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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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## ADMINISTRATIVE STRUCTURE OF THE DEPARTMENT OF SCHEDULED TRIBES

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After the dawn of Independence, India bestowed deep credence and conviction in establishing an egalitarian social system and made adequate provision in the Indian Constitution to accomplish the objectives of social justice, social welfare and development. Hence, a suitable administrative machinery which in turn delineated to enable the state to move into action and operation became necessary. Accordingly, efforts were made to create an administrative structure needed for implementation of the various policies and programs designed for social welfare in general and tribal welfare in particular in the country.

**Economic Goals of Tribal Administration:** The following are the main economic goals of tribal administration.

- ❖ Introduction of small scale industries in tribal areas, with a view to provide them with employment.
- ❖ Setting up large scale projects in such areas should be seen not as a major economic proposition, but as a problem of displacement of thousands of tribal people.
- ❖ Forest resources and their rational utilization present a complex problem. On one hand, right of the tribal has to be safeguarded and on the other, forest exploitation carried out.
- ❖ The problem of equitable distribution of income within the tribal community and also vis-a-vis the Indian society as a whole need to be examined in detail.
- ❖ Development of co-operatives is a medium through which there shall be quick gains in tribal welfare.

**Socio-Political Goals of Tribal Administration:**

There are a number of socio-political goals of tribal administration:-



- ❖ Suitable evolution of the socio-political structure in the democratic process.
- ❖ It is essential to bring about interest aggregation, orientation and politicization of the tribal society. However, this process required an in-depth study and analysis.
- ❖ It is aimed to bring about a gradual cultural and social development of the tribal structure, so that it merges with the national mainstream of Indian democracy.

### **Evolution of Administrative System for Tribal Welfare**

The administrative system in the tribal areas has undergone a considerable change in the last 30 years. The era of planned development was inaugurated with the launching of the First Five Year Plan in early 1950s. The Community Development Movement gave a new direction to the evolution of India's administrative system. This study of the administrative system in the tribal areas can be broadly divided into four parts:

- (a) Before 1947
- (b) 1947-1952
- (c) 1952-1974
- (d) 1974 onwards

#### **Administrative System Before 1947**

The tribal areas were the last to come under the British rule because of their difficult terrain and inaccessibility. Besides, the tribal people also asserted their right to self-governance particularly in relation to their rights over land and forests. The British declared some of the tribal areas as excluded and some as 'partially excluded'.

In the Indian States, the rulers had autonomy in internal administration within the norms fixed by the British government. The states were small in size and did not have a sophisticated administrative system. The interaction between the rulers and the people was, therefore, at a more intimate and personal level. Thus, the administration in the tribal areas was not formalized during the pre-independence days. The decision-making level, both in Indian States and in British India was quite near to the common man. Development



as a function of administration had not yet emerged. Therefore, the socio-economic life in the community was largely left untouched and the contact points between the people and the administration were minimal. Maintenance of law and order and protection of the tribes from the unwanted elements were the main objectives of the administration.

### **Administrative System between 1947-1952**

After independence, a special place was assigned to the tribal areas. Though administration of the tribal areas was not formally assigned to any one of the three lists in the Constitution but these areas were brought under two Schedules of the Constitution, for which special provisions were made. The excluded areas were put under the VI Schedule and the partially excluded areas and some of the tribal areas in the erstwhile Indian States were included in the V Schedule of the Constitution. The executive power of the Union government was extended to giving of directions to the states for good administration of the tribal areas and execution of the developmental programs for the tribal communities in general.

Thus, the Constitution provided for all contingencies in relation to the administration and development of the tribal areas and tribal communities. The central point in this scheme is flexibility so that on no account the tribal development should suffer. The Constitution also provided for the setting up of a commission after 10 years of its commencement to review the development of these areas and make suitable recommendations for further action. This period can be described as an "interregnum" between the earlier British system and the new system which was to emerge after the problems of transition had been sorted out and the system got a better foothold in these regions.

### **Administrative System between 1952-74**

The early 1950s witnessed some important structural changes in the administrative system in India. For the first time, a clearly defined plan of development was initiated and the administration was properly equipped for undertaking new developmental responsibilities. In the beginning, the general administration itself was assigned developmental tasks but gradually in some states separate development administrative machinery got established. After the inauguration of the



Community Development Projects in India, a special program of Tribal Development Blocks was taken up in tribal areas. Special emphasis was laid on the schemes of intensive agriculture, irrigation, soil conservation, development of communication, health, education, village industries, cooperation, housing and rehabilitation. As against 66,000 persons covered normally by a Community Development Block, each SMPT block covered only 25,000 persons in an area of maximum 518 sq. km.

The main programs for tribal development undertaken during the First Plan (1951-56) were for economic and educational development, improvement of roads and communication and provision of medical and public health facilities. The program of Tribal Development Blocks was however, not extended geographically during the IV Plan. The life of the then existing Tribal Development (TD) Blocks was increased by another five years making a total of 15 years with a view to consolidate the gains of the efforts already made. The different States had their own pattern for tribal development. In Madhya Pradesh, for example, the Tribal Welfare Department looked beyond the narrow schemes and assumed the responsibility of agriculture extension and other subjects as well.

### **The New Strategy for Tribal Development**

The next phase of tribal development began with a review in depth of the tribal scene in the country. The program had become too much schematic, having no relationship with local needs. Significantly, what was expected to be supplemental investment in tribal areas through TD blocks tended to become the exclusive investment. The benefit of normal programs hardly reached many of these areas. The difference in the level of development in tribal areas and communities and the general areas and other communities, therefore, tended to increase.

The problem of tribal development was broadly divided into two parts, viz., (i) areas of tribal concentration, and (ii) dispersed tribal communities. This seemed to be necessary for clearly defining the strategy, policy and programs for their faster development. In the case of areas of tribal concentration, it was possible to envisage that, programs taken up for infrastructure development in the area might benefit the tribal communities and provide the necessary conditions for



taking up community-oriented programs. Experience, however, had shown that area development programs by themselves did not benefit the tribal communities in the past; sometimes area development was at the cost of the tribal interest. Therefore, a concept of area development with focus on the development of the tribal communities was evolved for areas where the tribes were a predominant community.

The main objectives of the tribal sub-plans which were prepared during Fifth Five Year Plan are elimination of exploitation in all forms, speeding up the process of socio-economic development, building inner strength of the people and improving their organizational capability. In relation to the developmental programs, the tribal sub-plans represented the totality of public sector effort in this area. The entire tribal sub-plan area was divided into a number of integrated tribal development projects in the areas where the tribal concentration was more than 50 percent. It was gradually extended to dispersed tribal communities and isolated pockets.

### **Administrative setup at Central (National) level**

At the Central level the Ministry of Home Affairs was initially the nodal ministry responsible for the welfare of scheduled tribes. The Union Home Ministry was responsible for formulation and implementation of developmental programs of tribes in India. In September, 1985 under Rajiv Gandhi government, this arrangement was discontinued and tribal welfare became the responsibility of a newly created 'Ministry of Welfare'.

The shift of the subject of scheduled tribes from the Ministry of Home Affairs to that of 'Welfare' has been criticized on the ground that this action was a dysfunctional move in the reverse direction as compelling necessity. Tribal development is vastly more than mere development and demands a set of prerequisites which only the Home Ministry is in position to provide. Total welfare entails preservation of the culture also. As implementation rests with respective States, the Home Ministry's removal from the scene was bound to reprioritize scheduled tribes in the eyes of the latter".

In fact, the newly constituted Ministry for Tribal Affairs, which is the nodal agency for empowering the tribes, is among other things, expected to:



- (i) Formulate need based policies, plans and programs;
- (ii) Review existing legislation which impinge upon the interests of tribes and to amend them, where necessary, to protect their interests (as also to persuade the states to do the same);
- (iii) Ensure flow of funds and benefits under TSP in proportion to their population from the general development sectoral budgets both at central and state levels;
- (iv) Guide and coordinate both governmental and non-governmental organizations working for the welfare and development of the tribes; and
- (v) Monitor the implementation of policies and programs/laws related to STs to ensure their effective implementation/enforcement.

### **Organization Tribal Affairs Ministry at Union Level**

The Ministry of Tribal affairs is functioning under the overall guidance of the Union Cabinet Minister, Minister of State and the Secretary. The Secretary is assisted by two Joint Secretaries, Deputy Director General and Economic Adviser, Additional Secretary & Financial Adviser, CCA are assisting the Secretary, Ministry of Tribal Affairs.

The Ministry is organized into Divisions, Sections and Unit. Each division is headed by a Deputy Secretary/ Director. The Ministry of Tribal Affairs has a sanctioned strength of 131 employees (including 5 posts of Pay and Accounts) and a working strength of 110. There are 33 group "A" posts, 51 group "B" posts, 31 group "C" posts and 16 group "D" posts.

### **Administration**

The establishment and general administration of the proper Ministry and the National Commission for Scheduled Tribes (NCST) are handled in the Administration Division. In addition, establishment matters of officers appointed under Central Staffing Scheme for the Department proper and ex-cadre posts, i.e. Economic Advisor, various Statistical Cadre, etc., are being administered in this division.





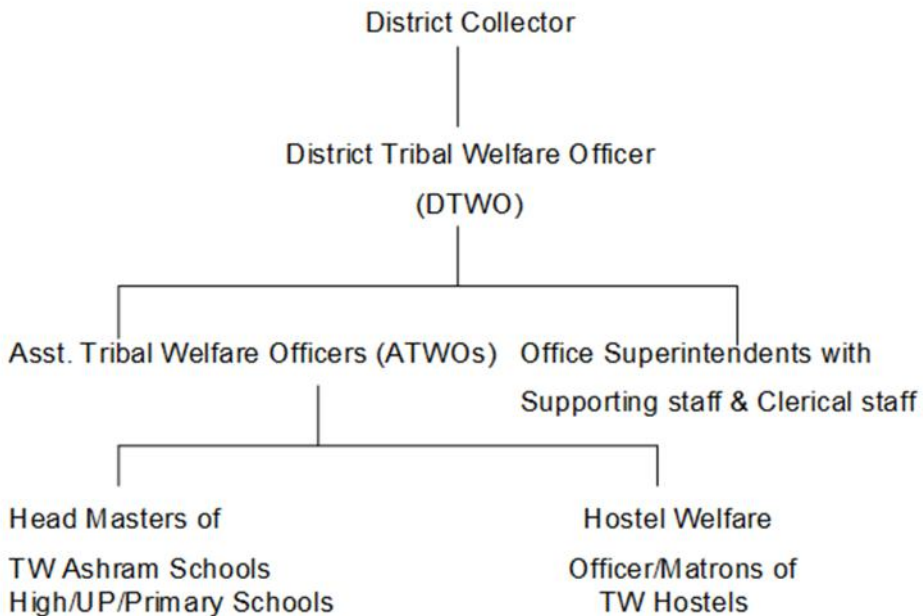
Ministry of Tribal Affairs had been facing severe crunch of space since its inception, to mitigate the problem, with the permission of Ministry of Urban. Hence, it would be fitting to look at the administrative machinery at the state and lower levels in slightly more detail.

### **Organizational Structure of District Tribal Welfare Office at Non-ITDA District**

In Andhra Pradesh out of 23 districts, other than ITDA districts as mentioned above are called as Non-ITDA Districts or Plain Areas. The organizational structure of Tribal Welfare administrative unit at all these districts level starts with District Tribal Welfare Officer (DTWO) who functions under the District Collector and also responsible to the Commissioner of Tribal Welfare, Hyderabad. To look after the Tribal Welfare schemes in the district and to look after the educational aspects and Tribal Welfare institutions, he is assisted by the Assistant Tribal Welfare Officers (ATWOs). He is responsible to look after the functioning of Head-Masters of Tribal Welfare Ashram Schools, High Schools, Upper Primary and Primary Schools in the district. The ATWOs are also assisted by Hostel Welfare Officers and Matrons of Tribal Welfare hostels. To look after the office affairs, the District Tribal Welfare Officer is assisted by Superintendent and other clerical and supporting staff.



### Organisation of Tribal Welfare Department at District Level



Source: Office of District Tribal Welfare Officer, Kurnool.

### Organizational Structure of Tribal Welfare Department in Andhra Pradesh

Planning for the organizational structure of the Tribal Welfare Department is an indispensable ingredient in the process of tribal welfare management. After the general and specific objectives and necessary plans and programs to carryout are formulated by the policy making body the next phase in management process is framing of the organizational structure below the policy making body in order to get the objectives realized and the plan accomplished. A clear understanding of the objectives and plans of an organization enables structuring, functioning and performance of an organization.

“Organization is the orderly management of personnel for facilitating the accomplishment of some agreed purpose through allocation of functions and responsibilities. It is the formal structure of authority which is well defined and coordinated towards the attainment



of the specific objective. These objectives are achieved by the combined efforts or different specialists belonging to the organization.

## **Origin and Evolution of Tribal Welfare Department in Andhra Pradesh**

The origin of Tribal Welfare Department had its roots in the recommendations of the conference of the officials and non-officials held at the Secretariat of Madras Presidency in December, 1949 to appoint a Committee under the Chairmanship of R.S. Malayappan, who was the Special Agency Development Officer to tour the agency areas of Andhra and select suitable sites for tribal development schemes such as improvement of forests, plantations, irrigation, hydro-electric projects and exploitation of mineral resources. The committee recommended for taking up various schemes of development and also stressed the need for prevention of exploitation of hill men by plains, merchants and money lenders. Accordingly, the government took steps to implement the recommendations of the committee.

### **First Step in the Development of Scheduled Tribes**

Late Sri Pandit Jawaharlal Nehru, the first Prime Minister of India, laid down the approach for development of scheduled tribes. Dhebar Commission as per Article 339 of the Constitution of India also endorsed this approach and observed that the tribes should be integrated with the rest of the society while allowing them to continue their traditions, ethos, arts, culture and their identity. Their right on land and forest should be safeguarded and they should be trained for their administration and development.

### **Formation of Tribal Welfare Directorate – Dhebar Commission**

The Hon'ble President of India in their Order No. 35/36-60-TC, Government of India, dated, 14.10.1961 appointed a Committee for Scheduled areas and Scheduled Tribes headed by Sri. Dhebar. In pursuance of the recommendations of the Commissioner of Scheduled Areas and Scheduled Tribes that where the ST population in all the States was ten lakhs and above were declared as Scheduled Areas.

The Tribal Cultural Research & Training Institute (TCR & TI) was established during 1962-1963 vide G.O.Ms. No.1242, Education Department, dated, 2.5.1962 with the following aims and objectives:



- (1). Monographic and ethnographic studies.
- (2). Socio-economic and benchmark surveys.
- (3). Planning for tribal development, and
- (4). Evaluation studies of ongoing tribal development programs.

Besides the Tribal Welfare Department, Tribal Development Blocks and other Development Departments, the following institutions are also functioning for the welfare of scheduled tribes:

1. Girijan Cooperative Corporation with Headquarters at Visakhapatnam.
2. Girijan Development Agency with Headquarters at Srikakulam.
3. Andhra Pradesh Scheduled Castes and Scheduled Tribes Cooperative Housing Societies Federation with Headquarters at Hyderabad.

### **Single Line Administration**

The tribes had to approach several Agencies for redressal of their grievances in developmental as well as regulatory matters, since several departments were working in the sub-plan areas independent of the ITDAs. This issue was discussed in detail in the meeting held by the then Chief Minister on 14.6.1986 and it was considered necessary to introduce single line administration in ITDA areas by bringing all the officers and staff working in tribal areas irrespective of their departments under the administrative control of the Project Officers of ITDAs. This is intended to facilitate better co-ordination among all the functionaries operating in sub-plan areas and to meet the needs of tribes who can look to the single agency for getting all their problems attended.

### **Present Organizational Structure**

A separate Directorate of Tribal Welfare was created (separately) by bifurcating from Social Welfare Department in the year 1966 vide G.O.Ms. No.2710, dated, 14.11.1966 of Education Department. In pursuance of the orders of the government in the said G.O., the Director of Social Welfare in his proceedings Rc.No.44598/66, dated, 20.05.1967 distributed the posts between Social Welfare and



Tribal Welfare Departments to enable newly formed Tribal Welfare Department to function.

A Legislative Committee on Welfare of Scheduled Tribes with tribal Members of Legislative Assembly as Members is constitutes from time to time to critically examine whether concerned departments are following the rule of reservations to scheduled tribes and to assess the progress of implementation of various developmental schemes for the benefit of tribes.

### **Accountability**

The Tribal Welfare Department has such an important role to play in protecting and securing the welfare of scheduled tribal people in the district that the Legislature cannot be in-different to its working. The Minister for Social Welfare or Tribal Welfare who ever may be the parent Minister he is responsible for State Legislature for all the administrative and operational activities of Tribal Welfare department. Keeping in view the interests of the tribes at large in the state, he should place on the table of the House all the information and data sought by the Members of the House. As he is accountable to State Legislature he should not answer questions in an evasive manner. Further, the Minister is constitutionally responsible for the actions of his subordinates in pursuance of his policies.

Accountability means the responsibility of the administration to the Legislature for public expenditure as tax payers money is involved in it. It includes not only submission of accounts of completed expenditure for inspection by State Legislature but also the legislature's right to criticize public expenditure. At present public accountability is exercised by the Legislature through various methods like legislative questions relating to tribal welfare affairs, legislative debates and submission of performance reports to State Legislature. The Legislative Committees like Public Accounts Committee (PAC) and Estimates Committee (EC) also exercise financial control over Tribal Welfare department in respect of financial matters.

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## THE EFFECTIVENESS OF EXHIBITION AND TRADE SHOWS IN JEWELLERY BUSINESS

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### INTRODUCTION

Jewellery Exhibitions and trade Fairs are exciting events. The Hundreds of companies come together under one roof to sell their gems and jewellery products and promote their Businesses. Each show is different; it can be anything from a massive trade event leading with Businesses from around the world taking part, to a gathering at the local homespun (the village hall). Over the years organized trade shows had provided an even playing field in which small business and large ones came together to determine the trade show effectiveness.

A jewellery Exhibition, if well planned, can generate a great deal of press for the store, as well as for the event. This will help the exhibitors to become recognized and help enhance its reputation as the place to be. In Exhibition jewelers can demonstrate your product in best way. Trade shows have always attracted curious crowds, that's what they're for. India witnesses a large number of trade shows throughout the year and you can often hear about them through the media, either in your local newspaper or on the Internet.

The visitors also gets a lot of opportunities by attending these trade shows. A large number of enthusiastic buyers directly purchases new products. This is because they get a good discount during the course of such business events.

The show is good for jewellery retailers. For loose gemstones ,have received good enquires but they could not be converted into actual sales. However this jewellery exhibitions or trade shows are a good platform.

### Jewellery

Jewellery or jewellery consists of small decorative items worn for personal adornment, such as brooches, rings, necklaces, earrings, and bracelets. Jewellery may be made from a wide range of materials.

Gemstones and similar materials such as amber and coral, precious metals, beads, and shells have been widely used, and enamel has often been important. In most cultures jewellery can be understood as a status symbol, for its material properties, its patterns, or for meaningful symbols. The patterns of wearing jewellery between the sexes, and by children and older people can vary greatly between cultures, but adult women have been the most consistent.



Jewellery : Flow of ruby and emerald

Exhibition

A trade fair, trade show, trade exhibition, or expo are organized so that companies in a specific industry can showcase and demonstrate their latest products and services, meet with industry partners and customers, study activities of rivals, and examine recent market trends and opportunities.

An exhibition, in the most general sense, is an organized presentation and display of a selection of items. In practice, exhibitions usually occur within museums, galleries and exhibition halls, and World's Fairs. Exhibitions can include many things such as art in both major museums and smaller galleries, interpretive exhibitions, natural history museums and history museums, and also varieties such as more commercially focused exhibitions and trade fairs.





consumer buying jewellery at booth



Fashionable jewellery at exhibition

## Advantages of Jewellery Exhibition

### To Jewellers :

Exhibiting at a trade show has hundreds of benefits for your business. Establishing a presence, whether big or small, for your company at a trade show gives you a powerful platform for meeting new customers, reaching out to your existing clientèle, and building a more established and reliable brand

- Provide an excellent opportunity to assess opinions from clients & determine market potential. And Helps in increasing sales.
- Enables all aspects of selling process attention, persuasion etc.
- Helps to inform market place of product
- Helps in selling off samples or unsold jewellery
- Develop and strengthen jewellery brand
- Interact with all visitors to your exhibit, as they could turn into customers



Communicating with customer B2C Communicating with wholesaler B2B





- Whenever possible, try to close deals on the spot to capitalise on the buying mood of the event.
- Take a direct approach to sales, as most attendees are already interested in your company's products or services.
- If you can't close deals during the event, try to set up appointments with key prospects for the week after the trade show.
- Provide an excellent opportunity to assess opinions from clients & determine market potential.
- The jewellers gets to meet customers and increase brand recognition and customer loyalty - increase demand for her brand of jewellery designs

However, like most forms of marketing, with the right strategy, a trade show can be a very profitable choice. With the right strategy, every trade show you attend is an opportunity to drastically expand your company's customer base.

### **Advantages to visitors/customer**

Our fairs take immense pride in being an effective networking platform. For in the midst of all the stalls, one can get into deep discussions with key players of the same industry, discuss trends in the jewellery business and forge a valuable business relationship to last a lifetime.

- It helps in getting every kind of jewelry at one place.
- Helps in taking the advantages of various schemes which jewelers have introduced during exhibition.
- Help in compression of quality of a same product from different outlets.
- Customers can bargain the price of jewellery items.

### **Advantages to Jewellery designer**

The jewellery designers get a good platform to their jewellery designs (how to sell her jewellery, unique selling features, what is the



designer's capabilities and possible special orders, answer any burning questions about her jewellery)

As exhibition is one of the strongest media of exploring business by promoting various products or services,

A jewellery Exhibition is a risk-free way for them to see what other jewellery designs you can make & what other jewellery can sell in their store.

Chances are, to get desire employment to designer and designer can sale their designs it is a new set of customers, and they're seeing these jewellery designs for the first time. A jewellery Exhibition is a great event that brings a large concentration of new customers - retail opportunity not otherwise accessible for the jewellery designer, for those designs.

Exhibitors usually try to present a large proportion of their range of products/services at these trade shows, gaining in two ways. The first one being the gain in advertising and brand promotion. A good portion of the target audience learns about new products to be launched. The second gain is through the direct sales that happen at these trade shows.

## **DISADVANTAGES OF JEWELLERY EXHIBITION**

- The risk of fire or robbery is always there.
- May suffer loss if jewellery are not sold.
- Heavy investment required.
- Loss can be suffered if the jewellery are stolen.
- Wastage of time and resources if proper out come doesn't comes out.

Jewellers can discuss your security arrangements as well as the time and modalities of the move and travel only with trusted collaborators. Involve your security/risk manager or, if you do not have one, consult with a crime risk and prevention specialist for a careful assessment of all risk factors and recommended prevention strategies.

## After the trade show

The period immediately after the closing of the exhibition is particularly risky because of the resultant confusion and generalised haste in leaving the venue. This may lead to opportunistic theft. Furthermore, at this stage certain exhibitors could be more vulnerable to robbery attacks. Exhibitors should therefore exercise extreme caution, especially during their departure from the exhibition venue. The following strategies should be considered:

- \* Do not waste time unnecessarily. Your merchandise should be returned to the safety of your store/business place as quickly and as securely as possible.
- \* Implement all the strategies that you have adopted whilst travelling to the exhibition venue

## DIFFERENT JEWELLERY SHOWS

### NATIONAL JEWELLERY SHOWS :

- Jaipur jewellery show(JJS)
- Jewellery Association show(JAS)
- Indian Fashion Jewellery & Accessories Show (IFJAS)
- The Gem & Jewellery Export Promotion Council

The jewellers and the designers has been working hard to prepare some exclusive and exquisite designs are being well rewarded by the response of visitors.



## Models in different jewellery

The attendees will have the opportunities to meet and intrect with jewellery and accessory manufacturing from various parts of india. The



participants of this show will discuss about the role of modern tools and technologies related with these industries.

Product launches ,meeting with foreign buyers and networking opportunities will be some of the highlights of this show.this show will create new business opportunities for the participants.

## **INTERNATIONAL JEWELLRY SHOW**

- India International jewellery show
- Hong kong International jewellery show
- Dubai International jewellery week
- Global Gem and jewellery fair
- Vietnam International Jewellery Fair
- Dubai Gold and jewellery group
- Singapore Jewellery and gem fair

## **RESEARCH METHODOLOGY**

**Research Methodology** is a way to find out the result of a given problem on a specific substance or research problem by using different criteria for solving the given research problem. The aim of this research to find out the the effectiveness of exhibition and trade shows in jewellers and consumes.

**Sample size:** 200 Jaipur jewelers who were participated and not participated in jewellery exhibition and 200 jaipur's jewellery customers to be selected from the universe to constitute a sample. The size of the sample was neither be large nor small, it was optimum.

**Data collection:** The information were gathered from both primary and secondary data.

## **REVIEW OF LITERATURE**

According to **Arjun & Jain Ajay (2014)**: jewellers have a better experience at the show. There were a lot of serious customer. It is good that these various cities are opening up for gemstones and jewellery. Though overseas customer are getting less in number day by days but the business volume is good.



**By Lauren Moreau on ( 2014)** The Dazzle exhibition features jewellery from emerging young artists. It's all for sale and the gallery's visitors are encouraged to buy on the spot if they wish. It's refreshing to see an exhibit that so clearly wants to support young artists. There are some beautifully delicate pieces of metalworking and some excellently chunky beaded and leatherwork pieces.

**Rhodes Sarah (2015)**, The annual symposium is a fashion jewellery and contemporary jewellery exhibitions. Founded in 1986, the department offers Both bachelor's and master's of fine arts degrees in gemstones and jewelry. The MFA is Taught in Ingles and, as such, Attracts a jewellery cohort of international students (current enrollment has students from more than 18 Countries around the world.) In the current climate of craft-based, higher-education courses being abolished, it is heartening to see the wide-ranging, traditional facilities for gemstone jewellery and hand manufacture being fully Utilized.

**According to K Srinivasan (2015)** Emerald Jewel Industry India It Has Been a spectacular show. If help remains the same, it will definitely Then Lower the prices, us do good business. Consumers Have the business as better Increased buying power. As far as trends are still lightweight jewelery is concerned, generation prefers sleek, trending. Younger We have a number stylish lightweight and lightweight jewellery designs. It has-been getting a good response at the show. We Have Been using electrofusion, milling technology for making bangles .

**By Ramana Solanki, Sangam(2016)** There is a wardrobe for jewelery demand in India as well as Middle East. They Have been loved by all our Consumers. It has-been one of the best shows at IJMS, Hats off to the Organisers, the way They Have Been Organising the show over the years and we are happy with the arrangements.

## **OBJECTIVE**

**The objective of study the effectiveness of exhibition and trade shows in jewellery business are as follows..**

- To Creates awareness and develops relationship with new prospects and Improve company image.
- To Determines and stimulates needs of customers:



- To strengthen and cultivate existing client relations.
- To acquire distributors and suppliers.
- To gain further acceptance in the society .
- To promote the product nationally and internationally.

### HYPOTHESIS :

$H_0$  : There is significance effect on the sale jewellery by participating in trade show or exhibition.

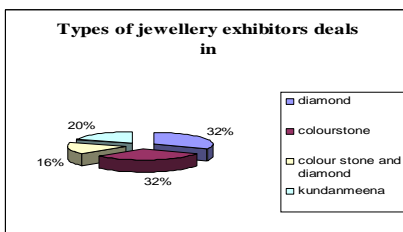
$H_1$  There is no significance effect on jewellery sale by participating in trade show or exhibition.

$H_2$ : Organisation achieve marketing objective by participating in the trade shows.

$H_3$ . Exhibition is a platform to launch new product and marketing the new product .

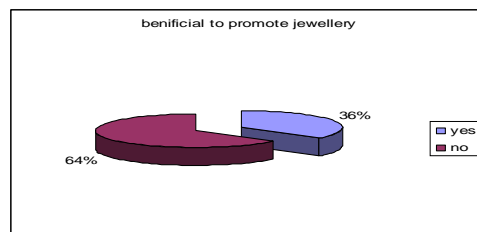
### DATA ANALYSIS AND INTERPRETATION

#### Types of jewellery exhibitors deals in



In jaipur JAS and JJS the 16 % of jewellery exhibitors deals in diamond and colour stone jewellery, 32 % in diamond, 32% in colour stone and 20% in kundanmeena and The budget is about 50000-100000 of 30% of exhibitor, 10000-20000 of 26% and 3000-40000 of 44%

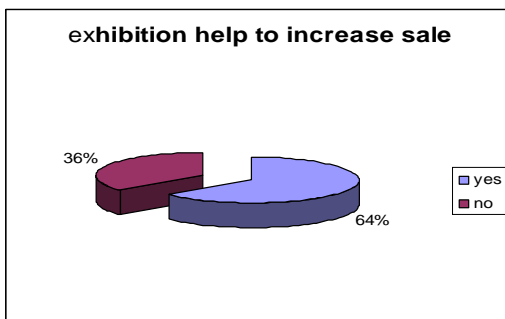
#### Exhibitions and shows are beneficial to promote jewellery



**64%** of the exhibitors think that the exhibition and trade fair are beneficial to promote their jewellery and 36% think it is not beneficial. So hypotheses  $H_3$  is proved that Exhibition is a platform to launch new product and marketing the new product

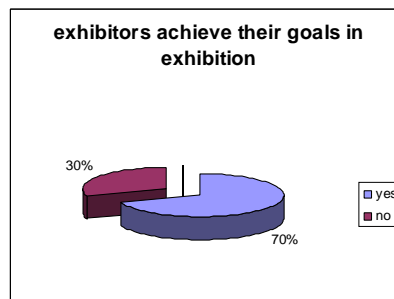


## Participation in Exhibition helpful to increase the sale



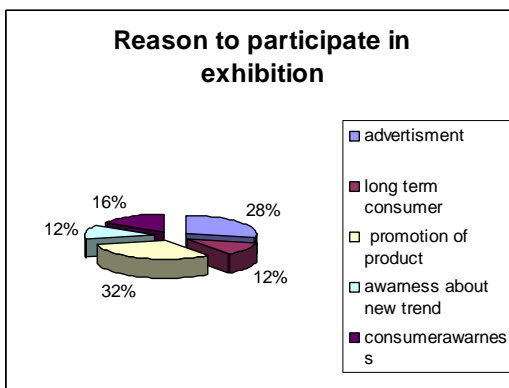
64% of the exhibitors think that the exhibition is helpful to increase the sales and 36 % think it is not helpful.  $H_0$  : There is significance effect on the sale jewellery by participating in trade show or exhibition. Most of jewellers participating from beginning when shows are stated in Jaipur as per virtual benefits .

## The exhibitors achieve their goals in exhibitions



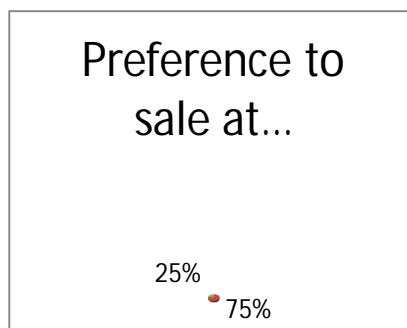
70%of the exhibitors are successful to achieve their goal in exhibition and 30% are not. Those who are not gaining some of them would like to quit as exhibitaors says that there is high challenges/compaction during the time of exhibition.

## Reason to participation in exhibition



12 % of the exhibitors take part in

## Mostly the jewellery product sold out :



75% jewelers take part in exhibition to sale and exhibit their products but 25% don't

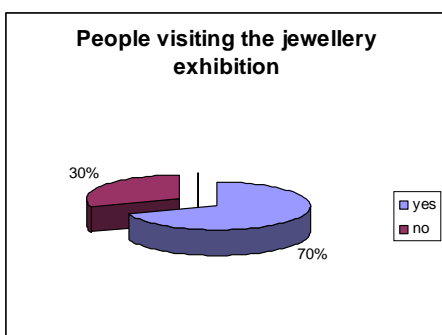


exhibition to be aware about the new trends,32% to promote their product,16% for consumer awareness,12% for long term consumer and 28% for advertisement.

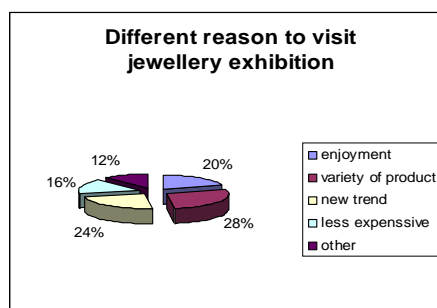
take part because of their product uniqueness or some of them didn't participate because of higher exhibition cost.

People visiting the jewellery exhibition :

Reason to visit jewellery exhibition..



70% of the people visit the jewellery exhibition some of them are genuine buyers, some of them visited because they are of fond of jewellery and 30% do not visit. They prefer to buy from showroom only.



20% Of the people visit the jewellery exhibition just for their enjoyment24% to know about the new trend,28% because of availability of variety if product,16% due to less expensive and 12% for other reasons.

40% customers like to buy diamond jewellery, 20% of the customer like colour stone and diamond jewellery. 16% kundanmeena meena jewellery 12% colour stone and 8% prefer to buy silver and other kind of jewellery.

## CONCLUSION

Most of the exhibitors think that the exhibition is the best medium to promote and advertise the jewellery. it also increase the sales of the product .So the exhibitors like to participate in the exhibition and earn profit. They think about the product to be sold and increase their profit by selling their product.



Customers get all such huge variety of jewellery at one place. Customers can distinguish between the prices and the quality of different jeweler's jewellery and can make a good decision. Sometimes not even the customers but also you can get interact to another business person who can join his business with your business. The diamond jewellery is mostly like by the customer but other types of jewellery are also sold such as kundan meena, gold, colour stone, they buy jewellery as an investment or due to new fashion or just because they like to wear jewellery.

Usually peoples also like to visit the exhibition as wide range of jewellery and unique designs are found under one roof. There are many other reason to visit the exhibition such as low price of jewellery, different designs to enjoy the exhibition, to know the new trend in market.

In jewellery exhibitions, traders from across the country come to showcase their craftsmanship and connect with potential leads. Similarly, the visitors at our exhibitions walk in to connect with vendors and tradesmen to grow their business too. When under one roof, in an exclusive business atmosphere, networking reaches its epitome and deals are struck.

Exhibitions have the main motive to generate sales and recognition, which lead to increase in the actual sale of the show and most of jewellers meet their expatiation.

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## **SUSTAINABILITY OF WOMEN SELF-HELP GROUPS**

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The activities of Self Help Groups (SHGs) have emerged as a sustainable approach to make credit facilities available to the poor at their door step in a simple and flexible manner. Self Help Groups have smoothened the way for economic independence for rural women. The growth of Self – Help Groups is an evidence of the fact that women are coming out of their shells and maintaining their citizenship. SHGs occupy a crucial role in the process of women empowerment and it is instrumental for socio-economic development of the poor people and poverty alleviation in the rural areas.

Despite its considerable outreach, successful savings mobilization and high loan – repayment rates, the sustainability of Self Help Groups banking has not been clear. There were many factors responsible for lowering the effectiveness of SHGs viz., illiteracy, lack of proper leadership, management, promotion of income generating activities, etc. SHG-Bank Linkage has become the dominant mode of microfinance in India and the success of the SHG-Bank Linkage model depends critically on the task of promoting, nurturing, strengthening, and monitoring SHGs tasks.

The sustainability of the system largely depends upon the stability and performance of the Self Help Groups (SHGs). Certain elements would become critical for the successful functioning of SHGs. SHGs require a large amount of pre and post lending monitoring. Quality assessment of SHGs is still now a challenging issue and the area under study bears the same imprint. Against this background, the present study is taken up to evaluate the performance of the



women Self-help Groups and to suggest measures for their long term sustainability.

### **Objectives of the Study**

Keeping in view of the importance of the study, the objectives of the study are:

1. To examine the progress of Self Help Groups in India
2. To portrait the socio-economic conditions of the sample SHG respondents
3. To examine the functioning of the sample SHGs
4. To examine the impact of the SHGs on the living conditions of the sample SHG respondents
5. To offer suggestions to protect internal health of the SHGs as well as for their long – term sustainability

### **Methodology**

The study uses both primary data and secondary data. The secondary data was collected from the books, journals, articles, working papers, reports of the NABARD, Economic Survey reports of the Government of India, reports of the Planning Commission, Census data, reports of the Society for Elimination of Poverty (SERP), Government of Andhra Pradesh, reports of the National Sample Survey Organization (NSSO), articles from news papers and internet. Pre-tested interview schedule was used to collect primary data. Multi-stage random sampling method is used for the present study to collect primary data. Guntur district of Andhra Pradesh is randomly chosen for the present study. In the second stage, four mandals are selected from Guntur district. In the third stage, four villages are selected from each selected mandal. Thus a sample of sixteen villages is selected for the purpose of the study. In the final stage, a sample of 40 respondents



was selected randomly from each village. Thus a sample of 640 households was selected for the study. Primary data was collected from these 640 sample respondents using pre-tested Schedule.

The important variables were formulated and the relevant data collected from the field were coded and analyzed using SPSS (Statistical Package for Social Sciences) software. Cross tables were drawn for analyzing the data. Substantial part of the thesis is based on tabular analysis. Suitable and appropriate statistical tools were used. ANOVA test is also used in the data analysis. Test of significance of the data is carried out using Chi-square test.

### **Major findings of the Study**

The study finds that there is good cooperation among the group members in the case of huge percentage of the sample respondents' groups. Regularity in savings is observed in the case of more than three fourths of the sample respondents' groups. There is no credit planning in the group in the case of huge percentage of the sample respondents' groups. Majority of the sample respondents are found to be utilized the SHG loan amount towards income generating activities. Majority of the sample respondents are found to be repaying the loan amount out of the income from own economic activity. All members pay regularly loan installment in the case of nearly three fifths of the sample respondents. All the members are repaying regularly in the case of largest percentage of the sample respondents' groups. No fines are being imposed for default in repayment in the case of majority of the sample respondents' groups. Fines are not being imposed in the case of default in savings in the case of majority of the sample respondents' groups.

There is no decrease in group savings over a period of time in the case of huge chunk of the sample respondents' groups. Majority of the sample respondents are hiring a person to look after book keeping



as they are not well educated. Meetings are held generally monthly once in the case of majority of the respondents' groups. Group Leader decides the timings of the group meetings in the case of majority of the sample respondents' groups. There is regularity in conducting meetings in the case of largest percentage of the sample respondents' groups. Nearly half of the sample respondents are attending the group meetings regularly. There is no decrease in attendance to the group meetings in the case of huge percentage of the sample respondents.

