the negative parenting. Parents should make sure that financial difficulties should not affect the child's behavior. Parents can make their children to realize the challenges and sacrifices done by them in a positive way. Single parent families are greatly associated with schooling. Parents should maintain a cordial relationship with the teachers of their children.so that Schildren's behavior can be monitored and corrected at right time when it is necessary.

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STRENGHTHENING TECHNIQUES OF STEEL BEAMS: AN ANALYTICAL INVESTIGATION

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Abstract

The design of a structure is intended to satisfy both limit state of collapse and serviceability as laid down by various codes. Strengthening is required to all structures when they reach their life span or some extra loads are applied on them. In this paper, three techniques, namely prestressing, cambering and section-enhancement techniques are investigated for a simply supported but laterally unsupported steel I-section beam analytically. Load carrying capacity, flexural capacity and deflections were determined to evaluate the performance and suitability of the situations of each technique. About 13 model cases of beam were analysed. In case of prestressing technique, iterative computations were done using MATLAB for different values of force factor and eccentricity ratio. In the cambering technique required calculated deflection was given as upward camber whereas in the section enhancement technique, improvement in flexural capacity was investigated through section-depth increment at central span by considering length and depth factors. In this study, about 13 models were modelled and analysed in ANSYS Software. Of three strengthening methods, section enhancement technique is the best method, which will provide economic feasibility and easy applicability in construction. The proposed strengthening methods will be useful in both construction of new structures and rehabilitation of existing structures.

Introduction

Steel differs from concrete in its attributed compressive strength as well as tensile strength. It also had high stiffness, toughness and ductile properties. Steel also has another advantage, it can be developed into nearly any shape, which are either bolted or welded together in construction and it can be erected as soon as the materials are delivered on site. So steel became one of the most commonly used materials in commercial and industrial building construction.

Strengthening will be required to all structures when they reached their life span or some extra loads were applied on them, so for strengthening of steel beams three new techniques are proposed, namely 1) External post tensioning technique, 2) Upward camber in technique and 3) Section-enhancement technique. The aim of the study is to investigate about the load carrying capacity andflexural behaviour of simply supported steel girder strengthened with external post tensioning, upward cambering and section-enhancement techniques using making a program in MATLAB . ANSYS software has been used for modelling of upward camber and section enhancement in the study.

External Post Tensioning Using Deflectors and Deviators

An application of post tensioning with high performance steel tendons reduces the size of steel members, and helps to increase the load-carrying capacity of beams. In this method the tendons are placed outside the physical cross-section (beyond the bottom most fibre or between neutral axis and bottommost fibre) of the member to be prestressed. The prestressing force will transfer through end anchorage. This procedure requires preparation of the girder through the insertion of laterally projecting elements (deflectors)in the web portion from either sides of the web of the beam intermittently at suitable intervals along the length. Cables pass through below the deflectors. These deflectors force the cable to follow a defined profile along the girder (Fig 1). Cables are tensioned and anchored at the ends of the beam. When the eccentricity is required to go below the bottom flange especially at the section of large bending moment, deviators are attached below the bottom flange along with the deflectors in the web portion (Fig2).

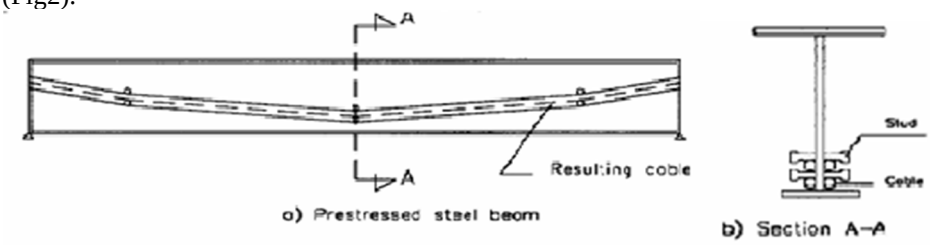
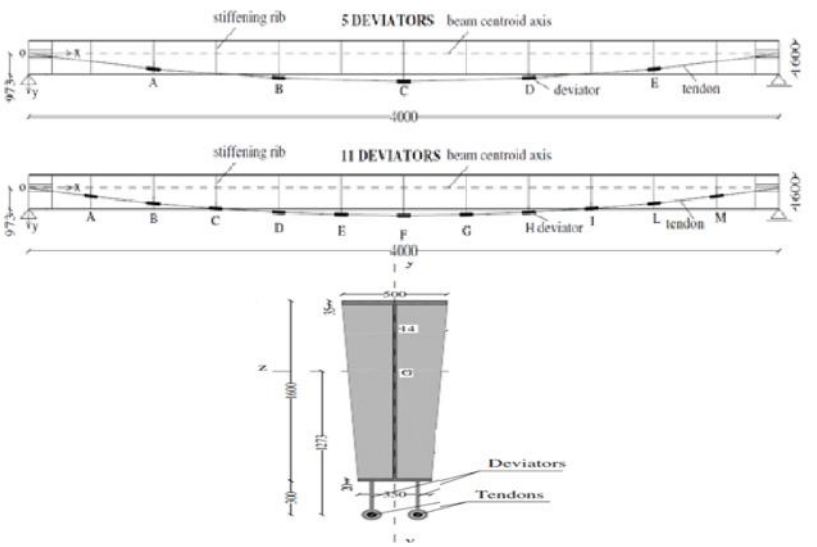


Fig 1: Prestressing with deflectors



(a) (b)

Fig 2: (a) Prestressing using deflector and deviators and (b) Cross section of a deviator

Upward Camber Technique.

Upward camber is a functional requirement to avoid effects of vertical deflection under moving loads. Camber is given in such a way that sag of floor system is restricted when live load passes over the bridge. Maximum deflections under specified live loads are found and given in the opposite direction in the girder. In case of a railway trussed bridge, when train passes over the girder the floor system becomes horizontal. Ifthe upward camber is not provided, the deflected shape of the truss under live loads will create additional secondary stresses in the members. In case, the girders are designed as cambered with prestressing, the secondary stresses are absent and thus cambering technique gives an economical design.

Section Enhancement Technique

Attaching a section of smaller length on to the base can strengthen a section by increasing the section modulus. This strengthening method can be termed the `section-depth increment.The sections at internal support of a continuous beam bridge and central portion of a simply supported beam bridge are governed respectively by maximum negative and positive bending moments. To strengthen these points an extra section is attached as shown in Fig 3.

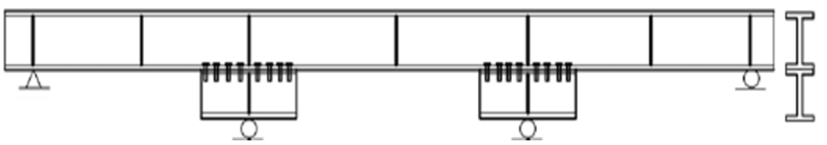


Fig 3: Beam with section-enhancement at interior support

Formulation of the Methodology

External Post-tensioning

If P is the prestressing force considered, the stress at top fibre due to dead and live loads is given by

$$\sigma_{tw} = \left(\frac{P}{A} + \frac{M_W}{Z_t} - \frac{Pe}{Z_t} \right) \quad (1)$$

and the stress at bottom fibre by

$$\sigma_{bw} = \left(\frac{P}{A} - \frac{M_W}{Z_b} + \frac{Pe}{Z_b} \right) \quad (2)$$

Due to dead load only, the stress at top is given by

$$\sigma_{td} = \left(\frac{P}{A} + \frac{M_d}{Z_t} - \frac{Pe}{Z_t} \right) \quad (3)$$

and stress at bottom

$$\sigma_{bd} = \left(\frac{P}{A} - \frac{M_W}{Z_b} + \frac{Pe}{Z_b} \right) \quad (4)$$

Assuming steel girder is laterally unsupported and σ_{bc} is critical bending stress value in compression.Stress capacity remaining at top after applying prestress force is

$$\sigma_r = \left[\sigma_{bc} - \left(\frac{P}{A} - \frac{Pe}{Z} \right) \right] \quad (5)$$

This remaining stress capacity gives an idea about the bending moment capacity of the section. For a simply supported beam carrying uniformly distributed load, bending stress at top is given by

$$\text{Bending stress at top} = \frac{M}{Z_t} = \frac{WL^2}{8Z_t} \quad (6)$$

Equating remaining bending stress value Eq (5) with bending stress of Eq(6), the live load intensity Wto be carried by the beam is given by

$$W = \left[\sigma_{bc} - \left(\frac{P}{A} - \frac{Pe}{Z} \right) \right] \times \frac{Z_t \times 8}{L^2} - D.L \quad (7)$$

Further, shear stress is given by

$$\tau = V/(t_w * d). \quad (8)$$

Bending stress values at top and bottom due to dead load and live load are

$$\sigma_{tw} = \left(\frac{P}{A} + \frac{(W + D.L) * l^2}{8 \times Z_t} - \frac{Pe}{Z_t} \right) \quad (9)$$

$$\sigma_{bw} = \left(\frac{P}{A} - \frac{(W + D.L) * l^2}{8 \times Z_t} + \frac{Pe}{Z_t} \right) \quad (10)$$

Due to dead load only

$$\sigma_{td} = \left(\frac{P}{A} + \frac{(D.L)*l^2}{8 \times Z_t} - \frac{Pe}{Z_t} \right) \quad (11)$$

$$\sigma_{bd} = \left(\frac{P}{A} - \frac{(D.L)*l^2}{8 \times Z_t} + \frac{Pe}{Z_t} \right) \quad (12)$$

Deflection values at mid span due to prestressing force only is calculated from,

For straight tendon pattern deflection, a = $-\frac{Pe \times l^2}{8EI}$. (13)

For parabolic tendons (central anchors) deflection, a= $-\frac{5Pel^2}{48EI}$. (14)

Laterally Unsupported Beam by IS800-2007.

When a beam is not adequately supported against lateral buckling (laterally un-supported beams) the design bending strength may be governed by lateral torsional buckling strength. The strength of the beam is determined locally against material yielding as well as against overall buckling under the combined action of axial force and bending moment due to presstressing force and other bending moments.

Strength in Combined axial force and bending moment

In the design of members subjected to combined axial force (tension or compression) and bending moment, the following should be satisfied:

$$\left(\left[\frac{M_y}{M_{ndy}} \right]^{\alpha 1} + \left[\frac{M_z}{M_{ndz}} \right]^{\alpha 2} \right) \leq 1.0 \quad (19)$$

$$\left(\left[\frac{N}{N_d} \right] + \left[\frac{M_y}{M_{dy}} \right] + \left[\frac{M_z}{M_{dz}} \right] \right) \leq 1.0 \quad (20)$$

Overall Member Strength

Members subjected to combined axial compression and biaxial bending shall satisfy the following interaction relationships.

$$\left(\left[\frac{P}{P_{dy}}\right]+\left[\frac{K_y C_{my} M_y}{M_{dy}}\right]+\left[\frac{K_{LT} M_z}{M_{dz}}\right]\right)\leq 1.0 \quad (21)$$

$$\left(\left[\frac{P}{P_{dz}}\right]+\left[\frac{0.6K_y C_{my} M_y}{M_{dy}}\right]+\left[\frac{K_{LT} C_{mz} M_z}{M_{dz}}\right]\right)\leq 1.0 \quad (22)$$

Moment of resistance from Eq (20)

$$M_{W1} = M_{dz}\left(1-\left[\frac{N}{N_d}\right]-\left[\frac{Pe}{M_{dz}}\right]\right) \quad (23)$$

Moment of resistance form Eq (21)

$$M_{W2} = \frac{M_{dz}}{K_{LT}}\left(1-\left[\frac{P}{P_{dy}}\right]-\left[\frac{K_{LT} Pe}{M_{dz}}\right]\right) \quad (24)$$

Moment of resistance from equation (22)

$$M_{W3} = \frac{M_{dz}}{C_{mz} K_z}\left(1-\left[\frac{P}{P_{dz}}\right]-\left[\frac{K_z C_{mz} Pe}{M_{dz}}\right]\right) \quad (25)$$

DISCUSSION ONANALYSIS AND RESULTS

An ISWB600@ 133.7 kg/m section from Indian Standards Steel Handbook has been used for a simply supported span of 10 m. Yield strength for steel section is has been assumed as 250 Mpa.

To calculate the load bearing capacity, shear stress, and stress at top and bottom fibres due to dead load and live load, a MATLAB programme was developed for the purpose. Two no dimensional parameters have been defined. These are force factor (FF) = prestressing force/ ($A*\sigma_{bc}$) and, eccentricity ratio (ER) = eccentricity / total depth. The variation of uniformly distributed load carrying capacity with varying FF on the simply supported beam of 10 m span for different ER values are given in Table 1 and a graph is shown in Fig (5).

Table 1:STRESSES BY VARYING FF AT CONSTANT ER OF 0.1

TRAIL NO	F.F	LCC	SHEAR STRESS	STRESS AT TOP		STRESS AT BOTTOM	
				D.L	D.L+L.L	D.L	D.L+L.L
1	0.05	24.035	9.404	7.850	88	0.950	-79.2
2	0.10	23.149	9.057	10.980	88	6.620	-70.4
3	0.15	22.263	8.710	14.109	88	12.291	-61.6
4	0.20	21.377	8.363	17.239	88	17.961	-52.8
5	0.25	20.490	8.017	20.368	88	23.632	-44.0
6	0.30	19.604	7.670	23.497	88	29.303	-35.2
7	0.35	18.718	7.323	26.627	88	34.973	-26.4
8	0.40	17.832	6.976	29.756	88	40.644	-17.6

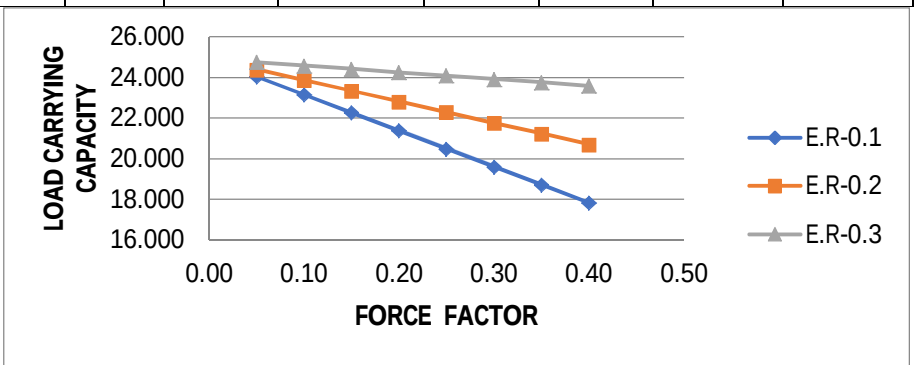


Fig 4: Variation of load carrying capacity with F.F

From Fig 5it can be conclude that at constant eccentricity even by increasing the prestress force load carrying capacity of the girder is decreasing. This is in contrast to our knowledgefor a concrete girder whose load carrying capacity increases with increasing prestressing force. Therefore, to increase the load carrying capacity there are two options available: 1) Increasing the cross sectional area by attaching another section and, 2) Increasing eccentricity of prestress tendons. However, increasing the area of section is not possible in all cases so there is a need to go for higher eccentricity values. But in concrete girders, higher eccentricity values causes failure when only dead load is acting on the girders.

Minimum permissible eccentricity

To increase the load carrying capacity of the girder the term

$$\text{So } \left(\frac{P}{A}-\frac{Pe}{Z_t}\right)<0 \therefore e>\frac{Z}{A}.$$

In ourcase this project Z/A = 207.77mm (i.e.) ER=0.3462.

Beyond minimum eccentricity calculated, the variation of load carrying capacity with force factor

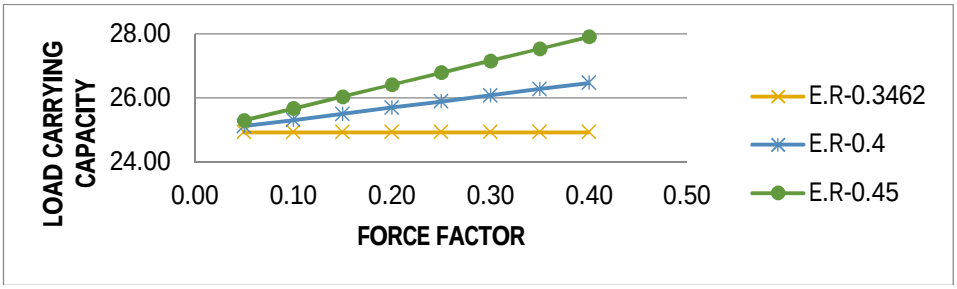


Fig. 5: Variation of load carrying capacity with FF

From the above graphs it is clear that load carrying capacity is increasing with increase in force factor but in earlier case it was in reverse manner, variation of load carrying capacity with E.R is shown in Fig 7.

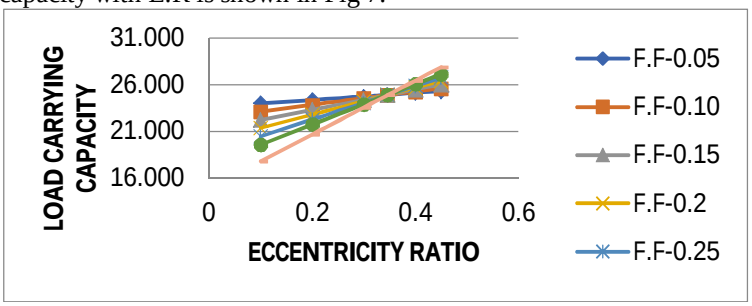


Fig. 6: Variation of load carrying capacity with E.R

From Fig.7 it is clear the load carrying capacity for all force factors intersect at minimum eccentricity point that means beyond minimum eccentricity, the load carrying capacity of the defined steel girder is increasing. Variations in shear stress with force factor for different ER are explained through graphs shown in Fig 8.

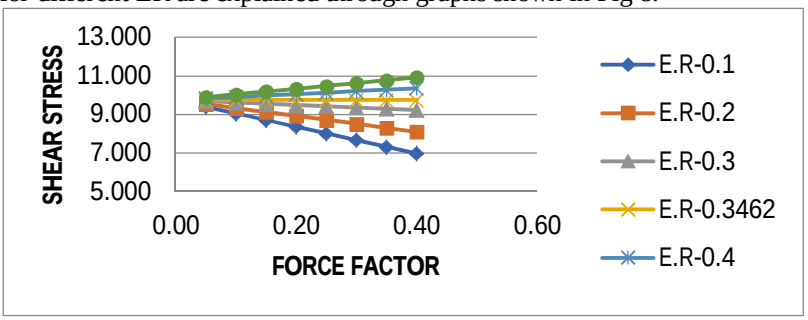


Fig. 7: Variation of shear stress with force factor

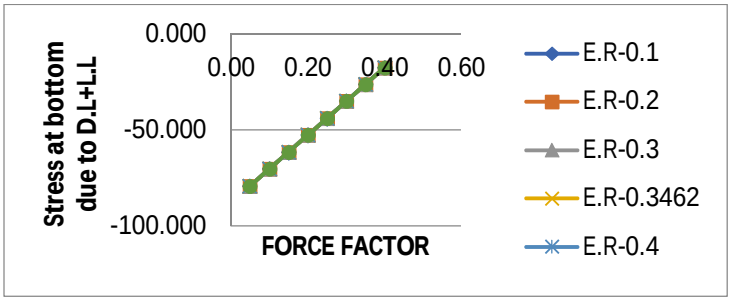


Fig 8: Variation of bending stress at bottom due to DL+ LL with force factor

From Fig. 9, it is clear that for all ER, stress at bottom is varying same with force factor, this is due to utilising of full strength at top section. Whenthe top fibre reaches its full strength σ_{bc}, the bottom fibre attains same stress value for all ERs, and top fibre stress for all FFs and ERs is equal to its maximum permissible compressive stress value σ_{bc}).

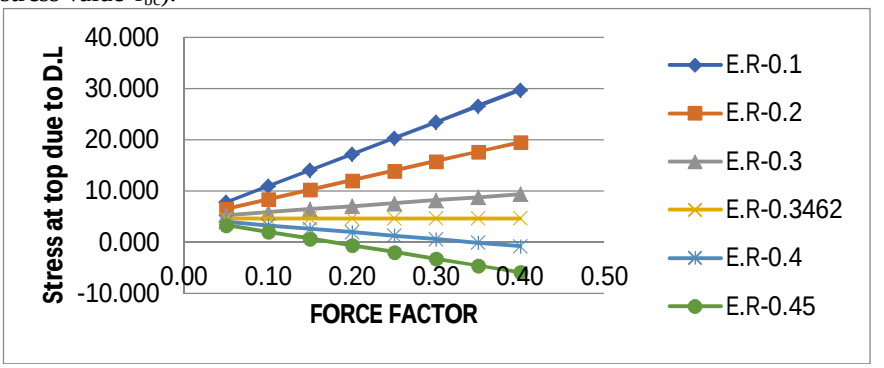


Fig. 9: Variation of stress at top due to DL with FF

At eccentricity ratio less than minimum ER, due to domination of axial stress caused by prestressing force, the compressive stress at top portion even without LL is increased when prestressing force is increased. Beyond minimum ER value the bending stress decreases and changes its nature from compressive to tensile.

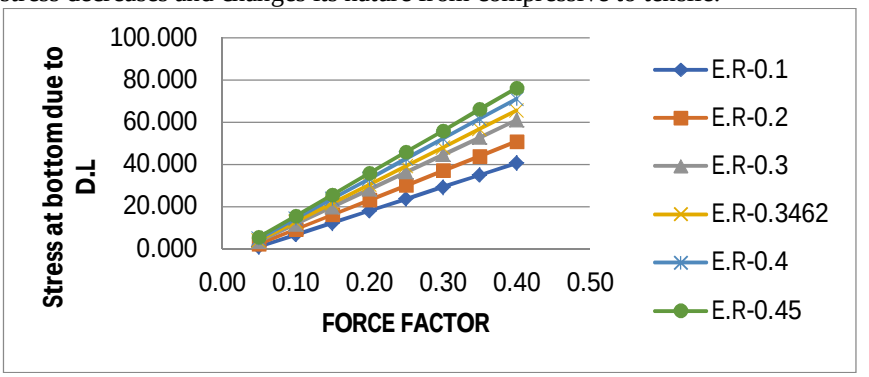


Fig. 10: Variation of stress at bottom due to DL only with FF

The moment carrying capacity is calculated from the Eqs 23,24 and 25 and the results are given in Table 2.

$$M_{W1} = M_{dz}\left(1-\left[\frac{N}{N_d}\right]-\left[\frac{Pe}{M_{dz}}\right]\right) = 379.15 \text{ KNM}$$

$$M_{W2} = \frac{M_{dz}}{K_{LT}}\left(1-\left[\frac{P}{P_{dy}}\right]-\left[\frac{K_{LT}Pe}{M_{dz}}\right]\right) = 418.15 \text{ KNM}$$

$$M_{W3} = \frac{M_{dz}}{C_{mz}K_z}\left(1-\left[\frac{P}{P_{dz}}\right]-\left[\frac{K_zC_{mz}Pe}{M_{dz}}\right]\right) = 355.015 \text{ KNM}$$

Table 2: BY VARYING FF AT CONSTANT ER OF 0.1

Trail No	Force Factor	Mw1	Mw2	Mw3	Min value
1	0.05	379.15	418.15	355.01	355.01
2	0.10	376.31	411.96	326.58	326.59
3	0.15	373.47	405.89	296.61	296.62
4	0.20	370.62	399.91	264.99	265.00
5	0.25	367.78	394.04	231.60	231.60
6	0.30	364.94	388.27	196.29	196.30
7	0.35	362.09	382.60	158.93	158.93
8	0.40	359.25	377.03	119.34	119.35

To understand the variation of load carrying capacity of the beam from the obtained results, a graph was drawn in Fig. 12 for the moment carrying capacity versus FF for various eccentricity ratios.