There is no penalty either for late attendance to the group meetings or for not attending the group meetings in the case of huge percentage of the sample respondents' groups. There is participation by all members in the discussion in the group meeting in the case of more than half of the sample respondents' groups. There is democratic and transparent functioning in the case of majority of the sample respondents' groups. Decisions within the group are being taken unanimously in the case of majority of the sample respondents' groups. Majority members' decisions are being taken while taking decision on financial transactions of the group in the case of two thirds of the sample respondents. No capacity building inputs are received by sample respondents' groups at the time of receiving bank loan in the case of largest percentage of the sample respondents'.

Nearly one third of the respondents' groups are found to be dependent on outsider for various services to a great extent. Considerable extent of problems with the banks like rude behaviour, undue delays, etc. are reported by just little over half of the sample respondents. Loan amount is inadequate in the opinion of the nearly three fourths of the sample respondents to a great extent. Quantum of installment amount is a problem to a great extent in the case of majority of the sample respondents. Women participation in Self-help Groups had resulted in empowering them in all spheres of life, say, socially, economically and psychologically. Confidence is built among



the sample women after joining SHGs. Self-esteem is achieved by the sample women. Women are actively participated in decision making in the household after joining SHGs. However, decision making with respect to major purchases and vote on own is not achieved in the case of majority of the sample respondents.

### **Suggestions**

In the light of the above findings of the study, the following suggestions are offered to protect internal health of the SHGs as well as for their long – term sustainability.

- Government should take steps to inculcate formulating plans to spend the SHG loan amount.
- SHGs be advised to impose fines to their members for default in repayment.
- Adequate training be imparted to group members by the NGOs and other Government officials to aware about bank loan, proper accounts keeping, self management, decision making etc.
- Banks should be advised to smoothly interact and function with the SHGs since most of the women in these groups are illiterates and unaware of bank procedures.
- Loan amount being given to the SHGs be enhanced keeping in view of the present inflation in the country.





## EXPLORING EMOTIONAL MATURITY AND TEACHER EFFECTIVENESS AMONG STUDENT TEACHERS

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### Abstract

The study intends to explore the emotional maturity and teacher effectiveness among student teachers. Normative survey method was used for the study. The sample for the study is 120 B.Ed students as 40 male (20 from arts and science each) and 80 female (40 from arts and science each) was selected from Malappuram District of Kerala. The tool used for assessing emotional maturity is Emotional Maturity Scale developed by Singh & Bhargava and the teacher effectiveness is assessed by the average marks given by teacher educators and school mentors. Mean, SD, t-test and correlation are employed for data analysis. The study revealed that there is significant and positive correlation between emotional maturity and teacher effectiveness among student teachers. There exists significant difference in the emotional maturity of male and female student teachers and there is no significant difference between the teacher effectiveness of male and female student teachers. Also, it was revealed that there is no significant difference in emotional maturity and teacher effectiveness based on stream of subjects.

**Key words:** Emotional Maturity, Teacher Effectiveness, Student Teachers, B.Ed programme

### Introduction

Teacher's professional quality is the yardstick of every education system since the educational scenario of every nation is



highly depended upon its quality of teachers and teacher education systems. The nature and quality of professionalization of teachers is key factor in growth and development of every country. Various commissions and committees on education in India such as University Education Commission (1948-49), The Education Commission (1964-66), National Policy on Education (NPE-1986), National Curriculum Framework for Teacher Education (NCFTE-2009) and NCTE Regulation (2014) etc. highly demanded the empowerment of teachers through their professionalism since it is the important factor for bringing effective paradigm shift in the educational advancement of Indian school education system. The educational undertakings without ensuring and giving proper provisions to develop and maintain teacher effectiveness especially among schoolteachers will be in futile. Sticking on traditional and failed prototypes of teaching methodologies may subvert the teacher effectiveness in current educational scenario. It is very important to enhance the professionalism in student teachers for channelize their teaching effectiveness in relation to needs of the time.

Emotional maturity is control over the expression of one's feeling and thoughts. It is the characteristic of a healthiest personality as to behave according to the accepted social values and ideals. It is key element to control disturbing feelings and emotions, facilitate steadiness and endurance, to be tolerant to any situations and free from neurotic threats and tendencies. Jersild (1963), states that emotional maturity refers to the degree to which the person has realized his potential for richness of living and has developed his capacity to enjoy things, to relate himself to others. Emotional maturity is a state of balanced feeling and self-control. Walter D. Smithson, (1974) states that emotional maturity is a process in which the personality is continuously striving for greater sense of emotional health intra physically and intra personally. It implies controlling our emotions rather than letting our emotions. Sinha (2014) observes that



emotional maturity is an effective determinant to shaping the personality, attitudes, and behavior in to accepting responsibility, making decisions, teaming with groups, developing healthy relationship, and enhancing self worth. The emotional maturity gives grid line of how a person is able to respond to various situations, control emotions, feelings and behave in an adult manner when dealing with others.

Teaching effectiveness is important because it is the key factor in promoting student learning. The educational achievement of a school, society, and nation is highly depended upon its teacher's effectiveness in handling instructional processes. Lorin .W. Anderson (2004) states that effective teachers are those who achieve the goals which they set for themselves or which they have set for them by others. In Medley's terms, the possession of knowledge and skills falls under the heading of 'teacher competence' and in contrast to the use of knowledge and skills in the classroom is referred to as 'teacher performance'. Hence, the teacher effectiveness is the accomplishment of teacher goals by linking teacher competence and teacher performance. The hallmark of effective teaching is knowledge and skills needed to attain these goals, and ability to use that knowledge and those skills appropriately if these goals are to be achieved. Hay Macber (2000) identifies four key clusters as criteria for teacher effectiveness as professionalism, Thinking/Reasoning, Expectations, and Leadership. The characteristics of professionalism include commitment, confidence, trustworthiness, and respect. The Thinking/Reasoning includes analytical and conceptual thinking skills. The expectations include drive for improvement, information seeking, and initiative. The leadership qualities include flexibility, accountability, and passion for learning. The concept and constituting skills of teacher effectiveness varies from grades and levels of teaching. The components of effective teaching performance in school especially primary level are different



from higher secondary and collegiate level. The teacher effectiveness focused in B.Ed courses are making the student teachers enable to prepare mainly to meet the needs of pedagogical practices in secondary and higher secondary schools.

The review of related studies on emotional maturity and teacher effectiveness showed various findings, among the study conducted by Subbarayan and Visanathan (2011) found that there is no significant relationship between emotional maturity and sex, community and family type of college students. Islahi & Nasreen (2013) showed that there is no significant difference in the teacher effectiveness among male and female teachers. Kumar (2014) reported that there is significant difference in the emotional maturity among adolescent boys and girls. . Khan and Shah (2015) concluded that the emotional maturity of non-working mothers is higher than the children of working mothers. Seema et al. (2015) found that there is no significant gender difference in teacher effectiveness of male and female teachers. Pachaiyappan and Ushalaya (2015) concluded that there is no significant gender difference in teacher effectiveness. Patel (2015) concluded that there is no significant difference in the teacher effectiveness of teachers from arts and science subjects. Kaur and Singh (2016) concluded that there is significant difference in the emotional maturity among boys and girls of senior secondary school students. Kalaiselvan and Mahesweri (2016) concluded that majority of post graduate students have only moderate level emotional maturity. The study reported that 45. 5% students have moderate level of emotional maturity, 30% high level and 24.2% low level of emotional maturity among post graduate students. Chauhan (2016) concluded that there is no significant gender difference between male and female in teacher effectiveness. It also reported that teacher effectiveness of science subject teachers is higher than teacher effectiveness of Arts subject teachers.



Thus, effectiveness of a teacher performance depends upon many social and psychological factors. The teaching skill is not a monotype, but it is combination of multi level skills and competencies. The psychology of teaching and learning greatly emphasizes that emotion is an important and basic constituent of healthy personality of teachers. The rationale for the study is that to find out the emotional maturity of a teacher in facilitating effective level of teaching and instructional strategies. It is very important to find out whether emotional maturity is positively correlated with effective teaching performance. The findings of the study may help the teacher educators and teacher education institutions to produce vocationally mature and effective teachers.

### **Objectives of the Study**

1. To find out the difference between the emotional maturity among student teachers from arts and science subject.
2. To find out the difference of emotional maturity among male and female student teachers.
3. To find out the difference between the teacher effectiveness of student teachers from arts and science subject.
4. To find out the difference in teacher effectiveness among male and female student teachers.
5. To find out the correlation between emotional maturity and teacher effectiveness among student teachers.

### **Hypotheses of the Study**

1. There will not be significant difference in emotional maturity among student teachers from arts and science subject.
2. There will not be significant difference in emotional maturity among male and female student teachers.



3. There will not be significant difference in teacher effectiveness among student teachers from arts and science subject.
4. There will not be significant difference in teacher effectiveness among male and female student teachers.
5. There will not be significant correlation between emotional maturity and teacher effectiveness among student teachers.

### Methodology of the study

Survey method is used for the present study. The sample for the study is 120 B.Ed students as 40 male (20 from arts and science each) and 80 female (40 from arts and science each) was selected from four B.Ed colleges of Malappuram District of Kerala. The tool used for data collection is Emotional Maturity Scale developed by Singh & Bhargava. The teacher effectiveness of student teachers is assessed by average score given by teacher educators and school mentors. The statistical techniques used for analyzing the data are Mean, Standard Deviation, *t* test and correlation.

### Analysis and Discussion

**Table-1**  
**Comparison between emotional maturity of student teachers**  
**from arts and science subjects**

Group	N	Mean	SD	t value	Level of Significance
Arts students teachers	60	184.18	9.51	1.78	Not Significant
Science students teachers	60	187.42	10.31		

It can be seen from the Table-1 that the mean score and SD of emotional maturity of arts student teachers are 184.18 and 9.51 respectively, while the mean score and SD of emotional maturity of science student teachers are 187.42 and 10.31. The calculated value of critical ratio is 1.78 which is less than the table value at 0.05 levels and



it is not significant. So, the null hypothesis is accepted and it is concluded that there is no significant difference in emotional maturity of arts and science student teachers.

**Table-2**

**Comparison between emotional maturity of male and female student teachers**

Group	N	Mean	SD	t value	Level of Significance
Male students teachers	40	184.68	10.27	2.11	Significant at 0.05 Levels
Female students teachers	80	188.83	9.86		

It is understood from the Table-2 that the mean score and SD of emotional maturity of male student teachers are 184.68 and 10.27 respectively, while the mean score and SD of emotional maturity of female student teachers are 188.83 and 9.86. The calculated value of critical ratio is 2.11 and is more than the table value at .05 levels and it is significant. So the null hypothesis rejected and it is concluded that there is significant difference in emotional maturity among male and female student teachers.

**Table-3**

**Comparison between teacher effectiveness of student teachers from art and science subjects**

Group	N	Mean	SD	t value	Level of Significance
Art student teachers	60	73.17	8.48	1.60	Not Significant
Science student teachers	60	70.55	9.33		

Table-3 shows that the mean score and SD of teacher effectiveness of arts student teachers are 73.17 and 8.48 respectively, while the mean score and SD of emotional maturity of science student



teachers are 70.55 and 9.33. The calculated value of critical ratio is 1.60 and it is less than the table value at .05 levels and it is not significant. Hence the null hypothesis accepted and it is concluded that there is no significant difference in emotional maturity among arts and science student teachers.

**Table-4**  
**Comparison between teacher effectiveness of male and female student teachers**

Group	N	Mean	SD	t value	Level of Significance
Male students teachers	40	72.03	9.81	1.17	Not Significant
Female students teachers	80	69.88	8.56		

It can be understood from Table-4 that the mean score and SD of teacher effectiveness of male student teachers are 72.03 and 9.81 respectively, while the mean score and SD of emotional maturity of science student teachers are 69.88 and 8.56. The calculated value of critical ratio is 1.17 and it is less than the table value at .05 levels and it is not significant. Therefore the null hypothesis accepted and it is concluded that there is no significant difference in emotional maturity among male and female student teachers.

**Table- 5**  
**Correlation between emotional maturity and teacher effectiveness of student teachers**

Variables	N	r value	Level of Significance
Emotional Maturity	120	0.70	Significant at 0.01 Levels
Teacher Effectiveness			

It can be seen from the table-5 that the *r* value of coefficient of correlation between the variables emotional maturity and teacher effectiveness among student teachers is 0.70. It shows that there is





strong correlation between emotional maturity and teacher effectiveness of student teachers

### **Findings of the Study**

- There is no significant difference between the emotional maturity of student teachers from arts and science subjects.
- There is significant difference between the emotional maturity of male and female student teachers.
- There is no significant difference between the teacher effectiveness of student teachers from arts and science subjects.
- There is no significant difference between the teacher effectiveness of male and female student teachers.
- There exist positive and significant correlation between emotional maturity and teacher effectiveness of student teachers.

### **Conclusion and Implications**

Emotional maturity is an essential component of effective and successful teaching. It plays a pivotal role in shaping the behavior, attitude and overall personality of a teacher. A teacher who is emotionally mature always behaves diligently and deals effectively according to situations, conditions and demands of the changing times. At the same time, teaching effectiveness is also very important for becoming a successful teacher. The success and failure of the students are largely depends on the effectiveness of their teachers. So, it is vital for a teacher to be emotionally mature and effective in his/her teaching for a desirable teaching-learning process.

It is clear from the study that male student teachers are comparatively more emotionally maturity than female student teachers. It indicates that male student teachers got more exposure to diverse situations that provided them an opportunity to come in contact with different types of people and situations. These types of experiences makes the male student teachers more emotionally mature to act and



deal effectively according to need of the time and situation. It is recommended that female student teachers should be provided more opportunities to field work and exposure to the diverse situations to have the rich experiences that may help them in becoming more mature to act and deal effectively according to need and situation. Additionally, orientation and training programmes, and special lectures on how to control ones emotions etc. may be organized regularly for the student teachers in general and female student teachers in particular. Teacher Education institutions should provide all the necessary facilities and favorable atmosphere to the teacher educators and student teachers to use latest technologies, audio-visual aids and different mass media to make teaching-learning more interesting and enjoyable to the students. All these facilities will definitely improve the teacher effectiveness of student teachers. Thus, collective and collaborative efforts are needed from the part of family, teacher educators and teacher education institutions to enhance the emotional maturity and teacher effectiveness of the prospective teachers.

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## प्रेमचंद के उपन्यासों की प्रासंगिकता

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प्रेमचंद युग-प्रवर्तक साहित्यकार हैं। ग्रामीण, शहरी जीवन की जो पकड़ उनमें थी वह उन्हें एक श्रेष्ठ साहित्यकार के रूप में खड़ा करती है। माना जाता है कि साहित्य सामाजिक प्रयोजन के लिए ही है। सामाजिक प्रयोजन लेखक-पाठक दोनों के संदर्भ में होता है। प्रेमचंद का औपन्यासिक लेखन लगभग सौ साल पहले हुआ था। इन सौ सालों में भारतीय जीवन और उसके साथ जुड़ी हुयी मूल्य-मान्यतायें बदल गयी हैं। तो प्रेमचंद के उपन्यासों की वर्तमान में कौन-सी प्रासंगिकता रह गयी है - इस पर विचार करना साहित्य के सामाजिक प्रयोजनवादी दृष्टि से अत्यंत महत्वपूर्ण है।

**प्रासंगिकता का अर्थ :-**

साहित्यिक कृति का वर्तमान जीवन के संदर्भ में मूल्यांकन करने या वर्तमान जीवन के संदर्भ में किसी साहित्यिक कृति के सामाजिक प्रयोजन का पता लगाना उसकी प्रासंगिकता माना जा सकता है। मूलतः कोई भी साहित्यिक कृति अपने युगीन जीवन से आबद्ध रहती है। साधारणतया कृति की कथावस्तु और उसमें व्यक्त समस्याओं को ही प्रासंगिकता के विवेचन के लिए स्वीकार किया जाता है। प्रासंगिकता के इन मानदंडों के प्रकाश में प्रेमचंद के उपन्यासों में कुछ अत्यंत प्रसंगिक लगते हैं तो कुछ अपने बदले हुए रूप में तथा आंशिक रूप से प्रासंगिक लगते हैं। अब हम प्रेमचंद के उपन्यासों में प्राप्त प्रासंगिकताओं को देखेंगे।

**१. निराश्रित नारी के वेश्या बनने की विवशता का दस्तावेज : सेवासदन (१९१८) और उसकी प्रासंगिकता :** प्रेमचंद का 'सेवासदन' उपन्यास में मध्यवर्गीय निराश्रित नारी को वेश्या बनने तथा बनाने की विवशता को उद्घाटित करता है। दहेज देने की असमर्थता में निराश्रित व अनाथ बनी नारी के पास सिर्फ अपने शरीर को बेचने के सिवाय और कोई जीविकोपार्जन साधन नहीं होता है। सेवासदन की सुमन भी इसी रूप में साधनहीन है। भोली के वेश्या जीवन को वह नजदीक से देखती है। वेश्या की बढ़ती हुयी इज्जत



के भ्रमपूर्ण आकर्षण में पडकर स्वयं वेश्या बन जाती है। वर्तमान समाज में निराश्रित नारी को जीविका के लिए वेश्या बनने के सिवा कोई आसान रास्ता दिखाई नहीं पड़ता है। सेवासदन में व्यंजित उच्चवर्गीय लोगों की भोग-विलासिता आज भी प्रासंगिक है। आज की नारी की पराधीनता ही उसे वेश्या बना रही है। सेवासदन का यह निष्कर्ष आज भी निःसंदेह प्रासंगिक है।

(२) किसान और भूस्वामी -जमींदारों का कुरुक्षेत्र : प्रेमाश्रम (१९२२) और उसकी प्रासंगिकता : 'प्रेमाश्रम' उपन्यास में अपने किसान और जमींदारों के संघर्ष के लिए, उच्चवर्ग की धनलोलुपता, कृषि क्षेत्र की क्रांतिकारिकता आदि की अभिव्यक्ति के लिए आज भी प्रासंगिक माना जा सकता है। प्रेमचंद युग में गाँवों में किसानों के शोषण करने वाले वर्ग में जमींदार, महाजन, सेठ-साहुकार, ब्राह्मण-पुरोहित आदि हुआ करते थे। आज सिर्फ इस शोषक वर्ग का रूप बदल गया है। खासकर जमींदार की जगह ज्यादा जमीन को मुट्ठी में रखनेवाला भूस्वामी आ गया है। शोषण उसी रूप में जारी है। किसान आज शोषण के शिकार होते हैं। संगठित होकर शोषक का विरोध करने की ताकत आज भी उनमें नहीं है - यही इसकी प्रासंगिकता है।

(३) औद्योगीकरण, पूँजीवाद से प्रभावित ग्रामीणांचल की कहानी : रंगभूमि (१९२५) और उसकी प्रासंगिकता : 'रंगभूमि' उपन्यास में व्यक्ति औद्योगीकरण और पूँजीवाद के परिणाम आज भारत में देखे जा सकते हैं। पूँजीपति मजदूरों का शोषण करके अपनी पूँजी को बढ़ाता है। मजदूर खून-पसीना बहाकर बीमार पडकर मर जाता है। यह वर्ग-वैषम्य की कहानी आज भी भारतीय औद्योगीकरण के क्षेत्र में विद्यमान है। सूरदास अपने गाँधीवादी विचारों के बल पर आंदोलन करते हुए आत्म त्याग करता है। गाँधीवादी आर्थिक विचारधारा प्रेमचंद युग के लिए आर्थिक प्रासंगिक थी। आज के संदर्भ में सिर्फ उसका मानवतावादी पक्ष ही प्रासंगिक रह गया है। रंगभूमि में व्यंजित उच्चवर्गीय लोगों के दांपत्य जीवन की विसंगतियाँ और कल-कारखानों के खुलने से ग्रामीणांचलों में होनेवाले साँस्कृतिक परिणाम आदि की प्रासंगिकता भी स्थापित की जा सकती है।

(४) धर्मान्धता, प्रजा का शोषण और पुनर्जन्म की आध्यत्मिक पत्रावली : कायाकल्प (१९२६) और उसकी प्रासंगिकता : 'कायाकल्प' उपन्यास के तीन मुख्य प्रतिपाद्यों में धर्मान्धता से प्रेरित हिन्दू -मुस्लिम दंगे तथा राजा के द्वारा किसानों का शोषण अधिक प्रासंगिक है। सांप्रदायिक कट्टरता की वजह से आज भी हिन्दू तथा मुसलमानों के बीच





में सांप्रदायिक दंगे होते हैं। इसमें निरपराध तथा निरीह जनता का ही अधिक नुकसान होता है, असामाजिक तत्वों को इससे लाभ होता है। भारत में आज सामंतवादी व्यवस्था नहीं है। फिर भी शोषक वर्ग के अन्य घटकों की वजह से किसान का शोषण तो आज भी जारी है। उपन्यास में व्यक्त तीसरा विषय पुनर्जन्म से संबंधित है जिस पर आज कई लोगों को विश्वास नहीं है। इस रूप में प्रेमचंद का कायाकल्प अपनी पूर्णता में न सही आंशिक रूप से प्रासंगिक है।

(५) अनमेल विवाह से निःसृत पारिवारिक बिखराव की करुण कहानी : निर्मला (१९२७) और उसकी प्रासंगिकता : निर्मला उपन्यास में व्यंजित दहेज प्रथा, अनमेल विवाह आदि के आधार पर इसकी प्रासंगिकता निरूपित की जा सकती है। दहेज प्रथा एक सामाजिक कुप्रथा है, जो आज भी भारतीय समाज में ब्रह्मराक्षस की तरह फैली हुई है। दहेज प्रथा अन्य सामाजिक कुप्रथाओं के लिए कारण बनती है। दहेज न देने के कारण निर्मला का विवाह दूसरे शादीवाला तोताराम के साथ हो जाती है और यह एक अनमेल विवाह है। ये दोनों ही नारी संबंधी समस्याएँ आज भी भारतीय समाज में विद्यमान हैं। नारी की पराधीनता ही इसका मुख्य कारण बताया गया है। आज भी भारतीय नारी आत्म-निर्भर नहीं हो पायी है।

(६) वैधव्य दर्द की मर्मन्तक कथा : प्रतिज्ञा (१९२९) और उसकी प्रासंगिकता : 'प्रतिज्ञा' निराश्रित अनाथ बनी विधवा की कहानी है। विधवा का पुनर्विवाह आज भी समस्या बना हुआ है। विधवा अकेली समाज में जी नहीं सकती है। उसे किसी का आश्रय चाहिए। समाज के सभी लोग उसे सिर्फ यौन तृष्णा की दृष्टि से देखते हैं। विधवाओं का यौन शोषण प्रेमचंद युग में ही नहीं बल्कि आज भी किया जा रहा है। यौन नैतिकता का पालन पुरुष को करने की जरूरत नहीं है। वही स्त्री के लिए आवश्यक है। विधवा स्त्री के लिए और भी आवश्यक है। उपन्यास का यह अंश आज भी अत्यंत प्रासंगिक है।

(७) मध्यवर्ग के मिथ्या सम्मान का दर्पण : गबन (१९३१) और उसकी प्रासंगिकता : 'गबन' में व्यंजित मध्यवर्गीय जीवन के आर्थिक खोखलापन, झूठा सम्मान, रिश्वतखोरी, महत्वाकांक्षा तथा पुलिस व्यवस्था की अत्याचारपूर्ण कार्रवाइयाँ आदि वर्तमान समाज में भी दिखाई पड़ती है। मध्यवर्गीय परिवार के रमानाथ तथा जालपा क्रमशः झूठा सम्मान तथा अतिशय आभूषण प्रेम का शिकार हुए पात्र हैं। इन दुर्बलताओं की वजह से ही उनका परिवार बिखर जाता है। आज के कई मध्यवर्गीय परिवारों में ऐसे लोगों को देखा



जा सकता है। गबन उपन्यास इस रूप में आज के मध्यवर्गीय जीवन की सच्चाइयों को प्रस्तुत करनेवाला सशक्त प्रासंगिक उपन्यास है।

(८) ग्रामीण - शहरी आन्दोलनधर्मी राजनीतिक उपन्यास : कर्मभूमि (१९३३) और उसकी प्रासंगिकता : 'कर्मभूमि' एक राजनीतिक आन्दोलनधर्मी उपन्यास है। गाँवों में अपने शोषण के खिलाफ किसानों के द्वारा तथा शहरों में मौलिक सुविधाओं के अभाव में प्रेमचंद ने आन्दोलन करवाये हैं। गाँव और शहर दोनों जगहों में इस आन्दोलन धर्मिता को अपने विकसित रूप में हम देख सकते हैं। इसके अतिरिक्त उपन्यास में व्यंजित शिक्षा संस्थाओं की अर्थ व्यवसाय नीति, धनिक वर्ग की अर्थलोलुपता, धर्माधता, प्रदर्शन प्रियता, किसानों की दयनीय स्थिति आदि मुद्दों की दृष्टि से भी कर्मभूमि उपन्यास में प्रासंगिकता निरूपित की जा सकती है।

(९) कृषक जीवन की महाकाव्यात्मक करुण कथा : गोदान (१९३६) और उसकी प्रासंगिकता : 'गोदान' भारतीय किसान जीवन का प्रतिनिधि महाकाव्यात्मक उपन्यास है। प्रेमचंद युग जैसा ही आज भी किसान के जीवन में कोई बड़ा मौलिक अंतर नहीं है। प्रेमचंद के परवर्ती उपन्यासों में चित्रित किसान जीवन में विशेषताओं एवं समस्याओं की निचोड़ गोदान में हैं। इस दृष्टि से 'गोदान' प्रेमचंद के उपन्यासों में सबसे विकसित माना जा सकता है। होरी के समस्त किसान सुलभ गुण आज भी भारतीय किसान में देखे जा सकते हैं। अतः गोदान संवेदना के स्तर पर आज भी प्रासंगिक है। गाँव का शोषक वर्ग जिसमें जमींदार, पुलिस अधिकारी, महाजन तथा पुरोहित शामिल हैं। इसके अतिरिक्त जातिवाद, किसान वर्ग की नई पीढ़ी का संघर्ष, नारी चेतना, गाँव का किसान अपना सब कुछ शोषक वर्ग को समर्पित करके भूमिधर किसान से भूमिहीन किसान बनने की करुण कथा आदि गोदान को शाश्वत मूल्यधर्मी बना देते हैं। इसलिए इसकी प्रासंगिकता निःसंदेह प्रामाणित होती है।

निष्कर्ष: प्रेमचंद साहित्य के मर्म तथा समाज के धर्म को अच्छी तरह जाननेवाले सजग युगधर्मी साहित्यकार हैं। जीवन के शाश्वत मूल्यों को लेकर इनका साहित्य लिखा गया है। इनका साहित्य देश-काल सीमाओं को लाँघकर किसी भी समय के लिए प्रासंगिक बन गया है।





## MAKING OF PRINT CULTURE IN COLONIAL ORISSA

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### Abstract

Printing press, like Europe, has changed Indian society, here it is Oriya society, and become an inseparable part of daily life. It has created an atmosphere in which people used to discuss about the public issues in local and global context. Further, commoditization and consumerism entered into the remote areas of Orissa wherever newspaper managed to reach. All these developments led to the rise of print culture in colonial Orissa.

**Key words:** Print, Printing Press, Newspaper, Print Culture, Advertisement, Public Sphere

The printing press has brought a new era for the human civilization with its unique feature of spreading information across the society. By bringing reformation in Europe, it became an important technology in the modern world for the spread of education, information, ideas and creating an imaginary world on the basis of an identity or ideology. We can observe the rapid socio-cultural changes in Europe after the spread of print technology. Print technology had created a print culture by engaging people around it. Similar developments in print were also seen in colonial societies like Orissa. Before talking about print culture in Orissa it is quite necessary to provide a brief history of the printing press that diffused throughout Oriya-speaking areas.



## Sketches on Early Printing Presses in Colonial Orissa

The printing press had brought changes in Oriya society with a far reaching impact. Interestingly, the first printing press of Orissa was established by Christian missionaries in the year 1837.<sup>1</sup> They had their own intention to establish a printing press in Cuttack, which remained the political, cultural and commercial capital of British Orissa till 1948. Spread of their faith among natives of Orissa was their major concern. Earlier to this printing press, the Oriya printed bibles were published from Calcutta.<sup>2</sup> Later, the Baptist missionaries brought many printed religious texts from Sreerampore in Bengal.<sup>3</sup> The missionaries in Orissa felt a kind of difficulty whose intention could be materialized by demeaning indigenous belief system and justifying the rationality of Christianity through printed pamphlets. It was also seen that many religious tracts were published from the Missionary Press of Cuttack.

The second printing press was "Cuttack Printing Company," an indigenous attempt for a new technology which transformed Oriya society, culture, politics, and economy. The Cuttack Printing Press was commenced on 1<sup>st</sup> July, 1865.<sup>4</sup> Gourishankar Ray, the manager of this printing company, continued this press for forty years, and it lasted upto sixty years in the service of modern Orissa. It published many textbooks, pre-print scripture or Oriya literary manuscripts into printed texts, and the newspaper, *Utkal Dipika*. This printing press had created, through *Utkal Dipika*, an imaginary world for the Oriyas to save their language as a medium of instruction in schools, and facilitated the formation of an identity on the basis of a language. It became a medium through which the colonial government came to know the problems of Orissa at the bottom level. It was followed many printing presses that has been discussed below.



The *Phakir Mohan Senapati and Co., Utkal Press* was the second indigenous printing press established in 1868 at Balasore.<sup>5</sup> Fakir Mohan Senapati and some progressive minded Oriyas from Balasore collected money and bought a printing press from Calcutta. This printing press became a new technology for the people of Balasore who engaged themselves to create a new medium for the Oriya imagination. Moreover, many books were published from this press, even the government documents were printed. The Collector of Balasore appreciated the establishment of the printing press at Balasore. This press facilitated the publication of two newspapers *Bodhadayini* and *Baleswar Sambad Bahika*.

Some printing presses were patronized by the rules of princely states like Bamanda, Mayurbhanj, Dhenkanal, and Talacher for literary enrichment. Even, the Zamindars had established some printing presses for the development of Oriya literature and to serve their own commercial purposes. Thus, the rise in the number of printing presses led to a change in all spheres of Oriya life. Hence, the printing press became a part and parcel of Oriya life without any doubt. It influenced the lifestyle of Oriyas who accepted this technology for their livelihood.

One of the most progressive minded oriya like Fakir Mohan Senapati considered his association with printing press as his passion. It became a tool for him to spread the awareness of the social problems and their remedies of that time. Though he worked for a few years with this technology but he used to write for the newspapers and journals published from the printing press. The forward-looking Zamindars like Baikunthnath De considered the printing press as a powerful means for the upliftment of Oriyas who fought for the development of education and modern infrastructural facilities like the Railways. He established "De Press" in 1873.<sup>6</sup> This printing press published many periodicals and textbooks. Likewise, the crown prince of Bamanda,



Sudhaladeva, established the *Jagannath Ballabh press* in his state for the spread of Oriya literature and its modernization. Eventually, the printing press had an enormous impact on Oriya life in the post-1865 period.

Natabara Samanta Ray has given an idea on the printing presses established in the last quarter of the nineteenth-century Orissa in the following manner:

The printing presses were established in Cuttack and other regions of Orissa between 1870 and 1889. Orissa Patriot Press or Utkal Hiteisini Press was established in 1873 by Kalipada Bandopadhyay in Cuttack to publish a newspaper, *Utkal Hiteisini*. Jagannath Rao was the manager of Victoria Press which was established in 1885. The Bamanda Press or Sudhala Press in 1885 was established by Sudhala Deva. Though he had given it to Chaturbhuja Pattanaik but, he brought it back from him due to his newspaper which created controversies in the region. He published *Sambalpur Hiteisini* from this printing press. The printing presses in other places of Orissa were: Bhaktipradayini Press (1874) at Puri. It could not stand for a longer period of time. Gopal Chandra Chatterjee established this press. A printing press (1875) was established by Nishanisedhini Society of Ganjam. It was not of a high quality. Some of the printing presses were established between 1889 and 1900. The Printing Corporation (1890) of Puri was managed by Shyammohan Ray and Damodar De. Bhagabat Prasad was the owner of Arunodaya Press (1893). Sitanath Ray, the brother of Radhanath Ray, was the proprietor of Ray Press (1894). Rajkumar Hariharnath Pandit Bahadur was the owner of Darpanraj Press (1899). The Binod Press (1899) was managed by Brajanath De at Balasore. The Utkal Press was also established around this period.<sup>7</sup>

The above discussion on the establishment of printing presses in the Oriya-speaking region led to the change in all the aspects of human



life. The standardization of Oriya language and coming of many newspapers and periodicals were the result of this new technology which radicalized the issue of Oriya identity and awareness. The environment created by newspaper developed the public debate on various issues for the linguistically unique region like Orissa. These newspapers were also facilitating a new kind of action by carrying information on new product which was known as advertisement.

### **Rise of Oriya Print Language**

The Oriya language and script were systematized for the print. The print language was written in prose form by adopting punctuation from Bengalis. Also, the Oriya language was standardized with the help of the missionaries and indigenous writers who

used to write grammar book, dictionary, and other kinds of books in Oriya. All these attempts brought the modern way of writing in a standardized way by adopting punctuation and prose format. We can get a glimpse from the following citation which also refers to the standardization of Oriya language:

The next development in Oriya language was the adoption of a standard form by borrowing heavily from Sanskrit. The role of the educated middle class was noteworthy in order to standardize Oriya language into a “pure” language reflecting its affiliation to Sanskrit – the mother language. The Oriya educated middle class promoted the Sanskritized Oriya language through textbooks, newspapers, and modern Oriya literature.<sup>8</sup>

The first Oriya letters were carved out for print by William Carey and it was mentioned in the daily ledger of Fort William College on 20<sup>th</sup> September, 1804.<sup>9</sup> Fakir Mohan Senapati went to north Calcutta, where a Bengali belonging to the service castes, Ramachandra Karmakar, carved out the Oriya print letter by observing its form



though he did not know the Oriya alphabet. Fakir Mohan found those letters unaesthetic.<sup>10</sup>

The first Oriya Bible was published in 1811 from Sreerampore Press, Calcutta. It was translated by Mr. Carey and Purusottam Pandit. Later on, many books were published in Oriya from this press. Some of the Oriya books were published between 1811 and 1843. They were mostly Bible translated into Oriya. Amos Sutton's *Utkal Bhasarthabhidhana* was composed during 1841-43 with the help of Bhubanananda Nyayalankara. It was published in 1841 from Cuttack Mission Press.

### **Growth of Oriya Newspapers and Periodicals**

The rise in the number of printing presses resulted in the growth of Oriya newspapers and periodicals in colonial Orissa. Orissa had seen many newspapers and periodicals during colonial period with long-term and short-term existence. They were varying in different aspects which deal with the Oriya society. It is also not true that Orissa had seen a newspaper only after the establishment of newspapers. Prior to the printing press, the first such newspaper was *Kujibara Patra* by Sadhusundar Das who had published it from his ashram with hand-written.<sup>11</sup> This hand-written newspaper was a mile-stone in the history of Orissa which marked the consciousness about public sphere and a new idea of disseminating information among Oriyas. Subsequently, the idea of newspaper was seen among the missionaries of Orissa.

Towards 1840s and 1850s, three periodicals came to exist, *Jnanaruna*<sup>12</sup> and *Prabodha Chadrika*,<sup>13</sup> and *Arunadoya*.<sup>14</sup> These three newspapers were the contribution of missionaries who continued for a period of time. The printed form of newspaper had established its foundation through these three newspapers. It is very difficult to say anything about *Jnanaruna* and not a single copy of it available today. Regarding *Prabodh Chandrika*, contained many contemporary



issues which is visible from a copy available at present. Both *Jnanaruna* and *Prabodha Chandrika* published in a time when a thin group of educated people were seen in Oriya society who can read these newspapers. Still, all the three newspapers could not stand long due to absence of wider readership.

The first indigenous newspaper *Utkal Dipika* came into exist in the year 1866, a defining moment in the history of Orissa, when millions perished in the Great Famine of 1866 indirectly giving an opportunity for the development of Orissa in all aspects. This was the first newspaper which lasted for a long time with a great managerial skill by Gouri Shankar Ray.

Throughout nineteenth century, it is a very happening fact that so many newspapers and periodicals that were published soon vanished from public domain. Not only in *Utkal Dipika* but in other newspaper a constant discussion was carried on for the longevity of Oriya newspapers and periodicals. It was also a known fact that *Utkal Dipika* was largest selling newspaper which developed slowly from a quarterly to weekly newspaper. It created a lager readership over a period of time for which I think it got a good number of advertisements. A number of advertisements on medicine of various kinds are available from the pages of this newspaper. Just after two years of *Utkal Dipika*, a popular newspaper *Baleswar Sambad Bahika* appeared in 1868. Apart from *Utkal Dipika*, it existed quite longer time in comparison with other newspapers. It focused on contemporary issues like language protection, education, and other information. Though it could not continue like *Utkal Dipika* but, it had a place in the history of Oriya newspaper. It had significant contribution towards the modernization of the Oriya society.

The newspapers like *Sambalpur Hiteisini* and *Asha* also played a vital role for the enrichment of Oriya language and became torch



bearers in the field of journalism in the last decade of the nineteenth century. They had advertisements of various things including medicines. The newspapers appeared in the nineteenth-century Orissa were as follows. Between 1871-80: *Utkal Putra* (1873), *Bideshi* (1873), *Shikhyaka* (1874), *Dharmabodhini* (1874), *Utkal Sanskaraka* (1874), *Chandrika* (1874), *Swadeshi* (1876), *Dhumaketu* (1877), *Utkal Madhupa* (1878), *Mayurbhanj* (1879), *Kohinoor* (1880), and *Purusottam Dipini* (1880).<sup>15</sup>

Between 1881 and 1890 *Purusottam Patrika* (1882), *Prabandhu* (1882), *Taraka* (1883), *Sebaka* (1883), *Sanskaraka* (1884), *Dhumaketu* (1884), *Nababidhana* (1884), *Pradipa* (1885), *Shikhyabandhu* (1885), *Haribhakti Pradayini* (1885), *Byabasayi* (1886), *Taraka O Shubhabarta* (1886), *Orissa Students* (1886), *Nabasambad* (1887), *Samyabadi* (1887), *Odia* (1887), *Odia O Nabasambad* (1888), *Orissa Patriot* (1888), *Sambalpur Hiteisini* (1889), and *Samalochana* (1889).<sup>16</sup> The last decade of the nineteenth century had seen some newspapers and periodicals: *Utkal Prabha* (1891), *Bhakti Tatwa* (1892), *Indradhanu* (1893), *Bijuli* (1893), *Brahmo* (1894), *Utkal Chikitshaka* (1894), *Utkal Bandhu* (1896), *Prabhati Tara* (1896), *Ganjam News* (1896), *Utkal Sahitya* (1897), *Orissa Times* (1898), *Ganjam Odia Hitabadini* (1899), and *Alochana* (1900).<sup>17</sup>

These are regarded as the instrument of communicating the ideas of progress and national awakening in Orissa. By the end of nineteenth century, the social and educational changes are quite noticeable. There have been great patriotic newspapers and personalities in Orissa.

### **The Notion of Print Culture**

Print became an inseparable part of late nineteenth-century Oriya society. People accepted it as a made career. The modern education completely depended upon print for its dissemination and





existence. The publishing of school textbook was the major contribution of print towards modern education for which many children had accessed the opportunity to study. It was not possible to imagine of a vibrant modern education in colonial Orissa without the help of print. The easy access of school textbook lessened the burden of teacher and their misinterpretation. Subsequently, the idea of dissemination of knowledge became uniform unlike pre-print era. Thus, print had an unparallel contribution for the spread of modern education without any obstruction.

The new technology, print, had also facilitated to create an imagined community by publishing newspaper and magazine. The newspaper and literary journals became a medium to express the grievances of Oriyas, and to inform the colonial government about it. It is quite evident that the newspaper like *Utkal Dipika* and *Baleswar Sambad Bahika* helped to create a debate for the preservation of Oriya as a medium of instruction in schools of Oriya-speaking region during 1868 to 1870. Moreover, the advertisement of some new products came to be known through newspaper. The advertisement is a separate part but, the political consciousness became visible. The demand for school, road, railways, and eviction from tax-pay due to natural calamities happened due to newspaper, a product of print. Therefore, it is clear that print played a vital role in the daily life of Oriyas through newspaper.

Employment opportunities were created by the new print for the Oriyas who could earn their livelihood through it. The printing press became very successful from the economic point of view. Though the newspapers and journals had political and social intention but, the economic interest cannot be kept aside. Fakir Mohan mentioned how his press was publishing official form of Balasore Collectorate in order to earn revenue. In many journals and newspapers, the names of those persons were published who paid the dues, which shows the economic



side of the press. The request notice can be found on some newspapers and journals for collection of their money from the customers. The newspaper-buyer constituted the customer for the press on which the existence of the newspaper depended. It is also evident that, some late nineteenth-century newspapers lost their existence due to the lack of support from the readership who did not buy them.

Thus, print became a part and parcel of Oriya people in the late nineteenth century and afterwards. The modern life of Oriyas was defined in association with print which transformed the Oriya social, cultural, and political life up to large extent. The idea of 'Oriya' as an identity and 'Oriya nationalism' conceived through print due its powerful way of communication. Also, the mighty Oriyas were subjugated by outside powers for four hundred years but, they received a powerful weapon in the late nineteenth century in the form of print which united Oriyas in 1936 scattered in different presidencies.

### **Emergence of Public Sphere**

The growth of modern education, sprang of printing presses, rise in the number of newspapers, and growing readership led to the existence of public sphere in second half of the nineteenth century. The news from outside Orissa or India informed people and widen their outlook. The consciousness was seen among the Oriyas in all spheres of life. This particular sub-chapter will discuss the emergence of public sphere by taking a few examples from the newspapers like *Utkal Dipika* and *Baleswar Sambad Bahika*.

The first and foremost example of public sphere was seen in 1866 when *Utkal Dipika* created an environment for the government to rethink on the severe disastrous of famine. Even though, there were many famines that took many lives but they were missing in history as well as in the memories of Oriyas. Then, why this particular Famine of 1866 was so significant in the history of Orissa. The simple reason



behind this historical fact is that the severity of this famine was seen in the pages of newspaper like *Utkal Dipika* which strengthened the voices of the Oriyas. The colonial government which was not thinking seriously about Oriyas had taken some welfare steps to compensate its irresponsibility that meted out to the people of Orissa. Many died in this famine due to the irresponsibility of the colonial government and two third population wiped out which remained the largest human loss in the written history of Orissa. We can not avoid any such human loss in pre-1866 period, as there were no written documents to give us proof.

The post-1866 period also had seen caution that learnt from the Great Famine. The newspaper, *Utkal Dipika*, objected the import policy of colonial government in the following article. There is an article *Bidesaku Chaula Raptani*<sup>18</sup> in *Utkal Dipika* which concerned about the government policy to export rice from Orissa to foreign without thinking about the people of Orissa who may face famine due to drought and less production. This article was written by keeping an eye on the 1866 great famine which took lakhs of lives from Orissa. But in the pre-1866 period, we don't see any such concern about government's wrong policies or people friendly issues discussed through any other medium which could be possible through newspapers due to the printing press. Thus printing press had created a public sphere through newspaper.

Furthermore, many abandoned children who had no parents were seen in the post-1866 famine Orissa. According to the famine Enquiry Committee, there were more than 8000 orphan boys and girls seen in Orissa.<sup>19</sup> The colonial government did not take any step for the welfare of these orphan children. It was reported that the orphan boys were nurtured by the Christian organizations and orphan girls were taken by the prostitutes. The common people appealed to the colonial



government to provide technical education to these orphan children and should take initiative for preserving of their religion.<sup>20</sup>

The government was submitting those children to the father of the church. Some famine affected orphaned girls were given shelter by the prostitutes. In an article on orphaned children in *Utkal Dipika*, the editor has mentioned the preservation of religion of those orphaned children under the father of the church. The government should take some steps to avoid the captivation of children as the Queen Victorian announced of religious independence.<sup>21</sup> A number of articles were seen in *Utkal Dipika* for the preservation of orphan children. The Cuttack Durbhikhya Nibarini Committee had taken initiative for the proper nurturance of those orphan children who were given priority in the pages of *Utkal Dipika* for their helplessness.<sup>22</sup>

The newspaper did a fabulous job for the development of modern education in colonial Orissa. The people of Oriya-speaking region had debated on the spread of modern education into the deep of rural areas. The best example of public debate was the language debate of 1868-70. There was an intensive debate in various newspapers regarding Oriya as a medium of instruction in the schools of Orissa. *Utkal Dipika* and *Utkal Hiteisini* were fought for the pro and anti of Oriya language.<sup>23</sup> Even this language debate was seen in Cuttack Debating Club and Ullasini Sabha. The Cuttack Debating Club was against Oriya language whereas the Ullasini Sabha was in favour of Oriya language.<sup>24</sup>

Another example of public discussion through newspaper was to establish one college in Orissa. There was an article *Odishare Gote Kalejara Prayajana* (Need of a College in Orissa) in *Utkal Dipika*.<sup>25</sup> This article has argued for a college as its neighbor. Bengal and Bihar have colleges for each of them but Orissa did not have a single college. It aroused public consciousness and Ravenshaw College was established



to fulfill the desire of Oriyas for higher education. Thus, public sphere evolved through the publication of newspapers and the host of periodicals. It is quite clear from the above discussion any kind of public grievances were reflected in the newspaper. The public awareness about an issue got momentum through public sphere where they could debate, argue, and discuss among themselves. The consequences of public sphere was seen in the preservation of Oriya language, spread of modern education, and no more famine like 1866 repeated in colonial Orissa.

In a nutshell, the Oriya print culture has created a public sphere – a large newspaper readership – for the conducive atmosphere in order to approach through print media on any issue. The public sphere had facilitated for the discussion on public issues through newspapers. Apart from news, the advertisements for medicines and other commodities started coming steadily in the last quarter of the nineteenth-century Orissa.



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- <sup>9</sup> Ibid., p. 62.
- <sup>10</sup> Ibid.
- <sup>11</sup> *Kujibara Patra* was published in 1830 by Sadhusundar Das. For more information, please see Bansidhar Mohanty's *Prabodh Chandrika*, Vanivihar: Utkal University, 1984.
- <sup>12</sup> *Jnanaruna* was published in 1849. It was edited by Reverend C. Lacey. It was the first attempt by the missionaries to publish an Oriya newspaper as it was mentioned in "Bangla Samayika Patra.."
- <sup>13</sup> *Prabodha Chandrika* was the second in its existence which had shown the interest of the missionaries towards publishing periodicals. W.C. Lacey, a Christian missionary, published this periodical in January, 1856. Though it aimed to spread the ideas of Christianity but, it came up with some news apart from religious discussion. It continued up to 1858 where after it was closed due to economic constraints.
- <sup>14</sup> *Arunodaya* was published in 1861 by Christian Vernacular Literature Society. It lost its existence after three years.
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- <sup>16</sup> Ibid., p. 180.
- <sup>17</sup> Ibid., p. 182.
- <sup>18</sup> *Utkal Dipika*, 1<sup>st</sup> January, 1869
- <sup>19</sup> *Utkal Dipika*, 1869.
- <sup>20</sup> *Utkal Dipika*, 1869.
- <sup>21</sup> *Utkal Dipika*, 9<sup>th</sup> February 1867.
- <sup>22</sup> *Utkal Dipika*, 11<sup>th</sup> August, 1866.
- <sup>23</sup> Natabara Samantaray, *Odia Sahityara Itihasa, 1803-1920* (Cuttack: Kalinga Mudrani, 1983), p. 231.
- <sup>24</sup> Ibid., p. 232.
- <sup>25</sup> Ibid., 10<sup>th</sup> January, 1872.



## ANALYSIS OF TORSIONAL REGULARITY AND LATERAL DISPLACEMENT OF STRUCTURE WITH SHEAR WALL BY STAAD-PRO

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**ABSTRACT:** The purpose of this analytical study of the building is to determine the torsional irregularity and lateral displacement whether the structure with or without shear wall is suitable and location of the shear wall according to the suitability. For this purpose four different models ten storied building each has been considered i.e. one model without shear wall and other with shear walls with different locations (i.e., inner and outer part). Models compared by lateral displacement and torsional irregularity to various structural elements with different location of shear wall. The buildings were designed using STAAD Pro. Providing shear walls at adequate locations substantially reduce the displacements due to earthquake load is taken into consideration.

**Key Notes:-** With/Without Shear wall, lateral loads, Location of Shear wall, Low Rise Building, torsional irregularity, Lateral Displacement

### INTRODUCTION:

In many respects concrete is an ideal building material, combining economy, versatility of form and function, and noteworthy resistance to fire and the ravages of time. The raw materials are available in practically every country, and the manufacturing of cement is relatively simple. It is little wonder that in this century it has become a universal building material. Tall buildings are the most complex built structures since there are many conflicting requirements and complex building systems to integrate. Today's tall buildings are becoming more and more slender, leading to the possibility of more sway in comparison with earlier high-rise buildings. RC Buildings are adequate for resisting both the vertical and horizontal load. When such building is designed without shear wall, the beam and column sizes are quite heavy, steel quantity is also required in large amount thus there is lot of congestion at these joint and it is difficult to place and vibrate concrete at these places and displacement is quite heavy which induces heavy forces in member. Shear wall may become imperative from the point of view of economy and control of lateral deflection. In RC multi-storey building R.C.C. lift well or shear wall are usual requirement. Centre of mass and stiffness of the building must coincide. However, on many occasions the design has to be based on the off center position of lift and stair case wall with respect to center of mass which results into an excessive forces in most of the structural members, unwanted torsion moment and deflection.





Generally shear wall can be defined as structural vertical member that is able to resist combination of shear, moment and axial load induced by lateral load and gravity load transfer to the wall from other structural member. As per assumptions, it is considerably regarded that less self-weight causes less story shears. Previously, the findings of researches had almost identical outcomes to determine the effectiveness of strengthening systems. Discussions on comparison between with shear walls and without shear wall system based on performance levels were made. Reinforced concrete walls, which include shear walls, are the usual requirements of Multi Storey Buildings. Design by coinciding centroid and mass center of the building is the ideal for a Structure. An introduction of shear wall represents a structurally efficient solution to stiffen a building structural system because the main function of a shear wall is to increase the rigidity for lateral load resistance. In modern tall buildings, shear walls are commonly used as a vertical structural element for resisting the lateral loads that may be induced by the effect of wind and earthquakes which cause the failure of structure. Provision of walls helps to divide an enclose space, whereas of cores to contain and convey services such as elevator. Wall openings are inevitably required for windows in external walls and for doors or corridors in inner walls or in lift cores. The size and location of openings may vary from architectural and functional point of view. The use of shear wall structure has gained popularity in high rise building structure, especially in the construction of service apartment or office/ commercial tower.

Reinforced concrete (RC) buildings often have vertical plate-like RC walls called Shear Walls in addition to slabs, beams and columns. These walls generally start at foundation level and are continuous throughout the building height. Their thickness can be as low as 150mm, or as high as 400mm in high rise buildings. RC shear walls provide large strength and stiffness to buildings in the direction of their orientation, which significantly reduces lateral sway of the building and thereby reduces damage to structure and its contents. Since shear walls carry large horizontal earthquake forces, the overturning effects on them are large. Shear walls in buildings must be symmetrically located in plan to reduce ill-effects of twist in buildings. They could be placed symmetrically along one or both directions in plan. Shear walls are more effective when located along exterior perimeter of the building such a layout increases resistance of the building to twisting. The most probable structure which is suitable for resist the building from all the classified causes like Wind, seismic transformation, torsional forces, displacement of the body and etc. is expectably RC Building with braced system (Shear wall).





### **APPLICATION OF SHEAR WALL**

Following are the applications of Shear wall:-

1. Shear wall is a structural member used to resist lateral forces i.e. parallel to the plane of the wall. In other words, Shear walls are vertical elements of the horizontal force resisting system.
2. In building construction, a rigid vertical diaphragm applicable for transferring lateral forces from exterior walls, floors, and roofs to the ground foundation in a direction parallel to their planes.
3. Shear walls are especially applicable in high-rise buildings subject to lateral wind and seismic forces. They provide adequate strength and stiffness to control lateral displacements.
4. Structurally, the best position for the shear walls is in the center of each half of the building. This is rarely practical, since it also utilizes the space a lot, so they are positioned at the ends.

### **TORSION IRREGULARITY**

Earthquake field investigations repeatedly confirm that irregular structures suffer more damage than their regular counterparts. Torsional irregularity is one of the most important factors, which produces severe damage (even collapse) for the structures. A large number of studies exist which investigate various aspects of torsional irregularity including

- Geometric asymmetry
- Stiffness distribution
- Analysis methods, (static, dynamic, non-linear, pushover, capacity analyses etc.)
- Comparison and discussion of code provisions
- Experimental studies

Regarding the torsional irregularities, most of the codes have similar provisions which are basically based on principles of the well-known standard of IBC09 (UBC97, ASCE7). A certain number of studies are devoted to the discussion and interpretation of the provisions in UBC97, IBC09 and other seismic codes. Four type structures which have different, shear wall locations were analyzed.

The structural wall positions which cause excessive torsional irregularity according to TEC and discussed the related code provisions. The code proposed ratio for the definition of the torsional irregularities is compared with the modified Q ratio.

Torsional irregularity which is recognized in most of the seismic design codes, varies depending on a number of factors including

- Plan geometry,
- Dimensions and positions of structural elements,
- Story numbers.

The purpose of this study is first to determine the conditions for excessive torsional irregularity and then to discuss the validity of code provisions. In order to achieve this aim, a parametric investigation is performed on four groups of “Typical structures” with varying structural wall positions and story numbers.

### CODE PROVISIONS FOR TORSIONAL IRREGULARITY

The provisions of ASCE 7-10 (2010) regarding the torsional irregularities are summarized in the following. In Clause 12.8.4.3 of the code, the accidental lateral load eccentricities of  $\pm 5\%$  are amplified by the factor

$$A_x = (\delta_{\max} / 1.2 \delta_{\text{avg}})$$

where  $\delta_{\max}$  and  $\delta_{\text{avg}}$  are the maximum displacement at Level  $x$  and the average of the displacements at the extreme points of the structure at Level  $x$ , respectively, computed by assuming  $A_x = 1$ . Extreme and average displacements at Level  $x$  are shown in Fig. 1. The torsional amplification factor ( $A_x$ ) shall not be less than 1 and is not required to exceed 3.0. These provisions may be expressed alternatively

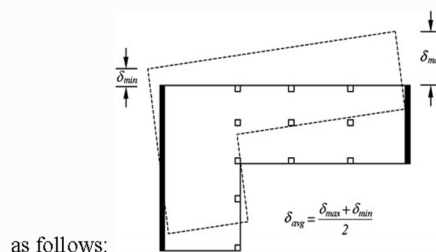


Fig. 1.1 Extreme and average displacements Torsional irregularity coefficient  $\eta_t$  is defined by

$$\eta_t = \delta_{\max} / \delta_{\text{avg}}$$

Then,

- (a) If  $\eta_t \leq 1.2$  then torsional irregularity does not exist, i.e.,  $A_x = 1$ ;
- (b) If  $1.2 < \eta_t \leq 2.083$  then torsional irregularity exists and eccentricity amplification factor is computed by

$$A_x = (\eta_t / 1.2)^2$$

- (c) If  $\eta_t > 2.083$  then  $\eta_t = 2.083$  ( $A_x = 3.0$ )



### **LITERATURE REVIEW:**

**C.M. Ravi Kumar et al (2013):** The study includes seismic vulnerability assessment of RC buildings without shear wall, with shear wall at center, shear wall at diagonal corners, shear wall at mid along X-direction, and shear wall at mid along Y direction, lastly shear wall at mid along X & Y-directions. Constructing the shear wall in tall, medium and even short buildings will effect and intern reinforce the significantly and either more economical than the bending frames. It is necessary and important to know and investigate analytically/experimentally, what should be the location of the shear wall that can induce minimum stresses in all the structural members of the multistoried buildings. The moment resisting frames are designed to independently resist at least 25% of design seismic base shear. The analysis and design of multistoried building with shear wall by hand calculation is very tedious and time consuming process. So the problem statement is carried out with the help of structural analysis software —ETABS. Time period will be less when shear wall is constructed in center but with the consideration of first mode will be creating torsion; hence that type construction should be avoided. Scale-up factor X & Y direction will be high when no shear wall is provided, further it will decrease slightly after providing wall at different location and less when wall is provided at the X-direction. Maximum story displacement will be less when shear wall is at X direction. Maximum story drift will increase slightly when shear wall is provided at different locations.

**S Monish et. al (2015):** In this paper attempt has been made to study two types of plan irregularities namely diaphragm discontinuity and re-entrant corners in the frame structure as per clause 7.1 of IS 1893:2002(part1) code. The models were analyzed using static and dynamic methods, parameters considered being displacement, base shear and fundamental natural period. In response spectrum method the maximum response of the building is estimated directly from elastic or inelastic design spectrum characterizing the design earthquake for the site and considering the performance criteria of the building. The software solves the Eigen value problem of the model and calculates the fundamental natural period values. When comparing static and dynamic method the magnitude of displacement is more in static as the response of the building is assumed to behave in a linear elastic manner. Hence the results are more accurate in nonlinear dynamic analysis. When comparing static and dynamic method of analysis the magnitude of base shear is more in linear static method which is an approximate value. Irregular structural configurations are affected severely during earthquakes especially in high seismic zones. The results obtained from response spectrum method are accurate, when compared with results of equivalent static method, since the method is based only on empirical



formula. The results of fundamental natural periods have proved that, the code IS 1893:2002 doesn't consider the irregularity of buildings.

**Lakshmi K.O. et al (2014):** This study aims at comparing various parameters such as storey drift, storey shear, deflection, reinforcement requirement in columns etc. of a building under lateral loads based on strategic positioning of shear walls and software used is ETABS 9.5 and SAP 2000.V.14.1. Shear walls in buildings must be symmetrically located in plan to reduce ill-effects of twist in buildings. Load is applied incrementally to frameworks until a collapse mechanism is reached.

It enables determination of collapse load and ductility capacity on a building frame. Base shear is the maximum expected lateral force that will occur due to seismic ground motion at the base of structure. The percentage of steel required in columns in ground floor has come down by 44%, 18% and 49% and up to 34.7%, 13.4% and 26.3% respectively in top floors when compared with bare frame model. In medium high rise buildings provision of shear walls is found to be effective in enhancing the overall seismic capacity characteristics of the structure. The comparison of story drift values maximum reduction in drift values is obtained when shear walls are provided at corners of the building. Response spectrum analysis can be seen that the displacement values in both X and Y directions are least in model with shear wall in core and corners when compared to all other models. Reduction in steel requirement up to 44.6% when shear wall is provided at the core and 34.7% when shear wall is located at core and corner of the structure.

**SUMMARY:** Using shear walls for both gravity and bracing system is unacceptable neither conceptually nor economically. The presence of shear wall in the building influence the overall behavior of the structure and it increases the strength and stiffness of the structure. The selection of especially the location and amount of shear walls is of the highest importance in strengthening. Strengthening shear wall may vary in various positions according to their positions in the plan. shear wall directly obstruct this end oscillation, hence reduce overall bending moment of building. Shear wall with different opening sizes and locations considering coupling beam actions may be considered for future research.

**METHODOLOGY:** In this study comparison of conventional building is done with and without shear wall and also consideration of location to be determined. Here G+ 9 storey is taken and same live load is applied in the structure for its behavior and comparison. The fixed base is analyzed by employing in building frames in seismic zone III by means of STAAD software. The response of the building frames with and without shear wall and the structure with shear wall in different location as

in inner and outer portion of the structure is studied for useful interpretation of results. Selection of appropriate damage parameters is very important for performance evaluation. Overall lateral deflection and torsional irregularity are most commonly used damage system. Overall deflection is not always a good indicator of damage.

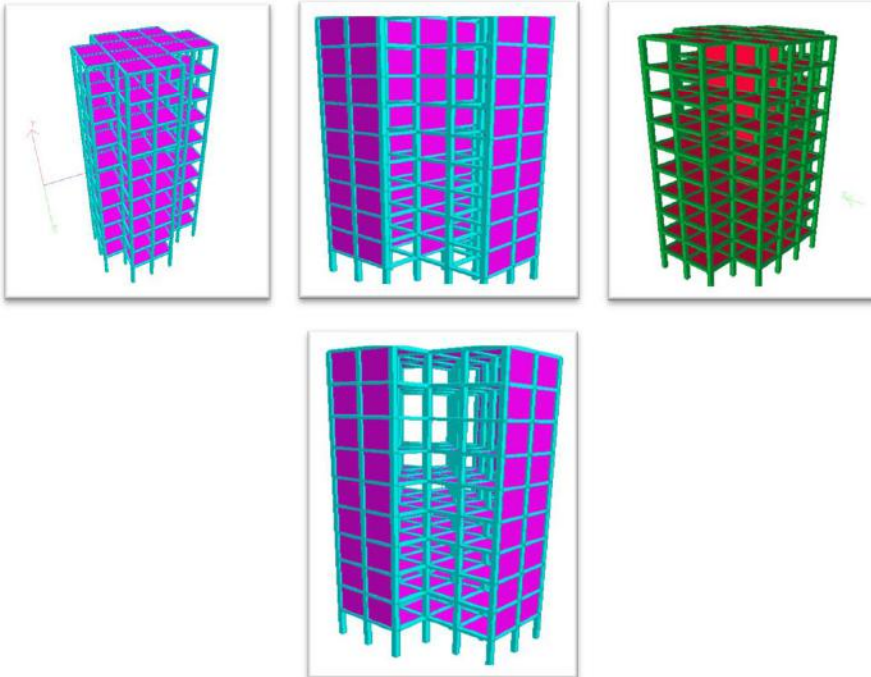


FIG.1: STRUCTURE WITHOUT SHEAR WALL

FIG.2: STRUCTURE WITH SHEAR WALL

FIG.3: STRUCTURE WITH INNER SHEAR WALL

FIG.4: STRUCTURE WITH OUTER SHEAR WALL

### Modeling:-

Four different models were studied in which Structure with and without Shear wall, structure with different positioning of shear wall in building i.e., Inner and Outer Portion of the Structure. Models are studied in zone-3 comparing lateral displacement for all models.



**Type of frame:** Special RC moment resisting frame fixed at the base

**Seismic zone:** III

**Number of storey:** 10

**Floor height:** 4.0 m

**Depth of Slab:** 130 mm

**Size of beam:** (450 × 600) mm

**Size of column (exterior):** (400 × 800) mm

**Size of column (interior):** (600 × 600) mm

**Live load on floor:** 2 kN/m<sup>2</sup>

**Floor finish:** 1.0 kN/m<sup>2</sup>

**Wall load:** 9.936 kN/m

**Materials:** M-30 concrete, Fe-500 steel Material

**Thickness of wall:** 230 mm

**Thickness of shear wall:** 230mm

**Density of concrete:** 25 kN/m<sup>3</sup>

**Type of soil:** Hard

**Damping of structure:** 5 percent

#### MAXIMUM TORSIONAL IRREGULARITY:

Number of stories	Structure type			
	A	B	C	D
1	1.918	2.076	2.551	2.487
2	1.891	2.024	2.420	2.262
4	1.855	1.962	2.279	2.073
6	1.824	1.917	2.163	1.963
8	1.790	1.873	2.056	1.875
10	1.756	1.830	1.955	1.804

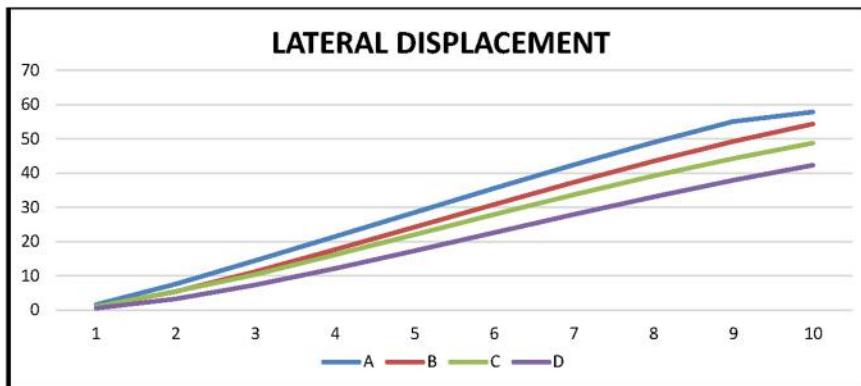
A- STRUCTURE WITHOUT SHEAR WALL

B- STRUCTURE WITH SHEAR WALL

C- STRUCTURE WITH INNER SHEAR WALL

D- STRUCTURE WITH OUTER SHEAR WALL





#### CONCLUSION:

- For all the investigated structures, torsional irregularity coefficients increase as the story numbers decrease.
- Torsional irregularity coefficients reach maximum values when the shear walls are placed as close as possible to the centres of mass without coinciding them.
- It has been found that model- D shows lesser displacement as compared to other models in longitudinal direction.
- It has been found that model-D shows lesser inter storey drift as compared to other models in longitudinal direction.

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## ***'IMMIGRATION' TO 'IN-MIGRATION' - ATHEMATIC TRANSFORMATION OF BHARATI MUKHERJEE IN HER NOVELS***

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The writers of the Indian diaspora share a common diasporic sensibility on certain common themes like the sense of uprooting and exile, issues of identity and alienation. As

Immanuel Nelson says there are certain common resonances in the literary representations of the Indian Diasporic experience in places as varied as Trinidad, Fiji, the United States, Singapore, Uganda, Canada, Britain, and South Africa:

A complex system of historical ties, cultural bonds, spiritual affinities and unifying racial memories generates a shared diasporic sensibility. There are common thematic concerns too; issues of identity, problems of history, confrontation with racism, intergenerational conflicts, difficulties in building new supportive communities<sup>1</sup>

When the former colonies of the British Empire, the Third World countries gained independence, the process of decolonization started. The term postcolonial has since gained ground to refer to the processes and moments following political decolonization<sup>2</sup>. Colonialism fosters dualistic thinking, as Peggy Ochoa points out:

Moving into that space may require more effort than accepting the formulations inherited from colonialism, but not to move into such space is to condemn postcolonial writing to a reiteration of the paradigms of a colonial system whose 'moment of hegemony' has passed<sup>3</sup>

Women writers of Postcolonial times have boldly stepped into this space to create new possibilities. Their works have challenged traditional thinking with regard to women's place in society. They



opposed women's marginalization, gave voice to the 'silenced' and inscribed new roles to their women characters. As KetuKatrak remarks:

..their texts deal with and often challenge their dual oppression -patriarchy that preceded and continues after colonialism and that inscribes the concepts of womanhood, motherhood and traditions such as dowry, bride-price, polygamy etc<sup>4</sup>.

Women writers deal with the burdens of female roles in urban environments such as the rise of prostitution in cities, women's marginalization in actual political participation. Hence women writers are presenting a new kind of content in their writings - issues which challenge patriarchy and capitalism - and new forms that can carry the weight of these concerns.

Bharati Mukherjee belongs to the group of writers from the postcolonial Indian Diaspora. Her works reflect the Diasporic experience. Brought up and educated in postcolonial India, Mukherjee has imbibed the postcolonial ethos.

Bharati Mukherjee was born to wealthy parents, Sudhir Lai and Bina Mukherjee in Calcutta, India. She learned how to read and write by the age of three. In 1947, she moved to Britain with her family at the age of eight and lived in Europe for about three and a half years. By the age of ten, Mukherjee knew that she wanted to become a writer, and had written numerous short stories.

After getting her B.A. from the University of Calcutta in 1959 and her M.A. in English and Ancient Indian culture from the University of Baroda in 1961, Bharati Mukherjee came to the United States of America. Having been awarded a scholarship from the University of Iowa she obtained her M.F.A. in creative writing in 1963 and her Ph.D. in English and comparative literature in 1969. While studying at the University of Iowa, she met Clark Blaise, a Canadian student from Harvard and subsequently married him on September 19, 1963.

In 1966 the couple moved to Montreal, where Mukherjee taught English at Mc Gill University. Three years later they moved to Toronto with their two small children where Mukherjee, now a Canadian citizen,



began to work on her first novel **The Tiger's Daughter**. It was published in 1972. It is loosely an autobiographical story of an East Indian immigrant who is unable to adjust to North American Culture, but who at the same time is painfully aware of the fact that she will never again belong to the culture she had left behind nor can she imbibe the new culture.

In 1975 she authored another novel entitled **Wife** depicting the frustration of an Indian wife who dreams of liberation at least in the US from the daily chores of domestic work in the capacity of an Indian wife who is expected to be obedient and subservient without any freedom. When she finds it difficult to cope with the new environment and culture and because of alienation and isolation she resorts to killing her husband.

Flowers in Indian context have a deep meaning attached to them. Bharati Mukherjee christened her next novel **Jasmine** (1985) where the protagonist Jasmine faces her adverse fate with undaunted courage and creates her own destiny. Unlike the other protagonists, Jasmine of Bharati Mukherjee is endowed with caliber, grit and a strong desire to 're-position the stars'. Just like the flower Jasmine, she also spreads fragrance wherever she is.

In **The Holder of the World** (1993) Bharati Mukherjee exhibits a rare gift of fictionalizing history. The novel presents an unlikely and intriguing confluence of two worlds—the Puritan 17<sup>th</sup> and early 18<sup>th</sup> century American world, trying to come to terms with the Mughal view of Indian life. The title is the literal translation of *Alamghir*, the name for the Mughal emperor, Aurangzeb.

Her next novel **Leave It to Me** (1997) deals with post-hippie America. The protagonist Devi, an Indian orphan, is adopted by a New York family of Italian origin. She is intent on tracing her roots as she faces an identity crisis in the new world. So, she sets out for her biological parents and realises that her parents are filthy human-beings looking after their carnal pleasures. As an incarnation of Devi, the goddess, she kills her father who was a notorious killer. She is the destroyer of evil and dispenser of justice. The novel reveals the scars of the *Beat generation*, whose legacy to its survivors is very bitter and traumatic.



The first of Bharati Mukherjee's planned trilogy, **Desirable Daughters** (2002) is the story of three Calcutta-born sisters as they come of age in a changing world. It depicts the confrontation of the old world values with the new one. The protagonists Tara, Padma and Parvathi are born into an affluent Brahmin family presided over by their loving father and orthodox grandmother. The girls are intelligent and artistic but they are constrained by a society that has no regard for women. They rebel against the taboos of their society and it subsequently leads them to different directions and to different continents. Their mettle is strained by difficult circumstances but ultimately their relationship is strengthened. Through the ancestors of the three sisters, Bharati Mukherjee weaves fascinating stories and gives a graphic description of

their childhood memories coupled with dramatic scenes from India's history.

The second novel in the trilogy, **The Tree Bride** (2004) continues the life of Tara Chatterjee after firebombing her home. This is the story of Tara, a naturalised citizen of America,

a good wife, mother of a child living in a gated community with a successful husband and personal happiness. In spite of all these, after eight years of her marriage, she feels that she is a privileged prisoner inside the gated community. She asks herself 'What do I want out of life?' Mukherjee narrates the story of the tree bride by looking at the 'roots'. Most of the story involves understanding the encounter with the alien i.e. the British. It also involves the usual obsession with free will and what that means individually, and how do people balance the tension between two very different worlds.

In her autobiographical work, *Days and Nights in Calcutta*, Mukherjee talks about her own position as a writer. At that time she was living in Canada. She says:

I am a late-blooming colonial who writes in borrowed language (English), lives permanently in an alien country (Canada), and publishes in and is read, when read at all, in another alien country the United States. My Indianness is fragile; it has to be professed and fought for, even though I look so unmistakably Indian. Language transforms our ways of apprehending the



world; I fear that my decade's long use of English as a first language has cut me off from my *desh*<sup>5</sup>.

During her stay in Canada from 1966 to 1980 Mukherjee felt she was an expatriate as life in Canada - fourteen years of it - tested her spirit to the breaking point. Her essay '*Invisible*

*Woman*' is a blistering reflection of those years. The Canadian experience made her feel bitter. She was made to feel she was a visible minority and she felt she was discriminated against as a writer too. She felt that in order to be a woman writer in North America, to be a Third World woman writer in North America, is to confine oneself to a narrow, airless, tightly roofed arena.

She was anxious and querulous, convinced that every aspect of the writing profession-finding an authentic voice, an audience, a publisher, knowledgeable reviewers-weigh heavily against her because of her visibility as a stereo-type. In an interview Mukherjee talks about her aim as a writer. She says:

We immigrants have fascinating tales correlate. Many of us have lived in newly independent or emerging countries. When we uproot ourselves from these countries and come here, either by choice or out of necessity, we suddenly must absorb 200 years of American society. I attempt to illustrate this in my novels and stories. My aim is to expose Americans to the energetic voices of new settlers in this country<sup>6</sup>

Writers of the Indian diaspora like V.S. Naipaul, Salman Rushdie, Ruth Praver Jhabwala, Kamala Markandaya, Vikram Seth, to mention a few, have enriched world literature with their works and have won worldwide acclaim. According to Hena Ahmad "the writers of the diaspora are the products of a dual cultural background, native and the western, and bring a wide and rich range of experiences to their literary output"<sup>7</sup>.

Bharati Mukherjee also belongs to this group. Her collection of short stories *The Middleman and Other Stories* won America's '*National Book Critics*' Circle Award.

The expatriates from the Third World, unlike their Western counterparts, carry their ethnic roots with them but these grow fainter



with every passing year, intensifying their sense of nostalgia. For the Third World writers the migrant experience of homelessness has been inspired by deep personal anguish and is compounded by rejection in the host countries on the basis of colour as Kamala Markandaya's **Nowhere Man** aptly illustrates this.

The women writers of the Indian diaspora in America and Britain share the common themes of the issues of identity, cultural conflict, rootlessness, existential dilemma and alienation with their male counterparts. In addition, they have to grapple with the problem of gender bias. As Brinda Bose has pointed out, "Ethnic women in America and Britain are twice marginalized by virtue of their race and by virtue of their gender"<sup>8</sup>

Hence the issues of hyphenated identity and gender roles find a prominent place in the works of the women writers of the diaspora. Nila Das elaborates on this. She says that the

Asian Americans have a feeling that America does not yet see beyond the colour of their skin. America does not treat them as Americans but as hyphenated Americans. They are subjected to racial discrimination and are not accepted as part of the mainstream socio-cultural fabric.

The problem of hyphenation has been a major concern of the postcolonial Asian American writers. Women writers have displayed a special interest in this issue. The reason for this can be that Asian American women had to bear the brunt of hyphenation in their personal, family, social and cultural life in much larger proportions than did their male counterparts. While in the popular American image, the Asian American men were projected as asexual and were ignored or kept at a distance, the women came close to the mainstream life-style and culture faster. Increasingly the women opted for inter-racial marriages. For many of them this only made their problem of hyphenation multidimensional.

Responding to the marginalization of women based on their gender and ethnicity, women writers of the Indian diaspora take a feminist perspective in their works. Writers like Bharati

Mukherjee, Ruth Praver Jhabwala, Kamala Markandaya and Anita Desai focus on women-based issues and champion the cause of women's



right and empowerment. In their works they foreground the problems faced by immigrant women in alien surroundings.

As a philosophy of life feminism opposes women's subordination to men in the family and society offering a frontal challenge to patriarchal thought, social organization and control mechanisms. Women writers of the Indian diaspora educated in postcolonial India and abroad have imbibed this philosophy. Their works portray educated women of postcolonial India desiring emancipation from the traditional gender roles. Dimple, the protagonist of Bharati Mukherjee's **Wife**, and Maya of Anita Desai's **Cry the Peacock** express their frustration at the constraints of the Indian wives.

In the early stages of her career, while her mindset was still that of an expatriate, Mukherjee looked upon Naipaul as her literary model. For her, an accidental immigrant, the brave and appropriate model is V.S. Naipaul. She detected a pale and immature reflection of Naipaul in herself as it is he who has written most movingly about the pain and absurdity of art and exile.

Bharati Mukherjee's novels are complex explorations without any of the protective, distancing cynicism of Naipaul as he showed that it was possible to create in fictional world about one's village far from the colonial metropolitan centre, that the chaos of a once colonized people was a worthy subject for fiction.

The shifting of the Blaises to America brought about a change in Bharati Mukherjee, the writer. It was a movement away from the aloofness of expatriation to the exuberance of immigration. In her introduction to *Darkness*, Mukherjee talks about this transformation:

The transformation as writer and as resident of the new world occurred with the act of immigration to the United States. Suddenly I was no longer aggrieved, except as a habit of mind. I had moved from being a 'visible minority' against where the nation had officially incited its less visible citizens to react, to being just another immigrant<sup>9</sup>.

For her it is possible with sharp ears and right equipment to hear America singing even in the seams of the dominant culture. In fact, it may be the best listening post for the next generation of Whitman's. It is moving away from the aloofness of expatriation to the



exuberance of immigration. She feels that she has ceased to see her Indianness as a fragile identity to be preserved against obliteration or a visible disfigurement to be hidden. She sees it as a set of fluid identities to be celebrated. She asserts that America offers the opportunity to dream big and pull it off, actions that are not possible in a traditional society.

The moving away from expatriate sensibility also involves changing role models for Mukherjee. Now she rejects Naipaul as a role model and chooses Bernard Malamud instead. Malamud was Blaise's teacher at Harvard and the former was a second father to Blaise and herself since he was a man of great moral force and he showered his life on them sometimes in practical ways and at other times as a role model.