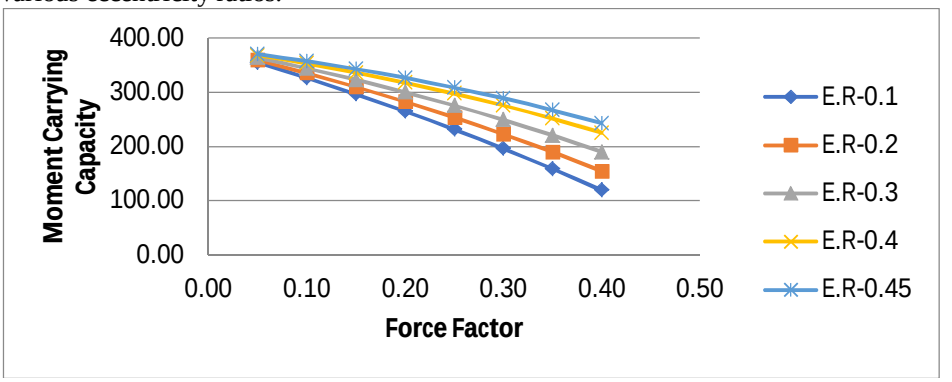


Fig. 11: Variation of Moment Carrying Capacity with force factor

From Fig.12 it is clear that load carrying capacity is decreasing with increase in FF because of lateral torsional buckling.

Camber Technique
ANSYS modelling of camber with an example problem

Defining finite element properties in ANSYS.

. For this study beam and solid elements have been taken. A pictorial summary of beam and solid elements taken is shown below with their codal names and degrees of freedom.

Beam 188 element **Solid 187 element**

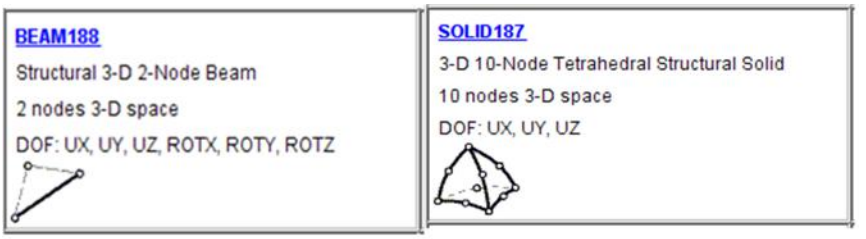


Fig 12: Elements used in modelling of beams in ANSYS

To give the camber in reverse direction, the deflection coming due to applied load on the straight girder need to be calculate first. Let the applied uniformly distributed loadis 50KN/m.

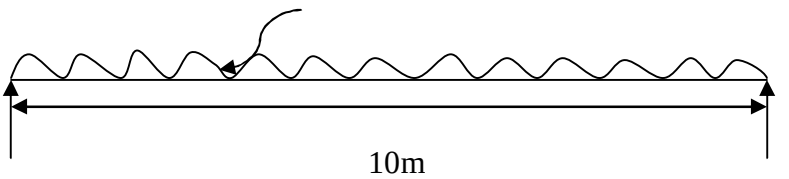


Fig. 13: Simply supported beam carrying udl of 50 KN/m.

Deflection due to above u.d.l = $\frac{5WL^4}{384EI}$ = 30.65 mm.

Bending stress at centre = 176.553Mpa.

The calculated amount of deflection was given in opposite direction of original bending direction and beam was modelled in ANSYS MECHANICAL APDL. The radius of curvature formed is calculated and it is 106215.36mm. In modelling stage for this high value of radius, generation of curve is very difficult so key points were located at ends and at a distance of 30.65mm above the base line at centre length of the beam then joined them by using straight lines**Beam188** element was used for modelling of the beam because it would not ask for any real constants (i.e.) it will adjust automatically with the cross section defined. After defining the element type its cross section need to be defined. After giving material model properties, the beam was meshed manually by definingits size in meshing command.

The support conditions were defined and load of 50KN/m is applied on it. Then model will be solved by using solve command. Fig14 show the contour diagrams for deformation and bending stress.

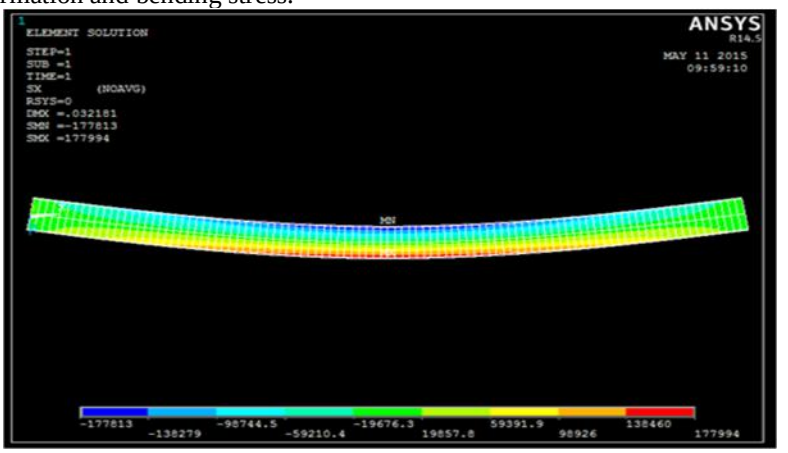
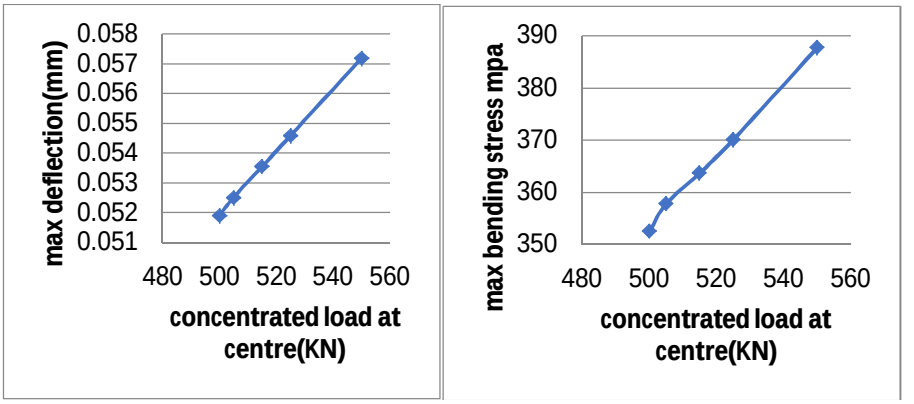


Fig. 14: Contour of bending stress variation along X-axis

Table 3: RESULTS OF CAMBER TECHNIQUE FOR DIFFERENT LOADING

S.No	Property/ Load type	Uniformly distributed load	Concentrated load	two concentrated loads @ (1/3)L
1	Max upward deformation given as upward camber	30.65 mm	49.043 mm	41.77 mm
2	Max deflection of cambered beam	32.18 mm	51.83 mm	43.789 mm
3	**Relative deflection**	**1.53 mm**	**2.787 mm**	**2.019 mm**
4	Max permissible deflection	30.76 mm	30.76 mm	30.76 mm
5	Max bending stress of straight beam	176.55 Mpa	353.107 Mpa	235.4 Mpa
6	Max bending stress of cambered beam	177.994 Mpa	352.477 Mpa	237.284 Mpa

In the fourth case beam was modelled with an incremental concentrated load at centre and deflection values were noted. A graph was drawn between load increment versus deflection and max bending stress versus load increment was showing in Fig 15.



(a) **(b)**

Fig. 15:a) Maximumdeflection variation with incremental concentrated load
b) Maximum bending stress variation with incremental concentrated load

Discussion on Resultsof Camber Technique

In all cases deflection values of straight beams exceeded the permissible value, after giving the camber in opposite direction the relative deflection values are very less compared to permissible value. On the other hand bending stress values were increased little bit after giving the camber than straight beam. This implies that camber technique serves better in controlling of deflection butbending stress would not decrease.

Section Enhancement Technique

The objective of this study was to investigate how the flexural capacity of a simply supported steel I-girder improves when it is strengthened with a section-depth enhancement at the centre of span by considering two factors namely length factor and depth factor.

The beam was modelled in ANSYS MECHANICAL APDL by taking 10 node **SOLID187** element because it will adjust with the given shape without asking for any real constants and supports free meshing.

Two factors were taken while modelling which are explained below and a pressure of total value 500KN was applied on top flange for all calculations.

Length factor = length of section attaching / total length of the beam.

Depth factor = depth of section attaching / total depth of section.

1. In modelling length factor varied from 0 to 0.5 by taking constant depth factor1
2. Then depth factor varied at a constant length factor of 0.1 and 0.5. Control beam calculations

Example Calculation SEL500 (L.F = 0.05 AND D.F = 1)

Length of the section attaching = 0.05*10000 = 500mm.

Depth of section attaching = 1*600 = 600mm.

A figure showing the co-ordinates of cross sectional key points defined in modelling stage



Fig. 16: Co-ordinates of cross sectional key points

Total load of 500KN was applied on top flange of the beam as pressure and end conditions are simply supported as explained in earlier models. Figure 17showing load application is given.

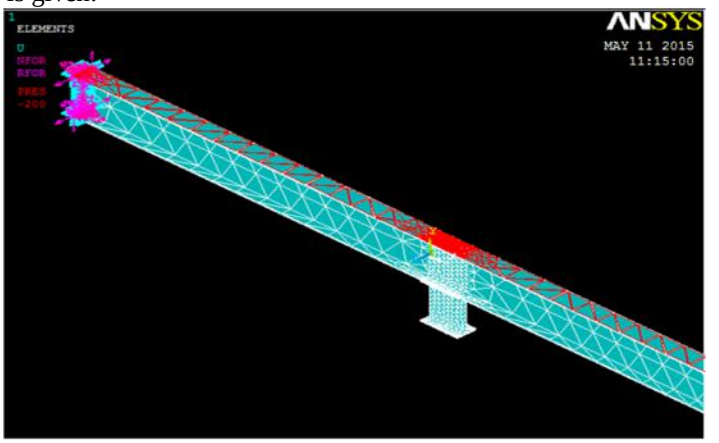


Fig. 17: Load pattern applied on SEL500

After application of load the model was solved, the contour diagrams of bending stress is shown in Figure 18.

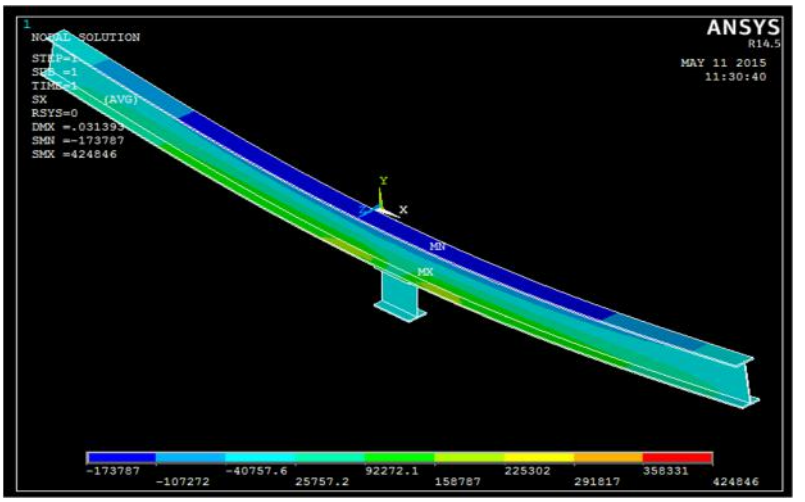
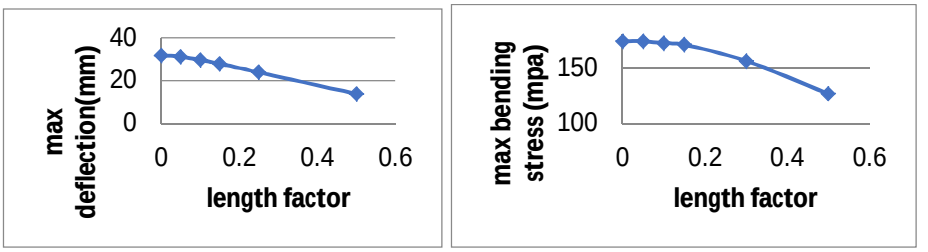


Fig. 18: Contour for bending stress of SEL500

Discussions on Results of Section Enhancement

To understand the variation of max deflection and bending stress with length factor (LF) at a constant depth factor (DF) of 1.0. Models of SEL500, SEL1000, SEL1500, SEL 2500, and SEL5000 were analysed and variations of max deflection and maximum bending stress with length factor for a constant depth factor are plotted in Fig 19.



(a) **(b)**

Fig19: Variation of maximum deflection and bending stress with LF

From Fig 19it is clear that the maximum deflection of the beam is decreasing with increasing value of LF. At smaller LF, there is no considerable decrease in deflection but at higher LF values deflection of the beam has decreased considerably. Same as deflection,max bending stress is also decreasing with increasing LF. The variation of max deflection with DF is shown in Fig 22 for a fixed values of LFs of 0.1 and 0.5.

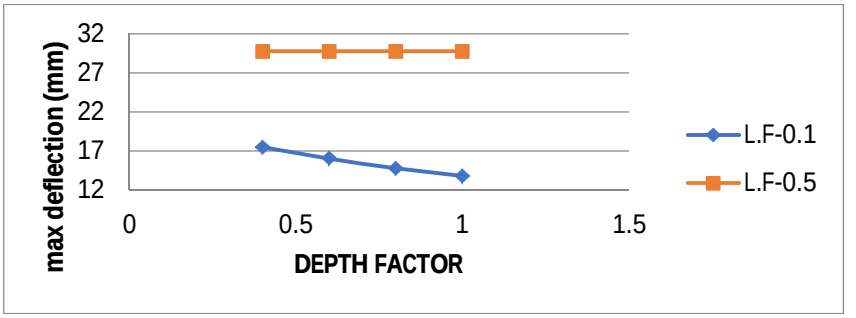


Fig 20: Variation of maximum deflection with D.F at L.F of 0.1 and 0.5

From the graph it is clear that, max deflection is increasing (very little) with increasing DFat a LF of 0.1. To understand this typical behaviour, DF is varied at a higher LF valueof 0.5.This causes the maximum deflection to decrease when depth factor increases. But in earlier case it has shown a typical behaviour because the attached section to be effective it must have a minimum length and then the depth of the section attached will come into picture.This typical behaviour is observed in case of maximum bending stress case also. The plots in Fig 21 show the variation of maximum bending stress with DF at lower and higher LF values.

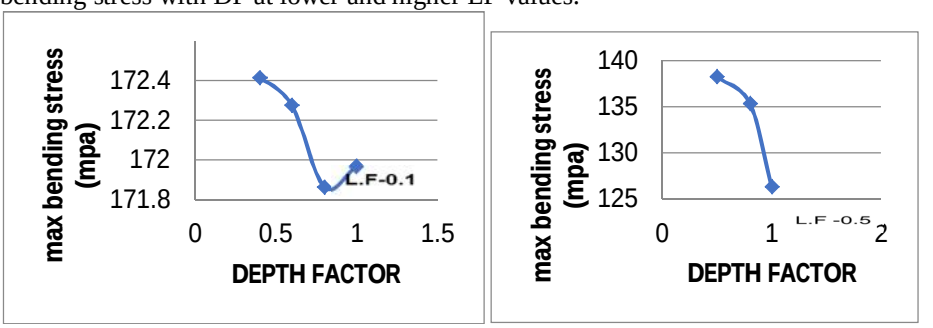


Fig. 21: Variation of maximum bending stress with DF at LF of 0.1 and 0.5

SUMMARY AND CONCLUSIONS

Summary:

In this study, three techniques have been studied -those are prestressing technique, cambering technique and section enhancement technique. In case of prestressing iterative calculations have been done to find maximum load carrying capacity of steel beam by varying force factor and eccentricity ratio manually and a program was made in MATLAB. For cambering technique, the calculated deflection was given as upward camber, modelling and analysis was done in ANSYS Software for different types of loading.In the section enhancement technique, how the flexural capacity of a simply supported steel I-girder improved when it was strengthened with a section-depth increment in centre of span by considering two factors -length factor and depth factor. In this study about 13 models were modelled and analysed in ANSYS Software.

Conclusions:

1. Contradictory to the previous results given by some researchers [4], it was found that load carrying capacity of both symmetrical and unsymmetricalsections increases with increase in the prestress force only beyond minimum eccentricity value. This means for eccentricity just below neutral axes, there may not be any increase in load carrying capacity of a prestressed I-beam even if prestressing force is increased. In fact, there will be decrease in load carrying capacity. For the laterally unsupported beam checked for overall member strength, load carrying capacity is decreasing with increase in prestressing force because of lateral torsional buckling.
2. Application of camber technique reduces the deflection of a member by 95 percent. This technique is best suited if a member fails in deflection.
3. Section enhancement technique reduces deflection by 50 percent and bending stress by 27 percent when length factor and depth factor are 0.5.
4. Length factor of the attaching section is the main parameter, which affects the flexural behaviour of the total member. At lower values of length factor, depth factor does not affect the flexural behaviour of the total member.
5. Of three strengthening methods, section enhancement technique is the best method, which will provide economic feasibility and easy applicability in construction.

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PERFORMANCE AND ESTIMATION OF SPEED CONTROL OF PMDC MOTOR USING ANN CONTROLLER WITH STATE SPACE MODEL

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Abstract
In this article modeling and simulation of PMDC (Permanent Magnet Brushless DC motor) is carried out using current control technique. This motor is widely used for high performance control applications. The ANN controller is used for speed control of this type of motor. The dynamic response of of the motor with the proposed controller is studied under different load disturbances. The effectiveness of the proposed controller is compared with that of the conventional PID controllers. The PID controller only provides satisfactory performance for set-point regulation. In the current control technique, the three phase reference currents of the PMDC motor are generated according to the motor parameters and the state of the switching signals to the inverter at any instant is determined by its rotor position, speed error and winding current. The developed model allows a quick examination into the performance of the system whenever the load is varied .The responses of various waveforms like line back e.m.f, phase currents, rotor position and speed are obtained for different load torques from no-load to full-load. From the results it is observed that the load increases the speed, frequency and back e.m.f decreases and speed ripple, current ripple increases. The time taken for the speed to attain steady state changes from open loop to closed loop and is decreased in closed loop.
Index terms- Permanent magnet motors, Brushless machines, PMDC, Speed Control, PID Controller, ANN Controller.

I. Introduction

Newly developed PMDC motor with high energy permanent magnet materials particularly provide fast dynamics, efficient operation and very good compatibility with the applications but only if they are controlled properly [1,2]. However, the ac motor control including control of PMDC motors is a challenging task due to very fast motor dynamics and highly non-linear models of the machines. Therefore, a major part of motor control development consists of deriving mathematical models in suitable forms. The dynamic models of the motors can be presented in different reference frames to lay down a basis for the motor control design. The mathematical formulations and the equivalent circuit models can be provided to help in better controller design for PMDC drives. There are two methods of controlling PMDC motor namely sensor and sensorless control [3].

Unlike a brushed Dc motor, the commutation of BLDC motor is controlled electronically. To rotate the motor the stator windings should be energized in a sequence. Rotor position should be known in order to switch the devices in a sequence. Three hall sensors are used to get the position information. The sensor less control, of PMDC Motor has the advantages of cost reduction, reliability improvement, elimination of difficulty in maintaining the sensors etc. This mode of control is highly advantageous if the motor is operating in dusty or oily environments for proper sensing of rotor position[4]. The sensor less method can also be adopted if the motor is mounted in a less accessible location. Further in the low rated motors power consumption by the sensors can reduce the motor efficiency and in compact units it may not be A sensor less operation of a PMDC motor using zero-crossing back e.m.f technique as well as current control technique are modeled and simulated using simulink [6,7]. The responses of line back e.m.f, phase currents, speed and rotor position are obtained and analyzed for different load torques from no load to full load.

II Modeling of Proposed ANN controller with PMDC motor

To simplify the motor construction and to reduce the cost of the motor the sensorless control scheme can be adopted. There are various control methods for sensorless control of brushless dc motor drive. Of these, the back emf method is the most typical and useful, in which the rotor position signal is acquired by detecting the back emf zero crossing of non-energized phase of the star connected motor. At the instant of commutation the magnitude and the polarity of line back e.m.f's change. Each transition occurs at every 60 electrical degrees and thus there are six commutation instants in one cycle.

The reliability of this method depends on the measured signals. Since the back emf is zero or undetectably small at standstill and low speeds, it is not

possible to use the back e.m.f sensing method in the low speed ranges and is suitable only when a minimum speed of about 5% of the rated speed is achieved. Hence, during starting the motor operates in open loop mode and is driven by the inverter which operates in 120^{o} conduction mode. When the motor reaches the minimum speed to facilitate zero crossing detection of back emf, the control is shifted to zero-crossing detection circuit and the drive operates in the closed loop mode.

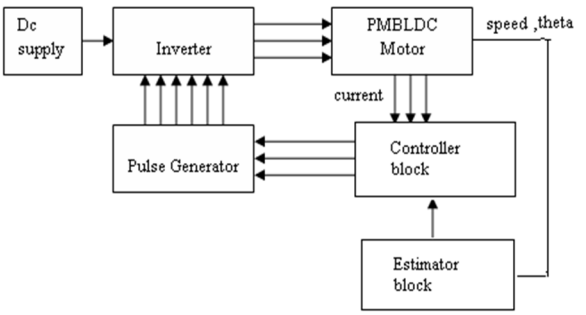


Fig.1. Block diagram of proposed control technique

The derivation of this model is based on the assumptions that (a) Induced currents in the rotor due to stator harmonic fields are neglected (b) Iron and Stray losses are neglected. (c) Three phase star connected motor is considered. The block diagram of the proposed controller of PMDC motor are shown in Fig.1. The model is developed based on the 5 differential equations which represent the motor.

$$V_a = R_s I_a + p\left(L_{aa} I_a + M_{ab} I_b + M_{ac} I_c\right) + E_a \quad \textbf{(1)}$$

$$V_b = R_s I_b + p\left(M_{ba} I_a + L_{bb} I_b + M_{bc} I_c\right) + E_b \quad \textbf{(2)}$$

$$V_c = R_s I_c + p\left(M_{ca} I_a + M_{cb} I_b + L_{cc} I_c\right) + E_c \quad \textbf{(3)}$$

$$J\frac{d\omega}{dt} + B\omega = T_e - T_l \quad \textbf{(4)}$$

$$\frac{d\theta}{dt} = \frac{p}{2} * \omega \quad \textbf{(5)}$$

$$X' = AX + BU$$

Where $X = \begin{bmatrix} i_a & i_b & i_c & \omega & \theta \end{bmatrix}^T$

$U = \begin{bmatrix} V_a & V_b & V_c & T_l \end{bmatrix}^T$

A & B are state-space matrices .Va, Vb, Vc are the impressed voltages on the motor windings and Tl is the external load torque on the motor. The state-space model calculates the line currents Ia, Ib and Ic, the speed ω (radians/sec) and the rotor position θ (radians), the phase back e.m.fs Ea, Eb & Ec. The open loop model is obtained when the supply to the BLDC motor is given from the 120 deg mode inverter for a repeating sequence. The load is represented as a step load torque. The mathematical modeling of the bldc motor is obtained from the five differential equations, which defines the motor, and are given as three voltage equations from the law of conservation of energy and the equation of motion.

The closed loop model using zero-crossing detection technique is obtained assuring that the motor has reached the minimum speed to facilitate zero-crossings of back e.m.f so that control is transferred to zero-crossing detection circuit. Then a closed loop operation is carried out and the motor windings are excited by the logical inverter. The logical inverter operates only when it is possible to detect the back e.m.fs. Since back e.m.f is a function of speed of the motor, at the instant of starting and during starting period its value is very less. Hence the motor is fed from 120^o inverter during starting period. The inverter operates for a given threshold time by the end of which the developed back e.m.f can be easily sensed. The same thing happens with the closed loop model using current control technique where, the zero-crossing detection circuit is replaced by a trigger generator i.e. state transition block which compares the reference current signals from the estimator block and actual output phase currents from PMDC motor in order to generate gate pulses which are given to the inverter.

III. Result and Discussion

3.1 The Conventional Controller

The conventional controller is one of the famous controllers used in a wide range in the industrial applications. The output of the PI controller in time domain is defined by the following equation:

$$v_c(t) = k_p e(t) + k_c \int_0^t e(t)\,dt \qquad \ldots\ldots\ldots\ldots\ldots\ldots (6)$$

where $v_c(t)$ is the output of the PI controller, k_p is the proportional gain, k_i is the integral gain, and e(t) is the instantaneous error signal. The main advantage of adding the integral part to the proportional controller is to eliminate the steady

state error in the controller variable. However, the integral controller has the serious drawback of getting saturated after a while if the error does not change its direction. This phenomenon can be avoided by introducing a limiter to the integral part of the controller before adding its output to the output of the proportional controller. The input to the PI is the speed error (e), while the output of the PI is used as the input of controlled voltage source inverter. And finally the controlled voltage obtained from inverter is fed to the motor for controlling its speed.