While in Canada her aim was to find a voice that would represent the life she knew in a manner true to her aesthetic sense. She felt that she was of the first generation of Indian writers to be influenced by American life and fictions, to have been exposed in her impressionable years to writers such as Djuna Barnes, Flannery O'Connor, John Hawkes, John Cheever, John Updike, William Gass and Thomas Pynchon. Her aestheticism was to accommodate a decidedly Hindu imagination with an Americanized sense of the craft of fiction.

Mukherjee felt that America accepts diversity and the "melting pot" helps new comers feel more welcome. She wanted to be recognized as a mainstream American writer as she saw herself as an American writer in the tradition of other American writers whose parents or grandparents had passed through Ellis Island.

America built confidence in Bharati Mukherjee. There she evolved from an insecure expatriate to a confident storyteller. Mukherjee's evolution as an artist - from an insecure young

Indian expatriate seeking in Naipaul a model for emulation to a confident story teller who has now enthusiastically redefined herself as an American artist to the immigrant tradition of writers such as Henry Roth, Isaac Bashevis Singer and Bernard Malamud make an interesting study.





It is not that Mukherjee was unaware of the violence that pervades American society. This violence too is portrayed in her novels. She is aware of the brutalities and violence in America, but in the long run her characters are survivors; they've been helped by good strong people of conviction. By saying *American* she means an intensity of spirit and a quality of desire she feels *American* in a very fundamental way, whether Americans see her that way or not

Mukherjee is different from the other writers of the diaspora in that, for her immigration and assimilation are positive acts. She feels that the loss of the old culture is exciting, exhilarating, and is a plus rather than a minus. That she would have inherited extraordinary wealth and comfort if she had stayed on in India made her realize that she had the opportunity to live it up, to assume a new identity.

This concept that the 'loss of old culture is exhilarating' is the foreground in the novel *Jasmine* where the protagonist takes on new identities with ease but does not express any regret at losing connection with her old culture. While Mukherjee's earlier work centered on expatriation and dislocation-Tara of **The Tiger's Daughter** belongs to this phase-the later fiction extends its scope exploring a variety of Asian American encounters, and chronicling not merely the incomers' adaptation of her stories, but also American's transformation by its immigrants.

Her characters reflect her own circumstances and personal concerns. Her growth in self-confidence and her slowly developing identity as an American can be traced through her fiction. There is an adroit adaptation of the American vernacular in her fiction. Her characters have urgent, riveting voices; they speak in the contemporary idioms as immigrants handle it, each richly reflecting the cadences of their regional language on which they have grafted a new, distinctively regional Americanism.

Mukherjee credits her flawless vernacular to a very good ear and to the fact of her being married to an American writer who opened up for her an America that is normally closed to immigrants. Her compact and fluid style is similarly a matter of gradual evolution. She has lived through so many worlds and has been put in so many odd, momentous situations, accidentally, that all those worlds somehow creep into a



single sentence. Hers is not minimalism, which strips away, but compressing which reflects many layers of meaning.

As has been noted, many factors helped in the evolution of Mukherjee as an artist-her privileged background and education, marriage to an American citizen, help by other artists like Bernard Malamud, and not the least her own resolute self. All these helped her gain a foothold in the American literary world. Mukherjee's fictional works are illustrations of her attitude to immigration, her view that immigration is a positive and creative act, not an act of loss and alienation but one of transformation and metamorphosis. It enables her characters to invent new selves. As Prof. T. Padma observes:

the most prominent aspect of Bharati Mukherjee's handling of diaspora, is use of women as here in the only way modern life and hence modern literature will allow anyone to be a hero, not as a conqueror of fate but as a contender for full rights overachieving a self-forged fulfilling identity<sup>10</sup>.

As one moves in a chronological order, the woman protagonist is seen evolving and assuming different identities, from an amicable and vulnerable daughter to a protesting fighter for her rights and justice. Search for identity, fulfillment on the part of the protagonist and the journey of the discovery of the self through a series of cross-cultural situations constitute the theme of the various novels of Bharati Mukherjee.

In fact Bharati Mukherjee's all novels deal with the changed psyche of the behaviors of the protagonists, but the last novel of trilogy Miss New India (2011) takes a different turn while portraying the protagonist Anjali Bose. It is about the conflict within her own country – India - which can be labeled as 'performing America' – which is witnessing the effects of western cultural confrontations of highly sophisticated life style both in rural and urban India. With this Bharati Mukherjee has made an attempt that she has not made her corpus in immigrant sensibility and cross-cultural crisis in American or Canadian context only but of Indian context too. In an interview with Natasha Lavigilante Bharati Mukherjee says about Miss New India as:

Miss New India is a novel about change. If "American" is a metaphor for belief in the primacy of



individual freedom and acceptance of personal accountability, then only in that loose, metaphorical sense it is an “American” novel. For me “America” is an idea, not to be confused with “the United States”, which is a political entity, a nation-state. In *Miss New India*, the young Indian call center employees perform an American identity during their work hours, and then, in their off hours, they discover and act out their individual concepts of self-identity in a rapidly changing India. They are role-playing “an American” without giving up being “Indian” But they are reconstructing “Indian” in a contemporary India that is very different from that of their parents and grandparents. That’s what intrigued me as a novelist.

All her protagonists from **Tiger’s Daughter** to *Tree Bride* deal with assimilation of alien cultures in alien lands but **Miss New India** is solely set within India the protagonist conflicting with western cultural influences i.e., the consequences of ‘in-migration’. With this novel she has created new orientation of identity dealing with the amalgamation of the conservative ideology of patriarchal system and the desirous western cultural life style being witnessed in developing India as she herself named it ‘*performing America*’. By touching the issues like international terrorism, rape, arranged marriage system, teenage runaway, gay life in India, prostitution, art of theft, suicide, role of outsourcing of Indian economy, homelessness, call center life, immigration within India and assimilation in neo-Indian culture, changing Indian employee timings, she has shown great transformation of her creative thoughts since her *Tiger’s Daughter* to *Miss New India*, from ‘immigration’ to ‘in-migration’, as thematic and conceptual progression and as a writer her transformation during her journey of four decades of writing.

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## RISE AND FALL OF KUSHAN RULE IN KASHMIR

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Toward the middle of the first century A.D a momentous development took place in Kashmir, which left a profound bearing on the life and conditions of its people. It was the occupation of Kashmir by a great power namely, Kushans whose empire extended from Central Asia to Mathura. The significance of Kushan period does not lie only in the fact that they ruled the Valley for a long period but more significant is that Kushans integrated Kashmir with a large empire inhabited by different cultural groups a sizeable number of these groups migrated to and settled in the valley. And what is significant to note is that these immigrants belong to the upper sections of the society, namely ruling class, missionaries, urban artists and craftsmen and men of letters. As a matter of fact Kushan occupation of Kashmir paved the way for the influx of a culture which was an amalgam of Chinese, Central Asian, Iranian, Greek and Indian civilizations. It is very strange that notwithstanding a very significant and formative stage of Kashmir history, the Kushan period has been almost left out by the historical works written in modern times. Most of the modern works dealing with the ancient history of Kashmir dismiss the pre-Karkota period within a few pages giving an impression as if Kashmir had no past prior to the Karkota dynasty. It is only due to the work carried out by the archaeologists in recent times that the significance of early history of Kashmir has started gaining recognition among the historical circles.



The literary and numismatic evidence testifies to the fact that Kashmir was incorporated with the Kushan empire by its illustrious founder Kujala Kadphises sometime after his conquest of Kabul, parts of western Bactria and North-West India. The famous Chinese source, *Hou Han-Shu* (Annals of the Latter Han) compiled by Fan Yeh (A.D. 446), sums up this development in its well-known passage:

Formerly the Yue-chih were conquered by the Hiung-nu; they transferred themselves to Ta-hia and divided that kingdom between five *hi-hou* [minor chiefs], viz; those of Hiu-mi, Shuang-mi, Kuei-shang, Hi-tun and Tu-mi

More than a hundred years after this the *hi-hou* of the Kuei-shuang, Chiu-chu-chuch (also called K'iu-tsiu-k'io) attacked the other four *hi-hou*; he styled himself king; the name of his kingdom was Kuei-shang. He invaded An-si and seized the territory of Kao-fu; moreover he triumphed over Pu-ta and Kipin and entirely possessed those kingdoms.<sup>1</sup>

Chiu-chu chuch /Kiu-tsiu-k'io is unanimously identified with Kujala Kadphises;<sup>2</sup> and the Chinese treatise gives him the credit of not only founding the Kushana kingdom but also conquering Kao-fu (Kabul) after defeating An-his (Aracids), Pu-t'a (variously identified-Bactra by some and Pushkalavati by others) and Chi-pin.<sup>3</sup> The scholars

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<sup>1</sup> *Hou Han Shu*, Ch. 118 P. 9a, Vide Mukherjee, B.N., *The Rise and Fall of Kushan Empire*, Calcutta, 1988, p. 29 n.1.

<sup>2</sup> *T'oung Pao*, 1929, Vol. XXVI, PP. 201-202; *Journal Asiatique* 1914, S. XI, Vol. IV, p. 401, f.n. 1; Mukherjee B.N., *The Kushana Genealogy, Studies in Kushana Genealogy and Chronology*, p. 93, n. 24.

<sup>3</sup> *Hou Han Shu*, Ch. 118, P.9a, Vide., Mukherjee, B.N., *The Rise and Fall of Kushan Empire*, p. 39 n. 1



identify Chi-pin with Kashmir.<sup>4</sup> It should, however, be mentioned that at that time, according to the information supplied by *Ch'ien Han-Shu* and *Hou Han-Shu*, Kashmir empire included a portion of North-Western India.<sup>5</sup> Certainly, Kashmir and Gandhara are referred to as one political entity in the Buddhist records.<sup>6</sup> Therefore, the doubt raised by some scholars that Ch'ipin is Gandhara and not Kashmir betrays only ignorance of a well known historical fact.

The written evidence is sufficiently supported by numismatic evidence. Recently a hoard of copper coins of Kujala Kadphises has been found from the ancient site of Tarakpura on Sopore – Bandipore link road.<sup>7</sup> It is worth noting that one of the main routes which linked Kashmir with Astor, Gilgit, Chitral, Yasin, Badakshan, Tibet and further to Central Asia and China was Bandipur route passing through Gurais.<sup>8</sup> More over, there are one hundred and three coins of Kujala Kadphises housed in Sri Pratab Singh Museum, Srinagar – next only to Kanishka's in number.<sup>9</sup> The recently established, Central Asian Museum of Kashmir University, also contains three coins belonging to Kujala Kadphises. As the Kushanas succeeded the Indo-Parthians in North-Western India, it was natural for Kujala to continue, at least to a certain extent, the coin type of his predecessors.

The non-conventional sources namely philology and surnames can perhaps help us in throwing additional light on the contribution of Kujala Kadphises to the foundation of Kushan rule in Kashmir. As we

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<sup>4</sup> Mukherjee, B.N., *The Rise and Fall of Kushan Empire*, p.9; Also see his, *An Agriphan Source of Indo-Parthian History*, pp. 192-93, n.25.

<sup>5</sup> *Chien Han Shu*, Ch. 96A, P. 106; *Hou Han Shu*, Ch. 118, p. 4, Vide, Mukherjee, B.N., *The Rise and Fall of Kushan Empire*, p. 39 n. 11; Mukherjee, B.N., *An Agriphan Source of Indo-Parthian History*, pp. 192-93 n.25.

<sup>6</sup> Dutt, Nalinaksha., *Buddhism in Kashmir*, Delhi, p. 5

<sup>7</sup> *Indian Archaeology – A Review*, 1984-85, p. 144.

<sup>8</sup> Bagchi, P.C. *India and China*, Calcutta, 1944, pp. 68-74.

<sup>9</sup> S.P.S Museum, Accession Register.



know Kujala carried many titles namely, Kadphises, Kara, Kasa, Kava, and Kausa.<sup>10</sup> The term *Khadphench* used in Kashmir to denote an authority is perhaps the Kashmirized version of Kadphises. It is common-place in Kashmir to call a person after a ruler if he/she behaves in an authoritative manner. For example, in our contemporary history it is often heard people contemptuously calling their haughty, overbearing and authoritarian adversaries as Maharaja Hari Singh/ Shaikh Sahab/Indra Gandhi/Bakshi Sahib and the like. Since Kujala Kadphises not only ruled for a pretty long time but also founded a mighty Kushan empire, and that Kadphises continued to be the surname of his most illustrious successor at whose hands the empire reached to its zenith, the title Kadphises symbolized great power and authority, passing on from generation to generation through the word of mouth to become an established often-quoted term by all and sundry without being affected by the influx of substitute words in the wake of the repeated culture changes.

As Kara and Kausa were also the coveted titles of the founder of Kushan dynasty, it may perhaps be reasonable to infer that the famous surnames of Kashmir which continue till date, namely, Kar and Kawusa owe their origin to these titles of Kujala. Perhaps the Kushana nobles who were assigned the job of ruling over Kashmir on behalf of the Kushan king were either bestowed with these titles or they assumed them as local rulers just as subsequently we find the ruling class bestowed with titles like Raina and Malik which became their permanent surname. The physiognomy and DNA tests of the Kars and Kawusa's of Kashmir notwithstanding the common practice of inter-group marriages would help in proving or disproving of the hypothesis. There are also some families bearing the surname *Kashu* in Kashmir. Is this the derivative of Kushan? Perhaps, yes because the base of the

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<sup>10</sup> *British Museum Catalogue*, p. 120-122, 174; *Punjab Museum Catalogue*, p. 85, 181-82.





word *Kushana* is *Kusha*. It may also be pertinent to mention here that almost all the families bearing the *krams* of Kar, Kawusa, and Kush were among the rich families of Kashmir till recently. The reason is simple if we consider that throughout the pre-modern history it was the general policy of all the rulers to own and patronize the vocal sections regardless of political changes. The only condition was that they had to agree to become a part of the supporting structure. This is the reason that the fortune of the “faithful” upper classes, though changed slightly, but they seldom witnessed fall, especially if they were traders simultaneously. The above mentioned upper classes have traditionally remained traders plus landed magnets. In Kashmir there is a surname (*kram*) called *kanjwal*. Is this the Kashmirized version of Kujula? We leave it open.

While the conquest of Kashmir by Kujula Kadphises is established beyond doubt, it is, however, not clear when exactly Kujula’s army marched towards Kashmir and took it over. Yet the indirect evidence weighs in favour of drawing the inference that it was only after the conquest of Kabul and the immediate North-West of India that Kashmir fell in the hands of Kushan army. It may be recalled that *Hou Han Shu* refers to the conquest of Kashmir by Kujula after he had captured Kao-fu and P’u-ta.<sup>11</sup> Secondly, the coins of Kujula so far found in Kashmir belong to his later period. This can be assumed on the basis of a careful comparison of the titles adopted by Kujula Kadphises on his various coin types. We can reconstruct the relative chronological sequence of the coins issued by him. Most probably the *Hermaeus* □ Kujula Kadphises coins were the earliest issues of Kadphises I, the coins bearing the titles, Yavuga Kushana or only Kushana with the name of Kujula Kadphises can be regarded as earlier than those which show full fledged imperial titles like *Maharajasai* and *Rajatirajasa*.

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<sup>11</sup> *Hou Han Shu*, Ch. 118 P.9a, Vide., Mukherjee, B.N., *The Rise and Fall of Kushan Empire*. P. 29 n.1.



And the coins bearing both the titles *yavuga* (chief or leader) and *Maharajasa Rajatirajasa* (supreme king or king of kings) should mark the period of transition and thus come in between the coin types with title *yavuga* and those bearing the titles *maharajasa Rajartirajasa*. Thus the coins with the title *Maharajasa Rajartirajasa* should be placed last of all in this sequence. Following this scheme various coin types of Kujula Kadphises can be placed in chronological order as:

- 1). Hermaeus and Kujula type
- 2). Diademed head and enthroned king type, helmeted head and Macedonian soldier type, king seated and Zeus standing type.
- 3). Bust of king and Nike type, and
- 4). Bull and Bactrian camel type.

According to B.N. Puri Kujula Kadphises ruled between 45 A.D. and 78 A.D;<sup>12</sup> and "in the year 122 of the old era= 64 A.D. He sets his foot in North-west India as a king (Maharaja) and for fourteen years he consolidated his hold and expanded his territory, as is evident from the use of higher appellations.<sup>13</sup> Given this chronological construction, it would mean Kujula conquered Kashmir after 64 A.D.<sup>14</sup> However, according to the advocates of 78 A.D. as New Saka year, Kushana conquest of Kashmir took place around 50 A.D.<sup>15</sup>

Earlier it was believed that Kujula Kadphises was succeeded by Vima Kadphises, known in Chinese sources as Yen-Kao-Chen. However, startling discovery of the Rabatak inscription clearly demonstrates that Kujula Kadphises was succeeded by his son Vima

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<sup>12</sup> Puri, B.N., *India under the Kushans*, Bombay, 1965, p. 14.

<sup>13</sup> Ibid., p. 15.

<sup>14</sup> Ibid., p. 16.

<sup>15</sup> Mukherjee, B.N., *The Rise and Fall of Kushan Empire*, pp. 34-38.



Tak [to].<sup>16</sup> Interestingly Rabtak inscription has also been helpful in solving the Soter Megas issue. In the light of Rabtak inscription it appears that it was Vima Tak [to] who issued the coins with Soter Megas titles. Significantly one coin with Soter Megas titles is preserved in S.P.S. Museum Srinagar, which indicates his presence in Kashmir.

Vima Tak [to] was succeeded by his son Vima Kadphises.<sup>17</sup> Unfortunately about Vima Kadphises' reign in Kashmir, we have no evidence except for his one copper coin<sup>18</sup> and the inscription of Khaltse.<sup>19</sup> The copper coin carries the legend in Greek, reading SOTER MEGAS Ooemo BASILEOS BASILEON KADPHISES.<sup>20</sup> The depiction of king bears striking resemblance with the Vima's effigy depicted on the Khaltse inscription.<sup>21</sup>

As Vima was more commonly known as Ooemo, it seems that the present Oompur village situated near Srinagar was originally a capital city of Vima or it was a newly established settlement, founded under his patronage. As is true of most of the habitations of Kashmir, it also came to be called after the name of its patron/donor.

Vima Kadphises was succeeded by Kanishka I.<sup>22</sup> As mentioned earlier, the date of Kanishka's accession to power is a subject of great controversy. The occidental scholars are more inclined in placing

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<sup>16</sup> The Rabtak Inscription; text and translation by Nicholas Sims Williams.

<sup>17</sup> Ibid.

<sup>18</sup> KaK, R.C., *Handbook of the Archaeological and Numismatic Sections of the S.P. S. Museum*, Srinagar, p. 155.

<sup>19</sup> Konow, *Kharoshti Inscriptions*, Calcutta, 1929, pp.79-81, pp. XV/2;

<sup>20</sup> Kak, op. cit., p. 155.

<sup>21</sup> Compare Konow, op. cit, pp. 79-81, PP XV/2 and Kak, op. Cit. p. 155.

<sup>22</sup> Rabtak Inscription, op. cit.



Kanishka to the second century A.D, with, of course, a few exceptions;<sup>23</sup> while those in India, again with a few exceptions, are inclined to credit him with the founding of the era of 78 A.D.<sup>24</sup> The final solution of the riddle can not be done in the present state of our knowledge. Though the chronology is shrouded in mystery, it is clear that Kanishka I ruled for 23 years.

About Kanishka's rule in Kashmir we have sufficient evidence – both numismatic and literary. The conventional evidence is also supported by place-names and oral history. There are presently five hundred and seventy two Kushan copper coins in the S.P.S. Museum, Srinagar. Of them, four hundred and sixty-seven belong to Kanishka.<sup>25</sup> This is besides his two gold coins (out of total four) preserved in the same Museum.<sup>26</sup>

Kalhana's Rajatarangni not only refers to Kanishka as a ruler of Kashmir, but he also makes a mention of his building activities.<sup>27</sup> According to Kalhana he built a town after his name and also constructed *mathas* and Chaityas elsewhere in the Valley.<sup>28</sup> Clearly, he refers to the same Kanishka who is famous in history as a great patron of Buddhism.<sup>29</sup>

Hieun Tsang, who visited Kashmir in the early 7th century A.D. found local traditions regarding Kanishka's rule still fully alive in the

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<sup>23</sup> Puri, B. N., 'The Kushans' in Harmatta Jonos (ed.) *History of Civilizations of Central Asia*, Vol. II, *The Development of Sedentary and Nomadic Civilizations: 700 B.C. to A.D. 250*, UNESCO, pp. 249-251

<sup>24</sup> Ibid.

<sup>25</sup> Accession Register S.P.S. Museum.

<sup>26</sup> KaK, R.C., *Handbook of the Archaeological and Numismatic sections of S.P.S. Museum*, Srinagar, p. 131.

<sup>27</sup> Kalhana, *Rajatarangini*, Book I vs. 168.

<sup>28</sup> Ibid.,

<sup>29</sup> Ibid., Vol. I, p. 76.



Valley.<sup>30</sup> And it appeared so true to the Chinese pilgrim that he faithfully recorded them in his travel account, particularly the holding of third great Buddhist Council by Kanishka.<sup>31</sup>

The continued existence of a place called Kanishkapur in district Baramulla, described as a foundation of Kanishka, till present times, is a living evidence of Kanishka's rule in Kashmir.

Evidently, during the period of Kanishka Kashmir attained unprecedented prosperity. This is evident from the Kushan art treasures with Buddhist themes found in different nooks of the valley. Some sites are so distantly located that even today only an adventurer can reach to them.<sup>32</sup> The huge quantity of Kanishka's coins so far retrieved in Kashmir further attests to this fact. No less significant evidence of Kashmir's emergence as a famous place of Kushan empire is Kanishka's decision to choose Kashmir as a venue for the third world Buddhist Conference in preference to any other place of the vast Kushan empire.

Besides Kanishka, *Rajatarangini* refers to two more Kushan rulers of Kashmir, namely, Jushka and Hushka.<sup>33</sup> Jushka is in all probability Vasishka who succeeded Kanishka I on the Kushana throne in the year 24 of Kanishka Era and ruled for about four years.<sup>34</sup> It may be mentioned that Vasishka is also called as Vajheshka in the contemporary records,<sup>35</sup> and it is quite probable that he was known by this name in Kashmir which till the time of Kalhana came to be

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<sup>30</sup> Ibid.

<sup>31</sup> *Life of Hiuen Tsang*, New Delhi, 1970.

<sup>32</sup> Sites Like Doen Pather and Kutbal are on high altitudes, having rocky tracks still unlinked by modern roads and transportation.

<sup>33</sup> Kalhana, *Rajatarangini*, op. cit., Vol. I, Book I vs. 168-170.

<sup>34</sup> Rosenfield, J.M., *Dynastic Arts of the Kushans*, Los Angeles and Brakely, 1967, p. 57; Mukherjee, B.N., *The Rise and Fall of Kushan Empire*, pp. 92, 93.

<sup>35</sup> Ibid.



reduced to Juska in the local environment. Significantly enough *Rajatarangni* of Kalhana makes a special mention of him as besides clubbing the building activities of the three Kushana rulers (Kanishka, Jushka and Huska) and the efflorescence of Buddhism during their rule, *Rajatrangni* writes exceptionally about Juska "That wise king Juska, who built Juskapura with its Vihara, was also the founder of Jayasvamipura."<sup>36</sup>

Vasishka was succeeded by Huvishka, who was perhaps the brother of Vasishka. His reign marks one of the brightest periods of Kushana history. He ruled for a long period of 34 years (between 28 and 62 of the Kanishka Era).<sup>37</sup> His coins from Kapisa Bihar alludes to a vast Kushan empire inherited by him from his father which he certainly preserved. The variety of his coins in gold and copper are equally suggestive of the peace and prosperity in his time.

Huvishka's name figures among the three Kushana rulers mentioned by *Rajatarangini*, to have ruled Kashmir.<sup>38</sup> He also credits him for having built a town Hushkapura (Huvishkapura) after his name. The town survives in modern Ushkur,<sup>39</sup> a village about three kilometers to the south-east of Baramulla on the left bank of Vitasta (Jehlum). He also attributes to him and the other two Kushana rulers the construction of stupas and mathas at  $\square$ uskalettra.<sup>40</sup> Huvishka's rule in Kashmir is also corroborated by his gold coin found by chance somewhere in the valley.<sup>41</sup>

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<sup>36</sup> Kalhana, *Rajatarangni*, op. cit., Vol. I Book I vs. 169.

<sup>37</sup> Mukherjee, B.N., *The Rise and Fall of Kushan Empire*, op. cit., pp. 92-99

<sup>38</sup> Kalhana, *Rajatarangini*, op. cot., Vol. I, Book I, vs. 168.

<sup>39</sup> Ibid.

<sup>40</sup> Ibid., vs. 170.

<sup>41</sup> KaK, R.C., *Handbook of the Archaeological and Numismatic Sections of the S.P.S. Museum*, Srinagar P. 132.



Like his father (Kanishka), Huvishka's coins also portrayed the divinities drawn from different Pantheons,<sup>42</sup> although in the Indian environment the tendency seems more towards the depiction of new Brahmanical deities.<sup>43</sup> The solitary gold coin of Huvishka retrieved in Kashmir *inter alia* depicts ankusa, sun god and the legend Mioro.<sup>44</sup> This undoubtedly alludes to syncretic religious system promoted by Kanishka and his successors.

Huvishka was succeeded by Vasudeva I, the last great ruler of the Kanishka group of rulers. And he was followed by Kanishka II, Kanishka III and Vasudeva II. We have no information about the rule of these Kushana rulers in Kashmir. However, given the fact that upto Vasudeva II, Kushana's ruled the whole immediate neighbourhood of Kashmir, it is quite reasonable to conclude that the Valley of Kashmir would have also remained the part of Kushan empire at least until they lost the North West of India to the Sassanians around A.D 262. It may be mentioned that so far one gold coin of Vasudeva has been found in Kashmir.<sup>45</sup> However, it still awaits a serious scholarly attention to ascertain whether it belongs to Vasudeva I or Vasudeva II. Besides, *Ratarangini* refers to the name of a ruler Abhimanyu, who by all means seems an independent ruler but the one who had Kushana affiliation.<sup>46</sup> Kalhana refers to him as a true heir of Kushanas in that he was favourably disposed towards Buddhism.<sup>47</sup> After him Kalhana makes a mention of the revival of traditional Naga worship at the hands of a local ruling dynasty- Gonandas.<sup>48</sup> If on the basis of the revival of Naga worship by Gonanda III we presume that Kushanas ceased to rule

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<sup>42</sup> Rosenfield, op.cit., pp, 69-101.

<sup>43</sup> Ibid., PP. 76-77, 79, 92-95.

<sup>44</sup> KaK, R.C., op. cit, P. 132.

<sup>45</sup> Ibid

<sup>46</sup> Kalhana, *Rajatarangini*, op. cit., Book I vs. 174.

<sup>47</sup> Ibid., vs. 174-176.

<sup>48</sup> Ibid., vs. 185-187.



Kashmir after Abhimanyu, it seem that Kushana rule ended at the most a few years after it came to an end in the Peshawar region which passed in the hands of Sassanians in 262 A.D. Kalhana refers to five local rulers who ruled between the death of Abhmanyu and Kimnare (Kidara).<sup>49</sup> These five rulers might not have probably ruled for more than a century. As Kidarites occupied Kashmir around 410 A.D, probably Kushana rule came to an end there around 300 A.D or so.

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<sup>49</sup> Ibid., vs. 185-197; The five rulers mentioned are, Gonanda III, Vibhisana I, Indrajit, Ravana, Vibhisana II





## **A COMPARATIVE STUDY OF TENSILE STRENGTH OF DISSIMILAR MATERIALS ( SS 202,304,310 ,316 AND MILD STEEL) JOINED USING MIG AND TIG WELDING PROCESS**

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### **Abstract:-**

The different metal joints from claiming need has been developed similarly, as a structural material in different modern. Provisions which gives handy consolidation about mechanical properties similar to strength, erosion safety. To bring down the expense. Selections of joining methodology for such a material would challenge due to their physical further more concoction properties. These stainless steel and gentle steel different material joints are thick, as basic. Structural provisions joining for stainless steel What's more gentle steel is extremely discriminating due to carbon. Precipitation Furthermore, reduction about chromium prompts expand to porosity influences the nature of joint heads. Weaken quality. In the exhibit study, stainless steel from claiming evaluations 202, 304, 310 and 316 were welded in. Gentle steel Eventually Tom's perusing tungsten idle gas (TIG) and metal idle gas (MIG) welding procedures. Those rate. Dilutions from claiming joints were ascertained Furthermore rigidity of different metal joints might have been investigated. Those. Outcomes were compared for distinctive joints produced Toward TIG Also MIG welding procedures and it might have been watching. That TIG welded different metal joints have finer physical properties over MIG welded joints.

**Keywords:-**TIG, MIG, Tensile Strength, Dissimilar Metal Welding, Stainless Steel, Mild Steel



## 1. Introduction:-

Those stainless steel will be a standout amongst those the vast majority well known materials for structural applications, because of their phenomenal physical properties Yet build the structural cosset. Those extra reductions and the outline codes for stainless steels have kept tabs their streamlined use for routine structural building provisions for example, such that common construction, atomic reactors, warm force plants, vessels What's more heat exchangers for a few modern provisions [1-5].

The superior joint efficiency, basic process, low creation cost, welding dependability Also proficient metal joining methodology need aid key to processing of a significant number building and structural segments [6]. The metallurgical changes, for example, micro-segregation, precipitation about optional phases, vicinity from claiming porosities, hardening cracking, grain development in the high temperature influenced zone Also reduction about materials Eventually Tom's perusing vaporization need aid the real issues which produces poor mechanical properties for stainless steel welds [18-19]. Therefore, to structural applications, those stainless steels need aid used effectively Eventually Tom's perusing different steel welds the middle of stainless Also carbon steels with successful Also prudent use of the uncommon properties from claiming every steel indigent in the same structure [2-5]. The coarse grains Furthermore bury vivo trust granular chromium rich carbides along those grain limits on high temperature influenced zone, is watched Throughout traditional circular segment welding which deteriorates the mechanical properties of the joints [9-11].

Those joining of stainless steels for plain carbon steels will be basic provisions clinched alongside warm control industries, stainless steel piping will be regularly uncovered to high engineering Furthermore weight steam What's more bear on passes temperature Furthermore weight might underneath An specific level, those low-carbon and low-alloy steels channel transport perform enough Also diminish the general expense of the structure [7, 8 What's more 12]. Those weakening of the



weld metal with the two build metals and the distinctive coefficients from claiming warm development are two major criterions to different welding about stainless and low carbon steels [13]. Protected metal circular segment welding (SMAW), tungsten idle gas (TIG) welding Furthermore metal idle gas (MIG) welding methods indicates enhance mechanical properties for stainless steel Also low carbon joints [14]. TIG welding gives more terrific control through SMAW and MIG weld process, gives higher caliber welds over An totally mixed bag about metal Also alloys.

Therefore, it may be the vast majority regularly utilized on join stainless steel and different metals[15- 17]. Ductile properties Furthermore microstructure characterization about dormancy rubbing welds have been accomplished for 304L stainless steel Furthermore these values bring An extend starting with 600 with 732 MPa [14]. Those streamlining about rubbing welding parameters same time welding stainless steels might have been conveyed out and extreme ductile anxiety (UTS) from claiming 560 MPa need been got for optimized rubbing welding states for 95 MPa rubbing weight Also 180 MPa furious weight [5]. Those assessment about properties from claiming different stainless steel welds indicates that elasticity values extending starting with 600 to 689 MPa [15]. In the introduce work, stainless steel about evaluations 202, 304, 310 Also 316 were welded with gentle steel by tungsten idle gas (TIG) and metal idle gas (MIG) welding techniques. Those rate dilutions about joints were computed Also elasticity about different metal joint might have been investigated.

## **2. Material and experiment procedures:-**

The materials used in the experiments were cylindrical rods of length 115 mm and diameters 15 mm. The chemical compositions of the mild steel and different stainless steels are shown in table 1. The specimens were turned to 12 mm diameter in a lathe machine and faced to prepare the weld surfaces. Further, debarring was done with emery paper and the surfaces to be welded ere cleaned with acetone prior to welding. TIG and MIG welding process were used for welding different grades of steel with mild steel. The welding joint was designed

double 'v' groove with angle 90°. The E309L rod of 2 mm diameter filler material was used for all welding process. Uphill welding progression was used for all joints. The process parameters selected for TIG and MIG welding processes are shown in the Table 2. The strength of the welds were examined by carrying out tensile tests, specimen are shown in Figure 1 and specimen of different grade stainless steel and mild steel are tabulated in Table 3 .

Table 1. Percentage of Chromium and Nickel in mild steel and Stainless Steel.

Alloys(%)	Stainless steel (SS) grades				MildSteel (MS)
	202	304	310	316	
Cr	14.38	18.21	25.36	16.65	0.069
Ni	01.03	08.06	20.89	11.28	0.01
C	0.15	0.08	0.08	0.08	0.18
Mn	7.50	2.00	2.00	2.00	0.80
S	0.03	0.03	0.03	0.03	0.040
P	0.06	0.045	0.045	0.045	0.040
Si	1.00	0.75	1.50	0.75	0.40
Mo	-	-	-	3.00	-
N	-	0.10	-	0.10	-

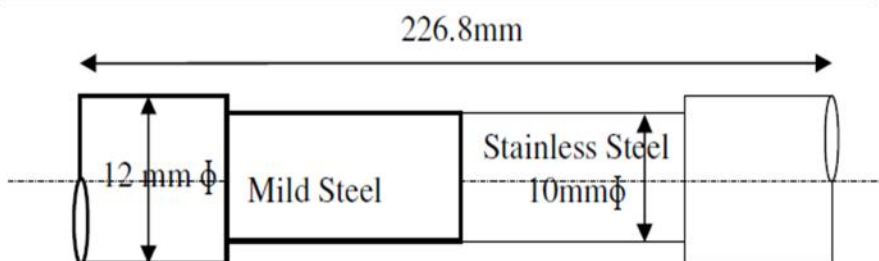


Fig.1. Tensile Test Specimen

S.No.	Parameters	Specification	MIG	TIG
1	Shielding gas	type	Ar and CO <sub>2</sub> (98%&2%)	CO <sub>2</sub>
		Flow Rate	7-12 liter/min	



2	Current	type	DC	DC
		Polarity	Electrode negative	Electrode Positive
		Current Range	60-400 Amps	50-70Amps
		Voltage Range	26-56 Volts	10-14 Volts
3	Pass	Type	Multiple	Multiple
4	Electrodes	Number	single	Single
		Size	-	1.6
		Type	Copper coated MS Plate	98 tungsten, 2% thoriated
5	Filler Rod	Type and material	Rod, E309L	

Table 2. Parameters used during TIG and MIG welding

Test Samples (TS)	Material 1	Material 2
TS 1	SS 202	MS
TS 2	SS 304	MS
TS 3	SS 310	MS
TS 4	SS 316	MS

Table 3. Test Samples Prepared by TIG and MIG Welding

### 3. RESULT AND DISCUSSION:-

The welding from claiming different evaluations of stainless steels might have been conveyed out with gentle steel. The dilatation on welding zone might have been computed, Also pliable test might have been conveyed crazy to every welded test from claiming TIG What's more MIG welding procedures.

#### 3.1 Dilution in Welded Zone:-

Those rate weakening about stainless steel Also gentle steel welded zone might have been ascertained tabulated Previously, table 4 to TIG welded different metal joints Also MIG welded different metal joints rate weakening tabulated to table 5. Those length about welded zone is finer



for MIG welded joint over TIG welded joint. The rate weakening Previously, stainless steel may be higher to MIG welded joint, the place as Previously, TIG welded joint weakening to gentle steel is higher. Those in general rate dilutions to weld zone for MIG welded joint need aid higher over TIG welded test tests but different joint of ss 310 What's more gentle steel and the correlation of the same demonstrated to figure 2.

Test Samples	Welded length (mm)			Diameter (mm)	Percentage Dilution		
	Weld Zone	in SS	in MS		of SS	of MS	in weld zone
TS <sub>1</sub>	13	3.0	2.0	10	23.07	15.38	38.45
TS <sub>2</sub>	13	2.5	2.5	10	19.23	19.23	38.46
TS <sub>2</sub>	15	3.0	4.0	10	20.00	26.60	46.60
TS <sub>4</sub>	14	3.5	2.0	10	25.00	14.28	39.20

Table 4. Total dilution in TIG welded SS and MS samples

Test Samples	Welded length (mm)			Diameter (mm)	Percentage Dilution		
	Welded Zone	in SS	in MS		of SS	of MS	in weld zone
TS <sub>1</sub>	15	4.0	2.0	10	26.60	13.33	39.90
TS <sub>2</sub>	12	3.5	1.5	10	29.16	12.50	41.66
TS <sub>2</sub>	16	4.0	5.0	10	26.60	13.33	39.90
TS <sub>4</sub>	15	3.5	4.0	10	25.00	28.57	53.57

Table 5. Total dilution in MIG welded SS and MS samples

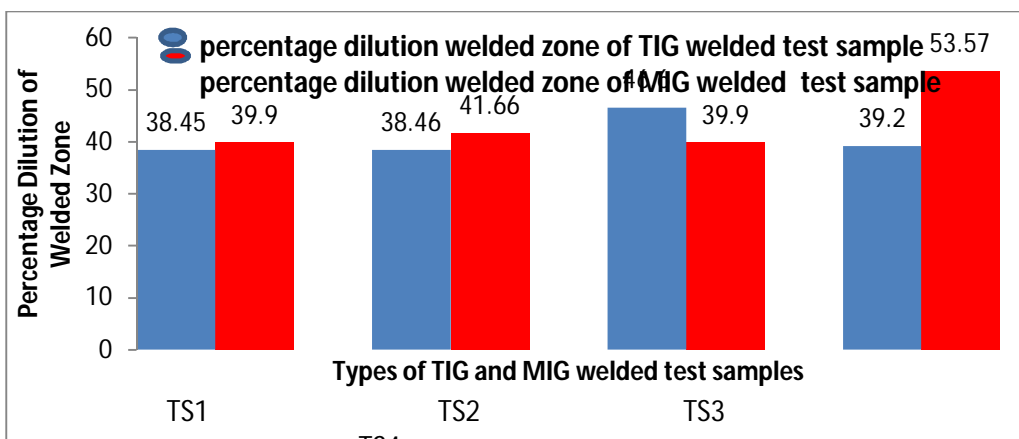


Figure 2. Percentage Dilution in TIG and MIG welded test samples

### 3.2 Tensile Test:-

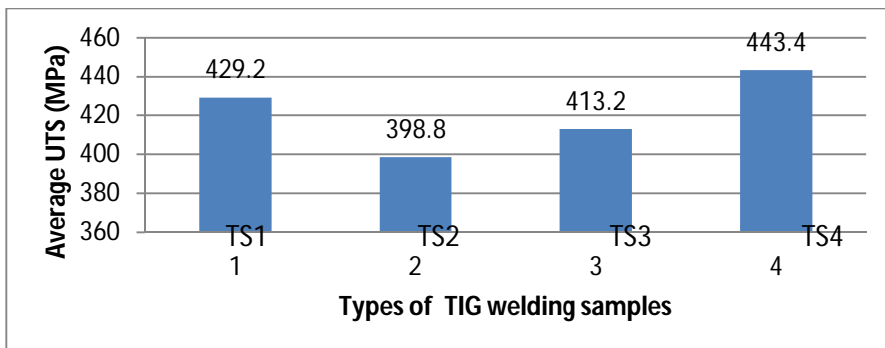
Tensile testing were carried out using Universal Testing Machine of 400 KN capacity and the geometry of the test specimen is as shown in Fig. 1. Mechanical proprieties of TIG and MIG welded dissimilar welds of stainless steel and mild steel after tensile test are tabulated in Table 6 and 7 respectively. Tensile strengths of welded test samples vary from 394 to 457 MPa depending upon the welding conditions. All the specimens broke in the weld region and parentage of elongation measured across the weldment using an extensometer show ductility ranging from 4.9% to 6.6%. The variation of average values of ultimate tensile value, yield strength and percentage elongation for each test sample has been plotted in Figure 3 and 4 respectively for TIG and MIG welded joints.



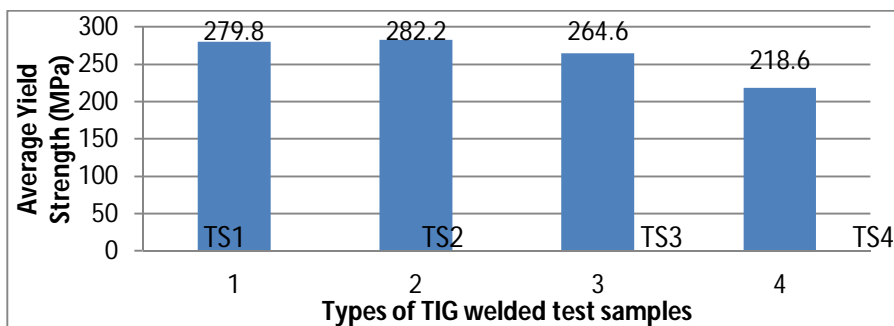
**Table 6. Mechanical Properties of TIG welded SS and MS samples**

Test Samples	UTS (MPa)	Average UTS (MPa)	Yield Strength (MPa)	Average Yield Strength (MPa)	% elongation	Average % elongation	Fracture Location
TS 1	430	429.2	287	279.8	5.7	5.66	Weld
	412		289		5.6		
	433		271		5.7		
	436		269		5.6		
	435		283		5.7		
TS 2	397	398.8	282	282.2	4.9	5.16	Weld
	402		286		5.3		
	400		274		5.0		
	401		289		5.3		
	394		280		5.3		
TS 3	410	413.2	269	264.6	5.1	5.12	Weld
	413		257		5.1		
	406		259		5.1		
	415		272		5.1		
	420		261		5.2		
TS 4	437	443.4	215	218.6	5.9	5.92	Weld
	443		221		5.7		
	448		225		6.1		
	432		219		6.0		
	457		213		5.9		

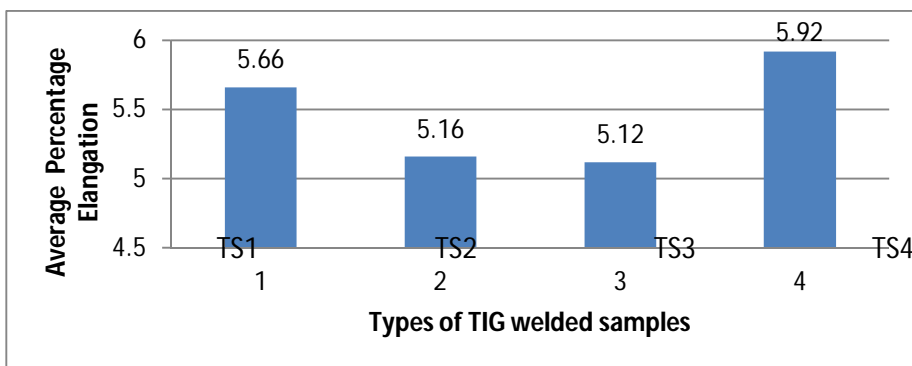




(a)



(b)



(c)

Figure 3. Variation of (a) Average UTS (b) Average Yield Stress and (c) Average Percentage elongation in TIG welded test samples.

The TIG welded test sample of SS 316 and Mild Steel has recorded maximum ultimate tensile stress, where as SS 304



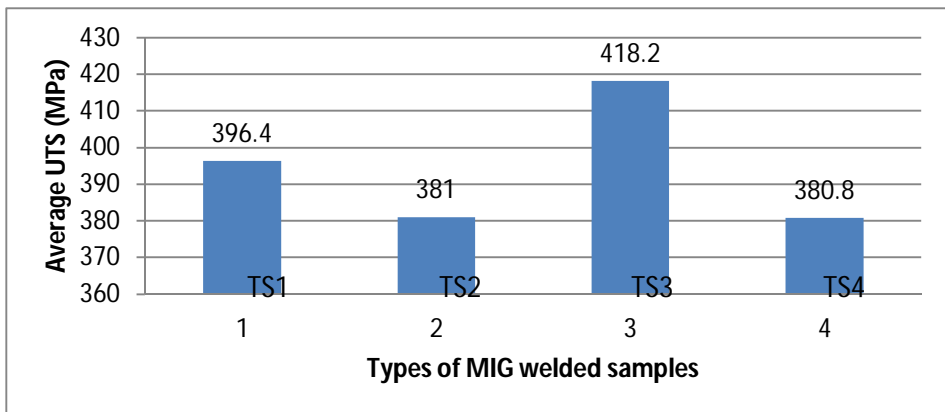
and Mild Steel has recorded the lowest ultimate tensile stress. The yield strength of TIG welded test samples of SS 202 and SS304 are better than other and in the same range but SS 316 have the poor yield strength as compare with other samples. The TIG welded test sample of SS 316 has the highest percentage elongation and SS 304 and SS 310 has shown lower percentage elongation.

Table 7. Mechanical properties of MIG welded SS and MS samples

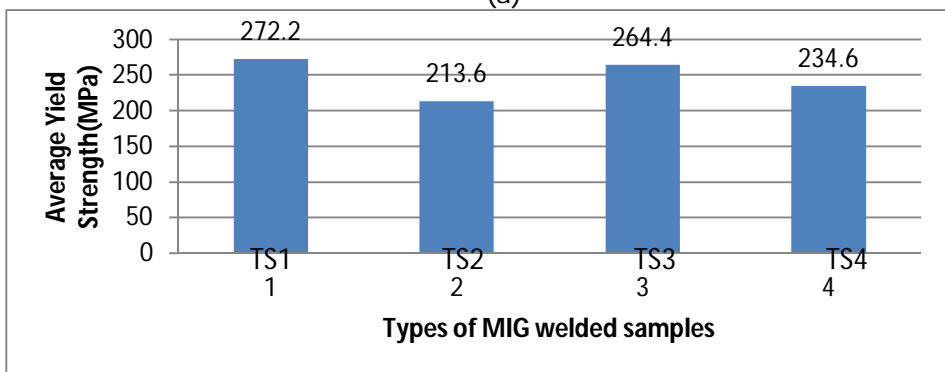
Test Samples	UTS (MPa)	Average UTS (MPa)	Yield Strength (MPa)	Average Yield Strength (MPa)	% elongation	Average % elongation	Fracture Location
TS 1	392	396.4	268	272.2	5.0	4.84	Weld
	400		273		4.8		
	386		275		4.9		
	400		279		4.7		
	404		266		4.8		
TS 2	378	381	207	213.6	4.7	4.7	Weld
	386		220		4.7		
	373		201		4.7		
	387		225		4.7		
	381		215		4.7		
TS 3	423	418.2	256	264.4	5.3	5.32	Weld
	409		259		5.3		
	411		266		5.4		
	413		276		5.3		
	435		265		5.3		



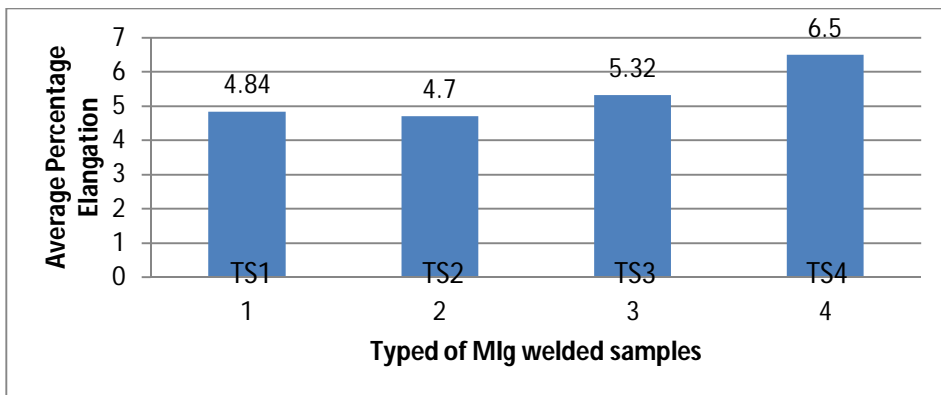
TS 4	366	380.8	235	234.6	6.5	6.5	Weld
	387		241		6.6		
	387		239		6.4		
	386		229		6.5		
	378		229		6.5		



(a)



(b)



(c)

Figure 4. Variation of (a) Average UTS (b) Average Yield Stress and (c) Average Percentage elongation in MIG welded test samples

The MIG welded test sample of SS 310 and Mild Steel has recorded maximum ultimate tensile stress where as test samples of SS 304 and SS 316 has recorded the lowest ultimate tensile stress. The yield strength of MIG welded test samples of SS 202 is highest but SS 304 has the poor yield strength in comparison with other samples. The TIG welded test sample of SS 316 has the highest percentage elongation and SS 304 recorded lowest percentage elongation.

#### 4.CONCLUSIONS:-

Throughout the study, gentle steel What's more distinctive evaluations of stainless steel were joined utilizing TIG What's more MIG welding methodology. Those elasticity Also weakening of welded joints were investigated. Those Choice from claiming different evaluations of stainless steel utilized to welding assume a paramount part done choosing those properties of the weld. From those study, accompanying finishes might make drawn –

1. Tungsten idle gas Welding is a greater amount suitability over metal idle gas welding to different metal welding of gentle steel Also stainless steel, TIG welding methodology gives finer quality. It might make due to lesquerella porosity clinched alongside different metal welds Throughout TIG welding Also carbon precipitation which hails out because of welding may be



Additionally lesquerella. The low rate of nothing carbon permits the result (welded stainless steel for gentle steel) superior erosion resistivity, pliability and quality.

2. Those fundamental imperfection which happens over welding different material by MIG will be the improvemen from claiming cracks Throughout those welding, which necessities that's only the tip of the iceberg exert to accomplishing comparable weld need by TIG welding.
3. Those rate weakening for stainless steel may be higher On MIG welded different joints which might be the reason about chromium passing due carbon precipitation in the joints Furthermore bring down erosion imperviousness.
4. The different metal joint from claiming SS 316 and gentle steel need the best pliability for both TIG What's more MIG welding procedures.
5. Those yield quality of different joint of SS 202 and gentle steel will be best for both TIG and MIG Welding methodology.
6. The different metal joint about SS 304 What's more gentle steel need poor ultimacy pliable anxiety to both. TIG What's more MIG welding methods.

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## **BRASS VESSELS IN SRIKAKULAM DISTRICT OF ANDHRA PRADESH (A STUDY OF BINDELU, GINNELU AND PALLALU)**

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### **1.0 History of Brass Craft in India**

The brass metal work started and evolved in the Indus valley civilisation (2400BC to 1700BC)<sup>1</sup>, widely spread to many places in India like Kalibangan, in Rajasthan, Lothan in Gujarat and Laimabad in Maharashtra. Firstly, it was discovered in Harappa and Mohenjo-Daro civilisations. During Harrapan civilization (2300-1730 BC) it spread to several parts of India and developed professional standards in many places during 2000-1000 BC<sup>2</sup>. The huge Buddha figure discovered at Sultan Ganj located in Bhagalpur district of Bihar, is a work of great skill and pride in India. However, during Kshatriya Period (2<sup>nd</sup> to 4<sup>th</sup> Century BC) mining and metallurgy of copper and Zinc went through several technological innovations which served the people<sup>3</sup>.

Brass was commonly used for ornaments for its pleasant color and finishing. As a result, brass and bronze coins came into use which was the biggest achievement of the Ayodya dynasty in 1<sup>st</sup> century and Gupta and Chandra Gupta -II<sup>4</sup>.

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<sup>1</sup>Damodar Dharmanand Kosambi, "Ancient India: A History of Its Culture and Civilisation", The University of Michigan, *Panthoon Books*, 1966, page-26.

<sup>2</sup>Arun Kumar Biswas, "The Primacy Of India In Ancient Brass And Zinc Metallurgy", *Indian Journal of History of Science*, Department of Metallurgy, Indian Institute of Technology, Kanpur – 1995, pages:360- 369.

<sup>3</sup>Indian History Ancient India, *Pratiyogita Darpan*, Upkar Prakashan, 2009, page-22.

<sup>4</sup> Amar Tyagi, "Let's know: Handicrafts of India", *Star Publication*, U.K., 2008, pages: 16-20 51.





Brass and bronze were also used for making items like utensils, God and Goddess idols. Thus after stone work, brass work became popular in India. As a result, demand for gold and silver depleted.

In a short period, Brass work spread widely across the India with individualistic style of different states, for instance, Punjab is well known for cooking utensils, Kashmir for their richly made traditional household items (Plates, Somovars Plates and Trays), Rajasthan for Photo Frames, bowls, plates and boxes, Madhya Pradesh is for Traditional ornamental metal boxes, lamps of Sarguja, rice measure bowls and animal figure in Raigarh, Kerala is for making of gigantic church bells, Andhra Pradesh is for sheet metal work like Plaques, containers, vases etc. and Dokra metal craft is popular in the tribal belts of Orissa, Chhattisgarh and Madhya Pradesh. At present, India is the largest brass producing country.

## **2.0 Brass Craft in India**

Brass is the generic term for a range of copper-zinc alloys with differing combinations of properties, including strength, machinability, ductility, wear-resistance, hardness, color, antimicrobial, electrical and thermal conductivity and corrosion resistance. Brass sets the standard by which the durability of other materials is judged. It is available in a very wide variety of product forms and sizes to allow minimum machining to finished dimensions. Brass does not become brittle at low temperatures like mild steel. Brass also has excellent thermal conductivity, making it a first choice for heat exchangers (radiators). Its electrical conductivity ranges from 23 to 44 per cent of that of pure copper<sup>5</sup>.

Brass is specified because of the unique combination of properties, stronger and harder than copper, it is easy to form into various shapes, a good conductor of heat, and generally resistant to corrosion from salt water. Because of these properties, brass is usually the first-choice material for many of the components for equipment made in the general, electrical and precision engineering industries. Brass is also used to make pipes and tubes, weather stripping and other architectural trim pieces like screws, radiators, musical instruments and cartridge casting for firearms. Matched by no other material, brass

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<sup>5</sup>Paul T. Craddock, Journal of Archaeological Science, Volume 5, Issue 1, March 1978, Pages 1-16



is an indispensable product where a long and cost effective service life is required.

However, though brass making is a household industry, due to the cheaper availability and large scale production of stainless steel, aluminums and other competitive products, the demand for brass products has declined considerably. This in turn has affected the living conditions of the families engaged in this household industry. Hence, an attempt is made in this study to analyze the socio-economic conditions of the people engaged in brass making industry. The specific objectives are:

- To study the Brass vessel making process in the study area,
- To analyze socio-economic conditions of brass vessel making artisans,
- To suggest policy measures at micro and macro level

### **Methodology:**

This paper is based on primary data as source. The sample artisans for collection of primary data have been selected by using the purposive sampling method. The data was collected from Budithi, Brahmana Tarla and Tekkali of Srikakulam District of Andhra Pradesh state. A total of 76 vessel making artisans data was collected for this research paper. The data was collected about raw material procurement, vessels making, socio-economic conditions, marketing of the product and problems about their profession.

### **Analysis:**

The literacy levels, age, income, social status, etc. of the sample respondents are analyzed below. The Table – 1 explains the literacy levels, of artisans and family members, age of artisans, income and expenditure artisans. With regard to literacy levels of artisans 67.10 per cent of the respondents are having primary education and 32.90 per cent of the respondents are having secondary education, A total 280 family members were reported in the study area and of which only about one percent are illiterates, 35 per cent are primary educated, 34 per cent are Secondary educated, 26 per cent are with Higher education and 4 per cent are technically educated.



With regard to age of the artisans 52.63 per cent of the respondents have age between 30-55 years, 32.90 per cent of the respondents are above 55 years of age and 14.47 per cent of the respondents are below the age of 30 with regard to income, 55.27 per cent of the sample respondents are have income between `50,001 to `1, 00,000, while 40.78 per cent of the respondents are having income below `50,000 and 3.95 per cent of the respondents are having income above ` 1 lakh.

The table – 2 discusses information with regard to the initiation of the work, age of the unit, ownership of work place, workers in workshop, procurement of raw material. 92.10 per cent are doing by hereditary and 7.90 per cent by Self-Initiation. 92.10 per cent of the units have been running for more than 10 years and 7.90 per cent units have been running for more than five years and less than 10 years.

With regards to work space 60.52 per cent of the respondents are having own working space, where as 39.48 per cent are having rented space. As 88.16 per cent of the artisan workshops are based on a single worker, 5.26 per cent of the artisan workshops are based on two workers, 2.63 per cent each of the artisan workshops are based on three workers and no workers and 1.32 per cent of the artisan workshops are based on four workers with regard to procurement of raw materials, 88.16 per cent of the artisans procure raw material from Bobbili, 7.89 per cent from Rajahmundry, 2.63 per cent from Srikakulam and 1.31 per cent from Vizianagaram to make their products.

Table – 1

Literacy, Age, Income and Expenditure of Artisans

Sr. No.	Sample Distribution	Category	Percentage
1.	Sample Respondents Literacy Levels	Primary	51 (67.10)
		Secondary	25 (32.90)
		<b>Total</b>	<b>76 (100.00)</b>
2.	Sample Distribution by Literacy Levels of Family Members	Illiterates	3 (1.07)
		Primary	98 (35.00)



		Secondary	96 (34.28)
		Higher	72 (25.72)
		Technical	11 (3.93)
		<b>Total</b>	<b>280 (100.00)</b>
3.	Distribution of Sample Respondents – Age Wise	Up to 30 Years	11 (14.47)
		30 – 55 Years	40 (52.63)
		Above 55 Years	25 (32.90)
		<b>Total</b>	<b>76 (100.00)</b>
4.	Sample Distribution by Income	Below 50,000	31 (40.78)
		50,001 to 1,00,000 Lakh	42 (55.27)
		1,00,001 and Above	3 (3.95)
		<b>Total</b>	<b>76 (100.00)</b>
5.	Sample Distribution by Expenditure	Below 50,000	31 (40.78)
		50,001 to 1,00,000 Lakh	42 (55.27)
		1,00,001 and Above	3 (3.95)
		<b>Total</b>	<b>76 (100.00)</b>

Source: Primary Data

Note: Figures in the parentheses indicates per cent



Table – 2

Work, Unit Age, Size of the Unit and Procurement of Raw Materials

Sr. No.	Sample Distribution	Category	Percentage
1.	Sample Distribution by Work	Hereditary	70 (92.10)
		Self-Initiated/ Trained	6 (7.90)
		<b>Total</b>	<b>76 (100.00)</b>
2.	Sample Distribution by Duration of the Unit	More Than 10 Years	70 (92.10)
		5-10 Years	6 (7.90)
		<b>Total</b>	<b>76 (100.00)</b>
3.	Sample Distribution by Ownership	Own Shop	46 (60.52)
		Rented Shop	30 (39.48)
		<b>Total</b>	<b>76 (100.00)</b>
4.	Sample Distribution by Size of Unit(Workers in the Workshop)	0	2 (2.63)
		1	67 (88.16)
		2	4 (5.26)
		3	2 (2.63)
		4	1 (1.32)
		<b>Total</b>	<b>76 (100.00)</b>
5.	Sample Distribution by Source of Material Procurement	Bobbili	67 (88.16)
		Rajahmundry	6



			(7.89)
		Srikakulam	2 (2.63)
		Vizianagaram	1 (1.31)
		<b>Total</b>	<b>76 (100.00)</b>

Source: Primary Data

Note: Figures in the parentheses indicates per cent

There are different vessels in different sizes and in this paper, the researcher discussed three vessels viz., *Bindelu*, *Ginnelu* and *Pallalu*

### **Brass Bindelu:**

*Bindelu* is a Telugu term used for a vessel which looks like a pot, made by Brass and is traditionally used by every household for fetching and storing water. It is also popularly called Budhiti Bindelu in Andhra Pradesh state. It also has the specific feature of combination of casting and sheet work. It also has the special feature of black surface finish. This brass container consists of 3 parts namely base, body and the rim.

### **Requirements for Making Brass Bindelu:**

#### **Materials required:**

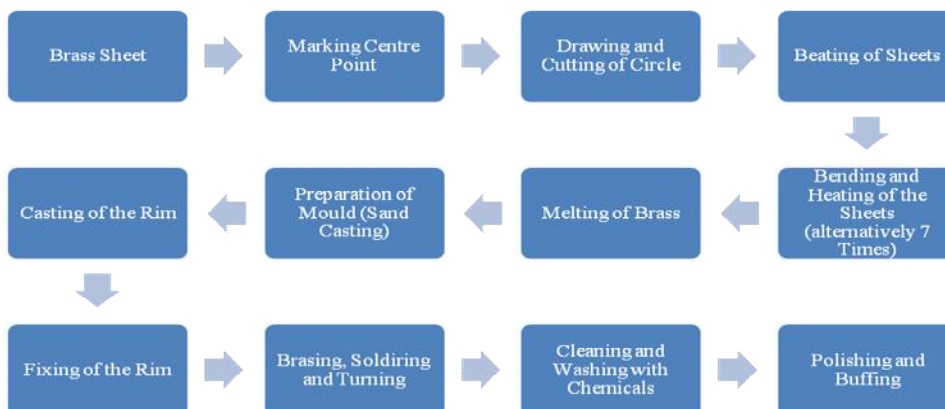
Brass required for the weight of 3.5 kg binde is 4 kg, Lakka, Brasso, Brasspol and Acids for cleaning and soldering material.

#### **Tools/ Machines required:**

Metal hook with the pointed tip, Filer, Chisel, Hammer and U-shaped iron rod, Pattakaru, bowl, turning tools and turning machine.

**Making Method:** Combination of Sheet Metalwork and casting,

## Making Process: Making process explained in Figure – 1



*Figure – 1 Flow Diagram for Bindelu Making Process*

**Ginne:** Ginne is a Telugu term. It looks like a round shape vessel, which is in the form of the bowl and it is used for eating food, hence it is made out of Bronze or Brass. However, there are different types of Ginnes. Historically, the Ginnelu used by different castes according to their culture and each Ginne is different from the others. Particularly in earlier days, Ginne is made for eating food and it was crafted according to their requirements, style and comfort. However, in present days these Ginnes are used to keep the Thalamburalu (Turmeric mixed dry rice) which is part of traditional marriage ceremony in Andhra Pradesh. Presently there are different Ginnes are available namely 1) Velama Ginne 2) Kapu Ginne 3) Bobbili Ginne 4) Karnala Ginne 5) Topi Ginne 6) Palasa Ginne and 7) Medarakancha.

### Requirements for making Brass Ginne:

#### Materials required:

Brass Required – 3 kg 250 grams, Riverside mud, Ash Powder, Black Oxide Powder, Service gum, coal/coke, Polish Materials.

#### Tools/ Machines required:

Turning machine, crucibles, wooden boxes, metal tools, wooden tools, turning tools. Pliers of different sizes, hammers of different sizes, small chisels (Mola) and pattern of ginne (aluminum or brass).

**Making Method:** Box casting method.

**Making Process:** Making process of Ginnelu presented in Figure – 2:

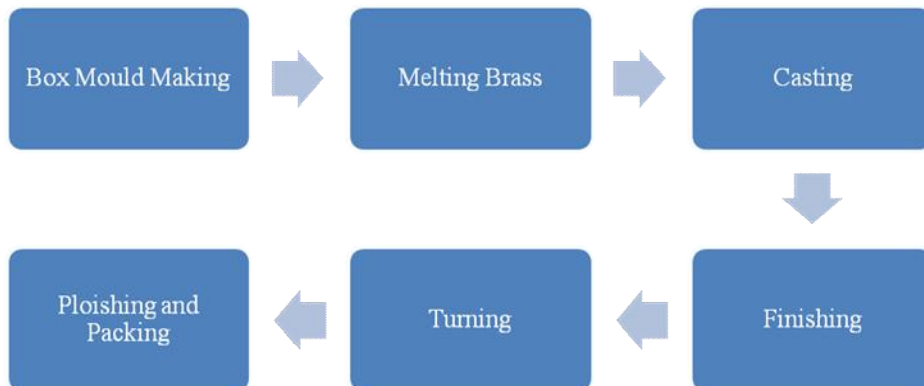


Figure – 2 *Flow Diagram for Ginnelu Making Process*

**Brass Pallemu: - Size – Available form 15" to 24" diameter, 18" pallemu has taken for making process:**

Brass Pallemu word is a Telugu term which is in a circular form look like a plate, it is made with the brass metal sheet. However, the brass pallemu is used in various household activities of day to day life, for instance, it is used for carrying fruits for puja to the temple, used as a container to keep fruits and prasadam for puja performed in the house, also it is used to keep different food items (solid and thick) during the functions in the families. Hence, it widely used for eating food in the home.

**Requirements for making Brass Pallemu:**

**Materials required:**

Brass required 1 kg 100grams, Brass Sheets. Acids and coconut brush.

**Tools/ Machines required:**

Wooden Mallet, Hammer and Merugudundu (one type of tool which installed on the floor)



**Making Method:** Sheet Metalwork,

**Making Process:** The making process of pallalu explained in Figure – 3:

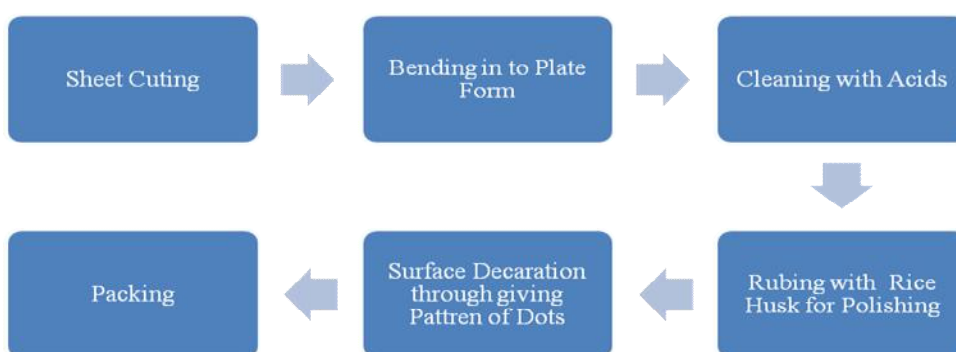


Figure – 3 *Flow Diagram for Pallalu Making Process*

### Perceptions of Artisans on Different Issues:

Table – 3 explained the Perceptions of the Artisans on Issues Related to Subsidies, Training Programs, Raw Materials, Design, Markets and Loans. 76.31 per cent of the sample artisans reported that they are availing subsidies from various Government programs and 23.69 per cent artisans are reported that they are not able to avail any Government subsidies. In the study area 80.26 per cent of the sample artisans are attended training programs conducted by various Institutes and 19.74 per cent are not able to attend the programs conducted by various Institutes to enhance their skills according to market need.

With regard to raw materials procurement 67.10 per cent of the sample artisans reported that raw material is easily available for making products and 32.90 per cent of the sample artisans reported non-availability of raw material for making their products. About design 90.78 per cent of the sample artisans reported that they are following traditional designs whereas 9.22 per cent of the sample artisans are following new designs. 72.37 per cent of the sample artisans reported that they market their products through Lepakshi and 27.63 per cent of



the sample artisans reported that they market their product through Shops. 84.21 per cent of the sample artisans reported that they are depending on un-organized sector for loans and 15.79 per cent of the sample artisans are reported that they are depending on Institutional loans.

Table – 4 discusses about Perceptions of the Artisans on Issues Related to Packaging, Government Support, Occupation, and Suggestion on Support System, CFCs and Operation Tools with regard to packaging of artisan's products 55.26 per cent of the sample artisans reported that they are selling their product with packaging and 44.74 per cent of the sample artisans reported that they are selling their products without packaging. In regard to the government support 55.26 per cent of the sample artisans have reported that they are availing support from the Government and 44.74 per cent of the sample artisans have reported that they are not getting any support from the Government. With regard to work satisfaction, 65.79 per cent of the sample artisans have reported that they are not willing to continue in the profession and 34.21 per cent have reported that they are willing to continue in the same profession.

With regard to suggestion on support system to artisans 35.53 per cent of the sample artisans suggested that Marketing strategies need to be improved, 28.94 per cent have suggested that semi-technology should be provided at cheaper cost, 21.05 per cent have suggested that loans to be provided for procurement of raw material and 14.48 per cent have suggested that appropriate and qualitative raw materials need to be provided through the Government mechanism. About CFC's 88.16 per cent of the sample artisans are aware about Common Facilitation Centers, whereas 11.84 per cent of the sample artisans are not aware of this facility. Using of operation tools 75.00 per cent of the sample artisans are un-aware about using power tools in making process whereas 25.00 per cent of them are aware about it.



Table – 3

Perceptions of the Artisans on Issues Related to Subsidies, Training Programs, Raw Materials, Design, Markets and Loans

Sr. No.	Sample Distribution	Category	Percentage
1.	Perceptions of Artisans on Subsidies	Availing Subsidy	58 (76.31)
		Not Availing Subsidy	18 (23.69)
		<b>Total</b>	<b>76 (100.00)</b>
2.	Perceptions of Artisans on Training Program	Attended Training Programs	61 (80.26)
		Not Attended Training Programs	15 (19.74)
		<b>Total</b>	<b>76 (100.00)</b>
3.	Perceptions of Artisans on Raw Materials	Availability of Material	51 (67.10)
		Non-Availability of Material	25 (32.90)
		<b>Total</b>	<b>76 (100.00)</b>
4.	Perceptions of Artisans on Design	Traditional Designs	31 (40.78)
		New Designs	42 (55.27)
		<b>Total</b>	<b>76 (100.00)</b>
5.	Perceptions of Artisans on Market	Lepakshi	55 (72.37)
		Shops	21 (27.63)
		<b>Total</b>	<b>76 (100.00)</b>



6.	Perceptions of Artisans on Loans	Institutional Loans	12 (15.79)
		Un- Organized Sector Loans	64 (84.21)
		<b>Total</b>	<b>76 (100.00)</b>

Source: Primary Data

Note: Figures in the parentheses indicates per cent

Table – 4

Perceptions of the Artisans on Issues Related to Packaging,  
 Government Support, Occupation and Suggestion on Support System,  
 CFCs and Operation Tools

Sr. No.	Sample Distribution	Category	Percentage
1.	Perceptions of Artisans on Packaging	Packaging the Articles	42 (55.26)
		No Packaging	34 (44.74)
		<b>Total</b>	<b>76 (100.00)</b>
2.	Perception of Artisans on Government Support	Support from Government	42 (55.26)
		No Support From Government	34 (44.74)
		<b>Total</b>	<b>76 (100.00)</b>
3.	Perceptions of Artisans on Occupation	Willing to Continue in the Profession	26 (34.21)
		Not Willing to Continue in the Profession	50 (65.79)
		<b>Total</b>	<b>76 (100.00)</b>
4.	Suggestions for Support Artisans	Providing Raw Materials	11 (14.48)
		Semi-Technology	22 (28.94)



		Loans	16 (21.05)
		Marketing	27 (35.53)
		<b>Total</b>	<b>76 (100.00)</b>
5.	Awareness about Common Facilitation Centre (CFC)	Aware	67 (88.16)
		Un- Aware	9 (11.84)
		<b>Total</b>	<b>76 (100.00)</b>
6.	Awareness about Power Tools Operation	Aware	19 (25.00)
		Un- Aware	57 (75.00)
		<b>Total</b>	<b>76 (100.00)</b>

Source: Primary Data

Note: Figures in the parentheses indicates per cent

### Suggestions:

Artisans in the study area have been facing several problems. Categorically the problems are related to Financial, Technical and Marketing areas. Due to lack of institutional finance, artisans are not able to reach market needs. Due to technical inefficiency, they are not able to adopt new methods of production. Due to lack of marketing channels they are exploited by middlemen.

For addressing artisans problems the Development Commissioner (Handicrafts) need to initiate a model like ATMS (Awareness Programs about New Technology, Training Programs on Specific Craft, Separate Marketing Channels and Support Services for Institutional Finances)

**Conclusion:** Indian culture has a rich tradition and ethos of crafts. Coming to the vessels craft, due to introduction of aluminum, plastic and stainless steel, importance of brass vessels went insignificant. Except for few occasions, brass vessels are not even used to as a present or for daily household uses. There is an urgent need to protect this rich



culture of brass vessel making for up- liftment of the craft and craftsmen, for preserving it to the next generations to experience this craft first hand.

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## Importance of the Three Key Concepts of Jaina Philosophy: Anekāntavāda, Ahimsā and Aparigraha in Peace and Harmony

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### **Abstract:**

Indian philosophy is divided into two main groups namely theist and atheist. Theists do believe in the authority of the Vedas. To the contrary, atheists do not believe in the authority of the Vedas. Jaina philosophy belongs to the atheist group. This philosophy has three main concepts-Anekānta (Non-absolutism), Aparigraha (Non-Possessiveness) and Ahimsā (Non-violence). Jaina's Anekāntavāda teaches that unity and difference are inbuilt and inseparable parts of reality. The concept of Aparigraha emphasizes that possessiveness is the root cause of all sufferings and thereby teaches to limit our greed. According to Ahimsā, one of the identification marks of Jainism, himsā is a greatest sin and thus forbids all of its kinds. This paper attempts to establish the importance of Jaina's theory of Anekānta, Aparigraha and Ahimsā in order to establish peace and harmony.

**Keywords:** Jaina philosophy, Anekāntavāda, Aparigraha, Ahimsā, peace, Harmony.

### **Introduction:**

Indian Philosophy is divided into two broad groups namely atheist and theist. Those who do not believe in the authority of the Vedās, are called atheists and the opponents are known as theists. Cārvāka, Buddha and Jaina belong to the atheist school of Indian Philosophy.

Lord Rṣavha is the founder of Jaina philosophy which was reformed by the later twenty three Tirthankars. Amongst them Mahāvira is note worthy because he gave a new orientation to this philosophy. Jaina Philosophy has three main parts– Epistemology, Metaphysics and Ethics. As far as Jaina Philosophy is concerned, there are three key concepts, Anekānta (Non-absolutism), Aparigraha (Non-Possessiveness) and Ahimsā (Non-violence) that can play vital role in establishing peace and harmony. Theory of Anekānta is contained in Jaina



Metaphysics and the rest two, namely Aparigraha and Ahimsā are included into Jaina Ethics. This paper is an attempt to show the importance of these three concepts i.e. Anekāntavāda, Aparigraha, and Ahimsā in establishing peace and harmony.

### **Anekāntavāda :**

Indian Philosophers are not in agreement regarding the nature of reality. Some, for example Vedāntins, believe that reality is unchanged and eternal while Buddhists consider it as ever changing. Both views are one sided. But in Jaina's view, reality is both changing and unchanged from different perspectives. In fact the Jaina Metaphysics is a realistic as well as relativistic pluralism. It is called Anekāntavāda or the theory of the many-sidedness of reality or non absolutism. Acc to this theory a thing has many attributes, both positive and negative and all these attributes are true from different standpoints. We the ordinary human beings can know only some attributes of a thing. Only omniscient can know all the merits of a thing. Thus, human knowledge is relative and limited.

Jaina's Anekāntavāda emphasises that unity and difference are inbuilt and inseparable parts of reality. The concept of reality includes the principles of reconciliation, relativity, co-existence of opposites, tolerance, equality, equanimity and so on and so forth that are required in order to establish and maintain peace. These principles can act as the tools in order to bring people belonging to different religions, cultures, races etc. under one roof without destroying their own individuality. In this context, we can cite Jaina's example of an elephant and six blind men who tried to describe the elephant by touching the different parts of it. Each of them claimed that one's own description of the elephant is absolutely true. But the man with clear vision can see the whole elephant and know that all descriptions made by six blind persons about the elephant are only partial true, not absolutely true. We find, disputes and differences regarding philosophical, ideological, cultural and religious are rooted mainly in claiming the partial true as a whole true. But the Jaina's theory of Anekānta suggests that our judgments represent different aspects of the many-sided reality and are only partially true. This view of Jainism has enough capacity to make people broadminded, understanding and tolerant.





Anekāntavāda teaches us that truths are not contradictory rather complementary to each other. They can co-exist and develop the holistic approach to the greater truth. Ācārya Siddhasena Says:

“javanto vayapaha tavanto honti nayavaya javantoa nayavaya tavanto honti parasamaya,”<sup>1</sup> i.e. there are many views of truth as there are many ways to expression. The view of Ācārya Siddhasena reminds us Sri Sri Ramakrishna Paramahansa's famous saying: “Yata mat tata path”.

Like other Indian philosophical systems except the Cārvāka, the main goal of Jainism is liberation or Mokṣa. In Jaina's view, the universe is filled with both Jiva and Ajiva. The essential characteristic feature of Jiva or Atmān is consciousness (chetanālakṣano jivaḥ). Though every Jiva possesses consciousness but there is difference in its degree according to the obstacle of karma. In one of the Jaina Scriptures, it is stated that:

“For in this world living beings suffer individually for their deeds; for the deed they have done themselves, they obtain (punishment), and will not get over it before they have felt it.”<sup>2</sup>

Only the liberated soul who is free from all kinds of karmic obstacles possesses the purest consciousness. But though the soul in its real nature possesses Infinite Faith, Infinite knowledge, Infinite Bliss and Infinite Power, due to karma it is linked to body. This state is called bondage or Bandha. In order to dissolve this association between soul and body and consequently to realize the real nature of the soul which is called Mokṣa or salvation, Jainism lays down some ethical guidelines. Thus, another important part of the Jaina philosophy is its ethics that comprises of right faith, right knowledge and right conduct. In Jainism, as ignorance is the root cause of bondage, so the person aiming at liberation needs right knowledge that eradicates ignorance. In the Uttarādhyayana Sutra, it is said:

“All men who are ignorant of the Truth are subject to pain; in the endless Samsāra they suffer in many ways.”<sup>3</sup>

Right knowledge is attainable by keeping faith in the teachings of the Tirthankars or liberated persons. But right knowledge is not possible unless and until all the karmas are destroyed by right conduct. Hence,



Jainas believe that right faith, right knowledge and right conduct- all these three are required in order to attain liberation. Right conduct again is formed of five great vows prescribed mainly for monks (Panchamahāvratā). These are as follows

- (i) Ahimsā or Non-violence
- (ii) Satya or Truth
- (iii) Asteya or Non-stealing,
- (iv) Brahmacharya or Abstinence from self- indulgence and
- (v) Aparigraha or Non-possessiveness.