3.2 ANN controller

The ANN based control of PMDC motor is described in reference [9,12]. Before analyses the results are not attain the prescribed solution, it's desired to be improved further. The performance of PMDC motor to be improved using the Artificial Neural Network based controller. The FLC data is used to design the Artificial Neural Network algorithm (ANN). The proposed controller is working properly due to its well trained algorithm and also it minimize the computational time. The ANN is designed with a small number of neurons and single hidden layer. The feed forward neural network is developed with double neurons in the input layer, thrice in the hidden layer and single in the output layer. The two inputs are taken as error e(α) and change in error Δe(α), these inputs are developed and biased properly. From the FLC the network is designed and trained with the set of inputs and desired outputs. A feed forward back propagation neural network-training algorithm is used and it is trained with minimum error. The output of the network is change in PWM Signal Δd(α). The ANN is designed and trained with the error goal value of 0.00596325 at 11 epochs. The complete configuration of the trained network with the weights and bias is shown in figure 2.

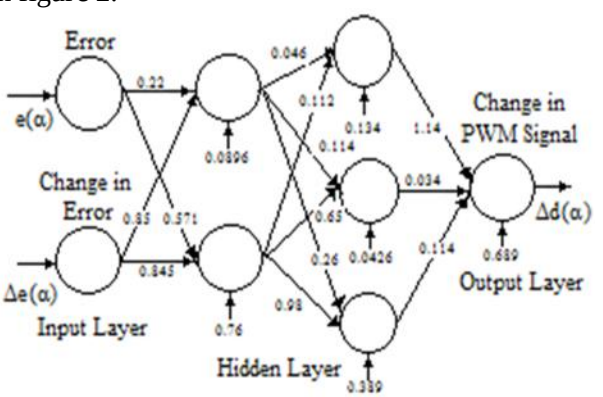


Fig. 2. Configuration of trained Neural Network

3.3 Simulation

The PMDC motor is simulated for a time of 1 sec at different load conditions i.e. at no-load, half-load and full-load of the motor and various plots are obtained. A step load torque is applied to the motor at 0.1sec in closed loop current control technique and at 0.2sec in closed loop zcd technique. The specifications of the motor and inverter are given below.

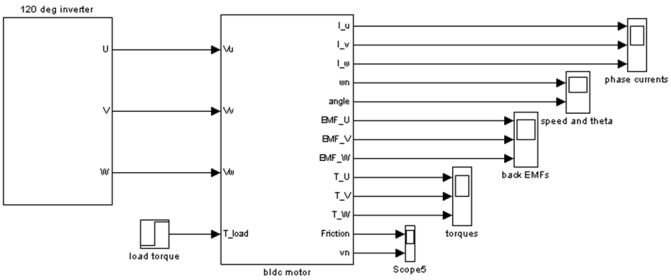


Fig.3. Open loop simulink model of the PMDC motor

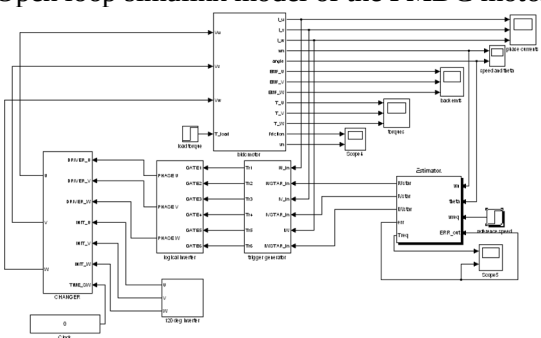


Fig. 4 .Closed loop simulink model of the PMDC motor using current control technique

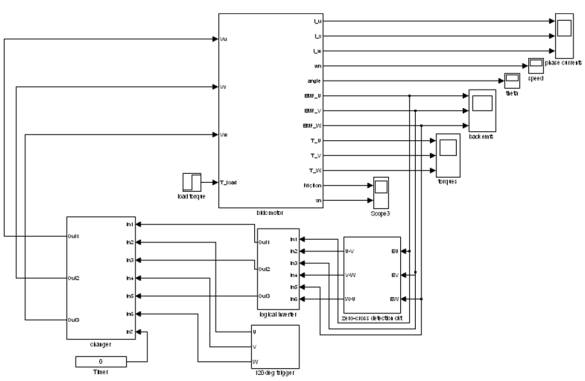
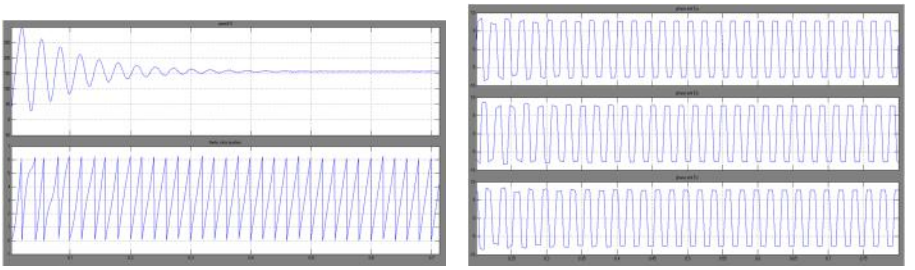


Fig.5. Closed loop model simulink model of PMDC motor using ANN



(a) (b)

Fig.6 (a) Speed and rotor position response at full load in open loop control, (b) Phase back e.m.fs at full load in open loop control

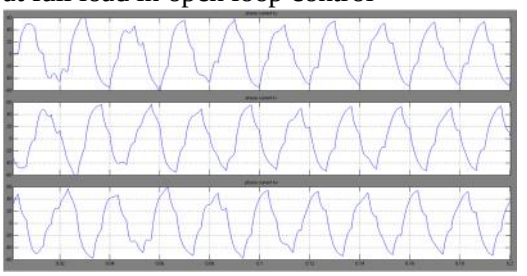
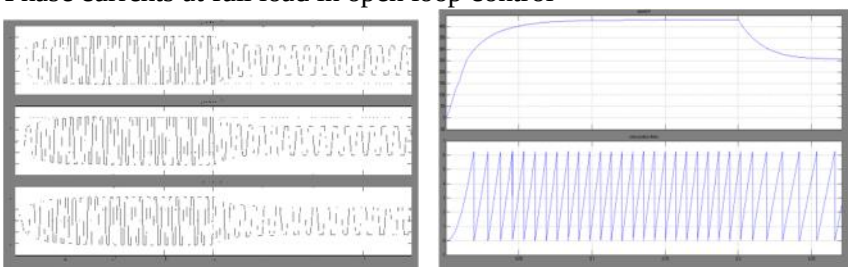


Fig.6(c) Phase currents at full load in open loop control



(a) (b)

Fig.7 (a) Phase back e.m.fs at full load condition (b)Speed and rotor position response at full load

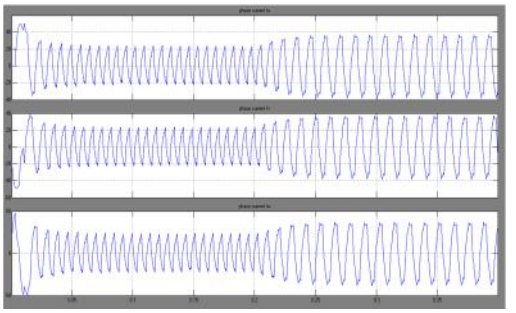
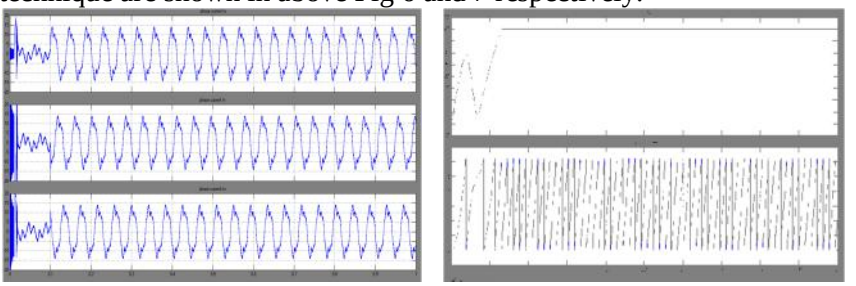


Fig.7(c) Phase currents at full load in

The waveforms of phase back e.m.f, speed, phase currents, rotor position for open loop model as well as closed loop model using current control technique are shown in above Fig 6 and 7 respectively.



(a) (b)

Fig.8(a) Phase currents at full load using ANN Controller, (b) Speed and rotor position at full load using ANN Controller

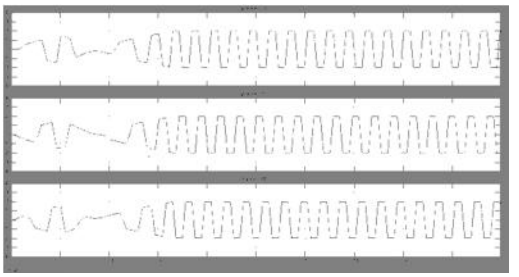


Fig.8(c) Back e.m.fs at full load using ANN Controller

The dynamic response of the PMDC motor driven by the PI controller is shown in Fig. 9. The PI controller performance of the PMDC motor dynamic performance is presented.

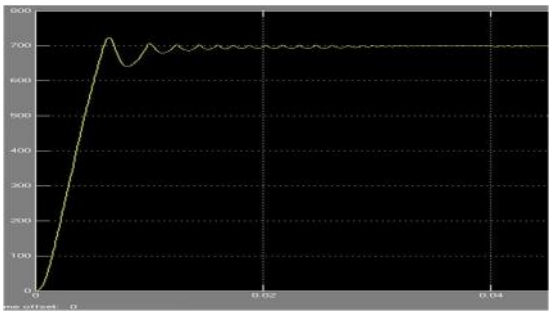


Fig. 9. The dynamic response of the drive system using a PI controller

In PID controller scheme only change is the replacement of PI controller block with PID controller block. The dynamic response of the PMDC motot by the PID controller is shown in Fig. 10. The dynamic response of the PMDC driven by the ANN Controller is shown in Fig.14. At no load condition a marginal increase in the speed is observed. As the load increases there is decrease in the line back e.m.fs and speed –these are evident from Fig. 7(a) & 7(b). Also there is rise in the currents which is observed in the Fig.7(c) & 8(a). At full load there is an increase in speed ripple and the time taken for the speed to attain steady state changes from open loop to closed loop and is decreased in closed loop. These responses can be seen from Fig.6 (a), 7(b) & 8(b).The change in frequencies of phase currents and rotor position can be observed when a step load is applied to the motor. This is in agreement with drop in speed and fall in slope of rotor position with load. The peak current is increased by more than 1.5 times.Fig.7(c) & 8(a) match with these conclusions.

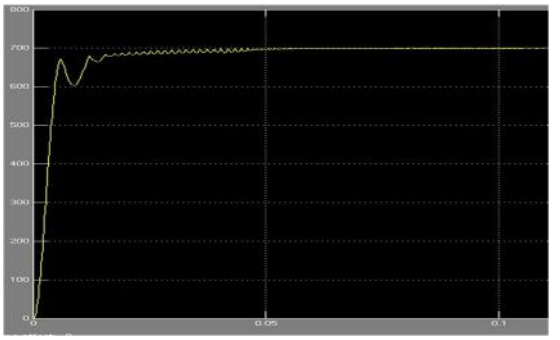


Fig. 10. The dynamic response of the drive system using a PID controller

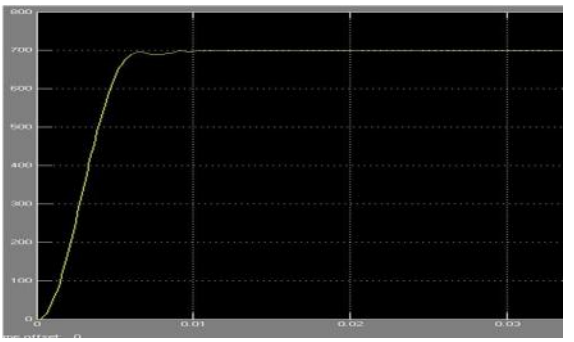


Fig. 14. The dynamic response of the drive system using ANN controller

Table.1 Comparative analysis of transient and steady state performance

Controller	% Overshoot	Rise time in Sec	Steady state error	Settling Time in Sec.
PID	1.2	2.85	4	1.5
ANN	nil	0.52	0.001	0.68

The performance of the controller response for PMDC motor speed control has been estimated and provided in table.1. It is seen that the ANN closed loop controllers give the better settling time. This ensures that the controller provide the effective feedback. It is concluded from the above table 1 the ANN controller has improved the dynamic performance of the PMDC motor.

IV. Conclusions

Modeling and simulation of a sensorless controlled PMDC motor is carried out at different loads. Initially the stator windings of motor are excited with an inverter which operates in 120^{o} mode conduction for a threshold period of 0.04sec. When the motor reaches the minimum speed to facilitate zero-crossing detection of back e.m.f, the control is transferred to the closed loop mode using zero-crossing detection technique as well as current control technique. Thus, the closed loop operation is carried out where a pair of stator windings of the motor is excited by the inverter. The main advantage of the present scheme is that the sensorless operation can be easily implemented leading to a reliable cost effective system with good motor efficiency.

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EFFECT OF PRANAYAMA ON ATTENTION AMONG ADOLESCENTS IN SECONDARY SCHOOLS, WEST BENGAL, INDIA

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Abstract

A quasi experimental study was conducted to assess the effect of pranayama on attention among adolescents in selected secondary schools of West Bengal. The objectives were to assess and compare the attention level of the adolescents before and after Pranyam in pranayama (P) group and non-pranayama (NP) group, to evaluate the effect of Pranyam by comparing the attention level among adolescents in P and NP group and to find out the association of attention of the adolescents with selected demographical variables. Non-equivalent pre-test post-test control group design was adopted, where 144 students were involved through stratified random sampling technique as sample. Differences were compared in scores of Digit memory tests (DMT), Oral Trail making test part B and Stroop color tasks through independent t-test with $P < 0.05$ level of significance. The mean post-test attention score in DMT, and Stroop color test of the students of P group were significantly ($p = 0.05$) higher and lower in OTM-B task than NP group. It inferring that pranayama was effective in improving attention of the adolescents in P group, though some domain of attention depended on the students age and classes they reading in.

Keywords: Pranayama, Adolescents, Attention.

Introduction

Adolescence, transitional phase of growth and development between child and adulthood, is the time of profound biological, intellectual, psychosocial and economic changes. In adolescent period school performances and academic achievements are very important, which may be harmful due to stress related to complicated tasks like role identification and carrier choice of this period[1]. Attention is the cognitive and behavioral process to concentrate on a particular thing or specific information from a complex, with attention ignoring perceivable information and narrowing the range of stimuli. The essences of attention are focalization and concentration of consciousness. Attention span is the amount of concentrated time a person can spend on a task without becoming distracted. Span of attention can measured by sustain

attention. A student who cannot keep his attention fixed for a reasonable period is sure to lag behind in his studies. Inattention means a person wanders off task, lack of persistence, has difficulty sustaining focus, and is disorganized; and these problems are not due to defiance or lack of comprehension. [2].. Stress and decision overload are the most important cause of inattention or reduced span of attention.[7,] India has the world's highest number of 10 to 24 years old people (World Population prospects: 2015). Positive energy, good environment, friends, teachers, outdoor games with regular yoga are the preventive measure in adolescent's health. During pranayama mind is passively attached with it. Mind is becoming calm, quite and tranquil as because of slow, smooth and prolonged breathing. Mental stress is also managed through pranayam.[4] So the introduction of pranayama in older adolescent helps to reach a higher position or aspects of achievements.

Objective of the study

The major objectives of the studies were to assess and compare the attention level of the adolescents before and after pranyam in pranayama and non-pranayama group. This study also intends to evaluate the effect of pranyam by comparing the attention level among adolescents in pranayama and non-pranayama group with an intention to find out the association of attention of the adolescents with selected demographical variables.

Method and Materials

Design and Participants

This Non-equivalent pre-test post-test control group design and was approved by the Institutional Ethics Committee included 144 adolescent students in the age group 10 to 15 years (studying in grades VI- IX) through Stratified random sampling technique. 18 students from each stratum were selected by systematic random sampling technique for both pranayama and non-pranayama group. A written informed consent was obtained from all participants prior to their inclusion in the study. With the help of a questionnaire, participation eligibility was ascertained where all females were non-yoga practitioners and did not have formal training in yoga and pranayama.

Instrumentation

Digit memory test

The revised version (6th October 2004) of the Digit memory test was used in this study to test the controlled selective auditory attention of the adolescents in both groups. Standard score was used to measure the selective attention score. The adolescents were scored by adding total number managed

backward and forward together. According to this tool gap between digit forwards and digit backwards, two is normal, whereas if the gap is larger than three, or smaller than one, this may be worthy of note [5].

Stroop color task

The Golden version (1978, for ages 5 to 90) of the Stroop color test (developed by John Ridley in 1935) [36] was used to assess the selective attention score of the adolescents in both groups. In this test, the number of items correctly named in 45s in each condition was calculated (i.e., word card, color card, color word card). Then the predicted CW score (Pcw) was calculated using the formula; Pcw= (W×C)/(W+C), then the Pcw value was subtracted from actual number of items correctly named in the incongruous condition (IG) based on the performance in both W and C conditions. A negative IG value represents a pathological ability to inhibit interference, where a lower score means greater difficulty in inhibiting interference. [6]

Oral trail making test part B

The oral version of the Trail making test part B (OTMT part B - developed by Ricker and Axelrod; 1994, pp. 48–49) was used to assess the verbal attention of the adolescents in both groups. According to this tool the time in seconds adolescents has taken to complete the task. Therefore, higher score reveal greater impairment [7].

Procedure

A structured yoga session, developed by the researchers as they being a yoga instructor and with the help of expert guidance and reference. The 30–minute yoga sessions were structured as follows: 7 -minutes initiation, 3-minutes of yoga postures,12- minutes pranayam, a 3-minutes relaxation and 5 minutes time gap between changing poses and technique. Initiation involved Relaxation, OM chanting and Sourya Pranam. Yoga posture include Padmasana, Utkatasana and Bhujanagasana .Pranayam focused on Nadi suddhi breathing, Bhastrica pranayama and Bhamari pranayama- Humming bee breathing. Relaxation involved OM chanting. The researcher had done one month Certificate Program under Vivekananda district wellness centre, Bankura District, West Bengal state, India undertaken by AYUSH Ministry of Health and F.W. Govt. Of India. For the purpose of Yoga session, the Pranayam group of 72 subjects was divided into 4 batches consisting of 18 participants in each batch. Yogic poses (asanas) and pranayam practiced session was taught in group sessions, each session lasted for 30 minutes for two weeks. A common hall was used to teach and demonstrate the Yogic poses (asanas) and pranayam. Yoga session was done by the researchers. The pranayam groups were monitored for

Yogic poses (asanas) and pranayam the practice in the school under the supervision of a researchers. The pranayam group received 9 times yoga session.Each eligible participant then entered the pre-test stage, which consisted of performing the Digit memory Test, Oral trial making test part B and Stroop colour test. Then Participants in the Pranayam group underwent a structured yoga session that consisted of one 30-min session. In contrast to the pranayam group, the participants in the control group were simply instructed to maintain their normal life without participating structured yoga session After completion of 9 the structured yoga session program, all the participants were invited to entre for the post test. Each participant was asked to perform the Digit memory Test, Oral trial making test part B and Stroop colour test again for the comparison of pre-and post-test scores.

Data analysis and interpretation

Section1 Finding related to demographic characteristics of the adolescents students In pranayama group most (52.8%) of the children belonged to the age group 10 to 12 years whereas in non-pranayama group most (56.9%) of the children were also belongs to the age group 13 to 15 years. All the children of pranayama and non pranayama group were distributed equally (25% each) in the academic standards VI, VII, VIII and IX. Most (52.78%) of the children in pranayama group belonged to the joint family and in non pranayama group most (52.78%) of the children were also belongs to the joint family. In pranayama group 48.6% of the children were two siblings and in non pranayama group most (54.2%) of the children were also two siblings.

Section 11 Findings related to the pre test and post test attention scores of the adolescents before and after pranyam in pranayama group and in non pranayama group

Table 1 Mean, median and standard deviation of pre test and post test focused attention scores by Digit memory test Attention by Oral trail making test part B, Stroop color test among adolescents in pranayama and non pranayama group

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n=144 (P=72: NP=72)

Variables	Pranayama group						Non-pranayama group					
	Mean		Median		Standard deviation		Mean		Median		Standard deviation	
	Pretest	Post test	Pretest	Post test	Pretest	Post test	Pretest	Post test	Pretest	Post test	Pretest	Post test
Digit memory test	82.06	91.72	81.00	90.50	12.34	11.96	84.39	85.36	81.50	83.00	12.72	13.73
Attention by Oral trail making test part B	36.20	18.00	28.90	21.80	24.70	19.50	30.73	26.95	21.05	17.29	27.50	25.65
Focused attention by Stroop color test	2.74	6.21	2.52	5.74	5.88	4.97	3.12	1.84	2.27	1.17	6.44	5.73

P – Pranayama group, NP- Non-pranayama group

Section III: Findings related to the effect of pranayama in terms of pre test and post test attention scores of the adolescents in pranayama group.

Table 2 Mean, mean difference and standard deviation of pre test and post test attention scores of the adolescents in pranayama group and 't' value computed between those

n=72

Attention score	Pre test	Post test	Mean difference	't' value
	Mean ±SD	Mean ±SD		
Digit memory test	82.06±12.34	91.72±11.96	9.66	6.73*
Oral trail making test part B	36.20±24.70	18.00±19.50	18.20	7.70*
Stroop color test	2.74±5.88	6.21±4.97	3.47	7.28*

$'t'_{0.05,\ 71}=1.99$ p=0.05

Section 1V Findings related to the effect of pranyam in terms of post test attention scores of the adolescents in pranayama and non pranayama group

Table 3 Mean, mean difference and standard deviation of post test attention scores of pranayama group and non pranayama group with independent't' value computed between those

n=144 (P=72: NP=72)

Attention score	Pranayama group	Non-pranayama group	Mean difference	't' value
	Mean ±SD	Mean ±SD		
Digit memory test (DMT)	91.72±11.96	85.36±13.73	6.36	2.96*
Oral trail making test part B (OTM-B)	18±19.5	26.95±25.65	8.95	2.35*
Stroop color tesT	6.21±4.97	1.84±5.73	4.37	4.88*

't'$_{0.05,142}$=1.99 p= 0.05 P- Pranayama group, NP- Non-pranayama group

Section V Findings related to the association between attention scores and selected variables.Data revealed that Auditory attention scores of the students was dependent on their age and independent on their classes they reading in and number of siblings they have. It depicted that Verbal attention scores of the students was independent on their age and number of siblings they have whereas dependent on their classes they reading in. It also found that Focused attention scores of the students was not dependent on their age and their classes they reading in but dependent on number of siblings they have.

Discussion

In the present study the adolescents of lower age group (47 students of 10-12 years) and lower classes (46 students of class VI-VII) performed better (at and above median attention score 81) in DMT whereas who have less number of siblings (55 students has 1-2 siblings) scored below median. In the present study most (48 students) of the adolescents of lower classes (class VI-VII) perform better (at and above median score 23.05) in OTM- part B tasks and same (48 students) number of adolescents of the higher classes (class VIII- IX) scored below median. In the present study most (38 students) of the adolescents of higher classes (class VIII- IX) perform better (at and above median score 2.46) in Stroop color task and same (38 students) number of adolescents of the lower classes (class VI-VII) scored below median. In the present study selective auditory attention scores of the adolescents was depend on their age as young children do not have mature selective auditory attention skills. The present study result showed that performance in oral trail making test part B and Stroop color test was strongly associated with their academic classes they read in. This pattern is consistent with previous study showing that education always correlate to perceptual and motor performance. [8]

The present study is supported by the single cross sectional study

conducted by Nilsoge.D, Bagade A et al (2016) In the study reference the researcher use Narisudhi,Bhastrica pranayama and Ujjayi breathing technique to evaluate of attention and verbal memory in yoga practicing pre-adolescents. They found the specific technique were effective to increase the attention and verbal memory in experimental group than control group [9].

Conclusions

It can be concluded that adolescents school students who practice pranayama in the 9 sessions showed better performance in auditory, verbal attention span and focused attention tasks compared with the adolescents in control group. Practice of pranayama alters the structures of brain [18] and improve memory which contribute directly to the development of cognitive performance skills and executive skill of the students, possibly leading to improvement in attention and memory if practice regularly. Larger randomized controlled trials are needed to validate these findings.