### **Ahimsā:**

The basic tenet of Jainism is “Ahimsā Paramo Dharmah”. Ahimsā is the only religion that is pure, determinate and eternal. It is one of the distinguishing marks of Jaina philosophy. Jains think himsā is the greatest sin. Other sins include dishonesty, untruthfulness, unchastity, covetousness etc. In the various sacred texts of Jainism, we find jainas have condemned himsā in the strongest possible terms and considered it as the main impediment to the attainment of salvation. The Jñānārṇava describes the abominable nature of himsā in the following way:

“Himsā alone is a gateway to the miserable state, it is also the ocean of sin, it is itself terrible hell and it is surely the most dense darkness.”<sup>4</sup>

In the Sūtrakṛitāṅga Sūtra, it is stated that

“knowing that all the evils and sorrows arise from injury to living beings, and that it leads to unending enmity and hatred, and is the cause of great fear, a wise man, who has become awakened should refrain from all sinful activities.”<sup>5</sup>

In the same vein, the Uttarādhyayana Sūtra suggests:

“Everything that happens to somebody, affects him personally; therefore, knowing the creatures’ love of their own self, do not deprive them of their life, but cease from endangering and combating them.”<sup>6</sup>

The literal meaning of the word ‘Ahimsā’ is non-injury or non-killing; but widely it denotes to harmlessness, the renunciation of the will to



kill and of the intention to hurt any living thing, the abstention from hostile thought, word and act.<sup>7</sup>

In the Uttarādhyayana Sūtra, it is said:

“Therefore a wise man, who considers well the ways that lead to bondage and birth, should himself search for the truth, and be kind towards all creatures.”<sup>8</sup>

The term Ahimsā is used in both positive and negative senses in Jaina philosophy. In its positive sense, Ahimsā refers to caring for and sharing with all living beings as well as tending to protecting and serving them. The positive side of Ahimsā is based on universal love towards all living beings. In its negative sense, it denotes to avoiding any kind of harm in thought, word and deed. In fact, the negative meaning of the word Ahimsā is not only non-killing it has a deeper and wide meaning and thus it includes not to injure, command, enslave, insult, torment, torture any being.

Jainism teaches that one should keep himself / herself from himsā not only in deed, but also in thought a word. Speaking harsh word or keeping ill will against anyone is equivalent to inflicting him/her bodily injury. The Sūtrakṛtāṅga Sutra, one of the Jaina Scriptures said:

“The mind of those who sin in thoughts is not pure; they are wrong, they do not conduct themselves carefully”<sup>9</sup>

So mere abstention from killing someone is not Ahimsā, its connotation is much more than that. Even forcing someone to do something against his/her will or causing injury to him or her due to negligence is also amounts to himsā. The Āchārāṅga Sūtra reads:

“I renounce all killing of living beings, whether subtile or gross, whether movable or immovable. Nor shall I myself kill living beings (nor cause others to do it, nor consent to it). As long as I live, I confess and blame, repent and exempt myself of these sins, in the thrice threefold way (i.e. acting, commanding, consenting, either in the past or the present or the future.), in mind, speech, and body.”<sup>10</sup>

Thus, Ahimsā is the principle that Jainas teach and strive to practice not only towards human beings but also towards all other living beings



including environment. The Jaina scripture says: “Abstain from slaughter of living beings. This is the Law proclaimed by the Sage.”<sup>11</sup>

Again, the Sūtrakṛtāṅga Sutra observes:

“This is the quintessence of wisdom: not to kill anything.  
Know this to be the legitimate conclusion.”<sup>12</sup>

Though the vedās and the Upaniṣads have recognized Ahimsā as a moral value, they did not prohibit himsā in the context of sacred rituals. It is Jainism that prohibits himsā strictly in its all forms. In the Jaina’s text, we find there are three ways of committing himsā or sins: “by one’s own activity, by commission, by approval (of the deed).”<sup>13</sup> The Jaina scripture prohibits all these activities in order to prevent himsā. The verse goes as:

“Do not kill living beings in the threefold way (I.e. by your own acts, by order, and by assent; or by thoughts, words, and acts) being intent on your spiritual welfare and abstaining from sins. In this way numberless men have reached perfection, and others, who live now, and who are to come, (will reach it).”<sup>14</sup>

Even the Jaina Scripture warns us that the abode of the person who commits himsā is the abode of the Asuras. The verse goes as:

“Those who engage in undertakings, who work the perdition of their souls, and who kill (living beings), will go to the world of the wicked, to the abode of the Asuras for a long time (to dwell there).”<sup>15</sup>

In the Prasnavyakarana it is said that non-violence is something that is able to protect all. “ahimsa tasathavarasavrabhuyakhema kari”<sup>16</sup> In fact, on this principle of Ahimsā, other ethical values of Jainism like truth, non-stealing etc. are based. For example, Jains think that telling lie is a kind of verbal violence because it hurts the feeling of another person. Likewise, stealing someone’s property amounts to another kind of violence as it mentally injures that person whose property is stolen. Similarly, accumulating wealth beyond need is also violence. It deprives those who actually need it.



### **Aparigraha:**

Jaina Ethics emphasizes on non-possessiveness or contentment (Aparigraha), because according to this philosophy, possessiveness is the root cause of all bad actives. The Jaina Scripture suggests that “Cows and horses, jewels and earrings, cattle, slaves and servants: all these (possessions) you must give up in order to obtain the power of changing your form at will.”<sup>17</sup>. For the monks, the Jaina scripture enjoins:

“An ascetic should not lay by any store, not even so little as the grease (sticking to his alms-bowl); but as a bird with its plumage, so he with his alms-bowl should wander about without desires.”<sup>18</sup>

Lord Mahāvira says: “Rago ya doso ya biya kammabiyam”<sup>19</sup> i.e. attachment and hatred are the two seeds of all evil actions. The Sūtrakṛtāṅga Sūtra warns us that “Man, cease from sins! For the life of men will come to an end. Men who are drowned (in lust, as it were), and addicted to pleasure will, for want of control, be deluded”<sup>20</sup>. The same Jaina Scripture says:

“Sramanas who do not comprehend this and do not know what is dangerous, who care for the pleasures of the moment only, will suffer death an endless number of times, like big fishes who when the water rises are by the water (deposited) on dry land and are killed (there), poor things, by hungry *dhaṅkas* and herons.”<sup>21</sup>

In fact, Jainism teaches us to avoid attachment to idea or thought, object and person and considers such attachment is the root cause of exploitation, injustice, distinction conflict, war etc. It emphasizes that attachment to idea is more harmful in comparison to that of an object or person. Lord Mahāvira thinks that the person who sticks to his own idea and hates other cannot achieve liberation which is the main goal of this philosophy. The scripture says “Suyagadosayam sayam pasassanta garahanta param vayam je u tattha viussanti sansare te viussiya”<sup>22</sup>. The person who is attached to particular ideology cannot accept what others say and thus is not able to know the higher and perfect truth without which liberation is not possible.



“Those will reap pains who, in thoughts, words, or acts, are attached to their body, to colours, and to forms.”<sup>23</sup>

In order to overcome this attachment or parigraha, Jaina Tirthankars preach the vow of Apaigraha or non-possessiveness. The concept of non-possessiveness emphasizes on the limitation of the possessive tendency which gives birth to conflicts in every field of life. In the Jaina Scripture it is stated:

“The fool thinks that his wealth, cattle, and relations will save him; they him, or he them. But they are no help, no protection.”<sup>24</sup>

### **Conclusion:**

The Jainas' concept of Anekānta, Aparigraha and Ahimsā are very much relevant in today's society. In fact, all these three concepts have immense importance on peace and harmony in this age of violence and disharmony in almost all walks of life. Jainas' Anekāntavāda teaches to respect all views. To establish peace, what we need is mutual understanding and the doctrine of Anekānta can play a great role in this matter. Though Ahimsā in the strict sense cannot be practised because the great Epic Mahābhārata says that there are many creatures which are imperceptible and which can be destroyed by the simple movements of our eyelids, still, through the preaching of Ahimsā, the Jainas emphasize on the fact that each sentient being has sanctity and dignity of its own and thus we should respect them. In fact, Jain's concept of Ahimsā intends to preach a life of love for all. Ahimsā is the reverence for all kinds of lives. Lastly, the concept of Aparigraha helps us to limit our greed and practice non-violence in thought, word and deed which are essential for achieving global peace and harmony. Thus, Jainas' concepts of Anekānta, Aparigraha and Ahimsā have great practical values. All these concepts can play important role in establishing peace and harmony throughout the globe.

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## LITERATURE AND TERRORISM

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### Abstract

The social and cultural environment with its subjective life cannot be fully covered through the subject matter of history. The essential aspect of terrorism and its impact which the historians cannot record, can be narrated through the lives of fictional characters. Many prominent writers have represented the acts of terrorism, and analysis of terrorists and terror through fictional literature. The literary representations of terror encompass the issues related to victimization, heroism, cynicism, idealism, political and social disagreement, religious and cultural distinctiveness, economic injustice, as well as the symbolic representation of violence. The life thriving amidst terrorism is illustrated to reflect the reality and so these writings can be recorded as important socio historical sources of information. In fact the study of literary writings has much to offer to the transdisciplinary investigation of terror.

**Key Words:** Terrorism, literary representations, violence, narratives of history

The literary engagement with terrorism is not a new thing. We find representations of terrorism, terrorists and terror in English literature from the present day back to the beginnings of modernity. John Utz in his article on *Terrorism in Literature* puts it as, "Given this dependence upon imagination and representation, it should come as no surprise that terrorism has served as a ready topic for fiction. The 19th century was a fertile ground for violence intended to effect political change, and dime-novels about Irish secret societies, Russian anarchists, and other prototypical terrorists proliferated as the century





waned "( Utz 2005). Thus many prominent writers have represented the acts of terrorism, and analysis of terrorists and terror through fictional literature. In fact the study of literary writings has much to offer to the transdisciplinary investigation of terror. The literary representations of terror encompass the issues related to victimization, heroism, nihilism, idealism, political and social conflict, religious and cultural identity, economic injustice, as well as the symbolic and rhetorical values of violence. Literature related to terrorism fascinates the audience due to their thrilling plots of secrecy, the portrayal of violence and the tactics to unmake the peaceful world. Some writers focus more on the social, political and aesthetic issues rather than highlighting the acts of violence and suspense. While there are writers who have attempted to penetrate the mind of terrorists and explain and criticize their point of view thereby bringing to light the cultural and political system that terrorists claim to oppose, while some writers have focused on the plight of the victims of terrorism.

Many literary critics and scholars consider Joseph Conrad's *The Secret Agent: A Simple Tale* to be among one of his finest novels and one of the first intelligence works of English literature which seriously explores the topic of terrorism. The themes of anarchism, espionage, and terrorism are the focus of the novel. The novel came into limelight after the September 11 terrorist attacks and acquired the status of a classic novel post-9/11 age. In fact it was one of the most talked about novel in the American media after 9/11.

In the Greenwich Bomb Outrage of 1894, a French anarchist guy blew himself up into pieces in the grounds of the Greenwich Observatory. This event greatly touched Conrad as it was so mysterious as the man did not destroy anything else but only himself though it is thought that the target would have been to blow up the Observatory. Inspired by this event Conrad came up with the idea of the novel 'The Secret Agent: A Simple Tale'.



The plot of the novel is set in London in 1886 and tells the story of Adolf Verloc, a businessman who also works as a secret agent for some foreign embassy which is implied to be Russia. He is part of a group of anarchists of which Comrade Ossipon, Michaelis, and "The Professor" are the most prominent. These anarchists believe in overthrowing the government and carry on functioning as ineffective terrorists. However they produce pamphlets called 'F.P.' (The Future of the Proletariat) and hold private meetings among themselves to create disturbances in smooth working of government so as to instigate public outrage. The novel also gives an insight into Verloc's family life which comprises of his wife Winnie, his mother-in-law, and his brother-in-law, Stevie, who appears to be mentally challenged.

Conrad in the novel, paints a true to life picture with plotters, spies, policemen, diplomats, and bomb-makers which gives rise to the act of terrorism. Terrorism and anarchism are intrinsic aspects of the novel, and are central to the plot. We find Verloc involved with an agency which pushes him to perform terrorist activities. Also we find the other characters as involved in anarchist political revolution. The Professor went out with a glass vial of high explosives in his breast pocket and a detonator in his palm. This very much resembles the portraits of modern terrorists who menace our own world. We find Conrad providing deep insights into the debates on terrorism through his characters. We find Vladimir instructing Verloc to blow up the Observatory because he wanted to make the terrorist attack a symbolic one, an attack which would have been sufficient to capture the mass media's attention. This is very much similar to the present day terrorist intentions whose main targets are not actually the buildings in themselves, but the resulting terror which is created in the minds of the people when media hysterically reports the attacks, the failures of the governments to deal with terrorist attacks and the victims plights.



Also a great contribution of Conrad is seen when he makes Stevie explode the bomb. Here we find that neither The Professor nor any other member including Verloc sets off the bomb, but it is the humble and honest Stevie who is made to do the job. We often find terrorist organizations employing such simple humble people who are often mistreated by society and thus tricked into performing terrorist activities as a way to avenge their personal or social humiliation. Thus we find Conrad giving an insight into the terrorist profile who are often psychologically unwell, full of hate or having some very base motive to avenge the wrong done by the society.

Also we find that the real culprits and mastermind are not the local anarchists but the foreign embassy diplomat. We often today see the involvement of foreign states in the terrorist attacks of a country. A foreign state sponsored terrorism is much common today whose motive is to crackdown the economy of a country thereby toppling the government.

Conrad was not a fan of anarchists, but was also equally skeptical of the governments and the media that demonize them. *The Secret Agent* has an underlying tone of irony as it brings to surface the failings of the government to function efficiently. We find the police and politicians too corrupt or just infested with their own petty career ambitions. They have no proper management to protect the population against these kinds of terrorist attacks.

Thus Conrad depicted such a realistic scenario of the terrorist world that it came to influence Theodore Kaczynski who used "The Professor" as a source of inspiration, and fabricated sixteen exploding packages that detonated in various locations. He became a great admirer of the novel in his teens and developed a kind of affinity with the character of "The Professor" due to the traits that they had in common like disaffection, hostility toward the world, and being an



aspiring anarchist. Thus the novel truly brings to surface the interior instincts of a dissatisfied modern society which breeds anarchists and terrorists.

Another novel which brings out the domestic lives of terrorists is the book *The Good Terrorist* by the Nobel Prize winning writer Doris Lessing. It is a political novel first published in the year 1985 inspired by the Irish Republican Army (IRA) bombing of the Harrods department store in London in 1983. The plot of the novel revolves around the central character Alice Mellings, who organizes a squat in London, where a group of radicals move in and thus her home is transformed into the headquarters for the radicals who plan to join the IRA. Alice strives to reconcile herself to the communist beliefs despite having a bourgeois upbringing. She is drawn into terrorist activities and is compelled to follow her boyfriend Jasper who is an IRA sympathizer. Alice follows Jasper to become a member of the Communist Centre Union, a leftwing group committed to revolutionary action. They are a group with huge dreams and ambitions to incite social change against complacency and capitalism. However in their desperate attempts to prove themselves serious and committed to the cause, the group experiments with explosives and plan to commit one single, horrific act that will get them in the news. They build a car bomb and plan to explode a hotel but their inexperience leads to a minor accident on the way to the target site and finally the premature denotation of the bomb leads to killing of the one of the group members along with several other bystanders.

The novel reveals the inner workings of the terrorists' sanctum where the group stays as a family. They work on building their household and work as a team to deal with tragedies and police. It brings out the approachable and human side of the terrorists whose ideologies make them believe that what they are doing is for the greater good. Alice with her maternal instincts strives hard to make the house



homely and domestic by cleaning and renovating the house but she is equally smart as she is able to confront officials, persuade the authorities to restore the water and electricity supplies of the house, and thus prevents the local police from evicting them. In the words of Bob Corbett,

However, the great brilliance of *The Good Terrorist* is Lessing's creation of Alice. She is one of the most interesting characters of fiction I have ever read. Most characters seem to be better or worse expositions of some "type." In Alice Doris Lessing has created one of the most "real" fictional characters I have ever read; perhaps the very best. Alice is a mass of contradictions: an angry and bitter revolutionary, brilliant con artist when dealing with authorities, a seemingly confused daughter, both loving and hating her mother, and a child willing to steal large amounts of money from her father with the ease of swatting a mosquito. She lives in the squat – and not for the first time – and unlike the others, she successfully and relentlessly works to create a "home" not unlike the middle to upper class homes most of the other "revolutionaries" came from. (Corbett 2012)

Janes Rogers revisits the novel commenting, "Lessing is exploring the territory where the personal becomes political. In *The Good Terrorist* she shows us the point where the heaped-up disappointments and hopes and contradictions of individual lives coalesce into willfully murderous public action"(Rogers 2005). The novel highlights the intersections between personal domesticity and political rebellion. Thus the novel has terrorist undertones where one is compelled to think of Osama Bin Laden who revolted against the ambitions of America and committed a dreadful act of terrorism to display his disagreement.



Another novel in which the 'terrorist' never quite emerges as a credible mass murderer is the novel named *Terrorist* by John Updike. The novel dwells into the psyche of a young would be terrorist mind who seeks jihad and to follow the "Straight Path." Ahmad Mulloy-Ashmawy the son of a bohemian Irish-American mother and an Egyptian father who disappeared when he was three, turns to Islam at the age of eleven. Ahmad finds solace at the local storefront mosque in the study of the Quran under the guidance of his imam, Shaikh Rashid. Ahmad is already boiling over with anti-American thoughts in the face of American decay and corruption. While Ahmad has sexual impulses toward the girl, Joryleen Grant who is his African American classmate, he represses them and does not get into a serious relationship. His mother Teresa whom Ahmad rarely sees has an affair with Jack Levy who is Ahmad's guidance counselor at his School. He strives to get Ahmad enrolled in the community college but following the advice of his imam Ahmad applies for a local truck driving license even though he has good future prospects of joining college. Ahmad, under the influence of Shaikh believes that if he continues with college and studies, his academic studies will render him more secular and also make him doubt his religious beliefs. So he becomes a truck driver which leads to his involvement in a terrorist plot directed against the American non-Muslims where an attempt is made to blow up the Lincoln Tunnel under the Hudson River. His Imam offers him a chance to prove his religious fervor by rendering himself a martyr. Ahmad is tempted to become a suicide bomber as he agrees to drive the truck into the tunnel and blow himself up. — however, the crisis is averted through an intervention the elderly figure Jack Levy who meets Ahmad on the side of the road before getting on the highway and convinces him not to go through with the bombing. While approaching the planned location of the bombing, Ahmad chooses not to go forward



with his plan. But largely it remains unclear if he still remains a threat or does he shun his intolerant beliefs altogether.

Amien Kacou while reviewing the novel in the Journal *Perspectives of Terrorism* opines,

Updike suggests, first of all (intentionally or not), that what we overlooked about 9/11 is that there may be an intimate bond of meaning (or meaninglessness), perhaps even an uncomfortable empathy, between Islamist terrorists and their American victims or enemies: and the feeling they share is a feeling of dissatisfaction with the meaningless promises of secular modernity and materialism (symbolized quite notably by the setting itself—the decaying post-industrial city of New Prospect). What is even more important: I think Updike also suggests, second of all, that a key, universal philosophical lesson emerges from the difference in how this novel's main characters cope with their feelings of modern meaninglessness. (Kacou 174)

Thus the novel also tries to bring into light the inherent causes of frustration and feelings of void which leads the youth to express their resentment through the means of terrorism.

Thus terrorism often is adopted as a subject of literature and art as on certain levels there exists similarities between the two. The writers of such fictional works on terrorism encompass and accumulate the experiences of real life to depict them in the form of art. Here the boundaries between fictional world and real world and between word and deed are thus eliminated to deliver enhanced perspectives of terrorism and terrorists through the medium of fiction.

The dull facts and figures about terrorist attacks and the lives lost fail to provide us an understanding of the phenomenon on a deeper psychological level. The writers of these fictions have made remarkable



observations, applied imagination and in depth understanding to artistically portray the life of people associated and impacted from terrorism. Therefore these realistic narratives can also be counted to become important psychological documents to study the impact of terrorism on humankind. The life, the times, the emotions and the psychological effects which are reflected in the narratives can be used to reconstruct facts of history and make factual generalizations. Thus these realistic fictions can be even be read as narratives of history.

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## ATTITUDE AND EMOTIONAL RESPONSE AMONG UNIVERSITY STUDENTS OF ANKARA TOWARDS PHUBBING

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### Abstract

Phubbing (“phone” and “snubbing”) refers to snubbing a conversational partner when using the Smartphone in his or her company. Phubbing is one kind of technology interference that includes any “interruptions in face-to-face conversations to the feelings of intrusion an individual experiences”. The present survey study was aimed to find out the attitudinal and emotional response of university students towards phubbing. The study was conducted on N=200 (male=100, female=100) students of different universities of Ankara, Turkey. The findings of the survey revealed that how phubbing affect the present scenario of the society, and how Smartphone’s grow differences among people.

**Key words;** Attitude, Emotional, Phubbing

### Introduction

“It seems that since the arrival of the Smartphone in 2007, we’ve seen the arrival of a new problem, a uniquely 21st-century problem. While the world has gotten a lot more connected, people have become more disconnected, losing the art of conversation and real human interaction.”

With technology advancing, Smartphone’s play an important part in people’s lives. It’s easy to see people talking, slipping, or even playing on their phones in public places. Certainly, when people are concentrating on the small screens in hands, they won’t care about



their plights. So the probability of an accident is higher than before. Some countries even set up the “mobile phone sidewalk” to reduce potential hazards. But that is just palliatives. People needed to find a solution that “describe the annoying situation and further remind people to put their phones down, and get talking to each other again”. In response to this request, a new word “phubbing” was created.

**“Phubbing is a newly coined term which comes from the words “phone” and “snub.” It describes the habit of snubbing someone in favor of a mobile phone.”**

In the book “Phubbing All over the World”, “phubbing” is defined as “The act of snubbing someone in a social setting by looking at your phone instead of paying attention.” Comparing the two definitions in the paragraph, we can find both of them have the word “snubbing,” which is used similarly in meanings to “slight” and “neglect.” And the second definition emphasizes that the act of snubbing someone must happen in a social setting. When I am with people around me, I should talk, laugh, cry, or do something together with them, instead of only concentrating on my mobile phone. Playing games, reading novels, or even share my feeling with other friends on the Internet instead of paying attention to the person sitting opposite is considered rude on social occasions. So in fact phubbing is mainly about the act of “snubbing,” not just the use of the mobile phone.

We have reached a new problem since the arrival of the Smartphone. We have become more connected through our Smartphone's. However, as a result, we have become more disconnected to our surroundings. Whether it's scrolling our newsfeeds as we ignore our friends at gatherings or texting our friends at business meetings, it seems like we've become a more arrogant, self-centered bunch as we spend more time hooked on our phones. Recent years have seen an explosion in communication technology, creating devices and



systems that support one-to-one, one-to-many, and many-to-many human interactions. One of them is Smartphone's which allow people to connect with others from almost anywhere at any time. However, there is growing concern that Smartphone's may actually sometimes detract, rather than complement, social interactions. The term "phubbing" represents the act of snubbing someone in a social setting by concentrating on one's phone instead of talking to the person directly. Phubbing can be described as an individual looking at his or her mobile phone during a conversation with other individuals, dealing with the mobile phone and escaping from interpersonal communication. the concept of "phubbing" defined as the act of snubbing others in social interactions and instead focusing on one's Smartphone (Haigh, 2015), appears to have negative consequences for communication between partners, detrimentally affecting relationship satisfaction and feelings of personal wellbeing (Roberts & David, 2016). However, little is known about what causes phubbing behavior, and how it has become an acceptable or normative feature of modern communication. "Phubbing" the way we are present physically around but mentally somewhere far away.

The origin of the term phubbing is attributed to a campaign from the McCann Melbourne Company in 2012, when grassroots groups started to promote so-called polite use of mobile devices. Many have observed people snub each other through technology use, and how businesses and public spaces often discourage some kind of device use. For example, a restaurant or bar might put up a sign asking people to respect the atmosphere and be social in their real environment, rather than snapping, texting and tweeting their way through the night. According to Kipling Williams, a professor in the Department of Psychological Sciences in Purdue's College of Health and Human Sciences says "Being excluded is painful because it threatens fundamental human needs, such as belonging and self-esteem.



Research has found that strong, harmful reactions are possible even when ostracized by someone for a short amount of time. "According to his recent study, just two or three minutes of ostracism, or phubbing can produce lingering negative feelings such as anger and sadness, and over the long-term, can result in alienation, depression, helplessness and feelings of unworthiness.

People who 'phub' (often called 'phubbers') use their Smartphone's to

- Scroll through their newsfeeds: This is the most common one, and probably the worst one. Nothing says you're bored more than getting out your phone and checking to see what your friends posted online when you have company.
- Update their status: This could be as innocent as posting a selfie on Instagram. While you may be included, they are ignoring you momentarily by expressing themselves to all their social media connections.
- Text someone: They could be having a conversation (or multiple conversations) while the person they're hanging out with is in their physical presence.
- Play online games: Playing Angry Birds, Candy Crush, or any other game on a mobile app can exclude people. Phubbers can get very addicted to them especially if you collect points every time you play.

Some forms of phubbing don't require the use of the Internet. You could be on a phone call or send SMS messages and still have little to no consideration of the person you're with.



## Literature Review

Phubbing can be described as an individual looking at his or her Smartphone during a real-life conversation with other individuals, being engrossed in one's Smartphone, and avoiding interpersonal communication. Constructed by merging the words phone and snubbing, the term phubbing has made its way into the updated version of Macquarie Dictionary. This specific smart phone addiction might be considered the trouble of our age. Due to smart phones' make-up, phubbing is an issue that shares commonalities with a wide number of addictions. While there is not enough evidence related to this phenomenon, we have been led to believe that due to smart phones numerous features and ability to access the internet, phubbing is a multi-dimensional phenomenon. These dimensions are (i) Smartphone addiction, (ii) internet addiction, (iii) social media addiction, and (iv) game addiction.

Just as technology eases life, so does it cause a number of previously unseen problems in it? In the industrialized world, life requires faster access to various kinds of information as well as faster interactions and communication. This increasingly fast-paced lifestyle has caused many concepts, such as time, the perception of needs, and a sense of fun to have undergone fundamental changes. The hunger for more technology has consequences, such as excessive technology usage (Davis, 2001), high level of involvement in technology (Charlton & Danforth, 2007), and finally technology addiction (Turel, Serenko, & Giles, 2011).

Phubbing is a concept with many possible dynamics, such as being disrespectful toward another person or persons, disregard for others, and a preference for virtual environments over real-life ones. While phubbing can be based on applications, such as the internet or games transferred from one's computer to his or her Smartphone, the very intrinsic nature of Smartphone's may themselves provoke addiction. In



addition, the fact that one can now access the internet and games via Smartphone's has shifted internet addiction to another venue. As such, Smartphone's and internet addiction exist in a circular relationship, each triggering the other. For example, if the time one spends surfing the internet increases, so does phone addiction. However, problematic phone usage is seen as a behavioral addiction identical to the ubiquitous use of Smartphone's, even in prohibited environments, such as while driving (Bianchi & Philips, 2005). Researchers investigating Smartphone addiction have shown that while Smartphone's are used as a tool to overcome loneliness and the need to manage oneself, anxiety, worry, and deprivation disorder behaviors are observed in addicted individuals who have been separated from their phone (Park, 2005). In addition to offering a variety of conveniences to daily life, computers are also the source of a number of negative effects on humans. Individuals' exaggerated use of computers has led researchers to investigate the concept of computer addiction (Grifiths, 2000; Shaffer, 2002; Shotton, 1991). These studies suggest that computers are not the problem in and of themselves, but that problems arise as a result of the applications loaded on them. Playing games (Charlton & Danforth, 2007; Weinstein, 2010; Wood, 2008) and staying online for extended periods of time (Chou & Hsiao, 2000; Lin & Tsai, 2002; Yang & Tung, 2007) are examples of such cases.

### **Objectives:**

1. To examine attitudinal response towards phubbing among male and female students.
2. To examine emotional response towards phubbing among male and female students.



## Methodology

### Sample

The sample for the study was taken from different universities of Ankara, Turkey. The total no. of participants consisted of 200 students, with equal number of males (n=100) and females (n=100).

### Procedure

The data of the present study was collected through personal contact with the participants. Before administering the tool, the purpose of the study was explained to the participants and they were assured that their responses would be kept as confidential and will be used for research purpose only. After establishing the rapport with the participants, they were requested to fill the questionnaire. In this way, the data was collected from the participants. The obtained data was analyzed by the means of frequency distribution.

## Results

**Table 1.1. Showing attitudinal response among university students towards phubbing.**

Attitudinal response	Yes	No	Don't know
Do you think phubbing is a serious issue?	86.7%	6.9%	6.4%
Do you think it's a normal thing?	10.3%	74.9%	14.8%
Do you think phubbing is destroying relationships?	12.3%	45.3%	42.4%
Do you think the person is feeling unimportant so is phubbing?	50.7%	22.7%	26.6%
Do you & your family or friends have a rule about anti-phubbing?	34.0%	54.7%	11.3%
Do you think that phubbing is a growing problem?	82.8%	7.9%	9.4%
Do you think boys are more phubbing than girls?	19.2%	39.4%	41.4%



Table 1.1 depicts the attitudinal response of male and female students towards phubbing. Most of the students think that phubbing is a serious issue. About 86.7% and 82.8% of male and female students consider phubbing as a growing issue. And only 10.3% of students think it's a normal problem.

**Table 1.2. Showing emotional response among university students towards phubbing.**

Emotional response	Yes	No	Don't know
Do you think you are effected by phubbing?	68.5	24.6	6.9
Do you ignore people who do phubbing while sitting together?	80.8	12.8	6.4
Do you get annoyed if he/she is phubbing?	83.3	10.8	5.9
Do you get angry on phubbers?	66.5	28.1	5.4
Do you get sad with phubbers?	52.7	36.9	10.3
Do you feel yourself unimportant while someone is phubbing while you meeting he/she?	63.1	28.1	8.9
Do you feel person you are talking to, is not listening you because of phubbing?	86.2	10.8	3.0
14. Do you feel pity on the phubbers?	35.0	53.7	11.3

Table 1.2 shows the emotional response of students towards phubbing. Most of the people get annoyed and disturbed due to phubbing. Around 86.2% of students thought that the person they are talking to doesn't listen to them because of phubbing and 83.3% of people get annoyed. Although some people ignore the phubbers but most of the people become sad and angry with them.





## Discussion

Since Smartphone's become an important part of life in today's era, but there are growing drawbacks with it also. Apart from minimizing the distance between people who are far away from each other, it grows issues of phubbing among the people living side by side, by detracting social relationships. The study found that most of the students are involved in phubbing, and this study go in line with the study of Arslan and Tutgun-Ünal (2013), they found that more than half of the students attending the university in their study had used a Smartphone for at least six years and that they used it for at least one hour a day.

The study also reveals that how people are infuriated by phubbers, and most of the people get angry with their phubbing behavior. There exists a large number of studies conducted on young individuals, excessive Smartphone use, and Smartphone addiction that not only support the findings of this study, but that also bring to light the seriousness of the situation at hand (Bianchi & Philips, 2005; Ha et al., 2007; Lee & Hwang, 2009; Walsh, White, & Young, 2008).

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## **A COMPARATIVE STUDY OF PARADIGM SHIFT IN MODERN INDIAN ART**

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### **Abstract**

Modern Indian art has become no less experimental than that of Europe or America, though in a somewhat different way. This development was done by the end of 18<sup>th</sup> century to last quarter of 19<sup>th</sup> century. All genuine art has to be the expression of the spirit of its time. There is not only the development Painting, but also the development of sculptures & prints was done at that time. Development of Modern art took place in the countries like Europe, Portugal, Islamic countries, Greek and India. In India: Sculptor's – The Impressionism of Rodin and Epstein is represented by Prodosh Dasgupta, Khastgir, Ramkinkar Baij, S.K.Bakre et

### **Abstract**

Modern Indian art has become no less experimental than that of Europe or America, though in a somewhat different way. This development was done by the end of 18<sup>th</sup> century to last quarter of 19<sup>th</sup> century. All genuine art has to be the expression of the spirit of its time. There is not only the development Painting, but also the development of sculptures & prints was done at that time. Development of Modern art took place in the countries like Europe, Portugal, Islamic countries, Greek and India. In India: Sculptor's – The Impressionism of Rodin and Epstein is represented by Prodosh Dasgupta, Khastgir, Ramkinkar Baij, S.K.Bakre etc. A very simplified and strong style is found in the work of Shanko Chaudhuri, Dhanraj Bhagat and Bakre.In



Paintings : Manish Dey, Sailoz Mookherjee, Jamini Roy, K. Sreenivaslu have tried to revive traditionalism by falling back on other, not yet exploited aspects of ancient or folk art.

**Key Words:**Modern art, Renaissance, Architecture, Paintings, Sculptures, Traditional, Modernization, Abstraction, Revolutionary, Crisis, Stage, Experimentation, Integration, Style, European.

## Introduction

By the end of the 18<sup>th</sup> century Indian art of the Islamic period had also completed its cycle of life. What was good in the foreign Islamic culture had been completely absorbed into the Indian tradition. Islamic art in India had become thoroughly Indian, formally as well as emotionally, and Hindu art had become almost indistinguishable from its Islamic sister. But, with the tension between them, the creative stimulus had also disappeared. The Mughal style, now effeminate and over-ornate, had passed the peak of its evolutionary possibilities. There was even a contraction, a fusion of too complicated motifs into new standard patterns subordinated to a simple composition. And here a new experimentation set in, a search for new creative opportunities: the late Maratha temples, for example, with their simple fluted sikhara cones, or the late Rajput palaces planned in simple storey's decked with a rich covering of intricate, but uniform ornamentation. The time was ripe for another culture and artistic synthesis. This emerged from the contact with Europe. But it was a slow and painful process lasting more than a century. And it is not finished even today, because European art was also at that time in a critical stage and, under the impact of a long series of revolutionary discoveries, has not yet overcome it. thus, out of the conflict between East and West there is growing a new, and technical world civilization, overthrowing all older ways of life, whether Eastern or Western, but without finding its own form. And as all genuine art has to be the expression of the spirit of its time, modern



Indian art has become no less experimental than that of Europe or America, though in a somewhat different way.

### **Objective of Study**

The main object of this paper is to conduct comparative analysis of paradigm shift in Modern Indian Art in comparison to European, Portuguese, Louis xvi Style, English Influence, Romantic Renaissance.

### **European Colonial Art**

The few Europeans living amidst the teeming millions of the Mughal Empire or of the South had no alternative but to adjust themselves to the foreign milieu. They lived in Indian dress, in Indian style, with Indian wives, in Indian houses; and European articles, especially cult objects, were highly valued rarities. Many were buried in Mughal mausoleums (Agra cemetery in the 16<sup>th</sup> century) In the interior of India these practices continued well into the early 19<sup>th</sup> century. When they were sternly suppressed by the British East India Company. Even then, European tombs remained semi-Indian; an obelisque type was but a transformation of the sikhara of the Hindu funeral shrine, and a sarcophagus type an adaptation of the Tulsi shrine customary for deceased Hindu women. In the coastal settlements ("factories"), however, rich merchants had their "Baroque" mausoleums, amateurishly designed and clumsily executed (e.g. Balasore, Ahmadabad, and especially Surat).

### **Portuguese Art**

The Portuguese first introduced the late Renaissance and Baroque art of their country into their independent town at Goa, Bassein, Daman, Diu, and also into smaller mission stations in the interior (e.g. Haiderabad, or San Tome at Mylapore). They had good architects and painters especially amongst the Jesuits, and they imported Christian paintings and prints (mainly from Antwerp). The churches and



monasteries of Velha (Old) Goa, the vice regal palace, Sta. Fe, the Misericordia, San Francisco d'Assisi, above all Bom Jesus with the silver shrine of St. Francis Xavier, or those at Bassein (the Matriz, the Franciscan, Dominican, Jesuit and Augustinian churches, St. Paul, governor's palace, senate, etc.) are very impressive. However, they are purely European, and only in the many would sculptures is the hand of the Indian artist to be felt. The paintings and prints were also brought to the Mughal capital, and Jahangir had his Lahore palace decorated with copies of the Madonna, Christ, etc. Under Shahjahan, when "Firengi" mercenaries served in the mughal artillery, Tuscan and French mosaic workers were employed in the decoration of the Delhi palace of the Taj Mahal, while Italian paintings ( In the manner of Veroncse ) decorated the Athar Mahal at Bijapur. Again under Bahadur Shah, when Donna Juliana Dias de Costa had much influence in the imperial zenana, European paintings were in fashion. But taken all in all, European art was, outside the Portuguese possessions, no more than a whim, like the chinoiserie of Rococo Europe.

### **Louis xvi Style**

By the by other European nations obtained their share in the colonial competition, and built forts and settlements along the Indian coast; the Dutch at Surat, Cochin Ceylon Chinsura, the British at Surat, Bombay, Madras and Calcutta , the Danish at Tranquevar, and the French at Pondicherry and chandernagore. This had no influence on the interior of Indian, except for the curious rooms decorated with Portuguese blue and Dutch blue-and-white Delft tiles in the palace of the maharanas of Udaipur; but the great struggle for supremacy between the French and British First began to exercise some tangible influence on the Indian art. The French, beaten, continued to control much of India through their officers in the armies of the Mughal nawabs, the Maratha rajas and the sultans of Maisur. Then the French Revolution and later the Restoration forced a number of aristocrats, then jacobines



and Bonapartist officers, to try their luck at the courts of Haiderabad, Lakhnau, Indore, Gwalior, Sardhana and Lahore. In consequence, palaces in the French taste of the later 18<sup>th</sup> century, or at least similar decorations on Indian houses, turned up all over India, often indiscriminately mixed with elements of Mugal style, at Seringapatam, Tanur, Vellore, Satara, Haiderabad, Bhopal, Nahpur Gwalior, Baroda, Jaipur, Delhi (in the Red Fort, now destroyed), but especially at Lakhnau (La Martiniere, Dilkusha Palace, Sikandar-Bagh, Chhattar-Manzil, Hazrat-Ganj, Kaisar-Bagh, even with Chinoiserie features!). They continued in this style until c. 1850-70.

### English Influence

With the British conquest of the country English architecture of the period was also introduced, first in the "Presidency towns", in Calcutta (Old Mission Church 1770, St. John's Cathedral 1787, Roman Catholic Cathedral 1797, Warren Hastings' Belvedere House, Government House 1802, octahedral monument 1823, etc.), in Bombay (St. Thomas Cathedral 1672-1718, Town Hall 1835, Mint, etc.) and in Madras (Fort St. George, St. Mary's 1680, St. Andrews' 1820). They fit into the tropical scenery like the classical mansions on the vast plantations of the American South. They were imitated by the last nawabs of Bengal at Murshidabad (Bara Kothi 1829), the Kings of Oudh at Lakhnau (Moti Mahal, Tarawali Kothi, etc.) the Nizam of Haiderabad (Falaknuma Palace, etc.). Sculptures and paintings, of course, were entrusted to British artists: Chantrey, J. H. Foley, Woolner, Flaxman, Sir Joshua Reynolds, Tilly Kettle, Zoffany, Dance, Thos. Daniell, Lemuel Abbott, William Hodges etc. Whose representations of contemporary personalities and of palaces, many of which have since then disappeared, are of the great interest. The prints determined the larger size of late Oudh miniatures and the landscapes therein; the painter Mihr Chand in particular executed many careful copies after Zoffany and Kettle.



## **Art of the late 19<sup>th</sup> Century**

Thereafter, all the “historical” architectural styles of the 19<sup>th</sup> century found their way into India: neo-Gothic (Bombay government offices, the university and; the Victoria Terminus; St. Paul’s Cathedral and High Court in Calcutta, etc.), looking utterly out of place in the Indian scenery; Norman (e.g. Lahore railway station, bridge heads over the Jumna and Indus); neo-Italian (maharajas’ palaces in Gwalior, Indore, Baroda and the Victoria Memorial in Calcutta, etc.). The so called “Babu” (Hindu clerk) Gothic architecture of utilitarian offices and barrack buildings with badly proportioned, too narrow Gothic windows and gables, became especially common, but also a byword for lack of taste. Many mansion of rich Hindu merchants, overburdened with bad sculptures and clumsy horrors. European paintings, trick mirror, figured chiming clocks, etc., are veritable horrors. European painting was now taught in the government schools of Arts, generally provoking an aversion against occidental “materialistic” art. The only Indian painter of reputation was Raja Ravivarman of Travancore, a tolerable portrait painter, but known all over India because of his mythological pictures in very historical taste, sold in millions of bad oil prints.

## **Revival of Native Art**

In the last quarter of the 19<sup>th</sup> century a reaction finally set in, first amongst a handful of Englishman who had learnt to appreciate the beauties of Indian art and deplored its disappearance, then amongst Indians who first timidly tried to copy and imitate old masterpieces of art, but at last broke away completely to new inspirations.

By and by an increasing number of genuine masterpieces of ancient Indian art became known. In 1862-87 Sir Alexander Cunningham surveyed most of the surviving monuments of Northern and Central India, Jas. Burgess undertook a similar job in western India, H. Cousens in the South and 1879 Jas. Fergusson brought out his History





of Indian and Eastern Architecture. In 1896 J. Griffith created a mighty wave of enthusiasm by the publication of the Ajanta murals, in 1902 the newly founded Archaeological survey of India started its Annual Reports, and in 1905 the Law for the Protection of Ancient Monuments was passed. Museums of archaeology and industrial art were founded, especially at Lahore, Jaipur, Calcutta, Madras, under the initiative of G.C Birdwood, J.L.Kipling (father of the poet), The .H.Hendley, F.S.Growse, B.H. Baden-Powell and E.B.Havell. The still surviving crafts were surveyed and encouraged. The traditional late Mughal –Rajput architecture was used for new buildings: the town of Bulandshahr in Uttar Pradesh the Lord Curzon Museum at Mathura, the government buildings at Jaipur, Jodhpur and Bikaner (by Sir Swinton Jacob), Baroda Palace (by Mant and Chisholm), Lahore (by Sardar Ram Singh), the Indian Gate , General Post Office and Prince of Wales Museum at Bombay (by G. Wittet) The last stage of this rather artificial revival was the building of New-Delhi (1911-80) by Sir Edwin Lutyens and Sir Edward Baker in a mixed Indo-European style, sometimes quite successful as far as is possible for adaptations of the kinds.

In the meantime Europe had become more interested since the discovery of Graeco-Buddhist (Gandhara) sculpture. Much more important was the general revolution of European taste since the Impressionists, so that classic Greek art was no longer set up as the sole standard of beauty, and attempts were made to understand non European art style from their own standpoint.

### **Romantic Renaissance**

This new approach was first applied to Indian art by E.B Havell, principal of the Calcutta School of Arts and A.K.Coomaraswamy. The new interpretation of Indian art was very one- sided almost identical with Wackenroder's theories which had awakened the Romantic poets



and artists of the early 19<sup>th</sup> century to an understanding of mediaeval European art. It fulfilled two important tasks: the vindication of the beauties of Indian art and of the noble ideals it served, and the restoration of the artistic self-respect of a nation trodden down to servility. On the other hand this one-sided emphasis on its mediaeval aspect has hindered its critical study and also scared off other nations from a normal enjoyment. Today; a more balanced approach is gaining ground.

### **The Bengal School**

Under the influence of Havell, Abanindranath Tagore, a cousin of the poet Rabindranath, and Nanda Lal Bose tried to recreate a national style of painting. Working in water colours, they chose Indian subjects, and experimented in a technique eclectically culled from Mughal and Rajput miniatures, the Ajanta murals, even Chinese and Japanese ink painting. The works of the aristocrat Abanindranath were timid and delicate, sentimental, always wrapped in a vague atmosphere and vaguer emotions, an Indian variant of late PreRaphaelism. Nanda Lal evolved a strong, experimental style. But his efforts to recapture the form language of a long dead past often misled him to produce the absurd figures. Despite all these weakness both masters have created an opus which, because of its nobility, meant an immense progress. From their teaching there developed the so-called Bengal School (centers in Calcutta and Shantiniketan) which was hailed as a renaissance of national art and captured most art schools (D. Roy Chowdhury, Mukul Dey, Bireswar Sen, Sarada Ukil, K.N.Mazumdar, Asit Kumar Halder, etc.). Similar attempts at the Bombay school of Arts under Gladstone Solomon and at Ahmadabad under Ravisankar Raval and Kanu Desai were soon absorbed. But soon the Bengal School degenerated into a mass production of eclectic compositions, abstruse figures without structure because every detail had been copied from



somewhere else, and of a neurasthenic sentimentality mistaken for "spirituality".

## **The Bengal School**

The reactionary "restoration" mentality and the soft sentimentality of the Bengal School could, however, no longer appeal to a younger generation thinking in terms of political and social revolution, of modernization and industrialization of the country, of contact with the masses. International modern trends more and more got the upper hand. Not with standing official efforts to boost a "national" architecture inspired by Gupta models (Birla Temple at New Delhi, neo-Buddhist Shrines at Calcutta, Sarnath , etc., "chaitya" arches, chhatris, Hindu columns, in recent government buildings, etc.), modern functional architecture has now become the rule , and Le Corbusier has been responsible not only for the planning of Chandigarh , the new capital of the East Panjab, but also for administrative buildings and villas at Ahmadabad and other towns; Otto Koenigsberger at Bangalore ; and quite a generation of younger India artists is working in the same spirit. In sculpture, the impressionism of Rodin and Epstein is represented by Prodosh Dasgupta, Khastgir, Ramkinkar Baij , S.K.Bakre, etc. A very simplified and strong style is found in the works of Shanko Chaudhuri, Dhanraj Bhagat and Bakre. In painting, Manishi Dey, Sailoz Mookherjee, Jamini Roy, K.Sreenivasalu have tried to revive traditionalism by falling back on other, not yet exploited aspect of ancient or of folk art. The leaders of Impressionist painting are N.S. Bendre, Kalyan Sen, D.J.Joshi, Kanwal Krishna, K.C.S. Paniker. S.D. Chavda, K.H.Hebbar, B.Sanyal, K.S. Kulkarni, Lakhman Pai, and Rathin Moitra have evolved a modern style via a study of folk art. The extreme modern wing is represented by K.H. Ara, H.A. Gade, S.B.Palisikar, Samant, George Keyt ("the Indian Picasso"), Rasik D.Raval (comparable to Matisse ). M.F.Husain and Amina Ahmad (symbolic and decorative abstraction). The poet



Rabindranath Tagore has become known by very personal pen-drawings reminiscent of Odilon Redon. The best and most individual painter has probably been Amrita Sher-Gill, a girl of Sikh-Hunarian mixed descent who, trained in Italy and Paris, after her return to India evolved an increasingly Indian style via Gauguin, Modigliani and Japanese masters such as Korin and Koetsu; a style very simple and decorative, yet most sensitive and moving. She died young in a village, soon after her, in 1942.

## Conclusion

To sum up it can be said that the struggle over modern Indian art is not yet ended; it will probably continue as long as this subcontinent passes through the labours of modernization, as long as the integration of past and present is still uncompleted. Only then will the Indian art of the future reveal itself. But it cannot be a mere renaissance of the past; it will be something new, like all former styles emerging from a revolutionary crisis.

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## **A COMPARATIVE STUDY ON CUSTOMERS PREFERENCES TOWARDS PAYMENT OPTIONS IN ONLINE SHOPPING**

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### **Abstract: -**

E-commerce is proliferating rapidly in India in the form of online shopping. According to a new study by Forrester Research, *with \$681 billion in online retail sales in 2016, China is the largest market for e-commerce globally, followed by the US, and the fastest growing one is India.* The main objective of this research is to study, what is the foremost option for payments in online shopping for online shoppers in Andhra Pradesh. Among the leading options available for online payment, credit card, debit card, cash on delivery, EMI option, gift voucher and Digital wallet play a prominent role. To this end, a survey was conducted and the 150 questionnaires were distributed among the people of different markets and the general public in Ongole. A total of 120 valid responses have been evaluated by table analysis. The results of study reveal that buying preferences of on-line shoppers in India are significantly affected by various payment options that are described above. The results of the study could be further used by the researchers and practitioners for conducting future studies in the similar area.

**Keywords:** E-commerce, On-Line Shoppers, Payment Option.



## I. INTRODUCTION

Online shopping has been widely accepted as a way of purchasing products and services. It has become a more popular means in the Internet world ((Bourlakis et al., 2008)). It also provides consumer more information and choices to compare product and price, more choice, convenience, easier to find anything online ((Butler and Peppard, 1998)). Online shopping has been shown to provide more satisfaction to modern consumers seeking convenience and speed ((Yu and Wu, 2007)).

Rampant usage of Smart phones is one among the chief reasons for proliferation of online shopping in India. For keeping in touch, shopping, hailing a cab, or ordering food everything begins and ends with that Smartphone. Online shopping in India is permeating by leaps and bounds and it is only getting bigger. According to Forrester Research, approximately a fifth of total retail sales will take place online by 2021 in Asia Pacific, with 78 percent of that coming from mobile, up from 63 percent in 2016. The study adds that online retail via mobile will grow at a CAGR of 15.6 percent, to reach \$1 trillion in 2020, up from \$539 billion in 2016. India that is the fastest-growing e-commerce market.

Today, the online shopping has become a trend in India and the reason behind the adoption of this technique lies in the attractive online websites, user friendly interface, bulky online stores with new fashion, easy payment methods (i.e. secure pay online via gateways like paypal or cash-on-delivery), no bound on quantity & quality, one can choose the items based on size, color, price, etc.

**Online Shopping in India:** - Online shopping is growing in India day by day with the use of internet. Retailers expand their markets with the customer who may not otherwise visit the physical store. The main



significance of online shopping is to get attention of the customer who use internet most of the time. And the other benefit of online shopping is their unique online payment methods which attracts customer for purchase online. If there are so many benefits in online shopping on other side online shopping also comes with potential risks and dangers that customer wants to be aware. In the future, we can expect online stores to improve their technology tremendously, allowing for an easier and a more realistic shopping experience.

Many physical retail stores have expanded their market by using the Internet. By having both a virtual store and a physical store, companies get the best of both worlds. Stores that are marketing their products in both areas can take advantage of the high demand for online shopping availability. The ability to shop for products online gives consumers the option to purchase goods via internet with the convenience of not even leaving his or her home. Also rising in popularity, are online websites, such as flipkart, amazon, jobong, snapdeal which allow consumers to sell and purchase to each other.

Others, however, still enjoy and prefer to go into a physical store to make purchases. For some consumers their method of purchase is not because of a preference but because of generation gap.

**Online Payment Options:** - Today, the online shopping has become a trend in India and the reason behind the adoption of this technique lies in the attractive online websites, user friendly interface, bulky online stores with new fashion, easy payment methods (i.e. secure pay online via gateways like paypal or cash-on-delivery), no bound on quantity & quality, one can choose the items based on size, color, price, etc.

Payment Systems have made shopping online much easier. "Customers with a virtual wallet for online global shopping, empowering a new segment of consumers to buy products and services on the web "



without the use of a credit card” (DBS and PayPal, 2010). This payment option allows for safe transactions between two private parties.

Various methods of payment modes in online shopping:-

1. Credit card
2. Debit card
3. CoD ( cash on delivery)
4. Net Banking
5. EMI option
6. E- Gift voucher
7. E- wallet

**1. Credit Card:** - A credit card allows the cardholder to pay for goods and services based on the holder's promise to pay for them. The issuer of the card creates a revolving account and grants a line of credit to the consumer (or the user) from which the user can borrow money for payment to a merchant or as a cash advance to the user.

In online shopping process if the customer wants to pay via credit card then he/she has to give all the information of credit card on bill desk of the shopping web site. Many banks in India provide credit card and most of the online shopping websites have their payment gateways with credit cards. The most popular bank's credit cards in India are HDFC, ICICI, CITI, AXIS, SBI and PNB. In India the use of credit card is limited because of limited number of credit card holders.

**2. Debit card:** - A debit card is a more convenient way of spending money than carrying cash around all the time. You put your cash (or a check) into a checking account, and you can swipe your debit card to deduct money from that account to pay for your purchases. It's a great





way to buy things without having to worry about going into debt or losing your money.

Debit card have the same process of payment in online shopping as same as credit card. In India Debit card is also known as ATM card. All Nationalized and private banks provide the facility of debit card. The number of debit card users exceeds far more than credit card users in India.

**3. CoD (cash on delivery):-** It's a famous method of payment in online shopping in India. In this type of transaction payment for a good is made at the time of delivery. If the purchaser does not make payment when the good is delivered, then the good will be returned to the seller. CoD allows the purchaser to pay at the time of delivery instead of having to pay upfront. "CoD offers a fairly risk free trail process for a new user" says Dhall. Payment is made to the shipping company, and the shipping company then relays the payment back to the seller.

**4. Net Banking:** - Net banking is an electronic payment system that enables customers of a financial institution to conduct financial transactions on a website operated by the institution, such as a retail bank, virtual bank, credit union or building society. Online banking is also referred as Internet banking, e-banking, virtual banking and by other terms. For using net banking facility user have set up a Id and password and on the time of payment by using this ID and password costumer can pay the required amount.

**5. EMI option:** - EMI means 'Equated Monthly Installment - EMI' a fixed payment amount made by a borrower to a lender at a specified date each calendar month. In India Many online shopping website gives EMI option for payment of their purchase. This facility is given by website to only those customers who have a credit card. In our country



this method of payment is not so much popular because of the limited number of credit card holders.

**6. E-Gift Voucher:** - E-Gift voucher works just like regular Gift voucher; however, this kind of gift voucher is emailed to the recipient. A copy of the E-Gift voucher will also be sent to the purchaser as confirmation that the email was sent. This method of payments are very limited in online shopping because online shopping firms distribute very less number of voucher to the customer.

**7. E- Wallet:** - A digital wallet refers to an electronic device that allows an individual to make electronic commerce transactions. Every online shopping website has their E- wallet with different names. Customer of online shopping can fill their E- wallet by using different payment option and can pay their order whenever they need.

## II. OBJECTIVE OF THE STUDY

The research objective is to prioritize and analyze various payment options of online shopping with the people of different markets and general public in Ongole city.

## III. METHODOLOGY

Random Sampling had been used to collect the data from the respondents by making sure that all the respondents are online shoppers.

**Method of Data Collection:** - A structured questionnaire was served to collect the data from the respondents.

**Sample Design:** - Under sample design the method of Random Sampling had been used to collect data from the respondents.

**Sample Size:** - A sample size of 150 respondents, of which all are online shoppers, is taken for the collection of the data.

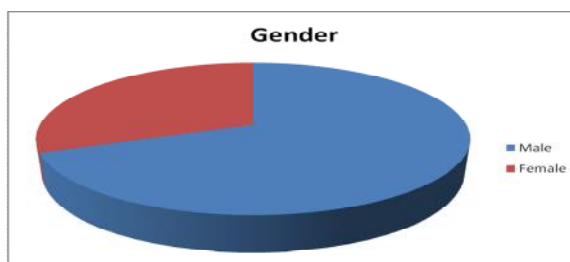
**Data Analysis and Interpretation:** - In data analysis and interpretation the method of Pie charts and tables had been used to analyze the data.

In this survey the questionnaire was distributed to 150 respondents from which 121 answered. Out of 121 responses, one had been declared invalid, hence totaling to 120 valid responses. The Questionnaire comprised of some demographic questions such as age, gender, frequency of online shopping, and the most preferred payment mode etc., were asked.

Following are the tables and pie diagrams of data interpretation

1. Out of 120 respondents 83 are male and 37 are female

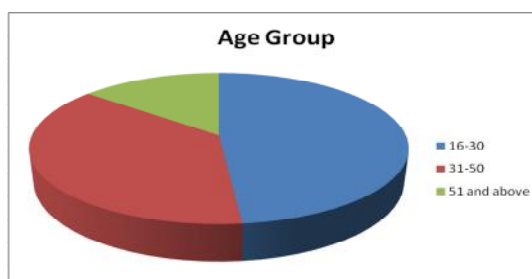
Gender	
Male	83
Female	37



*Figure 1: Male Female ratio of the respondents*

2. Out of 120 respondents majority are in the age group of 16-30.

Age Group	No.of Respondents
16-30	58
31-50	45
51 and above	17



*Figure 2: Age wise categorisation of Respondents*

3. Majority of the respondents are convenient with CoD payment option.

Method of Payment	Method of Payment
Credit Card	14
Debit Card	29
CoD	43
Net Banking	21
EMI	9
E-Gift	4
E-Wallet	

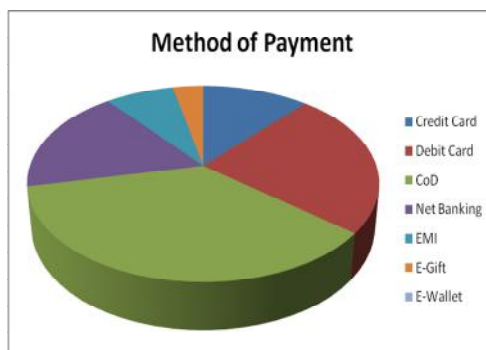


Figure 3: various payment options used by respondents

#### IV. CONCLUSION AND SUGGESTION

The work deals with an analysis of Comparative study of online shoppers preferences towards various payment options in online shopping. The study was based on empirical data obtained through distribution of questionnaire to the general public of Ongole city from different regions such as shopping complex, restaurants, book stalls etc. The overall result proves that the majority of the respondents' age group that shop online is 16-30. The number clearly indicates the projected growth of online shopping. The main objective of the research is to identify and prioritize various payment options available in online shopping and the result shows most of the respondents are using cash on delivery option in the city because of its easy to use and risk free nature of payment transaction. Next to CoD, majority of the respondents use debit card option, because of its availability with every bank account holder and easy to use process. The study reveals that of late net banking also is becoming popular among online shoppers due to Governments regulations on financial sector to encourage people towards net banking. According to the study Credit card and EMI options are also slowly boosting up after net banking. The number of



credit card holders is very less in city so this option is also very less frequently used. There is less number of respondents using EMI option because EMI facility is available only for those people who possess credit card and have credit limit. E-Gift option is not very popular among the respondent because of its low awareness. This result can also be used by various organizations to improve the payment transaction method and incorporate those methods which are frequently used by online shoppers to attract them towards online shopping.

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## THE ECONOMIC BACKGROUND OF THE MUSLIM FREEDOM FIGHTERS IN RAYALASEEMA REGION OF ANDHRA PRADESH

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**Brief History :** The present paper deals with the Muslims participation in the Freedom Struggle in the Rayalaseema. On the basis of available records, we have been able to list 26 Muslims who participated in the Freedom Movement. We do not know, for want of records, how many more participated in the struggle. In my thesis, contribution of Muslims of Rayalaseerna to the Freedom Movement in Andhra Pradesh have been discussed in detail (the role played by the Muslims in the . Freedom Movement ) However A few aspects specially with regard to economic reasons which made them to participate in the struggle are examined below.

**Introduction :** As will be seen further, excepting one or two most of these participants were economically poor and backward. They were either petty business men or Jatka driver, or Coolies whose incomes were too insufficient for their own maintenance. Under normal circumstance, perhaps they would not have ventured to participate in several movements since that would effect their family economy. Yet, they participated in the movement. Some of them were influenced by the speeches which they heard from the local leaders. The tour of National leaders like the Mahatma, Mohammad Ali and Showkat Ali brothers, Abdul Kalam Azad, and Babu Rajendra Prasad had electrifying effect upon them. Yet one wonders if this was sufficient for



them to participate in the movement and the mass, be they Hindus or Muslims participated with enthusiasm.

The present' study has shown that number of muslims who participated in the struggle for freedom in Rayalaseema was too small when compared to Muslim population itself. It will be seen that, most of the participants had to look to the higher ups among the Hindus for eking out their livelihood. The Hindu leaders were most of them, economically well placed and could afford to sacrifice. The Muslims being almost in the pay of Hindus, naturally followed them unwittingly. This was obviously because, the Muslims had to depend upon them for their financial support and if and when ordained by the Hindu leaders, explicitly or implicitly, these Muslims had join hands with them. We do not have any knowledge as to how those dependent Muslims lived on, when their bread-giver was behind the bars. It was quite possible- that they were at the mercy of the Hindu leaders. Most of them being Zamindars or followed professions like law or medicine. This would make one raise the question whether, these Muslims were so much influenced by the national sentiments as to participate on their own accord. It is true that many of them expressed the view that, they participated in the movement on their own and not by face from other bodies.

In some cases, the Muslims reaction is the spur of the movement when under emotional stress they jumped into fray without realising the consequences of the action.

### **Muslim Freedom Fighters in Rayalaseema :**

Even in such a case, they were in the company of Hindu friends who might be goaded them into action along with them. Here it is the emotional reaction that mattered rather than cool logical thinking. This is more so in cases where these people indulged in violent activities,



which was much against the principles of non-violence of Mahatma Gandhi.

We can cite the case of Sheik Peer Sahib of Cuddapah, who was imprisoned and punished for the act of sedition as early as 1857. It is stated that this individual excited sedition, among the native officers and men of Madras Native Infantry regiment stationed at Cuddapah. He was a poor mendicant who, from available evidence, collected money from several Muslim officials of M. N. I. He was even fed by some. He started whispering that British raj would be ended and there would be Mughal rule once again re established. This was sufficient for British authorities to consider his action as seditious.<sup>1</sup>

Those that participated in violent activities like removal of fish plates and cutting of Telegraphs lines, During of Bungalows and the like were indulged in such activities by the encouragement of Hindus who were far better placed in society than these young Muslim participants. They were all along under the instruction of Hindu friends. The fact that M. Mohidden Sahib of Chiyyedu Village in Anantapur District was introduced to Gandhiji by a Harijan Erukulappa in 1932 at Anantapur shows that there was no distinction of caste or creed in people's participation in the Quit India Movement. He was only a coolie by profession.<sup>2</sup>

Mulla Akbar Ali of Nemakal in Kurnool district, son of Mullah Ali Sahib, a priest came under the influence of Sitarami Reddy, a village congress leader, at the age of 18 years. They participated in the programme of propagating against the payment of tax on salt and tapping of liquor. Again, these two leaders went to Alur to picket the alcohol bidding, under the leadership of Venkateswara Rao. All of them were arrested for having picked against alcohol bidding. Akbar Ali and his friends were convicted by the Magistrate of Adoni for six months of imprisonment from 10-7-1942 to 10-4-1943.<sup>3</sup> Akbar Ali's participation





was objected to by his co-religionists. He replied that all of them were after all, Indian Muslims and not Muslim League activists. At the time of his arrest, Muslims of Bellary wanted him to tender an apology so that he would be freed from imprisonment. But,, all these fell on deaf ears and he could not be cowed down easily. As a true nationalist he had participated in the movement.<sup>4</sup>

Two others, namely, M. Shamsheer Bags and Mohammed Rasool Sahib° who participated in the Quit India Movement, unfortunately associated themselves in violent activities, which was much against the tenents of the Mahatma., Under the leadership of Nivarti Venkatasubbaiah, both of them removed the fish plates of the railway line between Nandyal and Tanyarn railway station on 31-8-1942. We have no source to find out whether it was simply under the spur of situation or quite willingly that they indulged themselves in such activities. From what we know it is more likely that, having associated, with others, they could not keep themselves away from the stand taken by others with regard to the violent activities.

At this juncture, another question that we have to examine is whether they were aware of the implication of such violent activities which were disapproved by the Mahatma since they were very much against the principles upheld by him. For all that happened and considering the fact that, after all, the participants were not so much educated as to understand the implications it is quite likely that they blindly followed their colleagues.

Yet another, Muslim K. Mahaboob Sahib from Kurumala, Anantapur district also took part in non violent activities. e was a coo y y pro essiOn' under the leadership of Aryasamudra Narasinga Rao, and a group of people and he indulged in the act of setting fire to the forest bungalow at Kothakota: He was arrested and convicted for one year regorous imprisonment from 19-7.1943 to 19-7.-1943.<sup>7</sup>



We have to recall the services of four Muslims who joined the Indian National Army of Subhas Chandra Bose. Abdul Khadar was a jataka driver, who hailed from Riyachoty, Cuddapah districts.<sup>8</sup>

Both Abdul Ali<sup>9</sup> and Mohammed Afzal<sup>10</sup> were the sons of a retired police constable of Caandragiri, Chittoor district and M.Mohammed Ibrahim<sup>11</sup> was a son of patnulu. Hyder Sahib of Punganur, Chittoor district joined the British army due to their financial problems and were sent to battle field. They were caught by the Japanese in the II World War, as prisoners. Later, as prisoners of war they were enmass transferred to the control of Netaji Subhas Chandra Bose. Netaji addressed them and explained to them the need of the hour and filled in them a spirit of nationalism so that they could fight against those Britishers. At last, they surrendered to Britishers and were sent back to India. In these cases, they were not direct participants in the Freedom Struggle. Their miserable financial conditions had driven them to events like that join the army and the events that followed were only consequential.

In such mass movement, not all would realise the magnanimity of the cause for which they were struggle. It was a sort of group mentality that made them participate in the movement. In other cases it is quite possible that the leaders of the villagers might have, at least to some extent, taken over the burden of maintenance of the families of these freedom fighters.

This does not mean that we are belittling the sacrifices made by the Muslims. In fact, we may as well say the same with reference to Hindus also. But in cases, where there were quiet ordinary people like coolies or jatka drivers, or petty business men, they might not have had any knowledge of British atrocities. But, they were not subjected to such tyranny as the land lords and merchants had undergone. Yet, they felt that British rule was unwanted. On their own individuality, they



could not come to the forefront of the movement and they joined the others inspite of the fact that, they could not do so, with their own responsibilities of family and with nothing else to fall back upon excepting their own meager earnings.

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## ENVIRONMENTAL EDUCATION: THE BIBLICAL PERSPECTIVES

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### Abstract:

This paper is a short conceptual article which discusses the Biblical perspectives to environmental education. This is a study of the major areas in the light of the Church, in its conviction for Environmental education. The Church for salvation also includes the creation or the environment, through it defined stage, and is fully responsible for the environmental conditions, and it must provide redemptive measures for it. It is the immediate task of the Biblical philosophy of education, to establish the truth of the world, in order for Church to effectively discharge its responsibilities; fundamental steps must be taken to control the psycho-ecological basis of the religion founded in the Bible. Thus, Church can motivate people to work for positive social change through Biblical based environmental education which can be guided towards the Christo-centric environmental education.

**Keywords:** Authority, Creation, Steward, Redemption, Environmental Education.

### INTRODUCTION

The readers of the Bible will undoubtedly realize and can determine that the Bible is a book of Creation, ideas, anthropology, history, political rights, and Ecology, and so on, if prospectively interpreted seeking the Mind of God, which are enshrined in the Bible and mandated man's responsibility to creation by God's as its steward on earth. As Genesis 2:v15 tells us that *"The Lord God took the man and put him in the Garden of Eden to work it and take care of it,"* also in Genesis 1:v28, *"Be fruitful and multiply, and fill the earth and subdue it; and have dominion over the fish of the sea and over the birds of the*



*air and over every living thing that moves upon the earth", while here subdue does not reflect suppression but rather to manage its successive growth and development for the very survival and existence of man. Authorized stewardship is not for domination but for dominion, as apostle Paul wrote 'Moreover it is required in stewards, that a man be found faithful' (1 Corinthians 4:2), faithful in all God's appointments and not exploitation, as humanity stands at the summit of all creation.*

As everything God made was made to be very good (Genesis 1) and human beings have a special role in Creation, therefore human life should not be separated from either God or the rest of Creation as the first man's body was made "*from the dust of the ground*" but God "*breathed into his nostrils the breath of life*" (Genesis 2:v7). Like Adam and Eve, we are created to live together and be members of creation. Therefore, we shouldn't attempt to detach our responsibility to the environment. More directly, our general misunderstanding is based on a reading and interpretation of the Bible, due to our limited ecological understanding and responses which are influenced by the constrained religious beliefs we hold.

Thus hermeneutical opportunity is there, for hundreds of phrases are available in the Bible to keep the earth healthy, to which man can be the good steward or God's manager of the creation, while requesting Him to give us understanding to understand HIS mind, guided by the Holy Spirit for the better dissemination of the divine knowledge through various policies, which primarily starts from the Christian environmental education. Different contemporary ideas and perspectives can be drawn out from the Bible, if we let His comprehension be allowed to flow freely in us while trying not to limit ourselves to comprehend our understanding. But, with the aggregated environmental problems I believe that the creation righteousness is still not completely ruined. Therefore, Christianity can play a historical role in imparting Biblical based environmental education.



## AUTHORITY

For smooth and successful propagation of information interpreted from the Bible requires a formal divine authority, therefore few important Biblical authorities are discussed which are consented for the path to the salvation of entire creation through its philosophy.

The Bible clearly declares many times that God is the Creator (e.g., Genesis 1 & 2) and created man in his own image, Genesis 1:v26a says that *"And God said, Let us make man in our image, after our likeness: ...."* therefore, no other part of creation has the dignity of being in God's image and likeness. So God created man in his own image, and gave all authority to manage the creation. But a different command of how humans should relate to the world is given in the Genesis 1:v26b & 28 and Genesis 2:v15, *"....let them have dominion over the fish of the sea, and over the fowl of the air, and over the cattle, and over all the earth, and over every creeping thing that move upon the earth"* (Genesis 1:v26b) while Genesis 1:v28 also gave full right to be fruitful, and multiply, and replenish (*restore*) the earth, and subdue it, and have dominion over every living thing upon the earth. Thus the authority for restoration (*replenish*) of the creation is the condition to be fruitful and multiply, and to subdue (*manage*) it, but not subjugation. And in second Genesis, *"The Lord God took the man and put him in the garden to till it and keep it"* (Genesis 2:v15). This suggests that humans do not own the garden; the creation, but that creation belongs to God and humans are its custodians.

In Genesis 9 God uses the word 'Covenant' seven times to emphasize and sustain his Holy agreement or trust with all the creation, *"I do set my bow in the cloud, and it shall be for a token of a covenant between me and the earth"*, (Genesis 9:v13). It's the promise between God and whole creation, and agreement is the authority to fulfill what was agreed upon and was same authority given to Noah twice in the same



chapter, as was given to first humans in Genesis 1 & 2, *“And God blessed Noah and his sons, and said unto them, Be fruitful, and multiply, and replenish the earth”* (Genesis 9: v1 & 7). Hence, God had authorized Noah and his generations after the great flood to restore everything on the earth as his first creation model while getting pleasure from it.

The plan to appoint man therefore, as the steward or manager was from the beginning itself; as man were created in His image with his spirit blown into them; thus Adam’s descendents are all both earthly and heavenly, and it was his will to provide man the divine mandate to look after the God’s created earth and be a faithful steward, for He wanted to maintain and retain everything ‘good’, which, and how he had created, Genesis 1:v31a *“God saw everything he had made, and indeed, it was very good.”*

Also, Jesus’ Great Commission to his eleven disciples, in Mark 16:v15 said *“Go into all the world and proclaim the good news to the whole creation (some translation-‘creature’)”*.’ This reflects that the direct authority was given to all the believers to be a torchbearer and be an accountable steward for the management of his property. So, we have the guaranteed authority and a duty of fulfillment through rigorous preaching about the God created earth, and the inevitable environmental problems, which has now become imperative for us is forcing the whole of Christianity to be educated about the planet in peril through comprehensive Biblical based environmental education.

## **PREACH THE WORD**

### **God the Creator:**

God created the universe, and is its ultimate Owner. *“The earth is the LORD’s and all that is in it, the world, and those who live in it; for he has founded it on the seas, and established it on the rivers”* (Psalm



24:v1-2). David praises God in 1 Chronicles 29:v11, "*O LORD..... for all that is in the heaven and in the earth is thine; thine is the kingdom, O LORD,....*". The Bible, from the beginning teaches that God is the Creator of the universe and everything in it. This is the first Christian teaching about Creation, and it is the foundation on which every Christian environmental teaching must stand for. Also in the Gospel of John 1:v1-4 "*In the beginning was the Word, and the Word was with God, and the Word was God. The same was in the beginning with God. All things were made by him; and without him was not any thing made that was made. In him was life; and the life was the light of men.*" And Paul in letter to Hebrews 1:v10 says that, "*..... Lord, in the beginning hast laid the foundation of the earth; and the heavens are the works of thine hands..*". Thus, Creation belongs to God, therefore we as the responsible stewards, manager, caretaker, etc., must faithfully and diligently supervise what is His and must acknowledge that "God" "the Creator has Created Creation."

### **Responsible Steward:**

*"We are to be humble regarding the idea of ownership and to be open to the demands of solidarity. Our mortality and our weakness of judgment together warn us not to take irreversible actions with what we choose to regard as our property during our brief stay on this earth. We have not been entrusted with unlimited power over creation, we are only stewards of the common heritage."* (The Common Declaration by Pope John Paul II and Patriarch Bartholomew-2002). "*The Lord God took the man and put him in the Garden of Eden to till it and keep it.*"(Genesis 2:v15). "*Then God said, 'Let us make humankind in our image, according to our likeness; and let them have dominion ..... upon the earth.'*" God then blessed them, and God said to them '*Be fruitful and multiply, and fill the earth and subdue it; and have dominion over..... every living thing that moves upon the earth.*' (Genesis 1:v26 & v28). As we were





made in the image and likeness of God Himself, humanity has far more authority over the rest of the planet than any other species. The only choice we have is how we chose to exercise this right. The dominion in itself is morally neutral and not same as 'domination' which is equal to 'exploitation'. Will we exercise our dominion over the earth with responsibility and kindness, like God exercises dominion in relationship to us? Or will our dominion will turn to domination and be more selfish, full of greed, unlimited wants and destruction? The choice is up to us. We must now recognize that our God given job description is to take-care of the earth with full responsibility and compassion.

### **The Holy Spirit Sustains:**

Did you ever wonder what makes the earth functions as remarkably as it does and what controls and holds the universe and its mechanism? Christians can see this as the work of the Holy Spirit. Just as it does at the beginning of creation, *'Now the earth was formless and empty, darkness was over the surface of the deep, and the Spirit of God was hovering over the water'* (Genesis 1:v2). *'Then the LORD God formed man from the dust of the ground, and breathed into his nostrils the breath of life (the spirit); and the man became a living being'* (Genesis 2:v7). This inspiration and pouring of God's spirit is the first basis behind the emergence and development of all life forms. Thus, the Spirit is positioned everywhere within and outside the structure of Creation, creating the foundation, the natural laws, on which everything rests whether visible and invisible.

The Psalmist also in the concluding statement makes the same proclamation (Psalm 104:v30), *'When you send forth your spirit, they are created; and you renew the face of the ground'*, therefore the Spirit gives life to Creation, and thrust its creativity forward. Meaning, the Spirit urges us to behave towards Creation as in Galatians, Paul writes that *"If we live by the Spirit, let us also be guided by the Spirit"*



(Galatians 5:v25) in all thing. These words guide us for our behavioral change towards our neighbor; other people and indeed the environment, as *"the fruit of the Spirit is love, joy, peace, longsuffering, gentleness, goodness, faith, Meekness, temperance: against such there is no law"* (Galatians 5:v22 & v23). Consequence is that we must now increasingly recognize application to our treatment these fruits of spirit and must raise this important questions in our congregations as it is important for churches to take them seriously as they seek to shape their members' personality and survival.

Christian communities and leaders across must shared these commitments to fight environmental injustice and responsibly accept the God's stewardship for healing and managing the Earth. It would be unthinkable for Christian communities to abandon these commitments. They are not optional or marginal aspects of our faith but an obligation to Jesus. Jesus calls us to the faith that brings life not only to ourselves but to all of creation, particularly environment. But no matter how difficult it may be, it is clear that this is the right thing to do by allowing the spirit to work through us and guide us to solve the problem.

### **Creation Redemption:**

*"For in him all the fullness of God was pleased to dwell, and through him God was pleased to reconcile to himself all things, whether on earth or in heaven, by making peace through the blood of his (Jesus) cross."*(Colossians 1:v15-20). *"In (Jesus) whom we have redemption through his blood, even the forgiveness of sins"* (Colossians 1:v14), the sins of environmental injustice to his creation which he had gracefully handed over to us in trust. But he sacrificed himself on the cross for our sins to be redeemed; *"For God so loved the world that he gave his only Son ..."* (John 3:v16), and we shall be redeemed only if we faithfully accept our misgiving and greediness, and return to him with



submissiveness and humility. In Matthew 22:v37 *“Jesus said unto him, Thou shalt love the Lord thy God with all thy heart, and with all thy soul, and with all thy mind.”* This first and Greatest Commandment is the path we can follow to get our redemption that if we love him with all our heart, soul and mind we will obey all his commandment and be like him, having no greed for worldly thing, no trespassing and moulding ourselves, and having outlook of his characters. As such He can be revealed to us, but must take the task genuinely and strategically among the people providing full knowledge about been responsible caretaker.