Recommendations

On the basis of the findings of the study following recommendations were made for further research:

- A similar study could be replicated on a large sample in a multi-center trial with different demographic characteristics.
- A similar study could be done to find out the bio-physiological effect of pranayama.

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A STUDY ON THE GREEN MARKETING INITIATIVES, STRATEGIES, PRACTICES ADOPTED BY SELECT FIRMS OPERATING PAN INDIA

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Abstract: In today's competitive world, 'survival of the fittest' is the mantra which can lead to success. The firms and business houses in various capacities have worked upon applying varied strategies from time to time to gain a competitive edge over their rivals. The present study intends to identify and analyze the various green marketing initiatives, strategies, practices adopted by different firms operating pan India. For this Green Strategy matrix is used. It is found that the firms are operating in various capacities and there rests a huge prospect to change their way of operations to cater to the market opportunities.

Keywords: Initiatives, Firms, Green Marketing, Practices, Strategies

In today's competitive world, 'survival of the fittest' is the mantra which can lead to success. The firms and business houses in various capacities have worked upon applying varied strategies from time to time to gain a competitive edge over their rivals. Many achieved success; rest got washed away. Thus application of strategy or impinging a new initiative is a very uncertain area to explore. Utmost care and diligence must be applied to a new practice, initiative or strategy. This objective intends to identify the various green marketing initiatives, strategies, practices taken up by the firms to achieve long term goals or success.

The concept of green marketing is developed from the societal marketing concept, which Kotler proposed in 1976 (Wong, 2008). Many firms have framed green marketing objectives and have clubbed these with marketing activities. Based on the Roper Survey report, more than half of US consumers recycle bottle, cans, and newspaper (Ottman and Creasey, 1998). So, there is a clear indication that most consumers display green sentiments in their daily activities and purchase patterns. The 2004, Indian Ocean earthquake killed nearly 230,000 people in 14 countries and drowned coastal communities with waves up to 30 meters high(Chun-Shuo Chen). In the following year, Hurricane Katrina severely damaged the US. Since then, people have realized the importance of environmental preservation and management.

In a 2002 Roper Survey, 41% of consumers said they did not buy green products because they worried about the diminished quality of eco-friendly versions. And both Procter & Gamble CO. and Wal Mart Stores Inc. have been criticized for selling a brand of paper towels labelled as green in which theinner tube was made of recycled paper but the towels themselves were made of chlorine bleached paper and came in plastic packaging.(F. Cairncross, 1992)

So, there is a dilemma on the level of companies understanding of green products, green raw materials availability, obligation of top level towards green commitment,level of competitiveness, etc. These questions can be answered by considering the green marketing strategy matrix given by Ginsberg and Bloom. A company can get effective idea and guidelines on a host of issues relating to green marketing by following the matrix.

Objective of the study: To identify and analyze various green marketing initiatives, strategies, practices adopted by different industries operating on a pan India basis.

Methodology of the study:15 companies (operating pan India) have been selected on the basis of judgement sampling.Data have been collected from articles and journals. Data have been analysed with the help of tables and charts.

GREEN MARKETING STRATEGY MATRIX

Business environment is so dynamic that no single matrix can fit in all the firms. Strategies can be made to use under different market and competitive settings. Ginsberg and Bloom's (2004)suggested a green marketing strategy which companies may use. The two main considerations of the strategy is the likely sustainability of green market segment i.e, size of the green marketin their industry and the ability of one firm to differentiate it from that of its competitors (differentiability on greenness).

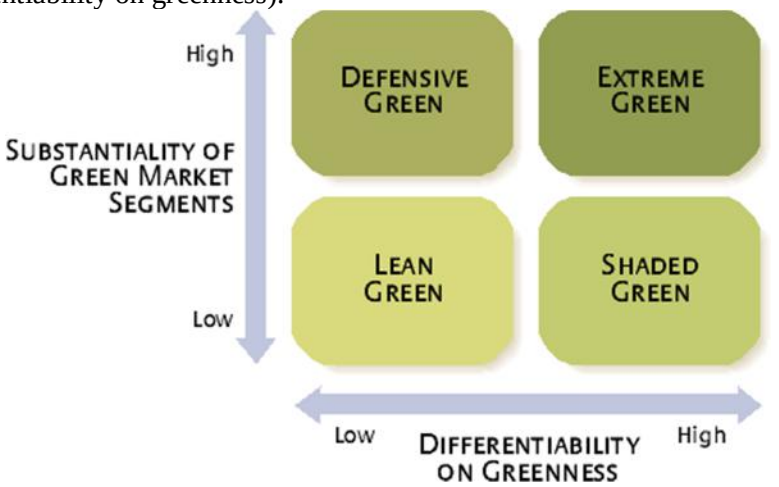


FIG: GREEN MARKETING STRATEGY MATRIX

Lean Green: Lean Green are those firms which are focused on obliging to various sorts of green and environment friendly acts. They are interested in cost efficient activities and do not seek to get long term benefits of the adopted ideas.They often hesitate to promote their green ideas and activities in a fear of being judged. They do not want to highlight about their product attributesas they think in the long run they cannot be competitive. They believe in spending more in green initiatives rather than in spending to publicise it.

Coca- Cola can be considered in this category. As it does not invest in promoting its green activities like recycling and package modification. The company has attached its efforts in overall branding activities rather than on stressing green activities individually. Coca-cola also thinks that added scrutiny in the green initiativesof the company may lead to the exposure of many other business strategies which they do not intend to disclose in public.

Defensive Green: These are those firms who use green marketing as a weapon in crisis. This crisis is created by competitors move to capture market share. This strategy is used by the firms to build brand image and cover up losses that they have incurred. Their green efforts may be sincere and sustained one but their publicity is irregular and temporary. Regular promotion of green initiatives might increase consumer expectations and may also result in wastage of resources. Thus they adopt defensive strategy and promote about green activities only when they get struck by competitors.

Example of this strategy best suited to the huge clothing retailer Gap Inc.The company has taken up huge energy conservation and waste reduction measures and has highlighted it in their website. As they do not want to publicise it through promotional campaigns. In the late 1990s Gap was charged of making false promises as the green activists found that the son of the former CEO had purchased a Timberland. But that was owned separately by the son of the CEO andin no way linked to Gap Inc. Thus Gap Inc.launched huge publicity campaign to clear the doubt in people‘s mind by raising queries and clearing doubts, distributing pamphlets and explaining its environmental policies and practices to the society. It was a successful campaign.

Shaded Green: The companies belonging to this category have the characteristics of being committed to green. They invest in long term, systemwide process with financial and nonfinancial commitment towards green initiatives. The firms identified as shaded green see opportunity in undertaking green initiatives. Even they feel they can get a competitive edge if they have innovative green ideas andtechnologies implemented in their product categories.Environmental benefits are promoted as a secondary factor. The primary aim is to promote direct, tangible benefit to the customers by promoting through mainstream channels.

Example of Shaded Green Company can be the Toyota Prius. It is a fully hybrid electric vehicle developed by Toyota in the year 1997 and launched in U.S.market in 2000. Toyota did not highlight its environmental impact rather stressed on points like fuel efficiency, less time to be spent at pumps for gas filling, best for consumers who wants to save on recurring expenses, energy efficient automobile during promotions. The feature of reduced air pollution was taken as a secondary characteristic thus wasnot put in forefront during promotions.

Extreme Green: These companies are green deep hearted as the concept of green is everywhere in their activities. The product life cycle process, pricing and objectives are also integrated with green ideas and green practices. The serve as the niche market in the green segment and induce sell through boutique stores or speciality channels. The motivating factor for these firms have been the total quality environment management right from the basic level.

Example of extreme green companies are The BodyShop and Patagonia. Social responsibility towards the stakeholders, environment, suppliers are all taken care by the company.They include green in every possible way in their firm and follow it wholeheartedly.

The various marketing mix tools are used in the green strategies in the following way:

Primary Marketing Mix Tools

STRATEGIES	Marketing Mix Tools			
	PRODUCT	PRICE	PLACE	PROMOTION
Lean green	✓	X	X	X
Defensive green	✓	X	X	✓
Shaded green	✓	✓	X	✓
Extreme green	✓	✓	✓	✓

Source: Secondary Data

The above table helps to understand clearly the implication of various marketing mix tools in the green marketing strategy. The clear status of the companies can now be distinguished from one another. In the present study 15 companies operating in pan India basis have been identified. The companies belong to various product and service categories. The firms have been selected on the basis of convenience sampling. The researcher tried to cover maximum number of firms so that a diverse area may be covered in the study.

Green marketing initiatives, strategies or practices adopted by various firms are listed below. These firms are selected because

[SOURCE: Company websites]

Sl No.	Name of Company	Green Initiatives adopted	Green Practices adopted	Green Strategies adopted	Sector	Position in Green strategy matrix
1	**ITC Limited**	Started to produce bio degradable paper to keep itself ahead of its counterparts. This helps to promote environment friendly and recycleable paper which decomposes at a faster rate than other papers.	Producing multi-purpose paperwhich areozone treated and chlorine free.	Promoting benefits of using environmrntfriendly paper by embossing recyclable symbol and write up at the back of the copies and highlighting the green characteristic there.	FMCG	Shaded Green
2	**Tamil Nadu Newsprint and Papers Limited (TNPL)**	The initiatives undertaken by this firm includes two Clean Development Mechanism projects and a wind farm project that helped generate 2,30,323 Carbon Emission Reductions earning Rs. 17.40 Crore. TNPL is also the first paper mill to produce cement from solid wastes ie., fly ash, lime sludge.	Paper board products like folding box board, solid bleached sulphate board, white lined chip board, grey back board in coated segment and cup stock in uncoated segment are marketed under the brand name Aura. A modern effluent treatment plant had been installed to treat waste water.The water is used for irrigation purpose in the adjacent factory area earmarked to develop green cover. It has also planted 680000 varieties of trees. They also make bagasse based eco friendly paper.	Created a separate brand name as “Aura” which includes only environment friendly products..	FMCG	Shaded Green
3	**State Bank of India**	SBI started with the “Green Channel Counter”	SBI is providing services like paper less banking, no deposit slip,no withdrawal form, no cheques, no moneytransactions form all these transaction are donethrough SBI shopping & ATM cards. State Bank of India turns to wind energy to reduce emissions.	Promotion is done to enhance the use of paperless transactions so as to save our mother earth.	Services	Shade Green
4	**HCL Technologies**	HCL took initiativeslike steps to solve the problem of toxics and e-waste in the electronics industry, phasing out the hazardous vinyl plastic and Brominated Flame Retardants from its products and it has also mandated the law for Restriction on use of Hazardous Substances (RoHS) in India.	HCL focused on Green solutions, Green energy, Green Data Centers, Green guidelines, green buildings,green procurement and environmental standards – not just within the company, but throughout our supply chain including our vendors, our unified value chain including our partners, all the way to our customers. we set a target to reduce our per capita carbon footprint by 20% by 2020.(HCL Sustainability Report, 2016)	HCL developed in house Green IT solutions and Green Data Centers that focus on increased efficiency, green compliance and energy management for our clients. Implying customer focused techniques throughout the distribution channel from suppliers to customers.	Technological products	Shade Green
5	**Oil and Natural Gas Company (ONGC)**	Introduction of Mokshada Green energy-efficient crematorium, which will save 60% to 70% of wood and a fourth of the burning time per cremation.	It installed state-of-art technologies, effluent &solid waste management, environment monitoring and reporting, bio-diversity conservation efforts and up-gradation and sustenance of environment management	Obtaining environmental certifications and accreditions like Integrated HSE management system (QHSE) based on ISO 14001, ISO 9001 and OSHAS 18001 has been implemented in all	Petroleum product	Shaded Green

			systems, Sustainable Water Management, **Energy Efficient Green Building at Mumbai, Kolkatta, Delhi & Dehradun (ONGC Sustainability Report 2016-17)**	installations and facilities.		
6	**McDonald's**	McDonald's replaced its clam shell packaging with waxed paper because of increased consumer concern relating to polystyrene production and Ozone depletion. McDonald's restaurant's napkins, bags are made of recycled paper.	Mc. Donald's uses trans fatfree oil or its french fries, and canola-based oil with corn and soy oils, for its baked items, pies and cookies, organic milk,	To obtain certification from the U.S. Environmental ProtectionAgencyMcDonald's reduced solid waste by using less packaging and by promoting the use of recycled-content materials.	Services sector	Lean Green
7	**Coca-Cola**	sustainable packaging,purchased green brands from China and USA (Suja, China Green Culiangwang)	The Coca Cola Company maintains its focus on the environmental issues like water stewardship, sustainable packaging, energy management and climate protection in order to reduce waste and sustain the environment. **(Company Website)**	Focussing on packaging and branding of the product.	FMCG	Lean Green
8	**Suzlon Energy**	Focuses on rapid reduction in life cycle costs, acquired environmental quality standard certification ISO14001, Health and safety management certification like OHSAS 18001 and quality management certification in line with 9001 standards	Suzlon takes up the following practices global wind installations, emission (PUC) check drive for employees, cloth bag sale, free distribution of compost , expert lectures, sale of WWF products and movie screening(company website)	Focussed on improving green branding techniques,	Technological product	Extreme Green
9	**Kansai Nerolac**	Gave customers hazardous metal free paint	Kansai Nerolac has removed the hazardous heavy metals from their paints. The hazardous heavy metals like lead, mercury, chromium, arsenic and antimony can have adverse effects on humans. Lead in paints especially poses danger to human health where it can cause damage to Central Nervous System, kidney and reproductive system.	Promoting the child friendly and health friendly range of paints . These paints are free of hazardous materials.	FMCG	Shade Green
10	**KFC**	Created a recycling program for glass, plastic, aluminum, cardboard, paper and more • Switched lighting to energy-efficient CFL or LED bulbs in many areas • Installed smart valves on all men's urinals, saving thousands of gallons of water each month • Implemented a green cleaning policy • Created program to purchase recycled-content paper products Using electric scooters for delivery purpose	The latest stores of KFC are built using elements that follow the Leadership in Energy and Environmental Design (LEED) certification process created by the U.S. Green Building Council. These new KFC Green restaurant is part of KFC's green initiative, which looks at Economically responsible ways of saving Energy and being Environmentally aware.	Promote AEG's corporate environmental sustainability program,identify plastic waste reduction opportunities; partnering with suppliers to identify sustainable packaging alternatives for items like straws, plastic bags, cutlery, and lids; and setting market-specific goals to reduce, reused, and recycle.	Service sector	Shaded Green
11	**IndusInd**	Establishment of solar	IndusInd Bank has opened the	Promotion of green	Banking	Shade

	Bank	ATMs, reduced use of paper through office automation and increased online transactions, managing e waste, recycling paper, waste management, green procurement,refurbishing toners and cartridges,	country's first solar-powered ATM and pioneered an eco-savvy change in the Indian banking sector.Other practices are Watershed Development Programme, Soil and Water Conservation (SWC), Water Resource Development , Sustainable Agricultural Practices	banking and green IT concept and stress on sustainable banking strategies by launching campaigns like 'hum aurhariyali'	service sector	d Green
12	**Xerox**	Introduced advanced toner to maximize energy efficiency by optimizing heating, cooling and lighting. Producing recycled paper or sustainable stocks which is made with half as many trees as standard paper used for digital printing.Produces papers with certification from the Forest Stewardship Council. These papers are made from trees harvested in a way that protects endangered forests	Xerox introduced a "high quality" recycled photocopier paper in an attempt to satisfy the demands of firms for less environmentally harmful products. Work with partners to stress on to reduce waste, energy use, greenhouse gases and our overall environmental impact. Use of non toxicglues,elimination of varnish,electronic job ordering, etc	Promotion of environment friendly certified paper.	Technol ogical product	Lean Green
13	MAHINDR A & MAHINDR A LIMITED	Introduction of electric vehicle, green IT solution, first company to announce internal carbon price	Green data centres, energy audit, Carbon pricing, water neutrality, zero waste & circular economy are the pillars of environmental bottom-line.	Obtained certifications like ISO 14001: 2015 and OHSAS 18001:2007 standards	Automo bile/ste el/Tevh nologic al product s	Shade Green
14	Nestle	Providing science-based, meaningful and verifiable environmental information about our products and activities, a member of the ISO Water Footprint Working Group	Materials from sustainably managed renewable resources, provide science-based, meaningful and verifiable environmental information about our products and activities. reducing the weight of our packaging,use of environment friendly packaging, reducing carbon footprint, limit water usage, non-renewable energy use and solid waste generation, promotes recovery and recycling, using recycled materials	Member of the ISO Water Footprint Working Group, environmental auditing, verification and certification of our practices and along the supply chain network, proactive long-term engagement and partnerships with stakeholders, Building on the ISO 14001 certification of the factories, using a range of communication methods to engage consumers on environmental issues.	FMCG	Shade d green
15	The Body Shop	Reducing the environmental footprint, improving the biodegradability	Use 100% natural ingredients, Driving sustainable innovation in products	Publicise the environmental impact caused by the company, taken up policy of transparency and sharing clear information with customers	FMCG	Extre me Green

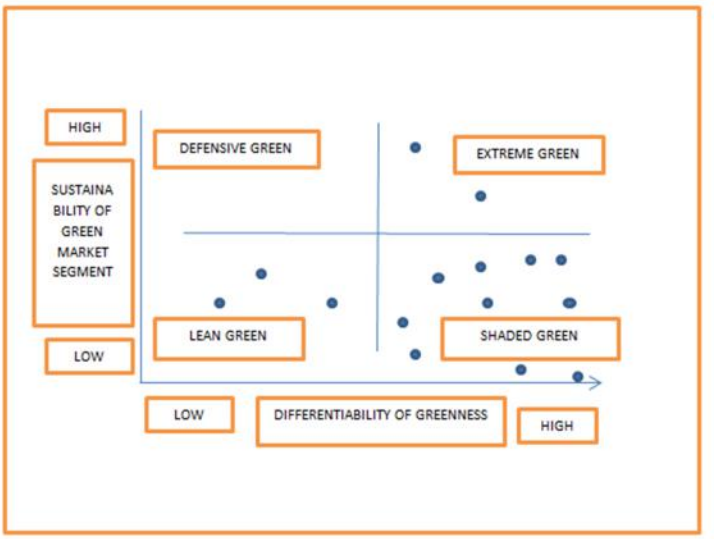


Fig: Various categories of green marketing strategy matrix

Strategies	Companies in Nos.	Companies in %
Defensive Green	0	0
Lean Green	3	20
Extreme Green	2	14
Shaded Green	10	66
Total	15	100

Findings & Conclusion:

The above diagram shows the various positions of the companies in the green marketing strategy matrix. A total of 15 firms have been selected (in the study) from various areas of operation. The firms have been operating in FMCG,FMCD, automobile, banking services sector, etc. It is seen that most of the firms (10 nos.) fall in the shaded green sector of the matrix, followed by 3 firms in the lean green matrix. Only 2 firms in the extreme green and nofirm in the defensive green matrix.

As there are less number of firms in defensive green category it can be said that consumers are not much vigilant on the activities of the firms, while in the extreme green matrix no firm out of the 15 selected firms lay there. It means that there lays huge scope for the firms to explore the virgin area of sustainable growth and development. Firms in the shaded green segment is the maximum which means that only the place aspect is to be taken care by them and all the other areas are covered by the firm. While in the lean green segment the

companies are only concentrating on the product aspect and the other three aspects related to price, place and promotion is not been taken care by them.
So the firms can put a foot forward towards promotion of green marketing initiatives which may give them long term benefits and profits. The firms in the shaded green and lean green category can be motivated to modify themselves and shift to the extreme category. Shifting to the extreme category will help them get many advantages. The advantages like increased brand equity, increased customer base, increased profit, loyal customers, etc. With little extra effort if the companies can change the scenario of competition in the industry. Thus, efforts should be taken and required modifications should be encouraged in the respective fields to embrace change.

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RP-HPLC-PDA METHOD DEVELOPMENT ANDF VALIDATION FOR THE ESTIMATION OF SORAFENIB IN API AND MARKETED PHARMACEUTICAL FORMULATIONS

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Abstract
A rapid and precise reverse phase high performance liquid chromatographic method has been developed for the validated of Sorafenib, in its pure form as well as in tablet dosage form. Chromatography was carried out on Xterra RP 18 (4.6 x 250mm, 5µm) column using a mixture of Acetonitrile: Water (85:15% v/v) as the mobile phase at a flow rate of 1.0ml/min, the detection was carried out at 273nm. The retention time of the Sorafenib was 2.165min. The method produce linear responses in the concentration range of 20-100ppm of Sorafenib. The method precision for the determination of assay was below 2.0%RSD. The method is useful in the quality control of bulk and marketed formulations.

Keywords: Sorafenib, RP-HPLC, Method Development, Validation.

1. Introduction
Sorafenib (Nexavar) is a potent competitive oral multikinase inhibitor that inhibits the threonine kinases pathway (Raf-1, wild-type B-Raf, and b-raf V600E), the vascular endothelial growth factor receptor, and also intracellular members of the mitogen-activated protein kinase signal transduction pathway. The IUPAC name is 4-(4-((((4-Chloro-3-(trifluoromethyl)phenyl)amino)carbonyl)amino)phenoxy)-N-methyl-2-pyridinecarboxamideN-(4-Chloro-3-(trifluoromethyl)phenyl)-N'-(4-(2-(N-methylcarbamoyl)-4-pyridyloxy)phenyl)urea. [1] In last, there were no successive pharmaceutical treatment for advanced refractory solid tumors that mostly finalized by death. Their survival rates for five years are almost low as 4-6% especially patients who suffered from liver, pancreatic and kidney cancers [2]. Nevertheless, a new strategy was developed to cure this tumor via the advent of imatinib mesylate [3]. After that time more than 30 different protein kinase inhibitors were developed to stop tumor development and progression offer promise for the future [4].The method has been developed by UV methods [5-7] and HPLC methods [8]. In present method developed method is cheap and reliable

compare to other methods and which is producing reproducible and good results.

Structure of Sorafenib:

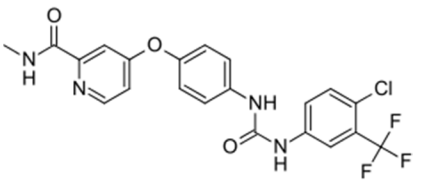


Figure: 1 Structure of Sorafenib

2. MATERIALS & METHODS:

Sorafenib was given by Sura labs. Water and Methanol for HPLC, Acetonitrile for HPLC were purchased from Merck. The tablets of Sorafenib obtained from local pharmacy.

Instruments: RP-HPLC(WATERS Alliance 2695 separation module, Software: Empower 2, 996 PDA Detector.), Digital weighing balance(Sartorius), Ultra Sonicator(Labman), pH meter(Lab India).

Methodology:

Preparation of Standard Solution:

Accurately weigh and transfer 10 mg of Sorafenib working standard into a 10ml of clean dry volumetric flasks add about 7ml of Diluents and sonicate to dissolve it completely and make volume up to the mark with the same solvent. (Stock solution)

Further pipette 0.6ml of the above Sorafenib stock solutions into a 10ml volumetric flask and dilute up to the mark with diluents.

Preparation of Sample Solution:

Take average weight of the Tablet and crush in a mortar by using pestle and weight 10 mg equivalent weight of Sorafenib sample into a 10mL clean dry volumetric flask and add about 7mL of Diluent and sonicate to dissolve it completely and make volume up to the mark with the same solvent.

Further pipette 0.6ml of Sorafenib above stock solution into a 10ml volumetric flask and dilute up to the mark with diluent.

Optimized chromatographic conditions:

Mobile phase ratio	: Acetonitrile: Water (85:15% v/v)
Column	: X-Terra RP18 (4.6×250mm) 5µ
Column temperature	: 30ºC

Wavelength	: 273nm
Flow rate	: 1ml/min
Injection volume	: 10µl
Run time	: 5min

Method validation: [9]

System Suitability

Accurately weigh and transfer 10 mg of Sorafenib working standard into a 10ml of clean dry volumetric flasks add about 7mL of Diluents and sonicate to dissolve it completely and make volume up to the mark with the same solvent. (Stock solution)

Further pipette 0.6ml of the above Sorafenib stock solution into a 10ml volumetric flask and dilute up to the mark with diluents.

Procedure:

The standard solution was injected for five times and measured the area for all five injections in HPLC. The %RSD for the area of five replicate injections was found to be within the specified limits.

Linearity: The linearity of detector response for Sorafenib is demonstrated by concentration versus area. Over the range of 20-100 µg/ml.The linearity was performed by using standard preparation. From the standard preparation transfer 0.2-1ml in to series of volumetric flasks and make up the volume with mobile phase to get concentration of 20-100 µg/ml. from this take 20 µg of solution and inject and calculate r^2.

Precision:

The Intra-day precision (repeatability) and inter-day precision (intermediate precision) study of Sorafenib was carried out by estimating different concentrations of 20-100 µg/ml three times on the same day and on three different days and the results were reported in terms of % RSD. All the experiments were carried in a dark room environment that the raw material is photo sensitive in day light.

Accuracy:

Accuracy was assessed by determination of the recovery study. Addition of standard drug to the pre quantified sample preparation at different concentration levels (50%, 100%, and 150%).

Limit of detection:

According to ICH guidelines the detection limit of an individual analytical procedure is the lowest amount of analyte in a sample which can be detected but

not necessarily quantities as an exact value. Limit of detection can be calculated using following equation as per ICH guidelines.

LOD=3.3*standard deviation/slope

Limit of quantification:

The quantitation limit of an individual analytical procedure is the lowest amount of analyte in a sample which can be quantitatively determined with suitable precision and accuracy. The quantitation limit is a parameter of quantitative assays for low levels of compounds in sample matrices, and is used particularly for the determination of impurities and/or degradation products. Limit of quantification can be calculated using following equation as per ICH guidelines.

LOQ=10*standard deviation/slope

Ruggedness:

Ruggedness of the proposed method was determined by analysis of aliquots from two homogenous slots by analyst using same operational and environmental condition.

Robustness:

Method was determined by two different operate and environmental conditions.

Assay:

Inject the three replicate injections of standard and sample solutions and calculate the assay by using formula:

%ASSAY =

$$\frac{\text{Sample area}}{\text{Standard area}} \times \frac{\text{Weight of standard}}{\text{Dilution of standard}} \times \frac{\text{Dilution of sample}}{\text{Weight of sample}} \times \frac{\text{Purity}}{100} \times \text{Weight of tablet} \times \text{Label claim}$$

3. RESULTS & DISCUSSION:

OPTIMIZED METHOD CHROMATOGRAMS OF SORAFENIB

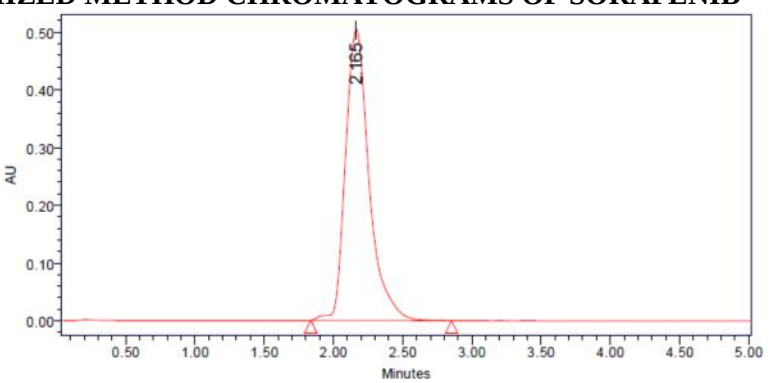


Figure: 2 Optimized Chromatogram (Standard)

Table: 1 Optimized Chromatogram (Standard)

S.No.	Name	RT	Area	Height	USP Tailing	USP Plate Count
1	Sorafenib	2.165	576012	505117	1.41	5846

Observation: In this chromatogram, the peak is well separated and theoretical plate count is within the limit. So, this chromatogram is optimized.

Optimized Chromatogram (Sample)

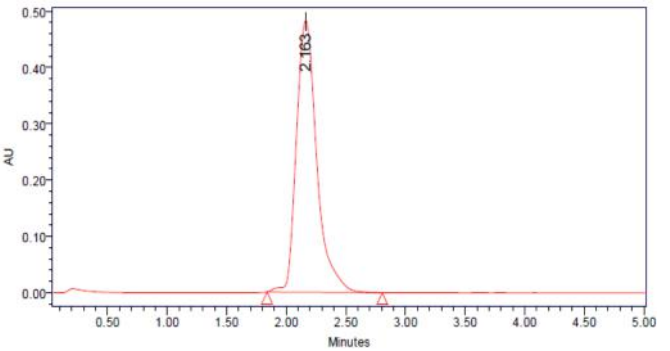


Figure-: 3 Optimized Chromatogram (Sample)

Table: 2 Optimized Chromatogram (Sample)

S.No.	Name	RT	Area	Height	USP Tailing	USP Plate Count
1	Sorafenib	2.163	575224	483391	1.43	5839

Acceptance Criteria:

- Theoretical plates must be not less than 2000.
- Tailing factor must be not less than 0.9 and not more than 2.
- It was found from above data that all the system suitability parameters for developed method were within the limit.

Validation Results of Sorafenib By Rp-Hplc

Blank:

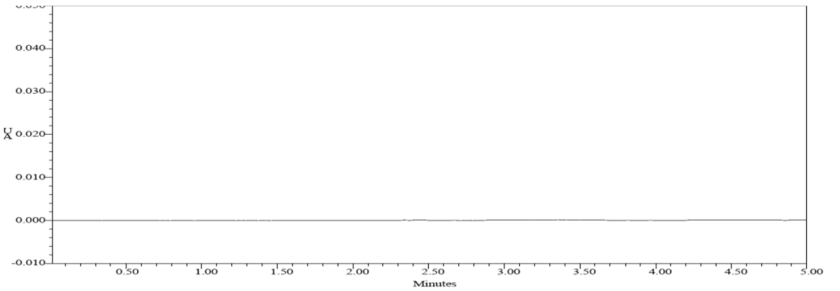


Fig-:4 Chromatogram showing blank (mobile phase preparation)

Table-: 3 Results of system suitability for Sorafenib

S.No.	Peak Name	RT	Area (µV*sec)	Height (µV)	USP Plate Count	USP Tailing
1	Sorafenib	2.173	505628	477915	5817	1.49
2	Sorafenib	2.165	505894	454466	5810	1.49
3	Sorafenib	2.192	506855	433328	5777	1.60
4	Sorafenib	2.152	520667	430583	5759	1.53
5	Sorafenib	2.128	509199	442971	5783	1.54
Mean			509648.6			
Std. Dev.			6318.103			
% RSD			1.2			

Table: 4 Chromatographic Data For Linearity Study:

Concentration Level (%)	Concentration µg/ml	Average Peak Area
33	20	168581
66	40	354709
100	60	522589
133	80	696532
166	100	857576

The plot of Concentration (x) versus the Average Peak Area (y) data of Sorafenib is a straight line.

Y = mx + c
Slope (m) = 8628
Intercept (c) = 1930
Correlation Coefficient (r) = 0.99

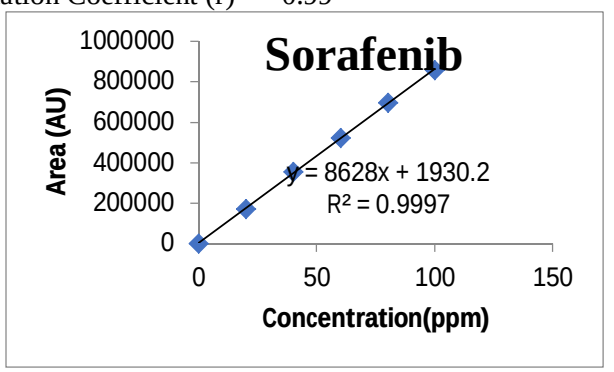


Figure-: 5 Calibration Curve of Sorafenib

Table-: 5 Peak Results for assay standard

S.No	Name	RT	Area	Height	USP Tailing	USP Plate Count	Injection
1	Sorafenib	2.180	527729	482601	1.44	5857	1
2	Sorafenib	2.168	575979	479316	1.42	5814	2
3	Sorafenib	2.176	596479	481267	1.50	5849	3

Table-: 6 Peak results for Assay sample

S.No	Name	RT	Area	Height	USP Tailing	USP Plate Count	Injection
1	Sorafenib	2.177	596961	463878	1.49	5820	1
2	Sorafenib	2.184	535275	469090	1.50	5810	2
3	Sorafenib	2.186	540057	463262	1.52	5841	3

The % purity of Sorafenib in pharmaceutical dosage form was found to be 98.6%.

Table-:7 Results of Precision (Repeatability) for Sorafenib:

S. No.	Peak name	Retention time	Area(µV*sec)	Height (µV)	USP Plate Count	USP Tailing
1	Sorafenib	2.198	507041	449653	5806	1.55
2	Sorafenib	2.194	504537	444489	5803	1.60
3	Sorafenib	2.190	512545	440821	5785	1.60
4	Sorafenib	2.197	505013	447677	5778	1.56
5	Sorafenib	2.192	506855	433328	5777	1.60
Mean			507198.2			
Std.dev			3185.43			
%RSD			0.62			

Table-:8 Results of Precision (Reproducibility) for Sorafenib

S.No.	Peak Name	RT	Area (µV*sec)	Height (µV)	USP Plate Count	USP Tailing
1	Sorafenib	2.138	523071	513471	5753	1.57
2	Sorafenib	2.147	527716	442971	5737	1.53
3	Sorafenib	2.130	520569	434642	5797	1.58
4	Sorafenib	2.131	521959	444851	5770	1.54
5	Sorafenib	2.138	523071	431357	5753	1.57
6	Sorafenib	2.128	502199	442971	5783	1.54
Mean			519764.2			
Std. Dev.			8934.227			
% RSD			1.7			

%RSD of all sample solutions should not more than 2.

Table-: 9 The accuracy results for Sorafenib

%Concentration (at specification Level)	Area	Amount Added (ppm)	Amount Found (ppm)	% Recovery	Mean Recovery
50%	262303.7	30	30.0	100.0%	99.7%
100%	516882.7	60	59.6	99.3%	
150%	782401.7	90	89.91	99.9%	

Table -: 10 Results of LOD and LOQ:

LOD	LOQ
2.86µg/ml	8.6µg/ml

Table-: 11 Results for Robustness

Parameter used for sample analysis	Peak Area	Retention Time	Theoretical plates	Tailing factor
Actual Flow rate of 1.0 mL/min	576012	2.165	5846	1.41
Less Flow rate of 0.9 mL/min	548389	2.897	5626	1.28
More Flow rate of 1.1 mL/min	485995	1.929	5732	1.33
More Organic phase	599681	2.275	5740	1.50
Less Organic phase	624528	2.444	5531	1.50

The tailing factor should be less than 2.0 and the number of theoretical plates (N) should be more than 2000.

Discussion:

The method is developed by using Acetonitrile: Water (85:15% v/v) mobile phase.and 5 trails are carried out in which some trials are showing high tailing factor and some trials are showing asymmetrical peaks

In the optimized chromatogram, the peak is well separated and theoretical plate count is within the limit. So, this chromatogram is optimized. The standard graph between cconcentration and absorbance gives linear curve with 0.99 r^2 value. The % purity of Sorafenib in pharmaceutical dosage form was found to be 98.6%.

The precision studies explain that the results are reproducible at different precisions and %RSD was found to be below 2.

The percentage recovery was found to be within the limit (98-102%). The results obtained for recovery at 50%, 100%, 150% are within the limits. Hence method is accurate.

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PUBLIC RELATIONS IN FILM INDUSTRY A CASE STUDY OF TOLLYWOOD

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Introduction

The importance of Public Relations (PR) in the film industry is bringing awareness to productions in order to create interest in those films by distributors, film festivals, movie goers, and other social influencers. Public Relations agencies are experts in branding and communication, understanding how to make productions newsworthy and relevant to today's audiences. They also offer crisis management planning and response services to help ensure that a production's message does not get lost in translation. Publicists use their established network of contacts and connections as well as seek new marketing opportunities to promote film productions and maximize their coverage through a variety of platforms. The film industry is one of the biggest players in the entertainment field. Every year, close to 600 feature films is released in the US, with India leading the numbers by a massive 1200-odd feature films per year. The figures fluctuate every year, but that does not take away the massive competitiveness of the film industry. Along with the advertising and marketing campaigns handled by the films, Public Relations is slowly becoming a major part of the promotional activities in the film industry.

However, the Public relations as a field has grown immeasurably in numbers and respect over the last three decades and today is clearly a growth industry. It is unfortunate that still in India, people have very less knowledge about public relations; it is hard for professionals to define to their peer groups, and relatives as to what they do for living. Indian business organizations think of hiring a charming lady in her 20's to handle public relations for the organization. Now is the time to change in this era of globalization, organizations need to come out of this sick mentality, and should foresee public relations seriously. There are no universally accepted definitions of public relations. Any book on the subject will list a number and add to them. For the purpose of this chapter, it is enough to say that the movement is way from definitions involving persuasion and towards the idea of two-way communication.

In this connection, Films have been huge revenue drivers in the entertainment industry. However, not all films succeed with high profit margins. Success can be contributed to aspects such as the writing, the production quality, or the acting within a film. These aspects contribute to how audiences, critics and media receive a movie. Unfortunately, these aspects typically overshadow one of the most important functions contributing to a film's success: promotion and public relations. For my capstone, I researched how films are promoted, branded, and distributed through public relations functions. Research largely relied on secondary research, with primary research added for deeper concepts. After basic knowledge was attained, the theories and concepts were applied in an additional creative component included for the capstone. This component attempted to create promotional materials in line with industry requirements, giving readers and the writer a tangible example to see film communications theory.

Tollyhood (as the Telugu film industry is called), which is considered as the second largest film industry in the country next only to Bollywood, is now in a tight spot. Hyderabad houses four film studios Ramanaidu, Annapurna, Sarathi and Padmalaya, besides the Ramoji Film City, the world's largest film studio complex as against one Ramanaidu Studio in Visakhapatnam, which is in Andhra region. The Telugu film industry had incurred a loss of around Rs 7 crore a day from mid-2009 to early 2010 when the Telangana agitation intensified, creating hurdles including cancelling or rescheduling of film shootings. Tollywood, which churns out close to 190 films with a total budget exceeding Rs 1,000 crore every year, relies mostly on studios in Hyderabad for huge settings, and on the Andhra region for lush-green fields and the large coastline as backdrops for duet songs and 'village' scenes.

Nevertheless, the Tollyhood, as the Telugu film industry is popularly known, is the second largest contributor to the industry's revenue, followed by the other regional language cinema industries in India. Indians love their cinema which is why India is the world's largest producer of films. "Every three months an audience as large as India's entire population flocks to the cinema halls." Fourteen million Indians go to the movies on a daily basis (about 1.4% of the population of 1 billion) and pay the equivalent to the average Indian's day's wages (US $1-3) to see any of the over 800 films churned out by Bollywood each year. India boasts of about 13,000 theatres enjoying a weekly admission of about 100 million people or 5000+ million per year. Distributors are the last link in the movie chain which takes films to the people. Although the country's filmed entertainment industry is the largest in the world in terms of the number of films it produces (around 900) and its theatrical admissions (around 3

billion), it continues to be small in size in terms of revenue, mainly due to hiccups in low ticket realization and occupancy levels.

While most are well aware of the importance of marketing while promoting a film, not many are aware of the importance of Public Relations (PR) PR and Marketing go hand in hand when a promotional event for a film is planned, the role of PR is maximizing the reach and coverage of the event across various platforms. A great PR agency ensures that the event gains maximum eyeballs and is covered across news channels. The role of PR is to inform the various journalists about the event, ensure and track the coverage of the event. If a certain film plans to promote itself in various cities like many films plan their city promotions in various cities then the role of PR is to tap the local media in those cities and ensure the event gets covered in the local press in that city.Unlike marketing, PR of a film begins the moment a film is announced. If a film is announced and is all set to go on floors for shoot, the role of a PR company is to get exclusive news and stills from the shoot and constantly be in news till the trailer and songs from the film are out. That's why a PR job is actually a lot longer and more challenging job than marketing.

Indian Film Industry

Anyway, the Tollyhood, as the Telugu film industry is popularly known, is the second largest contributor to the industry's revenue, followed by the other regional language cinema industries in India. Indians love their cinema which is why India is the world's largest producer of films. "Every three months an audience as large as India's entire population flocks to the cinema halls." Fourteen million Indians go to the movies on a daily basis (about 1.4% of the population of 1 billion) and pay the equivalent to the average Indian's day's wages (US $1-3) to see any of the over 800 films churned out by Bollywood each year. India boasts of about 13,000 theatres enjoying a weekly admission of about 100 million people or 5000+ million per year. Distributors are the last link in the movie chain which take films to the people. Although the country's filmed entertainment industry is the largest in the world in terms of the number of films it produces (around 900) and its theatrical admissions (around 3 billion), it continues to be small in size in terms of revenue, mainly due to hiccups in low ticket realization and occupancy levels.

In the number of movies released every year, focus on niche movies, advent of digital cinema and growth of multiplexes, implementations of innovative campaigns regarding a particular film and collaboration with international studios, and to a certain extent the rise of a new class of consumers who are ready to shed that extra penny for a good film, and to the young generation directors who also are ready to walk that

extra mile to do an experimental film with a bold theme; all these gave the required impetus to the producers . The Successful cinema is built upon several elements: content, technology, marketing strategy and human resource. The PR factor is where expertise in distribution and marketing comes in. The central business function includes product definition, designing and refinement, packaging, promotion, and communication through message making and distribution.

History of Tollyhood:

Importantly, the Telugu cinema is the segment of Indian cinema dedicated to the production of motion pictures in the Telugu language, widely spoken in the states of Andhra Pradesh, and Telangana.[1] Telugu cinema is based in Film Nagar, a neighborhood of Hyderabad, India. Since 1909, filmmaker RaghupathiVenkaiah Naidu was involved in producing short films and travelling to different regions in Asia to promote film work. In 1921, he produced the silent film, Bhishma Pratigna. He is cited as the father of Telugu cinema.[2] In 1933, East India Film Company has produced its first Indian film, Savitri in Telugu. The film was based on a popular stage play by Mylavaram Bala Bharathi Samajam, directed by father of the "Telugu theatre Movement" Chittajallu Pullaiah and cast stage actors Vemuri Gaggaiah and Dasari Ramathilakam as "Yama" and "Savithri" respectively.[3] The film was shot with a budget of estimated 1 million (US$14,000) in Calcutta.[4] It received an honorary diploma at the 2nd Venice International Film Festival.5PatalaBhairavi (1951) was the only South Indian film screened at the first India InternationalFilmFestival.6

However, the works such as B. Narsing Rao's ethnographic film MaaOoru won the 1992 Hungarian Visual Arts "Main Prize-Media Wave Award.K. N. T. Sastry's Thilaadanam received "New Currents Award" at the 7th Busan International Film Festival. K. Viswanath's Swati Mutyam was India's official entry to the 59th Academy Awards. Rajnesh Domalpalli's Vanaja was nominated for the Best First Feature and Best

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[3] . Narasimham, M. L. (7 November 2010). "SATI SAVITHRI (1933)". The Hindu. Chennai, India. Retrieved 8 July 2011.
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[5] . Bhagwan Das Garg (1996). So many cinemas: the motion picture in India. Eminence Designs. p. 86. ISBN 81-900602-1-X.
[6] 4th National Film Awards" (PDF). Directorate of Film Festivals. Retrieved 2 September 2011

Cinematography awards at the "23rd American Independent Spirit Awards.[7] The Baahubali (franchise) produced by Tollywood studio Arka Media Works is the highest grossing Indian film of all time globally. The second installment, The Conclusion is the only Indian film to receive the "Best International Film" at the "44th American Saturn Awards.[8]

Promotional poster of Bhakta Prahlada the first full length Telugu talkie produced and directed by H. M. Reddy to have a theatrical release.[9]

The Telugu film industry was originated with silent films in 1912; with the production and release of Anusha Adusumalli in 1923.[10] The film was directed by Raghupathi Venkaiah Naidu and his son R. S. Prakash.[11] On the other hand, Yaragudipati Varada Rao and, R. S. Prakash Rao have established a long-lasting precedent of focusing exclusively on religious themes; Nandanar, Gajendra Moksham, and Matsyavatar, three of their most noted productions, centred on religious figures, parables, and morals.[12] The first film studio in South India, Durga Cinetone, was built in 1936 by Nidamarthi Surayya in Rajahmundry, Andhra Pradesh. In 1935, Andhra Cine Tone was built in Visakhapatnam by Gottumukkala Jagannadha Raju. He introduced digital theater sound with the 1935 film Jagadamba.[13]

The first Telugu film with audible dialogue, Bhakta Prahlada, was produced by H.M. Reddy, who directed the first South Indian talkie Kalidas (1931). Bhakta Prahlada was completed on 15 September 1931,[14] which henceforth became known as "Telugu Film Day" to commemorate its completion.[15] Popularly known as talkies, films with sound quickly grew in number and popularity. In 1934, the industry saw its first major commercial success with Lavakusa. Directed by C. Pullaiah and starring Parupalli Subbarao and Sriranjani in lead roles, the film attracted unprecedented

[7] . Narsing Rao's films regale Delhi" (Press release). Webindia123.com. 21 December 2008. Retrieved 25 August 2012.
[8] .Dave McNary (27 June 2018). "'Black Panther' Leads Saturn Awards; 'Better Call Saul,' 'Twin Peaks' Top TV Trophies – Variety". Variety.com. Retrieved 9 January 2019.
[9]. Narasimham, M. L. (10 September 2011). "Eighty glorious years of Telugu talkie". The Hindu. Chennai, India.
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[11] . Telugu Cinema Biography". Kiwibox.com. 3 May 1913. Retrieved 28 November 2014.
[12] . CineGoer.com – Articles – History Of Birth And Growth Of Telugu Cinema". Cinegoer.com. Archived from the original on 10 April 2007.
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numbers of viewers to theatres and thrust the young industry into mainstream culture. By 1936, the mass appeal of film allowed directors to move away from religious and mythological themes. That year, under the direction of Krithiventi Nageswara Rao, Prema Vijayam, a film focusing on social issues, was released. Its success prompted the production of dozens of other immensely successful 'social films', notably1939's Vandemataram, touching on societal problems like the practice of giving dowry, Telugu films increasingly focused on contemporary living: 29 of the 96 films released between 1937 and 1947 had social themes.[16]

In 1938, Gudavalli Ramabrahmam, has co-produced and directed the social problem film, Mala Pilla which dealt with the crusade against untouchability, prevailing in pre-independent India. In 1939, he directed RaithuBidda, starring thespian Bellary Raghava. The film was banned by the British administration in the region, for depicting the uprise of the peasantry among the Zamindar's during the British raj. 1940 film, ViswaMohini, is the first Indian film, depicting the Indian movie world. The film was directed by Y. V. Rao and scripted by Balijepalli LakshmikantaKavi, starring Chittor V. Nagaiah in the lead role.[17]

The outbreak of World War II and the subsequent resource scarcity caused the British Raj to impose a limit on the use of filmstrip in 1943 to 11,000 feet, a sharp reduction from the 20,000 feet that had been common till then. As a result, the number of films produced during the war was substantially lower than in previous years. Nonetheless, before the ban, an important shift occurred in the industry: Independent studios formed, actors and actresses were signed to contracts limiting whom they could work for, and films moved from social themes to folklore legends. Ghantasala Balaramayya, has directed the mythological Seetarama Jananam under his home production, Prathiba Picture, marking veteran ANR's Telugu film acting debut in 1944.[18]

[16] . Articles – History of Birth And Growth of Telugu Cinema". CineGoer.com. Archived from the original on 18 February 2012. Retrieved 19 February 2012.
[17] . A revolutionary filmmaker". The Hindu. Chennai, India. 22 August 2003.
[18] .GhantasalaBalaramaiah: The Legend who created Legends". 26lettersto24frames.wordpress.com. 26lettersto24frames.