Not only human but the whole creation requires redemption in him, as Jesus is the Savior and the Redeemer of all things. In Romans 8 *the future glory*, there is the fall of human-kind and creation as a whole due to our false pride and will-fully rebellion against God with subjected to mismanagement of his creation. *“For the creation was subjected to frustration, not by its own choice, but by the will of the one who subjected it, in hope that the creation itself will be liberated from its bondage to decay and brought into the freedom and glory of the children of God. We know that the whole creation has been groaning as in the pains of childbirth right up to the present time. Not only so, but we ourselves, who have the firstfruits of the Spirit, groan inwardly as we wait eagerly for our adoption to sonship, the redemption of our bodies”* (Romans 8:v19-23). It's not just us whose lives are broken and damaged morally and spiritually, as Paul says it is the whole of creation that has been subjected to futility and groaning in travail while waiting for redemption of the world which can only be accomplished through our Lord Jesus Christ. The point here is that as Christians, being instrument we are called to participate with Him morally and spiritually for the healing, restoring, and in the redeeming of the Creation by Him.



## CONCLUSION

Thus, environmental education with the Christian perspective is an ideal way to reimburse and foster all the environmental injustice we have committed. Willful pollution of the environment is not only a human error; but it is also a moral evil. The most important perspective to successful Biblical based environmental education, be positively founded on the extraction of ideas from the Bible by understanding the mind of God and determines its values with humility while interpreting every word. We must glorify and celebrate the un-understandable qualities of God while our heart should completely be immersed in prayer of adoration for all that he had created.

Let us have greatest pleasure to be appointed as his servant to look after his pasture, and promise ourselves to be faithful and responsible stewards and offer obligable creation to God. We the believers have to acknowledge our sins, express sorrow for them and seek forgiveness, together with a promise to amend our sinful lives, of greed, prejudice, corruption, immortality, etc. Thus, the genuine repentance is the need of the hour, as rightly declared by Pope Francis and Patriarch Bartholomew (Joint Declaration, 2014) *“Therefore, we acknowledge in repentance the wrongful mistreatment of our planet, which is tantamount to sin before the eyes of God. We reaffirm our responsibility and obligation to foster a sense of humility and moderation so that all may feel the need to respect creation and to safeguard it with care”,* and by the Evangelical Environmental Network (1994), *“Because we have sinned, we have failed in our stewardship of creation. Therefore we repent of the way we have polluted, distorted, or destroyed so much of the Creator’s work.”* Therefore, we have failed in our spiritual environmental duties and the consequence of that failure is not only in the material dimension but even spirituality. Church, the social Changer can be a game changer once more for concrete development



towards the Environmental education, by taking the advantage of having wide platform it has, it can create significant and desirable outcome for leading the course as an elite environmental educator.

Humanity has a divinely-given responsibility for caring for creation, of protecting and fostering creation, as creation's steward. It's time to concentrate on our responsibility diligently before God. As Pope Benedict XVI rightly says that, "*When 'human ecology' is respected within society, environmental ecology also benefits.*" (*Caritas in Veritate* 51). Creation care is thus both a spiritual duty and a spiritual opportunity and at the end, all things and action must leads towards the Christo-centric environmental education.

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## PHILOSOPHICAL THOUGHTS OF M.K.GANDHI

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### M.K.Gandhi's Views on Value Education

The Gandhian Philosophy of value-education as emphasized in the role of a *satyagrahi*, an aspirant after Truth, awaits a worthy revival right now or never. As a matter of fact, the educative value of non-violence lies in sticking to the values it essentially stands for the well-being of mankind. It allows one to make a journey against all odds and establish the Kingdom of Heaven on earth with the prized spirit of eternal brotherhood of mankind. The triumph of non-violence and the relevance of Satyagraha in principle and practice even now prove the fact the values most endearing in life can be nurtured for the excellence and ascent of making in all goodness and poignance<sup>1</sup>.

Value-education as Gandhi designs in his scheme of Basic relationship between man and values. Man, to be man in the true life and education should accordingly be directed towards the purpose of looking upon man as the exponent of God - *Naranarayan*. To be christened with such values of honoring and idealizing the divine being in everyone by undergoing some practice, as Gandhi prescribes, in tolerance and austerity side by side with the practice of non-violence. The lesson of tolerance has an educational value that lasts and moulds one's personality to be pure and perfect in an approach to man and society.

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<sup>1</sup> Narasimha Rao. P.V.,(July1995),,Tallest Indian of the Century, Ministry of Information Broadcasting, Government of India; pp-13-14.



In a world of crises of consciousness, the Gandhian philosophy of education for values as reflected through cultivation of truth and non-violence, austerity and tolerance and *Sarvodaya* or Universal Dawn is the only alternative to arrest the extinction of humankind. The education of loving well calculated to the education of having and that of being as he propagates in his value-education is the surest avenue of transforming the over-zealous humanity into a lotus-land of poignance and excellence, devotion and dedication.

Gandhi's Basic Education was the practical embodiment of his philosophy of education. The main aim of Basic Education was to purify the heart and mind of all people and create a society free from all exploitation and aggression. Viewed in this light Gandhi was great educationist also. M.S. Patel has rightly remarked, "Green remarked that Pestalozzi was the starting point of modern educational theory and practice".<sup>2</sup> This may be true so far as Western education is concerned. An impartial study of Gandhi's educational teachings will reveal that he is the starting point of modern educational theory and practice of the East.

### **Aims of Gandhian Education**

The ideal of education has been very grand, noble and high in ancient India. Its aim, according to Herbert Spencer is the 'training for completeness of life'<sup>3</sup> and the molding of character of men and women for the battle of life. The history of the educational institutions in ancient India shows how old is her cultural history. It points to a long history. In the early stage, it is rural, not urban. The aim education was the manifestation of the divinity in men, it touches the highest point of knowledge. In order to attain the goal the completely educational

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<sup>2</sup> Swarup Saxena. N.R., (2003)., Education in Emerging Society, Surya Publication: Meerut;p-169.

<sup>3</sup> Anthony MacDonnell.,(1854-1930).,A History of Sanskrit Literature, Motilal Banarsidas Pub:New Delhi; p-34.



method is based on plain living and high thinking pursued through eternity.

The aim of education, according to Gandhi, was self-reliance. Every educated man and woman should be able to rely upon oneself to carry on his life. Earning of one's livelihood is a part of this self-reliance. Explaining this aim of education, he said, "This education ought to be for them a kind of insurance against unemployment."<sup>4</sup> It is hence that he laid so much stress upon industrial training in basic education. Gandhi wanted the educator to create ideal citizens through education. Keeping in view the poverty of India, Gandhi suggested that education in this country should be craft centered. Gandhiji has divided educational aims into two categories. They are:

- i) Provisional Aims of Education.
- ii) Ultimate Aim of Education.

### **i) Provisional Aims of Gandhian Education**

Provisional aims of Gandhiji's education are as follows:

- Vocational Aim: Gandhiji wished that each child should, through his education, be able to learn a productive craft to meet his future needs of life by adopting some industry or business. Hence, he advocated education for self-reliance and capacity to earn one's livelihood as the main aim of education. By this aim, he did not mean to make the child a laborer. He wished that each child should earn while engaged in learning and gain some learning, as he is busy with earning. Earning while learning is very good practice of western culture. It may be one of the factors for their development.

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<sup>4</sup> Ramakant Shukla .,(2001)., Philosophy of Education, Sublime Publications: Jaipur; p-253.





- Cultural Aim: Gandhiji wished that education should develop Indian culture. Hence, he advocated that together with vocational education; cultural advancement should also be achieved. The two aspects of development should go together side by side. He exhorted "I consider the cultural aspect of education as more essential than its academic aspect"<sup>5</sup>. Culture is the main foundation and an essential and special part of education. Hence, all types of human activities should bear the imprint of culture and refinement.
- Perfect Development Aim: Gandhiji insisted that education should develop all aspects of individuality harmoniously. He writes, "The real education is that which fully develops the body, mind and soul of children."<sup>6</sup>
- Moral or Character Development: Like Herbert, Gandhiji also believed that one of the essential aims of education is the moral development or character development. About this, Gandhiji has written in his autobiography "I have always given top position to culture of heart and character development in the process of education. I Consider character building as the main and essential basis of educational development"<sup>7</sup>.
- Aim for Liberation: According to him, there are two kinds of liberation. One was the liberation from all kinds of economic, social, political and mental slavery. The second was the liberation of the soul from worldly pursuits devotes itself to higher forms of spiritual living. Education should provide this spiritual freedom for self-growth and realization of itself.

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<sup>5</sup> Ibid

<sup>6</sup> Gandhi. M.K., Harijan., 11 September, 1937.

<sup>7</sup> Ibid



## The Individual and Social Aims of Education

Gandhi synthesized the individual and social aims of education. He did not restrict education to the achievement of any one single aim. He looked to the process of education from various perspectives. Therefore, he assigned different aims to education at different times, so much so that sometimes they looked mutually contradictory and even self-defeating. A closer examination of all these statements of Gandhi, however, shows that these aims of education are complementary to each other. Most educationists have, however, felt that the aim of education is integral development of human personality. Such was also the ideal of education formulated by Gandhi. He said, 'True education is that which draws out and stimulates the spiritual, intellectual and physical faculties of children.' Like Vivekananda, Gandhi maintained that character formation and manual skill were equally important. On the one hand, he wanted the child to earn while he learns. On the other hand, he also wanted the child to develop his character. According to him, the criterion of an individual's cultural development is not the breadth of his knowledge but his inner growth. Culture, according to him, is not an adjunct of the mind but a characteristic of the soul. The aim of education is the development of such a culture.

As has been already pointed out, Gandhi aimed at self-reliance through education. Therefore, he visualized a craft-centered education. Explaining his scheme of basic education as an insurance against unemployment in India, Gandhi said, "The child at the age of 14, that is, after finishing a seven year course, should be discharged as an earning unit. Even now, the poor people's children automatically lead a helping hand to their parents"<sup>8</sup>. However, the pathetic condition of our poor people is that they are neglecting their children to be educated and sending them only to earn at a very tender age around 7 years. The

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<sup>8</sup> Ibid



government of India has taken measure to eradicate this child labour but still we find some cases.

### **Moral and Spiritual Aims**

All knowledge is useless without a good character. In his speeches to the students at various institutions, Gandhi laid emphasis upon the moral and spiritual aims of education. Emphasizing the moral aim of education Gandhi said, 'The end of all knowledge must be the building up of character.' Character building is the moral ideal of education. According to Gandhi, that is most important in a man's life. His ideal in this connection were as much in agreement with the ancient Indian thinkers as with the contemporary Western thinkers like Emerson, Ruskin, etc. Gandhi very much admired the Indian Gurukul system of education and the ideal of *Brahmacharya*. According to ancient Indian ideal, education aims at liberation. This was also the aim of Gujarat Vidyapith established by Gandhi in 1929. Gandhi, however, defined liberation in a holistic sense, including political, social and economic liberation of all the members of society. Real freedom is spiritual freedom. To attain this freedom is the task of education. Again, education equally aims at intellectual, economic and political upliftment, though its chief aim is moral and spiritual. Condemning the widespread indiscipline among the students Gandhi asked them to follow the ideal of *Brahmacharya*.

According to Indian philosophy, the ultimate end of all knowledge is God realization. This God realization again, is the meaning of self-realization which has been considered to be the ideal of education by most of the educational philosophers in East and West. Agreeing with this line of thinking Gandhi maintained that a student should live a life of *sanyasi*. God realization and self-realization are mutually complementary, the one leads to the other. This spiritual ideal of education does not negate mundane or immediate ideals but



fulfils them. In the words of Gandhi “Self-realization is in itself an all comprehensive ideal.”<sup>9</sup> In his scheme of basic education, he planned for an education suitable to present day Indian society. He pondered over the difficulties of the present day Indian society and tried to find out their solution through education. His educational philosophy is based upon ancient Indian idealism. While he did not restrict the scope of physical education, his attention was mainly directed towards spiritual growth.

## ii) Ultimate Aim of Education

According to Gandhiji, the ultimate aim of education is to realize God. All other aims are subservient to this supreme aim. It is aim of self-realization which is pending since the very early time of Indian wisdom and which constitutes the essence of Indian philosophy.

Gandhiji wished that every child should grow into a divine human being by realizing Godliness in himself. Gandhiji writes. “To develop the self is to build character and to prepare the self for complete realization and realization of Godliness”<sup>10</sup>. In the definition of true education, Gandhi explained freedom or *Vimukti* as true goal of education. Education is the means for the end of liberation.

The theory of Gandhi’s education will be seen, in the result of his philosophy of life. As an idealist, he believes in absolute values, which have to be realized by all as a result of education. So he looks upon education as purposive direction. The ultimate aim of education is self-realization. For this, man must do God’s work in a spirit of self-abnegation. Believing that the individual realizes his best only in and through service to humanity, he wants education to develop the self-less individual who will find happiness in actively working for the

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<sup>9</sup> Ramakant Shukla (2001)., Philosophy of Education, Sublime Publications: Jaipur ; p-257.

<sup>10</sup> Swarup Saxena. N.R., (2003)., Education in Emerging Society, Surya Publication: Meerut;p-171.



betterment of all. Education naturally becomes an active process. Thinking is to be developed through doing, as thought has to issue in action. Education has also to stress right thinking and right feeling. Naturally, Gandhi stresses character-training much more than intellectual training. However, intellectual training is not neglected since only a fully developed individual and not a lopsided personality, can be capable of the best effort. Intellectual development through craft is training of the hand, head and heart together. It develops the creative individual, and it assures dignity of manual labor. It goes a long way to wipe out the social distinction between the thinking and the working class. It also helps the promotion of the non-violent values he seeks to inculcate in the pupils.

His aim is the development of the *Satyagrahi* individual-one who will be a seeker after Truth. A seeker after Truth is one who seeks the way to absolute Truth through relative truth. Truth is one who seeks the way to absolute Truth through relative truth. The school should impart training in the non-violent values. It should promote love, humility, co-operation, spirit of service, self-abnegation and fearlessness, and enable the educated man to place his duties before rights. When education succeeds in creating such *Satyagrahis*, Gandhi hopes that the non-violent co-operative social order of his conception-the *Ramaraj*<sup>11</sup> (Ideal society) could be evolved. All education must be for some end, and the end of Gandhian education is the creation of the *Satyagrahi* individual who will be the brick of *Ramaraj*.

The *Satyagrahi* will be wedded to a rural civilization and will work for his food, covet no one's possessions, live a simple life, respect all men and women, all races and all religions, and seek to serve the whole of mankind by serving his own neighborhood. The *Ramaraj* will, therefore, be a social order in which persons will be treated as persons,

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<sup>11</sup> Pillai . N.P.,(1959)., The Educational Aims of Mahatma Gandhi., Kalyanmandir Publications: Trivandrum, p-291.



and true freedom will lead to true community. All will be at peace with one another. When the world is made up of from the very beginning<sup>12</sup> and that if education is to be universalized within a reasonably short period of time, the productive aspect of Basic Education must be considered important.<sup>13</sup>

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<sup>12</sup> The First Five Year Plan, Ch-XXXIII, para 4-(3).

<sup>13</sup> The First Five Year Plan, Ch-XXXIII Para -9.



## A Synthetic and Spectral Studies of Mn(II),Co(II),Ni(II),Cu(II),Pd(II) and Fe(III) Complexes of some Naphthyridine based Schiff bases

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**Abstract:** The complexes of Mn<sup>2+</sup>,Zn<sup>2+</sup>,Cd<sup>2+</sup>,Co<sup>2+</sup>,Ni<sup>2+</sup>,Cu<sup>2+</sup>, Pd<sup>2+</sup> and Fe<sup>3+</sup>complexes of Schiff bases derived from the condensation reaction of 2-methyl-1-8-naphthiridine-3-carboxylic acid hydrazide with dehydroacetic acid,7-hydroxy-4-methyl-8-acetyl Coumarin and 1-hydroxycyclohexyl phenyl ketone have been synthesized and characterized by physicochemical data. These three ligands function as uni-negative, tridentate coordinating ligands with metal ions through phenolic oxygen and azomethine nitrogen. The geometry and the bonding characteristics of the complexes have been deduced from the electronic and ESR spectral studies. Further, the ligands and their metal complexes have been screened for their antibacterial and antifungal activity and the results are presented.

**Keywords:** Naphthiridine derivatives, Schiff base, hydrazone, transition metal ions spectral studies.

### Introduction:

Hydrazones belong to the class of azomethine which acts as potential ligand for transition group metals forming chelates. Metal complexes of various hydrazone derivatives have been synthesized and characterized over the years [1-4].Owing to the importance associated with this class of compounds, we presented here in the synthesis and characterization of Mn<sup>2+</sup>,Zn<sup>2+</sup>,Cd<sup>2+</sup>,Co<sup>2+</sup>, Ni<sup>2+</sup>, Cu<sup>2+</sup>, Pd<sup>2+</sup> and Fe<sup>3+</sup> complexes of naphthyridine based Schiff base of dehydroacetic acid-2-methyl-1, 8-naphthyridine-3-carbonyl hydrazone (DNCH).

### Experimental:

The synthetic procedure comprises of two steps. i) Preparation of the ligand ii) Preparation of complexes.



## Preparation of the ligands:

**1).Dehydroacetic acid-2-methyl-1, 8-naphthyridine-3-carbonyl hydrazone (DNCH):** 0.05 mol of dehydroacetic acid dissolved in methanol. To this 0.05mol of 2-methyl-1, 8-naphthyridine-3-carboxylic acid hydrazide in methanol was added by constant stirring. This mixture was added with a few drops of glacial acetic acid and refluxed on a hot water bath for 3hrs. When the solid separation completed it was filtered washed with cold methanol and recrystallized from dry methanol. The colour, yield %, m.p ( $^{\circ}\text{C}$ ) and elemental analysis (%) of DNCH are yellow, 82; 209-210 $^{\circ}\text{C}$ ; [Found (%) C,60.85;H,4.42;N,15.78;C<sub>18</sub>H<sub>16</sub>N<sub>4</sub>O<sub>4</sub> requires C,61.35; H,4.59; N,15.90] [m/z 352(M.,+60%)] and the base peak 105(100%).

**2)7-hydroxy-4-methyl-8-acetylcoumarin-2-methyl-1,8-naphthyridine-3-carbonyl hydrazone (HCNCH):**

This ligand was prepared in three steps:

**a) 7-Hydroxy-4-methylcoumarin<sup>5</sup>**

A mixture of resorcinol (0.1 mol) and ethylacetoacetate (0.1 mol) was added to concentrated H<sub>2</sub>SO<sub>4</sub> (50 ml) at 0 $^{\circ}\text{C}$  and it was allowed to stand overnight. 7-hydroxy-4-methylcoumarin that separated was filtered, washed and recrystallized from methanol. Yield: 16.0 g (91%). M.P. 185 $^{\circ}\text{C}$ .

**b) 7-Hydroxy-4-methylcoumarin**

A mixture of 7-hydroxy-4-methylcoumarin (0.1 mol), acetic anhydride (0.1 mol) and anhydrous aluminum chloride (0.15 mol) was heated in an oil bath at 160-65 $^{\circ}$  for 4 hours. The mass, after cooling, was decomposed with ice cold HCl and the product was taken into ether. It was washed well with water and dried. The product obtained on removing ether was





recrystallized twice with aqueous methanol. Yield: 16.3 g (75%) M.P. 170<sup>0</sup> C

**c) 7-Hydroxy-4-methyl-8-acetylcoumarin 2-methyl-1, 8-naphthyridine-3-carbonyl hydrazone**

To a mixture (0.05 mol) 2-methyl-1, 8-naphthyridine-3-carboxylic acid hydrazide in 150 ml of methanol and (0.05 mol) 7-hydroxy-4-methyl-8-acetylcoumarin in 50 ml of methanol taken in a 500 ml round bottom flask, a few drops of glacial acetic acid were added and the contents were refluxed on a hot water bath for 3 hrs. A light green compound separated out which was filtered, washed with cold methanol and recrystallized from dry methanol to give a solid of the same light green colour. Yield: 15.2 g (76%). M.P. 292<sup>0</sup>C [Found (%) C, 65.20; H, 4.41; N, 14.19; C<sub>22</sub>H<sub>18</sub>N<sub>4</sub>O<sub>4</sub> required (5) C, 65.66; H, 4.52; N, 13.93]. The purity of the compound was further ascertained by its mass spectrum [Fig. 8, m/z 402 (M<sup>+</sup>, 45%) and base peak 106 (100%)] and TLC.

**3)1-hydroxy cyclohexyl phenylketone-2-methyl-1, 8-naphthyridine-3-carbonyl hydrazone (HPNCH):**

2-methyl-1, 8-naphthyridine-3-carboxylic acid hydrazide (0.05mol) was dissolved in 150ml of methanol in a 500 ml round bottom flask. 1-hydroxycyclohexylphenylketone (Aldrich) (0.05 mol) in 50 ml of methanol was slowly added to it followed by a few drops of glacial acetic acid. The contents of the flask were refluxed on a hot water bath for 3 hrs. The compound that separated out was filtered, washed with methanol and recrystallized from dry methanol to give maroon solid. Yield: 16.3 g (84%). M.P.233<sup>0</sup>C [Found (%) C, 70.86; H, 6.00; N, 14.28; C<sub>23</sub>H<sub>24</sub>N<sub>4</sub>O<sub>2</sub> requires (5) C, 71.10; H, 6.24; N, 14.42]. The purity of the compound was further ascertained by its mass spectrum [9 m/z 388 (M<sup>+</sup> 43%) and base peak 227 (100%)] and tlc.



## **ii) Preparation of complexes:**

In the preparation of the metal complexes the metal and ligand were combined in 1:2 molar ratios in methanol so as to affect the solubility of the metal salts and the ligand. The Pd (II) metal complexes were prepared by taking  $\text{PdCl}_2$  and Co (II), Ni (II) complexes by taking their respective metal acetates. The contents were refluxed on water bath for two hrs and the solid separated was filtered, washed with water, methanol finally with ether and dried in vacuum. All the chemicals used were AR grade.

## **Results and Discussion:**

All the metal complexes are stable at room temperature and are non-hygroscopic in nature. Both ligand and its complexes are insoluble in water. The ligand is soluble in organic solvents such as methanol, acetone, DMF where as complexes are slightly soluble in methanol and acetone and are completely soluble in DMF and DMSO. The complexes have been structurally characterized by different physicochemical data. The analytical data of the complexes of DNCH are given in Table-I.



**Table: I Analytical data of the complexes of DNCH**

Complex	Metal	Carbon	Hydrogen	Nitrogen	Chlorine
Mn (DNCH-H) <sub>2</sub>	7.02 (7.25)	56.32 (57.06)	3.79 (4.00)	14.33 (14.79)	-----
Co(DNCH-H) <sub>2</sub>	7.44 (7.74)	56.12 (56.77)	4.02 (3.98)	14.63 (14.72)	-----
Ni(DNCH-H) <sub>2</sub>	7.35 (7.71)	55.92 (56.78)	3.66 (3.98)	14.32 (14.72)	-----
Cu(DNCH-H) <sub>2</sub>	8.00 (8.29)	56.12 (56.42)	3.75 (3.95)	14.29 (14.63)	-----
Pd(DNCH-H) Cl	21.00 (21.50)	43.05 (43.83)	2.98 (3.07)	11.03 (11.36)	7.23 (7.19)
Fe(DNCH-H) <sub>2</sub> Cl	6.74 (7.03)	53.80 (54.45)	3.71 (3.82)	14.25 (14.12)	4.23 (4.46)
Mn(HCNCH-H) <sub>2</sub>	6.12 (6.41)	60.98 (61.60)	3.83 (4.00)	12.84 (13.07)	-----
Co(HCNCH-H) <sub>2</sub>	6.56 (6.84)	60.89 (61.32)	4.05 (3.99)	12.88 (13.01)	----
Ni(HCNCH-H)OAC	11.19 (11.31)	55.25 (55.52)	3.81 (3.89)	10.68 (10.79)	---
Cu(HCNCH-H)	11.98	54.78	3.82	10.58	----

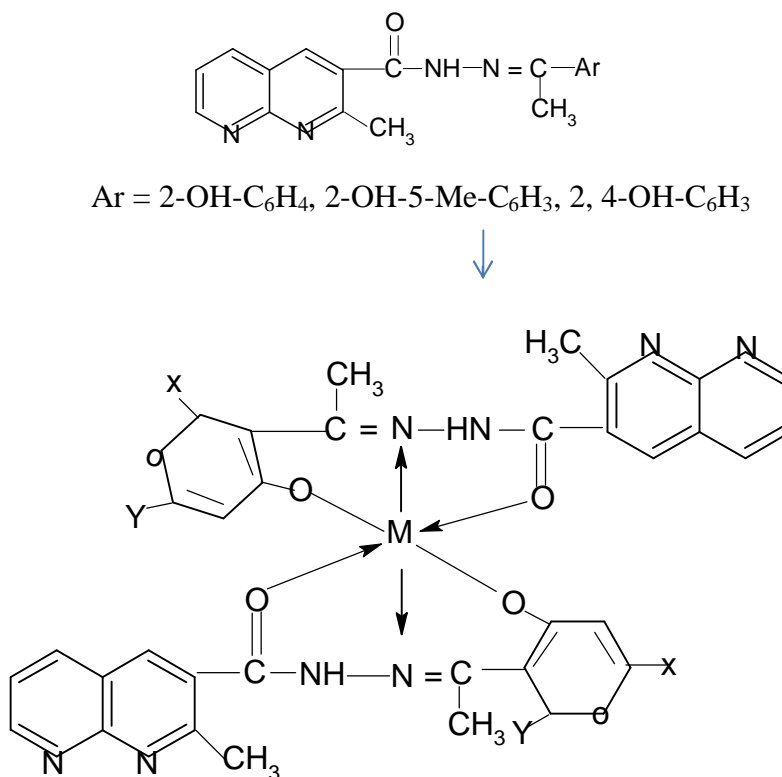


OAC	(12.13)	(55.01)	(3.86)	(10.69)	
Pd(HCNCH-H)Cl	19.33 (19.59)	48.25 (48.63)	3.06 (3.16)	10.00 (10.32)	6.47 (6.53)
Fe(HCNCH-H) <sub>2</sub> Cl	6.04 (6.25)	58.55 (59.10)	3.60 (3.84)	12.25 (12.53)	3.81 (3.97)
Mn (HPNCH-H) <sub>2</sub>	6.54 (6.62)	65.93 (66.52)	5.64 (5.60)	13.25 (13.51)	-----
Co(HPNCH-H) <sub>2</sub>	6.85 (7.01)	65.92 (66.25)	5.42 (5.57)	13.28 (13.44)	----
Ni(HPNCH-H)( OAC)	11.48 (11.62)	59.79 (59.42)	5.02 (5.20)	10.93 (11.09)	----
Cu(HPNCH-H)(OAC)	12.30 (12.46)	58.31 (58.86)	5.00 (5.15)	10.75 (10.99)	----
Pd(HPNCH-H)Cl	19.87 (20.10)	51.68 (52.18)	4.08 (4.39)	10.26 (10.59)	6.49 (6.70)
Fe(HPNCH-H) <sub>2</sub> Cl	6.26 (6.45)	63.21 (63.77)	5.25 (5.36)	12.69 (12.94)	3.88 (4.09)

**Note: Values in the parenthesis are the calculated ones**

The percent values of the elements in the complexes have been calculated as per the composition given in the **Table-I** for each case shows that the experimental values are in reasonable agreement with the calculated ones which may be presumed to have the composition assigned.

Conductance measurements were made in DMF at  $10^{-3}$ M concentration given in the **Table-II**. All the complexes except Fe (III) show only residual molar conductance values ( $8-15\text{Ohm}^{-1} \cdot \text{cm}^2 \cdot \text{mol}^{-1}$ ) indicating that they are non-electrolytes in DMF but in case of Fe (III) complex correspond to 1:1 electrolyte type [2].





**Table II Molar conductance ( $\text{Ohm}^{-1}.\text{cm}^2.\text{mol}^{-1}$ ) data**

Complex	Molar conductance
$\text{Co}(\text{DNCH-H})_2$	10
$\text{Ni}(\text{DNCH-H})_2$	10
$\text{Cu}(\text{DNCH-H})_2$	8
$\text{Pd}(\text{DNCH-H}) \text{Cl}$	14
$\text{Fe}(\text{DNCH-H})_2\text{Cl}$	69
$\text{Co}(\text{HCNCH-H})_2$	10
$\text{Ni}(\text{HCNCH-H})(\text{OAC})$	10
$\text{Cu}(\text{HCNCH-H})(\text{OAC})$	8
$\text{Pd}(\text{HCNCH-H}) \text{Cl}$	14
$\text{Fe}(\text{HCNCH-H})_2\text{Cl}$	72
$\text{Co}(\text{HPNCH-H})_2$	9
$\text{Ni}(\text{HPNCH-H})(\text{OAC})$	10
$\text{Cu}(\text{HPNCH-H})(\text{OAC})$	12
$\text{Pd}(\text{HPNCH-H}) \text{Cl}$	12
$\text{Fe}(\text{HPNCH-H})_2\text{Cl}$	65

The magnetic moment data indicate that the Co (II), Ni (II), Cu (II) & Fe (III) complexes of DNCH are paramagnetic with 3, 2, 3 and 5 unpaired electrons, Mn (II) and Fe (III) complexes of HPNCH paramagnetic with 5 unpaired electrons respectively and Pd (II) complexes are diamagnetic in nature. In case of HCNCH and HPNCH, Ni (II), Pd (II) complexes are diamagnetic in nature.

The IR absorption frequency of DNCH and HCNCH show a medium intensity band around  $3430\text{cm}^{-1}$  due to  $\nu\text{N-H}$  [5]. This band remains unshifted in the spectra of their metal complexes suggesting non participation of this group in coordination. A broad, small intensity band that appears in the ligand around  $3050\text{cm}^{-1}$  has been assigned to hydrogen bond  $\nu \text{O-H}$ . This band disappears in the spectra of the complexes suggesting deprotonation of the group during complexation. A medium intensity band around  $1230\text{cm}^{-1}$  in the ligands assignable to  $\nu\text{CO}$  has been



shifted towards positive side by about  $40\text{-}60\text{cm}^{-1}$  in the complexes. This positive shift indicates coordination through oxygen of the CO group [1]. A large intensity band around  $1680\text{cm}^{-1}$  assignable to  $\nu\text{CO}$  amide band which undergoes a lower shift by  $90\text{-}100\text{cm}^{-1}$  in their complexes suggesting that the oxygen of this is involved in bonding with the metal ions [2]. The ligand displays a medium intensity band which is found lower shifted by  $50\text{ cm}^{-1}$  in the complexes. This positive shift indicates coordination through nitrogen of the CN group involved in coordination. A very low intensity band around  $1610\text{cm}^{-1}$  assignable to  $\nu\text{C}=\text{N}$  of Naphthiridine ring system.

The coordination through oxygen of amide CO and phenolic CO groups and the Nitrogen of azomethine group in the ligands is further supported by the presence non ligand bands in their complexes in the far IR region around  $500$  and  $400\text{cm}^{-1}$  assignable respectively to  $\nu\text{M-O}$  and  $\nu\text{M-N}$  vibrations [6-9]. In addition Pd(II) complexes show a non-ligand band around  $300\text{cm}^{-1}$  due to  $\nu\text{Pd-Cl}$  [10]. Hence the DNCH and HCNCH function as mononegative, tridentate bonding to the metal ion through oxygen of amide CO and phenolic CO groups and Nitrogen of azomethine group.

Where as the ligand HPNCH shows a medium intensity band around  $3440\text{cm}^{-1}$  due to  $\nu\text{N-H}$ . This band remains unshifted in the spectra of their metal complexes suggesting non participation of this group in coordination. A broad, small intensity band that appears in the ligand around  $2490\text{cm}^{-1}$  has been assigned to hydrogen bond  $\nu\text{ O-H}$ . This band disappears in the spectra of the complexes suggesting deprotonation of the group during complexation. A medium intensity band around  $1230\text{cm}^{-1}$  in the ligands assignable to  $\nu\text{CO}$  has been shifted towards positive side by about  $50\text{-}60\text{cm}^{-1}$  in the complexes. This positive shift indicates coordination through oxygen of the CO group .A large intensity band around  $1660\text{cm}^{-1}$  assignable to  $\nu\text{CO}$  amide bond which undergoes a lower shift by  $80\text{-}90\text{cm}^{-1}$  in their complexes suggesting that the oxygen of this is

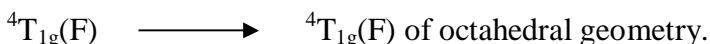
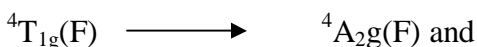
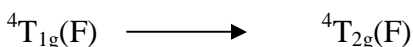


involved in bonding with the metal ions .The ligand displays a medium intensity band at  $1610\text{ cm}^{-1}$  due to  $\nu\text{C}=\text{N}$  which is found lower shifted by  $50\text{-}70\text{ cm}^{-1}$  in the complexes. This positive shift indicates coordination through nitrogen of the CN group involved in coordination. A very low intensity band around  $1610\text{ cm}^{-1}$  assignable to  $\nu\text{C}=\text{N}$  of Naphthiridine ring system.

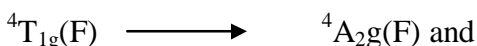
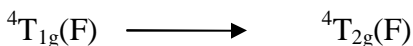
The coordination through oxygen of amide CO and phenolic CO groups and the Nitrogen of azomethine group in the ligands is further supported by the presence non ligand bands in their complexes in the far IR region around  $500$  and  $400\text{ cm}^{-1}$  assignable respectively to  $\nu\text{M-O}$  and

$\nu\text{M-N}$  vibrations. In addition Pd (II) complexes show a non-ligand band around  $290\text{ cm}^{-1}$  due to  $\nu\text{Pd-Cl}$ . Hence the DNCH, HCNCH and HPNCH function as mononegative, tridentate bonding to the metal ion through oxygen of amide CO and phenolic CO groups and Nitrogen of azomethine group.

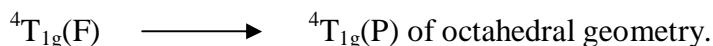
The Electronic Spectral data reveals that Co (II) complexes of DNCH and HCNCH each show three peaks in the region  $9260\text{-}22320\text{ cm}^{-1}$  that may be assigned in increasing order of frequency to the transitions.



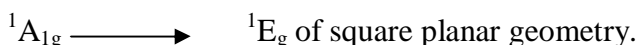
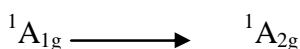
Where as Co (II) complexes of HPNCH shows three peaks in the region  $9220\text{-}22310\text{ cm}^{-1}$  that may be assigned in increasing order of frequency to the transitions.



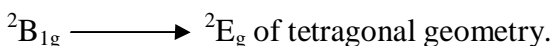




The Racah inter electron repulsion parameter (B) and nephelauxetic parameter ( $\beta$ ) obtained for complexes indicated that the metal ligand bonds are covalent in nature[11-12].The spectrum of Ni (II) complex reveals three peaks at the frequency observed for octahedral Ni(II) complexes.[13-14].The value of  $\nu_2/\nu_1$  (1.56) observed for the complexes supports this proposition. The Pd (II) complex show three peaks in the region 14490-24790 $\text{cm}^{-1}$  which may be assigned in the increasing order of frequency to the transitions.



The Cu (II) complex shows two broad peaks at 16610 and 18520  $\text{cm}^{-1}$ , in which the lower frequency peak being assignable to



The Fe (III) complex show three weak bands in the region 15680-24490 $\text{cm}^{-1}$  assignable to octahedral geometry which has been further supported by analytical, magnetic moment and electronic spectral data. [15-19].

The ESR spectra of Cu-DNCH,Cu-HCNCH and HPNCH show two peak envelopes-one of small intensity towards low field consists of four peaks corresponding to parallel component and the other of large intensity envelop consists of two peaks towards high field corresponding to perpendicular component. The parameters calculated for the complex are presented in **Table III**



**Table III. ESR Data of Cu (II) complexes**

complex	$g_{\parallel}$	$g^{\perp}$	$g_{ave}$	$A_{\parallel} \times 10^4$ (cm-1)	$A^{\perp} \times 10^4$ (cm-1)	$A_{ave} \times 10^4$ (cm-1)	$\alpha^2$	$\beta^2$	$\gamma^2$	$-\lambda$ (cm-1)
Cu-DNCH	<b>2.23</b>	<b>2.04</b>	<b>2.10</b>	<b>13.6</b>	<b>45</b>	<b>75</b>	<b>0.71</b>	<b>0.80</b>	<b>0.60</b>	<b>473</b>
Cu-HCNCH	<b>2.24</b>	<b>2.04</b>	<b>2.11</b>	--	--	--	--	--	--	<b>494</b>
Cu-HPNCH	<b>2.25</b>	<b>2.06</b>	<b>2.12</b>	--	--	--	--	--	--	<b>523</b>

It is clear from the above table that the  $g_{\parallel} > g^{\perp} > 2$  indicating that the unpaired electrons in Cu-DNCH, Cu-HCNCH and Cu-HPNCH lies predominantly in  $dx^2-y^2$  orbital.[20-21]. The values of  $\alpha^2$ ,  $\beta^2$ ,  $\gamma^2$  obtained for the complex suggest appreciable in-plane  $\sigma$  bonding, in-plane  $\Pi$ -bonding and out of plane  $\Pi$ -bonding respectively[22-23]. Further, the spin-orbit coupling constant ( $\lambda$ ) value of Cu (II) -473, -494 and -523 cm<sup>-1</sup> are lower than the free ion value ( $\lambda_0 = -828$  cm<sup>-1</sup>) suggesting considerable mixing of ground and excited terms in the complexes. The magnetic moment value of Cu-DNCH, Cu-HCNCH and HPNCH is 1.82 which is in agreement with their magnetic susceptibility measurements.

## CONCLUSION

In conclusion we have reported the synthesis of DNCH, Cu-HCNCH and HPNCH of Naphthiridine Schiff base metal complexes. The metal-organic ligand stoichiometry has been found to be 1:2 in the complexes of Fe (III), Co (II), Ni (II) and Cu (II), where as Pd (II) complexes have 1:1. Where as in the case of Cu-HPNCH the metal-organic ligand stoichiometry has been found to be 1:2 in the complexes of Mn(II), Fe(III) and Co(II) and 1:1 in case of Ni(II), Cu(II) and Pd(II) complexes. The formation of ligands and metal complexes are confirmed by structural characterization like elemental analysis, IR, and electronic spectra reveals that the coordination in metal complexes is through oxygen of amide  $>C=O$ , phenolic C-O and nitrogen of azomethine group.



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