Malliswari is the first Telugu film which had a public release with thirteen prints along with Chinese subtitles at Beijing on 14, March 1953, and a 16 mm film print was also screened in the United States.[19] The film was directed by Bommireddy Narasimha Reddy, a recipient of the Dada SahebPhalke Award, and the Doctor of Letters honour. Vasiraju Prakasam and K. N. T. Sastry are one of the noted Indian film critics from the state. The industry is one of the largest producers of folklore, fantasy, mythological and melodrama films. Filmmakers like KadiriVenkata Reddy, B. Vittalacharya and Kodi Ramakrishna have pioneered this genre. 1956 film Tenali Ramakrishna has garnered the All India Certificate of Merit for Best Feature Film. In 2013, IBN Live's poll cited Mayabazar as the Greatest Indian film of all time.[20]

Relangi, and Ramana Reddy were a comedy double act during this era.Nartanasala won the best art direction award at the Afro Asian film festival in Jakarta. Donga Ramudu directed by K. V. Reddy was archived in the curriculum of the Film and Television Institute of India.Nammina Bantu received critical reception at the San Sebastián International Film Festival. 1967 film UmmadiKutumbam was selected by Film Federation of India as one of its entries to the Moscow Film Festival.[21] The 1968 cult classic Sudigundalu was screened at the Tashkent and Moscow Film Festivals.[22]Moola Narayana Swamy and B. N. Reddy founded VijayaVauhini Studios in 1948 in the city of Chennai.Indian film doyen L. V. Prasad, who started his film career with Bhakta Prahlada, founded Prasad Studios in 1956 based in Chennai. However, through the efforts of D. V. S. Raju, the Telugu film industry completely shifted its base from Chennai to Hyderabad in the early 1990s, during N. T. Rama Rao's political reign.[23]

CONCLUSION

In this conclusion, the innovative Public Relations (PR) campaign, Tollywood has provided interesting case studies for the marketing strategists, which can be seen in the promotions of the films in near future in two Telugu States (Andhra Pradesh and Telangana). Tollywood has learnt the lessons on marketing strategy fast so as to garner profits in this highly competitive market. This study is unique and first kind of research work

[19] . Eenadu Daily, Eenadu Sunday – 28 April 2013, 100 years of Indian Cinema, Early Tollywood, Page.9
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focusing on this particular research area. The Tollyhood is the one of first growing film industry in India as well as at the global platform.

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NEED OF SCIENCE PEDAGOGY IN PEACE EDUCATION –A CORRELATION STUDY

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Abstract
Science is always in search of truth and establishes logical awareness of nature for healthy and developing society. Now due to progressive needs and demands and also generating un-satisfaction continuously affects survival and development of human society at large and make it restless .So it is very much necessary to accustom people with peace oriented movement. Science pedagogy introduces positive attitude, Appreciation skills, cultural and ethical values, cooperative communication skills among people which is the key point of peace pedagogy, the only sequence to generalize and extend peace education among people in the world around. This study is a search of such correlation of science pedagogy and peace education and the impact of steps of science pedagogy to establish and extend peace education.

Keywords: Science Education, Peace Education, Science Pedagogy , Peace Pedagogy

0. Introduction

Human beings are very curious in nature. They can observe precisely, correlates observations and predict future prospects by the cognition through their mind. This ability helps them to adjust with nature in finding out the truths of it. They not only explore ,interpret and change the physical world according to their own need and requirement but also try to establish the effective path for the sustainability of the healthy world . This process of observation, description, exploration is defined as the Science and it's product to form sustainable, healthy world restricting mistrust and misuse of Science is the peace .

1. Objectives

1.1 Objectives of Science in School curriculum: Science as subject or stream in School Curriculum leads to following objectives :-

1) Acquisition and understanding of knowledge , development of problem solving skill, skill of investigations, ability to think logically and to draw conclusions on the basis of experiments.
2) Development of ability to reach generalizations and to apply them for solving everyday problems.
3) Development of understanding of inter-relationships of science and society .Science deals with truth , society needs sustainability . Peace is the only bond to correlates them.
4) To foster creativity ,enable learners to carry out innovation in science for the sake of social balance, equity and peace.

1.2 Objectives of Science teaching : The first era of science teaching objectives are the three domains of instructional objectives namely

1) Cognitive
2) Affective
3) Psychomotor

All the above domains can be expressed in more simple and distributive form as to develop among the learners –

a) Knowledge
b) Understanding
c) Application
d) Interest and Attitude
e) Skills

The second era of science teaching is related to the next higher cognitive ability leads to following behavioral specification of the learners –

a) Illustrate facts, concepts and principles by citing real life examples or situations
b) Express same facts or concepts in different way .
c) Locate errors and rectify
d) Compare
e) Classify
f) Discriminate
g) Identify
h) Extrapolate
i) Translate
j) Interpret
k) Detect
l) Verify
m) Solve

1.2 Science Pedagogy: It is the art of teaching revolves around planning, delivering and evaluation of the science subject matter in sequence resulting in behavioral change of the learners .It includes following-

1) Teaching Strategies
2) Teaching Approaches
3) Teaching Methods
4) Teaching Models
5) Teaching Behaviors
6) Teaching Styles
7) Teaching Devices
8) Teaching skills-process & attitude
9) Teaching Aids

These all are dichotomized in as learner oriented or teacher oriented or content oriented or purpose oriented as it is needed effectively.

1.3 Peace Education[1]: It is the process of acquiring the values, the knowledge and developing the attitudes, skills and behaviors to live in harmony with oneself, with others and with the natural environment. **Ian Harris and John Synott** have described peace education as a series of teaching encounters that can draw from the learners following features

a) Desire for peace
b) Nonviolent alternatives for managing conflicts
c) Skills for critical analysis of structural arrangement that produce and legitimize injustice and inequality.

The greatest resource for building a culture of peace are the people themselves for it is through them that peaceful relationships are created. Educating people toward becoming peace agents is central to the task of peace building. Young learners in particular need new perspectives, skills and value orientations that will enable them to build relationships and structures that lead to positive change and human well-being. A culture of peace must replace the current culture of violence if we and our common home, planet earth are to survive which is possible through logical, systematic, justified approach of science pedagogy.

1. **Article- IRISH EDUC STUD- Whiteness, Patriachyand Peace building in UN Higher Education: Some Theoretical and Pedagogical Implications by Kevin Kester**
2. **Methodology:**

Qualitatively analytically compared peace pedagogy and science pedagogy to determine the action plan to be taken by science pedagogy to execute peace pedagogy for peace education.

2.1 Peace Pedagogy[1]: It is the art of teaching and implementing peace through education that instigates the process of acquiring the values and knowledge, developing attitudes, skill and behaviors to live in harmony with triads namely oneself, others and natural environment. According to research work of **Harris(1990)** this pedagogy is focused nowadays reflecting the increasing concerns about the level of violence in the world especially school violence which is considered as having a multidimensional structure that includes delinquent and aggressive behaviors preventing development and learning ,damaging school environment. According to the **analysis of Harris**, traditional educational pedagogical practices and authoritative school climate may lead to the increase in violence .The key points showing limitation of traditional pedagogy generating the need of science pedagogy establishing co-existence of peace and development i.e peace pedagogy are-

1) Teachers think themselves as the only source of knowledge instead of constructing knowledge together with the students.
2) Encouraging competition among students instead of cooperation.
3) Expecting students to accept knowledge instead of questioning them.
4) Putting forth the class norms and expecting students to obey.
5) Authoritative classroom instead of democratic one.

Now let try to take out the features to get out of the above 5 clauses in establishing peaceful development of the learner –

1) Sharing knowledge and coordination
2) Establishing Cooperation
3) Establishing inquisitiveness
4) Ensuring self discipline or auto discipline
5) Assuring democratic environment and freedom.

All these 5 features are the basic building blocks of science pedagogy. Henceforth peace pedagogy is the peace education through science pedagogy towards sustainability. It includes accompaniment of children's rights education, education for development, gender education, global education, life skill education, landmine awareness, psychological re-habilitation .

Research article : A Peace Pedagogy Model for the Development of Peace Culture in An Education setting by Riswanda Setiadi, Sunaryo Kartadinata, llfiandra ayami Nakaya

2.2 Adaptation of strategies in science pedagogy for peace-
Principles[1]:-

- **a)** Interdependence – Establishing interconnectedness of people and nature.
- **b)** Diversity – Focusing on natural and cultural diversity.
- **c)** Carrying Capacity- Available resources in the world is finite and hence it would be peacefully sustained.
- **d)** Rights and Responsibilities – Recognizing that the actions may have implications for current and future generations .
- **e)** Equity and Justice : Development must benefit people in an equitable way with peaceful coexistence.

2.3 Role of Science educational strategies in peace education-

- **a)** To promote culture of citizenship and give value to private and public educational institutions along with government institutions.
- **b)** To mobilize society to eliminate poverty , violence, injustice.
- **c)** To assert the importance of local communities and their ties to the entire earth.
- **d)** To identify personal and communal awareness of global responsibility.
- **e)** To endanger new hopes and ways of channeling the energies and resources of entire nations.
- **f)** To instill in the minds of people a conviction of the values of peace.
- **g)** To achieve self-fulfillment and full self-expression by maximizing their own potential.
- **h)** Dissemination of knowledge and skill to foster sustainable production.

3. Results:

3.1 Strategies in science pedagogy for implementing peace education

- Learning science knowledge and concepts important for socio scientific issues within society.
- Undertaking investigatory scientific problem solving related to socio-scientific issues within society.
- Gaining an appreciation of the nature of science from a societal point of view.
- Developing personal skills related to creativity, initiative, safe working.
- Developing positive attitudes towards science as a major factor in the development of society.
- Acquiring communicative skills related to better express scientific ideas in a social context.
- Activity based learning

- Valuing cultural issues , personal interdependence and informed judgments both from holistic view and local society perspective.

1. Talk to Rattan Professional College , Mohali by Dr. Punam Bansal,Govt. College of Education,Chandigarh

- Need to introduce assessment strategies to measure students' achievement of all the goals of education.
- Need to recognize the need for "Education through Science"
- The gap between research and practice needs to be made smaller.
- Paying greater attention to formative compared to summative assessment.
- Science Education should move progressively towards real world and context based including " education for peace" as prime issue.
- Teachers should be acknowledged with the responsibility to make themselves free from bias and conflict .
- Teacher education needs to include techniques whereby teachers are able to function beyond textbooks and be able to design teaching materials that can emphasis the affective domain, decision making and problem solving skills.

3.2 Action plan in science pedagogy for implementing peace education[1]

- **Leadership** - an open, supportive and participative leadership style is essential for creating a common vision and coordinating strategies across the school.
- **Policy and planning** - all school policies, such as travel plans, procurement and health promotion, reflect the principles of sustainability.
- **Relationships and ethos** - everyone feels valued and is given an opportunity to participate and flourish. A strong focus is given to pupil voice.
- **Buildings and grounds** - grounds are developed to support active and outdoor learning approaches and include wildlife gardens, outdoor classrooms etc. Sustained action is taken to minimize ecological and carbon footprints.
- **Curriculum** - global citizenship together with sustainable development education is a theme across all learning.
- **Learning approaches** -- the school has strategies for developing effective pedagogies and approaches to learning including outdoor learning, active and co-operative learning.

- **Personal achievement** -- learners have access to a wide and stimulating range of experiences that develop their skills, talents and confidence.
- **Community** - children and young people are given opportunities to explore, engage, connect with and contribute to their local community. Partnerships are formed with youth, community and adult learning sectors.

1.Talk to Rattan Professional College , Mohali by Dr. Punam Bansal,Govt. College of Education,Chandigarh

4. Conclusions:

Science Pedagogy ascertain following parameters to establish peace and sustainability[1]-

- Every person will be benefited from an education promoting development that is environmentally sound, socially equitable, culturally sensitive and economically just.
- Learning will be about knowledge and also about doing, being, interacting with others and changing the world.
- Formal learning will be enjoyable, hands-on and relevant to life outside school while addressing the problems of our world.
- Every person will be benefited from genuine learning opportunities throughout life, in the workplace, and within the community.
- Science education will prepare learners to enter the workforce as well as handle a crisis, be resilient, become responsible citizens, adapt to change, recognize and solve local problems with global roots, meet other cultures with respect, and create a peaceful and sustainable society.

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DEMOCRACY AND VOTING RIGHT

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India's Independence was significant not only as a major historical event but also for the termination of the Colonial Era and initiation of Another Era. India has chosen Representative Democracy through a Parliamentary Form of Government. This was the logical outcome of the unique nature of India's Freedom Movement from its origin. India is the largest democratic country in the world. Fifteen general elections were peacefully conducted for Lok Sabha and similar number of elections for State Legislatures. India has worked a fully vibrant democratic system for the last sixty years. But historically, democracy evolved over several stages in the world and this Chapter deals with the meaning of democracy, the concept of democracy, initiation and evolution of democracy in India.

Meaning of Democracy:

Democracy stands between the two extremes of Despotism and Anarchy. Though the Chola Empire permitted Village Republics where democracy prevailed, it was the Greeks who scientifically expounded and practised democracy. The word, Polis, refers to the City State and the study of Polis is Politics. The word 'Citizen' is derived from the word, City. Aristotle classified the constitutions into six categories – Monarchy, Tyranny, Aristocracy, Oligarchy, Polis and Democracy. It is interesting to note that Aristotle considered the worst form of Government by many, as Democracy. For him, a good form of government by many was Polis. After the Greeks, there was no systematic theory of democracy for the next thousand years.

In the late middle Ages, there appeared Marsiglio di Padova, a man who came within a stone's throw of accomplishing a fantastic scheme for democratizing the Holy Roman Empire and the Catholic Church. He boldly advocated a radical democratic theory. He definitely fixed the responsibility of the Rulers, both Temporal and Spiritual, to the people and consigned active power to the mass of men. He recommended the Government by means of Elected Councils in Church and State. In Marsiglio are the beginnings of great positivist reconstruction of law. According to him, if enforceability is not present, there is no law. What many called "the natural law", has no validity as law except when enforced. The real law, he declared, comes from "the will of the people" because only such consent permits law to be enforced. The people

by active consent, especially by elections, concede powers to the Government and they may also withdraw it. The people are the Legislator and the Sovereign while the State only forms the Government – whether monarchical or republican or theocratic are immaterial, if the rule is by the Citizenry.

The idea of democracy as the Rule by the Many was given very little critical development until the 17th Century Movement called Leveller in England. The Levellers, a radical soldiers' movement in the Republican Army of Cromwell, proposed a number of devices for achieving democracy through Representative Government. More important than the Levellers were the Theory of Consent by John Locke (1632-1704), who exalted the Parliament which he regarded as the Repository of the Rights of Liberty and Property which the people had assigned to the State for convenience of management. Locke provided the arguments for the Glorious "Whig" Revolution of 1688, the American Revolution of 1776, and French Revolution of 1789. His words were on the lips of all but the most conservative at the time of the American Revolt against England and in the constitutional period that followed.

A democratic system of Government derived from a Constitution is called a Constitutional Democracy. When a popular government, formed on the basis of the peoples' mandate, comes into existence and the whole administration of public affairs is wisely pursued and everything is with a strict conformity to the principles and objects of the constitution, we call this Good Government. Thomas Paine rightly says, "A Constitution is not the act of government and government without a Constitution is power without a right. A Constitution is a thing antecedent to a government; and a government is only the Creature of a Constitution."

Every democracy, except Britain, New Zealand and Israel, seems to have a Constitution in a written document. British writers argue that a Constitution need not be embodied in a single document. They say instead that a country's Constitution is a body of rules – some laws, some conventions which regulate its system of government. When there was a need for a break with the past and a need for a fresh start, the constitution was born.

Characteristics of Democracy:

Democracy has definite goals like freedom, equality and dignity of the individual. Since the 17th Century, the political and legal philosophy associated particularly with the Doctrine of Natural Justice, had an emphasis on a democratic system of Government and on individual liberty and freedom. In the Twentieth Century, this doctrine has resulted in the widespread acceptance of the existence of fundamental rights which were built into the constitutional democracies and received recognition internationally by means of the Covenants of Human Rights, agreed upon between Democratic States. Thus,

continuous advancement and progress of mankind was found possible only under the democratic system of government since democracy respects human values and legal procedures of governance.

The democratic Method of forming established institutional arrangements for arriving at political decisions in which individual acquire the power to decide through the vote. In other words, the governing power to rule the country should be derived from the people, as only the people can say who has the right to rule them. It is the people who give legitimacy to a constitution.

1. Democracy is a government which is derived from public opinion and is accountable to it.
2. The public opinion must be overtly and freely expressed.
3. For the overt and free opinion of the people, some opportunity and machinery to make that opinion known and hence some kind of suffrage, some kind of voice or vote.
4. In matters of contention between sections of public opinion, it is the majority opinion that prevails.

Right to vote:

1. No person who is not, and except as expressly provided by this Act, every person who is, for the time being entered in the electoral roll of any constituency shall be entitled to vote in that constituency.
2. No person shall vote at an election in any constituency if he is subject to any of the disqualifications referred to in Section 16 of the Representation of People Act, 1950.
3. No person shall vote at a general election in more than one constituency of the same class, and if a person votes in more than one such constituency, his/her votes in all such constituencies shall be void.
4. No person shall at any election vote in the same constituency more than once, notwithstanding that his/her name may have been registered in the electoral roll for that constituency more than once and if he does so vote, all his/her votes in that constituency shall be declared void.
5. No person shall vote at any election if he/she is confined in prison, whether under a sentence of imprisonment or transportation or otherwise, or is in the lawful custody of the police. Provided that nothing in this sub-section shall apply to a person subjected to preventive detention under any law for the time being in force.

Nature of Right to Vote:

Right to vote is not a fundamental right. It is argued that the right to freedom of speech and expression guaranteed under Article 19 (1) (a) of the Constitution of India is wide enough to embrace within its fold the right of

citizens to exercise his/her franchise. Elections to Lok Sabha or the State Legislatures are ultimately regulated by the Constitution. The Constitution, being the supreme source of the law, is higher than the law made by Parliament because the validity of the latter is determined with reference to the former. Provisions for conducting free, fair and peaceful elections are generally incorporated in the Constitution itself. The composition of Parliament, its duration, qualification and disqualifications for membership and of voters etc. are provided under the provisions of the Constitution. But these provisions, including Article 84 and Article 173, do not confer any Constitutional Right to contest election for membership of Parliament or a State Legislature. This position of the law is well settled by a number of decisions of the Supreme Court of India. In Mohan Lal Tripathi vs District Magistrate, Rae Bareilly, the Court pointed out that the right to elect representatives to govern is neither a 'fundamental right' nor a 'common law right' but a special right created by the statute or a 'political right' or 'privilege' and not a 'natural', 'absolute' or 'vested right'.

The Representation of Peoples Act, 1950 and the Representation of Peoples Act, 1951 are made by Parliament in detail to cover all aspects of elections to Parliament or to the State Legislatures, including the right to vote, right to contest elections or to challenge elections. In other words, outside these enactments, there is no claim of the voter or the contestants in elections because the detailed provisions relating to qualifications, disqualifications, formalities and remedies, etc. are well regulated by the relevant statutes. Democracy has been gradually evolved in India under the British Government of India. After the Independence, the Constituent Assembly and Interim Government made a sincere effort to make democracy real in India. Hence the Constitution provided an independent body called the Election Commission for conducting the free and fair election in India. The Commission has conducted fifteen general elections for Parliament and more than hundred in State Assembly Elections in India.

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TEACHER-STUDENT RELATIONSHIP AT HIGHER SECONDARY LEVEL IN RELATION TO ACADEMIC ACHIEVEMENT

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Introduction

The relationship between student and teacher, if it is to be maximally productive, must reflect certain attitudes and commitments of each to the other. Improving students' relationships with teachers has important, positive and long-lasting implications for both students' academic and social development. Solely improving students' relationships with their teachers will not produce gains in achievement. However, those students who have close, positive and supportive relationships with their teachers will attain higher levels of achievement than those students with more conflict in their relationships.

Teacher-Student Relationship

Teacher student relationship plays a vital role in the development of an individual as a whole. Many social scientists agree that healthy classroom climate influences healthy learning and better psychological development during adolescence, and teacher student relationship acts as a prelude to it. Studies show that the same factors which promote psychosocial development in the home-warmth, high standards and moderate control-also promote positive behaviour in classroom.

Academic Achievement

Academic achievement is defined as the wholesome academic performance in all the subjects in the school curriculum.

Objectives of the Study

- To find out the level of Academic Achievement among higher Secondary school students.
- To find out the level of Teacher - Student Relationship among higher Secondary school students.
- To find out the level of Academic Achievement among higher Secondary school students based on
    i. Gender
    ii. Class
    iii. Type of School

iv. Locale

- To find out the level of Teacher - Student Relationship among higher Secondary school students based on
  i. Gender
  ii. Class
  iii. Type of School
  iv. Locale
- To find out the significant difference Academic Achievement among higher Secondary school students based on
  i. Gender
  ii. Class
  iii. Locale
- To find out the significant difference on Teacher - Student Relationship among higher Secondary school students based on
  i. Gender
  ii. Class
  iii. Locale
- To find out the significant relationship between Academic Achievement and Teacher - Student Relationship among higher Secondary school students.

Review of Related Literature

Shah, Beena (2002) investigated the effect of family climate on home adjustment of adolescent. The students of class IX of Garhwal Mandal constitution were drawn randomly from 12 schools in two districts. The finding says that home adjustment of students having satisfactory family climate was found to be superior to that of those who had highly dissatisfactory family climate. But in the case of girls, family climate did not play an important role in determining the level of home adjustment.

Shukla, Kiran (2003) undertook a study to examine, whether parental behaviour and interaction influence the development of social competence of the children. On the basis of income, professional affiliation and material possession about 150 families from high SES and 150 families from low SES were selected. In addition, there being one son and one daughter in the age range 10-15 years in each family was considered. About 30 parentless boys in the above age range from the local orphanage were also part of this sample. Parental authority as well as peer interaction did reveal highly significant main effects on social competence. Both sons and daughters of the upper SES group were found to differ significantly compared to lower SES groups.

Tools Used for this Study

- Teacher - Student Relationship Scale constructed and standardized by the Investigator.
- The total marks obtained by the students in their Quarterly Examination for Academic Achievement.

Statistical Techniques used

Suitable descriptive and inferential statistical techniques were used in the interpretation of the data to draw out a meaningful picture of results from collected data. In the present study, the following statistical measures are used.

a. Mean
b. Standard deviation
c. Standard error deviation
d. 't' test

Analysis

Hypothesis – 1

The level of Academic Achievement among higher Secondary school students is moderate in nature.

Table 1
Showing the level of Academic Achievement among higher Secondary school students

Variable	Level	Frequency	Percentage
Academic Achievement	Low	74	26.0
	Moderate	134	47.0
	High	77	27.0
	Total	285	100.0

From the table 1, it is observed that more number of students lie in moderate level of Academic Achievement. It indicates that the level of Academic Achievement among higher Secondary l school students is moderate in nature. Hence, the hypothesis is accepted.

Hypothesis – 2

The level of Teacher - Student Relationship among higher Secondary school student is moderate in nature.

Table 2
Showing the level of Teacher – Student Relationship among higher Secondary school students

Variable	Level	Frequency	Percentage
Teacher - Student Relationship	Low	72	25.3
	Moderate	126	44.2
	High	87	30.5
	Total	285	100.0

From the table 2, it is observed that more number of students lie in moderate level of Teacher - Student Relationship. It indicates that the level of Teacher - Student Relationship among higher Secondary l school students is moderate in nature. Hence, the hypothesis is accepted.

Findings

- It was found that the level of Academic Achievement among higher Secondary school students is moderate in nature.
- It was found that the level of Teacher - Student Relationship among higher Secondary school students is moderate in nature.
- It was found that the level of Academic Achievement among higher Secondary school students is moderate in nature based on gender except male students.
- It was found that the level of Teacher - Student Relationship among higher Secondary school students is moderate in nature based on gender except male students.
- It was found that the level of Academic Achievement among higher Secondary school students is moderate in nature based on class.
- It was found that the level of Teacher - Student Relationship among higher Secondary school students is moderate in nature based on class except eighth class students.
- It was found that the level of Academic Achievement among higher Secondary school students is moderate in nature based on the type of school except Govt. school.
- It was found that the level of Teacher - Student Relationship among higher Secondary school students is moderate in nature based on the type of school.
- It was found that the level of Academic Achievement among higher Secondary school students is moderate in nature based on locale except urban area.
- It was found that the level of Teacher - Student Relationship among higher Secondary school students is moderate in nature based on locale.
- It was found that there is no significant difference between boys and girls of higher Secondary school students on their Academic Achievement.
- It was found that there is no significant difference between boys and girls of higher Secondary school students on their Teacher - Student Relationship.
- It was found that there is significant difference between higher Secondary school students hailing from rural and urban areas on their Academic Achievement.

- It was found that there is significant difference between higher Secondary school students hailing from rural and urban areas on their Teacher - Student Relationship.
- It was found that there is significant difference on Academic Achievement among higher Secondary school students based on locale.
- It was found that there is significant difference on Teacher - Student Relationship among higher Secondary school students based on locale.
- It was found that there is significant inverse relationship between Academic Achievement and Teacher - Student Relationship among higher Secondary school students.

Conclusion

The purpose of the present investigation was to study on Academic Achievement and Teacher - Student Relationship among higher Secondary school students. This study is sure to find usefulness in the field of education and findings of the study can serve as a data base for further research.

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NEED DOR THE SUSTAINABLE DEVELOPMENT OF GPCMS FOR TRIBAL DEVELOPMENT A STUDY IN VIZIANAGARAM DISTRICT OF ANDHRA PRADESH

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Abstract

In this study an attempt is made to investigate the role of and need for development of Girijan Primary Co-operative Marketing Socieities in general and with a special emphasis on the functional aspects of GPCMS located in the Gummalakshmipuram village of the Vizianagaram in particular. The issues discussed in this study ultimately concludes that, it does appear as if the existing structure will not be able to sustain itself, unless governmental subsidies are once again increased, which appears unlikely. If under such circumstances, a serious review and planning exercise is not undertaken, and fresh subsidies do not flow in, then, the structure will probably have to fold up. Given this to be the likely future, in the absence of a review cum planning exercise, the members of the cooperative may be helped to set up alternative institutions for savings and credit, as well as for key commodities such as cashew.

Key Words : GPCMS: Girijan Primary Co-operative Marketing Societies, PTGs: Primitive Tribal Groups, GCC: Cirijan Co-operative Corporation, ITDA: Integrated Tribal Development Agency.

The Girijan Primary Cooperative Marketing Society (GPCMS) Gummalakshmipuram is situated in Gummalakshmipuram Mandal of Vizianagaram district in Andhra pradesh. It was founded in 1956 as the Agency Produce Marketing Cooperative Society. It covers Gummalakshmipuram and Kurupam Mandals. The mandal headquarters has electricity. All the villages are not covered by pucca approach roads or electricity. People are used to walking long distances across the hills to make purchase of daily-required essential commodities or for the sale of minor forest produce.

The total tribal population in the area was around 64,000 and there were 18,000 non-tribals are also living in the area. Tribes included Savara, Kondadora, Jatapu, Gadaba etc are predominant. The Savaras and the Gadabas were considered to be the least exposed to the outside world and they are considered as Primitive Tribal Groups (PTG). The family, through marriage, is

the basic societal unit, and brides leave their natal village to come and live in their husband's village, after marriage. As each son gets married, he sets up his own house in the same village. As a result, it was the youngest son who usually tended to stay with the parents, even after marriage. Remarriage was possible for women and men in most tribes, but with a penalty, if the first spouse was alive. Men could and did share in the cooking tasks. Members interviewed said that their weekly income ranged between Rs 100 and Rs 600, based on the season and produce gathered.

As on 31.3.2006, the Girijan Primary Cooperative Marketing Society (GPCMS) had over 22,500 members, 10% of whom were women. In 1994, the membership had been 7270. One person from a family could become a member. It is found that the membership rolls had either not been revised to take into account expired members or persons not of tribal community, too, were members. The staff members were all on deputation from the GCC, with the GCC meeting a little more than 50% of the staff salaries. The rest came from the primary cooperative itself. The cooperative owns a sales depot, a godown, an office building, staff quarters and a jeep. When members were asked whom the cooperative belonged to, they said that it existed for their welfare, but belonged to the government. Members appeared to be on good terms with the staff, but were very respectful of them, as they were thought of as representatives of the government.

The cooperative had not had elections since 1980 and no member met could recall a general body meeting being held. Members said that they would indeed like meetings and would like control over the cooperative. However, they said that the cooperative was too large. They felt that if it were confined just to their village, they could manage it better. They felt that the village level cooperatives could be federated and processing units, as for cashew, pineapple, turmeric could perhaps be at this federation, which, too, should be located within the group of villages in the federation. The Gummalakshmipuram Girijan Primary Cooperative Marketing Society (GPCMS) was one of three such primary cooperatives in the area of the Parvatipuram divisional office of the GCC.

Services to Members

The members said that between November and January each year, they collected myrabalam from the forest, and also attended to crop harvesting. Between February and May, they collected tamarind, and between May and July, pungam and mahua. In summer, beedi leaves, too, were collected. They said that although they worked on their farms between August and October, it was a lean cash inflow period. Procurement by the Girijan Primary Cooperative

Marketing Society (GPCMS) over the last two years is provided in the following table.

As may be seen from the table, and as seen from the figures provided by the cooperative for the past 6 years, although the GPCMS procures a number of items, its main business appears to be in seeded tamarind, myrabalam, mahua seed, marking nuts, naramamidi bark, grade-l and grade-ll gum and pungam seed. Agricultural produce procured included niger seed, red gram, turmeric, ragi, paddy, sunflower seed and cashew nut. The quantities procured were insignificant, and procurement erratic. Different types of produce come in at different times of the year, and the cooperative currently probably feels obliged to procure whatever its members bring in. However, dealing in so many items, probably adds to costs of storage, accounting, transport, and staff, without bringing in additional income of value to members. The GCC divisional office provided the following figures on the

The variation between the potential and the actual procurement, and the procurement from year to year probably depend on a variety of factors such as working capital availability, storage capacity available, rates in the open market, yield. In Iridi, one of the villages covered by the cooperative, members said that 8- 9 years ago, cashew was introduced in the area, and since the last 4-5 years, they were selling the cashew crop. The village had 30 acres under the cashew crop. Within a 10 km radius, they estimated that there were at least 200 acres of the crop. From each acre, 3-4 quintals of cashew was expected. In early years they had some problems, as the local police and forest officials said that cashew was a minor forest produce, and it was not for them to dispose of it as they wished to. They said that each family harvested its own crop, and then informed the village head of the quantity available for sale. Based on total quantities available, one from among the village leaders, negotiated with traders for the sale of the entire village cashew produce. This was not formally a part of the cooperative's programme, though the village itself did act in a cooperative manner when dealing with cashew. The cooperative's staff said that cashew export was the main industry at Palasa, which was en-route to the district headquarters at Vizianagaram.

Most produce was taken by women as head loads, and by men on their shoulders, to the local weekly shandy. The weekly shandy did exhibit brisk business, with people from tribal communities bringing in vegetables, and small businesswomen and men buying it off them, for sale in small urban centres. So, too, the shandy was a place where simple clothes and other consumer goods were on display, for sale to the local community. The cooperative receives interest free working capital of Rs 3 to 4 million rupees each year, provided to it from the GCC. As with cashew, the cooperative does not process or sell any of

the minor forest produce that it collects, Different products are taken to processing units owned or hired by GCC located at different places.

The cooperative also provides credit to its members. The action plan for 2005- 2006 indicated that the cooperative hoped to provide 829 members residing in 97 villages, rupees two million worth of credit. That is. on average, in each village, less than 10 members were to be financed. At least one reason for the small percentage of members being financed could be that membership figures need revision. Another reason could be the high percentage of default. The Divisional Office of the GCC, Parvatipuram, provided the following figures related to the Gummalakshmipuram cooperative.

The loan recovery has been nil where consumption loans are concerned, and even in short term agricultural loans, the recovery has been poor. At Iridi, and a few other villages, a voluntary organisation had set up self-help groups (SHGs) for savings and credit, of women. There were 85 women in Iridi village each saving Rs 10 each month. The saved amounts were put in a bank, each month, and bus fares to the bank cost Rs 16. The women said that the government was willing to hand over the DR (domestic requirement) depots run by the cooperative to them. The DR depots were popular and the cooperative had 47 such depots through which subsidised rice, other rice, subsidised sugar, pulses, soap, salt, cooking oil, and other items of daily household consumption were made available to the local communities. The turnover in consumer goods sale through these depots, and as stockists for the area, was over Rs 20 million in 1998-99, and over Rs 10 million the next year.

Profitability

The audited balance sheet as on 31-03-1999 indicates that Rs 2,744,000 of loans were outstanding with members. The audited trading account shows a gross profit of 952,000, and the income and expenditure statement shows a net profit of Rs 143,000. Audited statements for subsequent years were not available, although the audit of accounts for 2004-2005 and 2005-2006 was under way. Audit is conducted by the auditors of the cooperative department, and audit reports are submitted to the GCC and to GPCMS chief executive, but not to the general body. Unlike other organisations which engage in purchase and sale of commodities, the main income from trade in a GPCMS/LAMPCS is the commission that the cooperative receives from agencies which take the produce from it. This commission and the transport charges received in 1997-98 were Rs 490,000, against which trade charges and transport expenses were Rs 554,000. The gross profit, therefore, was probably a result of valuation of closing stock. The cooperative appears to have a negative margin in the procurement that it undertakes. The net income of Rs 143,000 shown in the income and expenditure account appears to be a result of overdue interest being

shown as income. The balance sheet as on 31.3.98 shows Rs 407,000 as overdue interest as an asset. Salaries and establishment costs for the year were Rs 4.7 million. During the year a little over Rs 4 million had come by way of grant to the cooperative from the GCC, to meet establishment costs. The proportion of grant from the GCC towards establishment has since reduced.

Collaboration with External Agencies Including Government

The cooperative did collaborate with external agencies, but as their branch, or, as their agent. In fact, the bylaws of the cooperative clearly stated that the cooperative was to act as an agent, not of its members, but of the GCC and the government.

Effective use of Federation/Network

The cooperative did use the GCC effectively, but that was because GCC staff was on deputation to the cooperative, and was on the cooperative's management. The GCC helped the cooperative in detailed planning and accounting. Members voluntarily united for common needs. The members had not come together of their own to form the cooperative. The branches of the GCC had been converted into cooperatives. The cooperative functioned around several common needs, focusing on none except the PDS and one or two key MFP items.

Gender Discrimination

Women were not visible in the cooperative's functioning, either as members or on staff.

Status of Management Committee

* The cooperative was without an elected committee.
* Management accountable to members
* The management did appear to care for the members, but more in the manner of benefactors, than as those accountable to members. Annual general meetings were not held, and accounts not shared with members, even though detailed accounts were available in the cooperative.
* Member contribution to capital was insignificant.
* The members did not expect to have a share either in the profit or loss of the institution. They did want the cooperative to continue to exist, primarily for the PDS services.

Need Dor the Sustainable Development of Communities

The cooperative did have detailed plans of potential in area for servicing members, however, as with cooperatives across the country, it was not

able to reach the targets that it set for itself to service members for their development.

Issues arising:

* The GPCMS Gummalakshmipuram was perceived by members to be serving a useful purpose. It was one of the better performing primary cooperatives, with assets, and providing members several services. Members viewed themselves as core clients, not as members with rights and responsibilities. The provision of consumer goods was seen as particularly useful, as was the procurement of tamarind at rates far higher than the prevailing market rate, in the previous year. The GPCMS was, therefore, perceived as an organization to serve their interests. However, it was perceived as a governmental agency. Staff of the cooperative was treated as governmental employees, and not as their own staff.

The staff felt that the organization had conflicting agendas. If it were to run profitably, it could not afford to pay well above market rates for various produce brought in by members. On the other hand, if the agenda was to intervene in the market to increase overall prices for members, then there ought not to be any expectation of institutional viability. If the organization is to function as a cooperative, then it cannot afford to run on loss, if it wishes to serve its members over lengths of time.

* Staff salaries and establishment costs were not commensurate with the business being undertaken. Against Rs 4.7 million of staff and establishment costs, the cooperative had handled Rs 18 million worth of produce. This amounted to establishment costs of 26% of value of goods handled. Even if the cooperative handled its sales directly, such a high establishment cost was unlikely to be met from out of the goods handled, after trade costs had been met.
* Audit was not up to date and it was surprising (as with all the other LAMPCS). that the auditors permitted long overdue interest as an income and as an asset. All concerned appeared to think that the cooperative was running profitably, when in fact, it appeared not to be so.
* The area of operation was far too large for a primary cooperative to be cohesive. The membership, too, was far too unwieldy, and perhaps needed to be reviewed. If an analysis of the business revealed that such a large area and membership were indeed warranted, then, the cooperative could benefit from constituting a representative general body, a smaller general body which could take more interest in the organisation.
* Although the members did say that they would like to have elected boards and a smaller cooperative, they also appeared wary of taking responsibility for the financial results of the cooperative.

* Neither the members nor the staffs of the cooperative were particularly aware of the AP Mutually Aided Cooperative Societies Act of 1995. Existing cooperatives can apply for registration under the new Act and get "converted" to it, but this would require a commitment from members to the financial results of the cooperative.

Conclusion:

Any shift to the new Act would probably best be done simultaneously by the primary, along with other primary cooperatives, and their federation, the GCC. In the event of such a shift to the new Act, the cooperatives and their federation may find that their business cannot sustain the current staff drawn almost entirely from the GCC, (except for casual labour). Again, if the network opted for registration under the new Act, it could afford to analyze its business more closely to see which products brought in the most gain to members and to the institution/s, and choose to work around core commodities. On the other hand, it does appear as if the existing structure will not be able to sustain itself, unless governmental subsidies are once again increased, which appears unlikely. If under such circumstances, a serious review and planning exercise is not undertaken, and fresh subsidies do not flow in, then, the structure will probably have to fold up. Given this to be the likely future, in the absence of a review cum planning exercise, the members of the cooperative may be helped to set up alternative institutions for savings and credit, as well as for key commodities such as cashew.

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IMPACT OF EDUCATION TO EMPOWERMENT OF WOMEN IN INDIAN CONTEXT

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Abstract

Democracy is one of the most coveted inventions humankind has made so far. It provides freedom to decide the way of life human being want for themselves. It gives an opportunity for exercising the creativity they are endowed with. Human society has been struggling to achieve the goal of democracy. However, the pursuit of democratic ideals ii real life remains a difficult proposition. Democracy has been understood by many as a system only for men; women have been deprived of even the formal rights. They were not treated as human beings. The society, based on patriarchal values, considered woman only an 'object', a thing and no a person. Her value was to provide heir to male dominated society and to provide sustenance to the family by taking care of home, by remaining with in the four walls of that home. The patriarchal system is the very negation of democracy because it treats woman as a means and not as an end which the great political philosopher Immanuel Kant had laid down as OIK of the cardinal principles of Categorical Imperative, a moral basis of democracy. However, the theoreticians and protagonists of democracy could not think how a system could be democratic if hah0 of the humankind, i.e., women, are not given equal rights with men. The women's movement directed against the patriarchal domination and the struggle for political rights in the western countries is. well known.[1] It is also true that theoretically women have been granted equal political rights with men as a consequence of their movements. However, inspite of achieving equality in man] spheres,[2] women's equality in the political sphere is yet to be achieved even in the most advanced countries.[3] The deconstruction of patriarch did not diminish male domination in society or politics. Half of humankind is politically still a 'minority'.[4] The situation in the advanced countries in this regard is not very encouraging and the situation in the developing countries is dismal.

Introduction :

The Constitution of India guarantees equal rights to women. Besides exercising their franchise, they can contest for any political office. There would not be any discrimination on the basis of sex. Leaving aside the Prime Ministership once held by a woman, one notes that the constitutional rights

given to women have not empowered them to participate in the democratic political process of the country. About 72 percent of Indian women are still dependent on a male bread-winner, husband or son. The remaining 28 percent consists of economically independent women whose full-fledged exercise of social freedom is restricted either by husbands or by society The patriarchal culture has the effect of diluting freedom and equality in the political sphere. Indeed, the existing social and economic pattern of society has marginalised women; with the result, there are few women in public life.[5]

The structural features of political life also tend to exclude women from positions of power. In spite of having a woman Prime Minister, a few women Chief Ministers or Governors or some other women holding political and important offices, the level of representation of women in decision making has been very low. The women, who started as a small minority in the domain of politics in India at the time of Independence, have not become a large minority even after 47 years. An early study by Usha Mehta in 1973 brought out the fact succinctly that "although the representation of women in Parliament, in the Assemblies and the Union and State cabinets in India is larger than it is in many other countries of the world, it is not proportionate to their number in the total population and does not even approximate to the figure that political parties consider to be a fair allocation".[6] Usha Mehta also asserts on the basis of public opinion survey that women show less interest in information on political issues and are conservative in their opinions.[7] The 'token women' who are perceptible here and there do not represent the real situation of women in Indian democracy. Interestingly, the numerical strength women had in Indian Parliament at the time of Independence has ever since remained static. They continue to be a negligible minority.

A cumulative analysis of Lok Sabha and Rajya Sabha women members shows that in the Lok Sabha the highest number of women was 43 in the 8th Lok Sabha, and the lowest figure was in the 6th Lok Sabha when only 19 members could be elected. The highest proportion of women was 8%, in the 8th Lok Sabha (1984). In the Rajya Sabha, in absolute terms the highest number of women (29) was in 1980 and the lowest (14) was in 1970. Not only women in the Indian parliament are few, but their participation is also not encouraging. Anju Dubey's study brings out some star¬tling facts in this regard. Dubey observes :

Majority of women are there as either their husbands/fathers/mothers were in politics or the family has a history of politics. Not many women from the grassroots level are coming up to the national legislature. It is, therefore,

pertinent to question if they are the 'true' representatives of people's interest? Moreover, in cases where both husband and wile are in politics, there are two consequences – a positive one is that the woman has more exposure and support, but the negative one is - if they belong to the same political party then there is not merely comparison .between the two but women are also discriminated against regarding positions of power. Further, even if she is capable, the credit goes to the husband.[8]

Within political parties, there is a marked non-involvement of women in decision making bodies. In Janata Dal there is no woman member in the political affairs committee. Even the Left parties have no women members in their politbureaus. The Congress (I) however, claims active involvement of women members in their party's "decision-making bodies. As regards the choice of candidates during election, the names are being decided by the male members though there are some exceptions. Female members are entrusted with such responsibilities in election campaigns, holding meetings, etc.

It is often noticed that women activists take a partisan view on issues like violence and atrocities inflicted on women. The question of solidarity of women on the issue of 'political power' has been sidetracked in almost all conversations. Within political parties, women's issues are categorised as social and not political issues, to be dealt exclusively by women's wing. The Left parties may be exceptions in this context. Within the party structures more weightage is being given to the 'old' members rather than to the young ones. In some instances, the latter are even ridiculed and have to often face violent and humiliating situations.

The vast gap between theory and reality with regard to women's actual role in democratic functioning in modern India makes it clear that women's empowerment is a precondition for the success of democracy in India. A cursory look at the women's movement for empowerment in India would show that it could be divided into four phases. The first phase was indeed not one of women's movement by women, but by the social reformers who were, by and large, men. They were moved by the most pitiable conditions of women in society and felt that Indian society could not develop unless the conditions of the women improved. The crusaders m the dominant Hindu society were Raja Ram Mohan Roy, Swami Dayanand Saraswati, Iswar Chandra Vidya Sagar, etc. These social reformers fought against the system of sati (women's cremation with her dead husband) purdah (viel) and child marriage. The reformers supported widow remarriage and education of women. The movement launched by these social reformers had a limited goal. Their main aim was the reform of

Hindu society and women's issues were tackled from that point of view.[9] Basically, none of the social reformers challenged the male domination of the patriarchal system. Rather, it could be said that the movement launched by them was to make the patriarchal system a bit humane. Nevertheless, the social reform movement has created some social awareness amongst women.

The modem educational system and the international women's movement also influenced the women of India. After the first world war a large number of women joined India's freedom struggle. The second phase of women's empowerment was launched by the leaders of the national movement M.K. Gandhi made women an integral part of all struggles which he launched during the freedom struggle against British colonialism.[10] Women's participation in this movement was modest and it cannot be said that these movements were women's movements because the mere presence of women in any movement cannot make it a women's movement. The freedom of the nation was important for men and women as citizens of the country arid as such women were also involved in it. Women, as part of Indian people, fought for freedom from colonial masters, but the nationalist leaders, including Gandhi, had not raised any voice against the male dominated social structure of Indian society. The humane treatment to women was in a sense the end of ideology of the women's rights. This was the time when some women's organisations sprang up; they include the All India Muslim Women's Conference (Anjuman E-Khavatin-E-Islam), Women India Association (WIA, 1917) the National Council of Women of India (NCWI, 1925) and All India Women's Conference (AIWC, 1926)." The significance of these women's organisations was that for the first time women organised themselves and were seized with the issues which concerned them. Indeed, these organisations were a step forward for further development in the direction of women's empowerment. All these organisations have pleaded for the welfare of women and took up some concrete programmes for the amelioration of the conditions of women The AIWC declared itself as a non-political women's organisation; however, it had close links with the Indian National Congress. The Indian National Congress provided an umbrella under which groups with different shades of opinion gathered. Similarly, the AIWC also had women activists of different shades of political opinions.

The third phase of the women's movement in India emerged after Independence. The hallmark of this period was politicisation of the women's movement. For the political parties, because of universal adult franchise, women became a 'vote bank'. Therefore, all political parties have floated women's wings. The AIWC, one of the oldest women's organisations, has close

links with the Congress Party though it declared itself as a non-political organisation. The National Federation of Indian Women (NFTW), formed in 1954, has been affiliated to the Communist Party of India. After the split in the Communist Party, the CPI (Marxist) had organised a separate women's front i.e., All India Democratic Women's Association (AIDWA), in 1970. The CPI (Marxist-Leninist) had a loosely affiliated organisation of women in the Progressive Organisation of Women (POW), initially linked to the Naxalite students group in Hyderabad and later succeeded by the more autonomous Stri Shakti Sangh. The Bharatiya Janata Party (BJP) established its women's wing, called the Bharatiya Mahila Morcha. The women's wing of the Rashtriya Swayam Sevak Sangh (RSS) is the Rashtriya Sevika Samiti which also guides the Mahila Morcha, the women's wing of the BJP. The Socialist Party's women's wing, the Mahila Dakshta Samiti, has become the women's wing of the Janata Party since 1977. Some women's organisations also provide vocational training and residential facilities for women.

The fourth phase of India's women's movement started in the mid-seventies. The International women's year, followed by the International decade for women, has influenced the Indian women's movement tremendously. There has been a spurt in autonomous women's organisations as empowerment of women caught up the imagination of women activists. The political parties activated their respective women's wings. There also emerged some autonomous organisations such as Saheli (women friend), Kali for Women (Delhi), the Forum against Oppression of Women, Women's Centre, Purogami Stree Sangathan, in Maharashtra; Vimochana, Bangalore, Pennurima lyaklam in Tamil Nadu; Chingari Nari Sanghatana and Women Action group in Ahmedabad and many more groups and organisations for women in different parts in India.12 One significant feature of recent women's movement is the emergence of non-political women's organisations and voluntary groups which are actively helping wom¬en to be economically and socially secure. Prominent examples are Self Employed Women's Association (SEWA), Working Women's Forum and Annapurna Mahila Mandal. Over the last fifteen years attention has also been paid to studies concerning women's issues. Therefore, women research centres and institutions have been established at various places and universities.

Women's movement in India is structurally and ideologically heterogeneous. It consists of many movements and highly decentralised. It comprises of countless organisations in both cities and rural areas.[13] It also reflects differences in the approach to women's issues. The Bharatiya Janata Party led women's wing, Bharatiya Mahila Morcha, decries the feminism of the

western type and instead wants to revive the past traditional culture of India which, it is argued, gave dignified status to women.[14] The women's groups affiliated to Left parties also do not agree with western feminism that excludes from the women's movement other aspects of social and economic transformation. They look at women's movement as a part of socio-economic transformation of society for equality and justice.[15] Organisations connected with the non-political women's movement concentrate on issues which are specifically women's. In Colman's words, they are resolutely autonomous; they are generally small groups of activists, familiar mostly with western feminist ideology and style of function.[16]

The heterogeneity and diversity of the women's movement in India highlights two themes namely, civil rights and empowerment.17 The discourse takes into account two assertions of women's movement: first, women in contemporary India occupy an inferior position relative to men economically, socially and politically; second, this position is unjust and unacceptable. Yet, it is assumed that there is some dichotomy in their approach. It is pointed out that different organisations devote their energies to different tasks and operate with two distinct orientations and foci: one is largely urban based with a focus on rights and equality and the other has both urban and rural components with emphasis on empowerment and liberation. It is also asserted that:

in India the goal of empowerment is particularly critical for women who have been deprived of power within the family by mainstream religious and social traditions. Women cannot hope to exercise public power and so long as they are powerless over their own lives because of forced subservience to fathers, husbands and in-laws, violence within family and limited educational opportunity. Nor can they exercise power over them own private lives or public life if they are subsumed with poverty, ill-health and lack of adequate food and clean drinking water.[18]

There are many cultural and religious barriers to women's equality that are outside the realm of governmental action. Thus "transforming women's consciousness and building power at the grassroots is essen¬tial".19 The argument in this discourse is that rights cannot be achieved unless the status of women is improved, that is empowerment. However, this kind of argument narrows the scope of empowerment. Because empowerment means the vesting of power to the powerless it cannot be confined only to improving socio-economic status of women. Nor could it be separated from the movement for the 'rights' of women. So" far, the focus of women's movement was confined only to the welfare activities. Women's movement for the rights of women is a

recent phenomenon. Interestingly, there is not much resistance in Indian society, at this juncture, in improving the socio-economic condition of women than granting them civil rights. The gender bias is deep-rooted in India and runs counter to women's rights. Therefore, the inclusion of rights in the women's empowerment movement in India for democracy is essential. In the seventies, because of international concern about the status of women as reflected in UNO's declaration of Women's Decade, there has been a spurt in the feminist movement in India. Women's organisations, which so far were dormant, became active and took up women's issues in concrete ways. There has been awakening amongst the women and they have become assertive of their rights. This new assertion of women has been challenged by theproponents of patriarchal domination in two ways: (a) subtle and ideological, and (b) crude and undisguised.

Some very specific notions which are prevalent in the dominant ideological framework of the intellectuals, social reformers and politicians have to be examined here. One such notion is that women in India, in contrast to the women of advanced countries, have achieved political and democratic rights without much struggle. "The Indian Constitution guarantees political equality through the institution of adult franchise and Article 15 which prohibits discrimination inter-alia on grounds of sex. It should be kept in mind that this recognition of political equality of women was a radical departure not only from the socio-cultural norms prevailing in traditional India but also in the context of the political evolution of even most advanced countries at the date".20 It is also said that in spite of India being a backward country, a large number of women had participated in the national movement, especially after Gandhi's entry. Besides, it is also emphasized that the social reform movement, which contributed to the emancipation of women, was launched in India primarily by male social reformers. Behind these explanations there is a keen effort to belittle the efforts of the women's movement to fight against the feudal oppression of women, by propagating that equality and freedom have been basic ingredients of Indian culture and civilization. Ashis Nandy, while juxtaposing Indian ethos against the women's movement in the western society, asserts that:

in some areas of life, disjunctive with the traditional life style and not having clearly defined as well developed norms, women do not start with as much handicap as they do in many other societies. Obvious examples of such areas are politics and public affairs and some scientific and religious activities. Here public success does not seem to detract from private womanliness. In other words, in such instances the Indian woman can more easily integrate within her feminine identity the participation in what by western standards are manly activities, but in India are either not defined in terms of sex roles or are tinged

with transsexual or bisexual connotations. In these areas, Indian ' ; women do not have to fight the same battle that their western sisters have to fight, though some of them do pretend to give battle to the existing norms here.[21]

Dismissing the women's movement, Nandy says " in India the truly creative women in these areas have rarely been feminist, ardent or otherwise".[22] A similar argument is advanced for the general lack of women's interest in their own movement that "in the face of the western feminist this cry that women have been neglected by society in general, and by the government in particular, does not quite appeal to Indian women. They see that the legal safeguards and equal opportunities and facilities that are being fought for in many countries which claim long traditions of equality and freedom are already available to them".[23] The above arguments m favour of easy access of democratic and constitutional rights to women of India emphasize the point that Indian women have been granted constitutional democratic rights as a favour, that Indian society in contrast to the western society has no gender bias, and that the emerging feminist movement in India is not only redundant, but is against the culture and ethos of India.

Here in lies the interplay of discriminatory gender politics. The reason for grant of equal political rights to women in India is not the special ethos or culture of India or the magnanimity of Indian men. The main reason is that when India became independent, the women's movement, like the democratic movement, had already reached a stage all over the world that the leadership in the colonial countries, and for that matter in India, could not ignore it. India adopted the political arrangement of democracy because it was the accepted universal ideal. Similarly, the constitutional rights of women had already been universally accepted. In fact, the supporters of the uniqueness of Indian tradition legitimize the feudal strands of women's oppression by creating an east and west dichotomy. The worn-en's movement and feminism have been decried and looked derisively as something foreign, alien and against the Indian ethos and elitistic. Such an interpretation is based on erroneous assumptions.

NOTES

1. See Huber, Jean, (ed.), Changing Women in Changing Society. University of Chicago Press, Chicago, 1973; Mies, Maria and Jayawardena Kumari, Feminism in Europe' Liberal and Socialist Strategies, 1889 - 1919, Institute of Social Studies, Hague, 1983; Robin, Morgan (ed.). Sisterhood is powerful, Random House, New York, 1970 and Nare, Callestine, Women Power: The Movement for Women's Liberation, Tower Publications, New York, 1970.

2. See the Report of Organization for Economic Cooperation, Equal Opportunities for Women, Paris, 1979.
3. See Sibtanen, Janet and Michelle, Stanworth, Women and the Public Sphere: a Critique of Sociology and Politics, Hutchinson, London, 1984.
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9. See Minault, Gail, "Sisterhood or Separation? The All India Muslim Ladies Conference and the Nationalist Movement" in Gail, Minault, (ed.), The Extended Family: Women and Political participation in India and Pakistan, Chanakya, Delhi, 1981; also see Choudhri, Maitraye, Women's Movement: Re-form or Revival. Radiant, Delhi, 1993, pp. 137-163.
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11 See Choudhri, op.cit.
12. See Colman, Leslie J., "Women and Movement Politics in India", Asian Survey, Vol. XXIX, No. 10, Oct. 1989, p.949.
13. Katzenstein, Mary Fainsod, "Organizing Against Violence: Strategies of the Indian Women's Movement" in Pacific Affairs, Vol. 62, No.1, Spring 1989, pp. 53-71.
14. Sinha, Mridula, Expanding Horizon, Baratiya Janata Party Publication, Bombay, 1990, p. 193.
15 The left parties are critical of the contemporary non-political feminist movements and assert that they (feminists) are attempting to break up working class organisations through an interpolation of 'irrelevancies' such as issues of women's oppression into straight forward class struggles. For details see Ranadive, Vimaia, Feminists and the Women's Movement, All India Democratic Women's Association, 1987 and Chakraborty, Renu, Communist in Indian Women's Movement People's Publishing House, New Delhi; 1980.
16. Colman, op.cit., p. 944.-
17 Ibid.
18 Ibid. 10. Ibid.
20. Mazumdar, op.cit.. p. 283.
21 Nandy, Ashis, "Women versus Womanliness in India", in Rehana Ghadially (ed.). Women in Indian Society, Sage, Delhi, 1988.
22. Ibid.
23 Chatterjee, Suma, "Feminism, and Indian Conventions", in Rehana Ghadially, op.cit.

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मत्स्यपुराणे भक्तिरसः

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मम्मतभट्टः काव्यप्रकाशे देवादिविषयिकां रतिं भावेषु अन्तर्भूता इति उदाजाहार। रतिः देवादिविषयाव्यभिचारी तथांजितः भावः प्रोक्तः इति।रुपगोस्वामिप्रभृतयः भक्तिरेव मुख्यो रसः इतरे गौणाः इति मम्मटमतं निराकृतवन्तः। भक्तेः नाम वेदेषु न दृश्यते इत्यपि वादः दृश्यते। कृष्णविहारीमिश्रैः संस्कृतकाव्यशास्त्रे भक्तिरसविवेचनम् इति ग्रन्थे भक्तेः वेदेषु दर्शनम्, पुराणेतिहासयोः तस्याः एव प्रामाण्यम्, विशेषतः श्रीमद्भागवतस्यैव भक्तिशास्त्रसर्वस्वत्वं विस्तरेण निरूपितम्। तत्रैव बहूनि प्रमाणानि भक्तेः स्थापकानि दर्शितानीति तैः उक्तम्। श्रीभगवान् रसस्याधारोभुतो रसमयो रसस्वरूपश्चास्ति इति रसवादिभिः स्वीकृतम्। तस्य च रसत्वं मन्त्रब्राह्मणात्मकवेदेषु स्पष्टं लक्ष्यते इत्यपि प्रतिपादितम्। आर्ति- हेतुकी जिज्ञासामयी कामनामयी ज्ञानमयी चापि भक्तिर्भगवन्तं प्रति क्रियते परन्तु रसरुपिणी भक्तिस्तु रागमय्येव भवति। सा यदा सम्बन्धरहितास्ते तदा शान्तभक्तिरसः संबन्धसहिता तत्तत्संबन्धमयीति कथ्यते। वेदेषु यद्यपि सहेतुकी भक्तिराधिक्येन दृश्यते परन्तु या भक्तिर्भक्तिरसचार्यैः रसरुपतया प्रतिपादिता सापि वेदेषु वर्तते एव। यत्र संसारिककर्माणि परित्यज्यार्थाल्लोकनिन्दास्तुती विहाय भगवद्भजनमेव प्रधानं दृश्यते। तत्र या भक्तिः स शान्तिमयी शान्तभक्तिरसो वा। वेदस्य शब्दकोषो निघण्टुः प्रस्सिद्धः एव। तत्र निघण्टौ रसशब्दस्त्रिवारं भिन्ने भिन्नेर्थे पठितः। प्रथमेऽध्याये एकोत्तरशतोदकनामसु द्वितीयेऽध्यायेऽष्टाविंशत्यन्ननामसु, तृतीयेऽध्यये चतुश्चत्वारिंशदर्चानामसु च रसति क्रिया पठिता। तस्माद्वैदिककोशानुसारेण रसशब्दो जलवाचाकोऽन्नवाचकोऽर्चावचकश्च भवति। साधितं हि देवराजयज्वना तस्य टीकायाम्-रसति

शब्दार्थः – पचाद्यच्[1] , रसति हि तन्मेघपर्वतादिभ्यः पतत्। अथवा रसास्वादने पुंसिसंज्ञायां घः[2] रस्यते आस्वाद्यते जिह्वया लिह्यते इति रसः।यद्वा रसोऽपां गुणः, गुणगुणिनोरिमौ उपचारेणाख्यायेते मत्वर्थीयस्य लुग्वा रसावान् रसः। यद्वा सतिरर्चतिकर्मा[3] पचाद्यच् अर्च्यते देवतात्वात् अर्च्यतेऽनेन देवता इति वा। आत्वा विशन्विन्दवः इति निगमः[4] । अर्चा हि भक्तेः मुख्यमङ्गम्। नारद -भक्तिसूत्रग्रन्थेऽपि पुजादिष्वनुराग इति पाराशर्यः इति सूत्रेण पूजार्थे अर्चार्थे वा भक्त शब्दस्य सामर्थ्यं ज्ञायते। वेदेषु च रसशब्दोर्चवाचको अर्थात् भक्तिवाचको गृह्यते। एवं यदि रसशब्द एव तत्र भक्तिवाचकस्तर्हि कथं वेदेषु भक्ते रसत्वस्यानुपलब्धिः स्यात्। वस्तुतस्तु निश्चित रूपेण वेदा एव भक्ति रसस्य मूलम्।

३.५भक्तिरसप्रवर्तकाः आचार्याः

भक्तिसम्प्रदाये बहवः भेदाः वर्तन्ते। तेषु मधुरभक्तिवादिनः गौडाः, तस्य संप्रदायस्य प्रवर्तकः चैतन्यप्रभुः। किन्तु भक्तिरसविषये रसवादिनौ द्वौ आलङ्कारिकौ प्रसिद्धौ, तौ मधुसूदनसरस्वतिः रूपगोस्वामी च। मधुसूदनसरस्वतीः भगवद्भक्तिरसायनम्, उज्वलनीलमणिं च भक्तिरसनिरुपकं ग्रन्थद्वयं रचयामास। तयोः भगवद्भक्तिरसायनं प्रचारविषये वर्तते। भगवद्भक्ति -रसायने त्रयः उल्लासाः द्विशतं श्लोकाश्च वर्तन्ते।रुपगोस्वामिनः भाक्तिरसामृतसिन्धुः गुणेन प्रमाणेन च बृहत्तरः। तत्र पुर्वविभागः दक्षिणविभागः पश्चिमविभागः उत्तरविभगश्चेति चत्वारो विभागाः वर्तन्ते। पूर्वविभागे प्रतिविभागं पुनः अवान्तरविभागाः लहरीनाम्ना विभागाः वर्तन्ते। पूर्व विभागे चतस्त्रः लहर्यः वर्तन्ते। प्रथम- लहर्याम् उत्तमभक्तिलक्षणम्, शुद्धभक्तेः गुणाः, पापस्य वैविध्यम्, तन्मोचनमिति विषयाः प्रतिपादिताः। द्वितीयस्यां साधनलहर्यां साधनभक्तिः

1.पा.सु. ३-१-१३४

2.पा.सु २-३-११९

3.पा.सु ३-१४

4.ऋ.सं ६-६-१९-२

निरूपिता। भक्तेः साधनानि तीर्थयात्रासेवन-स्तोत्रपठनादीनि तत्र निरुपितानि। तृतीय लहर्यां भावरुपा भक्तिः उदाहृता।चतुर्थलहर्यां प्रेमभक्तिः उदाहृता। दक्षिणविभागे पञ्चलहर्यः पञ्चसु अपि भक्तिरससामाग्रीविशेषाः विभावानुभावादयः वर्णिताः।पश्चिमविभागे शुद्धा भक्तिः वर्णिता। तत्रापि चतस्रः लहर्याः शान्ति भक्तिः, प्रीतभक्तिः,प्रेयो भक्तिः वस्तलभक्तिः मधुरभकिः इत्यादयो भेदाः प्रत्येकं एकैकस्यां लघ्र्यां निरूपिताः।उत्तर विभागे गुणो भक्तिरसः।तत्र नवसु लहरीषु गौणभक्तिः वर्णिता। प्रथमलहरीसप्तके शान्तश्रृङ्गारौ विहाय इतरेषां सप्तरसानां मिश्रणं भक्तिरसेन क्रमात् उदाहृतम्। अष्टमलहर्यां रसविरोधमैत्रीवर्णनम्, नवमलाहर्यां रसाभासाः इति विभागाः दृश्यन्ते।

३.६भक्तिरसस्थापनम्

मधुसूदनसरस्वतिना कव्यप्रकशोक्त लक्षणम् अनूद्य निराकृतम्। यथा-

द्रुतस्य भगवद्धर्मात् धारावाहिगतङ्गता।

सर्वेशे मनसो बुद्धिः भक्तिरित्यभिधीयते।।[5]

इति भक्तेः लक्षणं उक्तम्। कन्तादिविषये लौकिकसुखोपि रसव्तम् अङ्गीक्रीयते। अमोघस्य परमात्मनः वर्णनात्मकं तत्संयोगेन अनुभूतं सुखं कथमिति न रसः इति प्रत्याख्येयः। अतः शाश्वतिकः आनन्दः रसः इति अङ्गीकरात् भक्तिरेव मुख्यो रसः, अन्ये तस्यैव अङ्गभूताः इति मधुसूदनसरस्वतिभिः सिद्धान्तितम्।रुपगोस्वामिभिः भगवद्विषयरतिस्थायिकं भक्तिरसं स्थापयित्वा तस्य विभावादीन् तेषां संयोगप्रकारश्च विस्तरेण निरूपिताः। अपि च भक्तिरसं द्वादशविधं निरुपयामासुः। भक्तिः अखण्डानन्दः रूपादिरसान्तरमिश्रणेन अमिश्रणेन च गौणः शुद्धः चेति भक्तिरसं प्रथमं द्विविधो भवति। मुख्यभक्तिरेव शुद्धा भक्तिः। मुख्यभक्तिश्च पञ्चधा १)शान्तः २)प्रीतः ३)प्रेयान् ४)वत्सलः ५. मधुरः इति।गौणभक्तिः सप्तधा १) हास्यभक्तिः २)अद्भुतभक्तिः ३)वीरभक्तिः ४)करुणभक्तिः ५)रौद्रभक्तिः ६) भयानकभक्तिः ७) बिभस्तभक्तिश्च।

5.भगवत भक्ति रासयानम् अध्यायं १ श्लो.४

एवमाहत्य भक्तिरसः द्वादशधा भवति। किन्तु पुराणादौ शुद्धभक्तिः एव पञ्चेति व्यवहारो दृश्यते। करुणारसादावापि सुखविरोधिषु सुखानुभूतिः अलौकिककाव्यव्यापरमहिम्ना दृश्यते। लौकिकशोकः तु दुःखहेतुकः एव। अपि च तत्तद्रसानां वर्णाः शान्तरसस्य दैवतानि विकासविस्तारादिचित्तस्य विशेषाः रुपगोस्वमिभिः दर्शिताः। शान्त -भक्तिनिरुपणविषये भागवतस्तोत्रेषु उदाहरणानि भूयांसि वर्तन्ते इति तद्विस्तारः उदाह्रियते।[6]

मत्स्य पुराणे भक्तिरसः

मत्स्यपुराणे सप्ततितेमेऽध्याये पुण्यस्त्रीणां सदाचारव्रतप्रकरणे मन्मथरूपिणः नारायणस्य स्तुतिः वर्तते।। ब्रह्मा पुण्यस्त्रीणां सदाचारं जिज्ञासुः ईश्वरं तत् प्राकारं पृष्टवान्। तदा गोपीनां वृत्तान्तमीश्वरः ब्रह्माणामुक्तवान्। द्वापरे याः कृष्णस्त्रियः ताः एकदा वसन्ते उद्याने स्थिताः। मार्गे गच्छन्तं सर्वाभरण- भूषितं कृष्णपुत्रं साम्बं दृष्ट्वा कामपीडिताः बभूवुः। जगन्नाथोऽपि ताभ्यः कुपितः सर्वाः यूयं वेश्याः भविष्यन्ति, दस्यवः वः हरिष्यन्ति इति शशाप। ताश्च शापसन्तप्ताः भगवन्तं शरणं ययुः। भगवानपि तासु प्रसन्नः एवमाह- भगवान् दाल्भ्यः युष्मभ्यं व्रतविशेषम् उपदेक्ष्यति, तत्प्रभावेन यूयं मुक्ताः भविष्यन्तीति। कालान्तरे दाल्भ्यः तत्रागत्य व्रतप्राकरम् उपदिदेश। ताः अपि मन्मथरूपं नारायणं स्थापयित्वा अर्चयामसुः। तेन पपात् मुक्ताः। मौसलपर्वणि दस्युभिः हृताः अपि पुण्यवत्यः एव बभूवुः। भानुवारे पुष्यमीनक्षत्रे, पुनर्वसूनक्षत्रे वा मन्मथरुपिणं नारायणमर्चयित्वा एवं स्तवः करणीयः इति दल्भ्यः उपदिदेश। तत्रत्या भगवत्स्तुतिः भक्तिरसस्य उदाहरणम्। तद्यथा-

संसारोत्तारणायालमेतद्वेदविदो विदुः ।
यदा सूर्यदिनेहस्तः पुष्यो वाथ पुनर्वसुः।।
भवेत्सर्वौषधीस्नानं सम्यङ्नारी समाचरेत्।

6.भक्तिरसामृतसिन्धु श्लो. १११-१२६

तदा पञ्चशरस्यापि सन्निधातृत्वमेष्यति।

अर्चयेत् पुण्डरीकाक्षमनङ्गस्यानुकीर्तनैः।।[7] **इति।**

अत्र गोपीनां मनश्चाञ्चल्यमनुभावः कृष्णदत्तः शापः उद्दीपनविभावः, नारयणविषयिक भक्तिरेव स्थायीभावः इति सर्वोऽपि भक्तिरसविषयः सम्पन्नः। द्वितीयभागे भक्तिरसप्रबोधकानि बहूनि स्तोत्राणि वर्तन्ते।

ब्रह्मकृत गायत्रीस्तुतिः

तारकासुरवधे उपायं निश्चित्य ब्रह्मा स्वतनोः गायत्रीं सृष्ट्वा एवमुवाच- देवि विभावरि त्वं मेनायाः गर्भं प्रविश्य सतीदेव्याः पुनर्जन्मपर्यन्तं मेनागर्भे तिष्ठ इति तामुक्त्वा तस्याः महिमानं बहुधा स्तुतवान्। यथा-

त्वं महोपायसन्दोहा नीतिर्नयविसर्पिणाम्।
परिच्छित्तिस्त्वामर्थानां त्वं मही प्राणिहृच्छया।।
त्वं मुक्तिः सर्वभूतानां त्वं गतिः सर्वदेहिनाम्।
त्वञ्च कीर्तिमतांकीर्तिस्त्वं मूर्तिः सर्वदेहिनाम्।।
रतिस्त्वं रक्तचित्तानां प्रीत्स्वं हृष्टदर्शिनाम्।
त्वं कान्तिः कृतभूषाणं त्वं शान्तिर्दुःखकर्म्मणाम्।।
त्वं भ्रान्तिः सर्वबोधानां त्वं गतिः क्रतुयाजिनाम्।
जलधीनां महावेला त्वञ्च लीला विलासिनाम्।।

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7 म.पु. अ.७० श्लो .३३-३५

सम्भूतिस्त्वं पदार्थानां स्थितिस्त्वं लोकपालिनी।

त्वं कालरात्रिर्निःशेषभुवनावलिनाशिनी।।

प्रियकण्ठग्रहानन्ददायिनी त्वं विभावरी।

इत्यनेकविधैर्देवि रूपैर्लोके त्वमर्चिता।।[8] **इति।**

अत्र गायत्रीविषयिका ब्रह्मणो भक्तिः स्थायिभावः। विभावर्यपरनामिकायाः गायत्र्याः महिमा आलम्बनविभावः चतुर्वर्णानां प्रत्येकं स्वरूपदर्शनम् अपरित्याज्यत्वं च उद्दीपनविभावः। स्तुतिकारणादयः अनुभवादायः इति भक्तिरसस्य इदमुदाहरणम्।

२.३.५. देवैःकृता कुमारस्तुतिः(१५९)*

नमः कुमाराय महाप्रभाय स्कन्दाय च स्कन्दितदानवाय।

नवार्कविद्युद्युतये नमोऽस्तु ते षण्मुख कामरूप !।।

पिनध्दनानाभरणाय भर्त्रे नमो रणे दारुणदारुणाय

नमोऽस्तु तेऽर्कप्रतिमप्रभाय नमोऽस्तु गुह्याय गुहाय तुभ्यम्।।

नमोऽस्तु त्रैलोक्यभयापहाय नमोऽस्तु ते बालकृपापराय।

नमो विशालामललोचानाय नमो विशाखाय महाव्रताय।।[9]

देवाः तारकात् भीताः आर्ताः शिवशरणं प्रपन्नाः। शिवोऽपि तेषु अनुग्रहं दर्शयन् कुमारं उत्पादयामास। स एव तारकस्य हन्ता विधिना निर्दिष्टः। अतः रक्षिष्यतीति विश्वासः गोप्तृत्ववर्णनमपि पूर्ववदत्रापि उपवर्णितम्। अत्र नमस्करात्मकाम् स्तोत्रं उपनिबद्धं।इत्यादीनी बहूनि उदाहरणानि अस्मिन् पुराणे दृश्यन्ते

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8 म.पु. अ.१५४ श्लो .७८-८४

9 म.पु.अ.१५९ श्लो.१३-१८

उपयुक्त ग्रन्थसूची,सङ्केतपद सूची

1.पा.सु. ३-१-१३४ अष्टाध्यायी चौखाम्बा वारणासी

2.पा.सु २-३-११९ अष्टाध्यायी चौखाम्बा वारणासी

3.पा.सु ३-१४ अष्टाध्यायी चौखाम्बा वारणासी

4.ऋ.सं ६-६-१९-२ अष्टाध्यायी चौखाम्बा वारणासी

5.भगवत भक्ति रासयानं मदुसुधनसरस्वती अध्यायः १ श्लोक संख्या ४ चौखाम्बा वारणासी

6.भक्तिरसामृतसिन्धु श्लोक संख्या १११-१२६पञ्चमलहरी दक्षिण विभागे-स्थायीभावाः श्रील रुपगोस्वामि गौडीय मठः गुन्टूरु

7.मत्स्यपुराणम् अध्यायः .७० श्लोकसंख्या ३३-३५ naag publications new delhi

8.मत्स्यपुराणम् अध्यायः.१५४ श्लोकसंख्या ७८-८४ naag publications new delhi

9.मत्स्यपुराणम् अध्यायः.१५९ श्लोकसंख्या १३-१८ naag publications new delhi