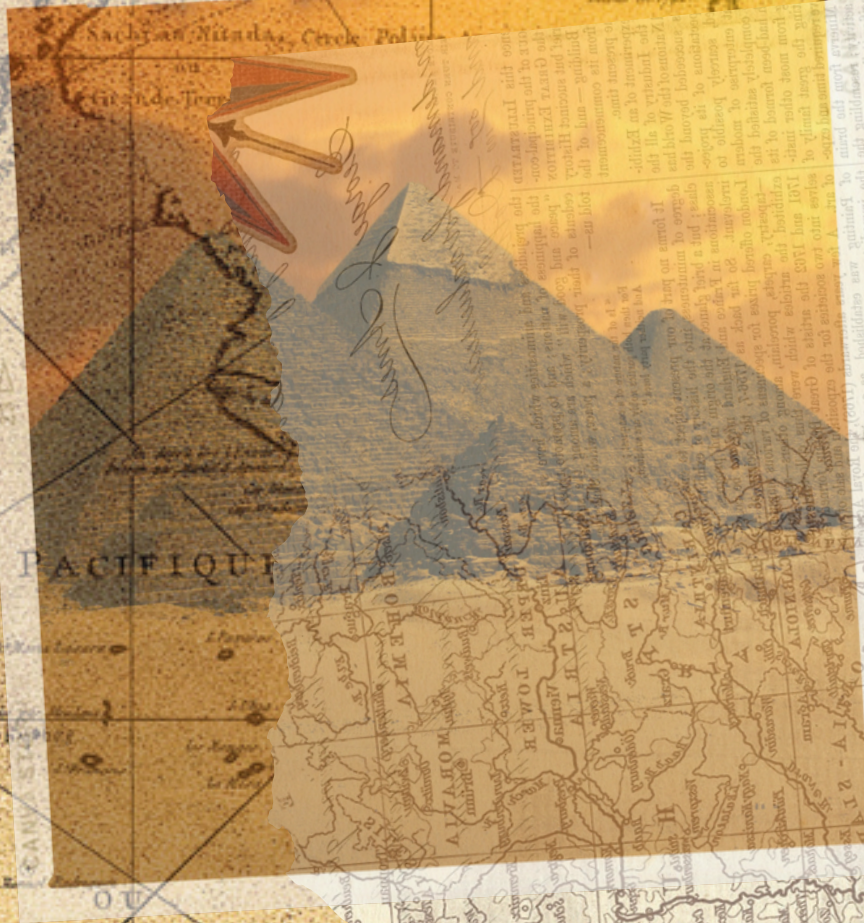


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Impact and consequences of globalization currently taking place in developing countries like India

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Introduction: Globalisation is the new term that has dominated the globe since the end of the cold war, the disintegration of the former Soviet Union, and the worldwide tendency toward the rolling ball in the 1990s. In many developing nations, a process of structural adjustment encouraged by studies and initiatives of the World Bank and other international organisations has begun, with growing dependence on the market economy and renewed confidence in private capital and resources. Also Globalisation has provided developing nations with new opportunities. Greater access to developed-country markets, as well as technology transfer, offer increased productivity and a greater quality of life. Globalisation, on the other hand, has brought with it new issues such as rising inequality between and within countries, financial market instability, and environmental degradation. Another disadvantage of globalisation is that the vast majority of poor countries are excluded from it.

The process of globalisation of the Indian economy was slowed by trade and investment obstacles until the 1990s. Since then, trade, investment, and financial flows have been liberalised, lowering barriers to competition and hastening the speed of globalisation.

meaning and definition: Is a globalised world defined as the rapid movement of people, resulting in increased interaction? Does this imply that individuals can communicate with each other from anywhere in the globe as a result of the IT revolution? Does this imply that each country's commerce and economy are open in a non-intrusive manner, with all types available to the customer of his choice? Is it possible to argue that mankind has attained liberation to the point that we can speak about social, economic, and political globalisation? Though an exact definition of globalisation is yet unclear, there are a number definitions worth looking at, including...





Stephen - Globalisation is defined as the lowering of the transaction cost of global capital and goods movements and therefore of factors of production and commodities.

Guy Brainbant - "The globalisation process includes not only the opening up of world trade, the development of advanced communication technologies, the internationalisation of financial markets, the growing importance of multinational corporations, population migrations, and more broadly increased mobility of people, goods, capital, data, and ideas, but also infections, diseases, and pollution."

Impact on India: Following a huge crisis caused by a foreign exchange crisis that brought the country dangerously near to defaulting on debts, India opened up its economy in the early 2000s. A spate of domestic and external sector policy measures were enacted in reaction, partially in response to pressing requirements and partly in response to multilateral organisations' demands. The new policy regime pushed the economy in a more open and market-oriented direction. Scrapping the industrial licencing regime, reducing the number of areas reserved for the public sector, amending the monopolies and restrictive trade practises act, starting the privatisation programme, lowering tariff rates, and switching to market-determined exchange rates were all major measures implemented as part of the liberalisation and globalisation strategy in the early 2000s.

Over time, there has been a progressive liberalisation of current account transactions, with more and more industries opening up to foreign direct investments and portfolio investments, easing foreign investor participation into telecom, highways, ports, airports, insurance, and other significant sectors. Over the last decade, India's tariff rates have dropped dramatically, from a weighted average of 72.5 percent in 2017-18 to 24.6 percent in 2018-19. Tariff rates gradually increased in the late 1990s, eventually reaching 35.1 percent in 2021-22. India is dedicated to lowering tariffs. Peak tariff rates will be decreased to the bare minimum, with a peak rate of 20%, and most non-tariff obstacles, including practically all quantitative limits, will be removed in another two years, by March 2020.

India's Global: The liberalisation of the domestic economy and India's growing integration with the global economy have aided in the acceleration of GDP growth rates, which have risen from 5.6 percent in 2016-17 to 77.8 percent in 2020-22. Growth rates have dropped, but the country has nevertheless managed to expand at a pace of 5-6 percent in three of the previous five six years.





In a global comparison, India is currently the second-fastest-growing country, after only China. Given that India's growth rate in the 2000s was just 3%, while GDP growth in nations like Brazil, Indonesia, Korea, and Mexico was more than double that of India, this is a significant increase. Despite the fact that India's average annual growth rate nearly quadrupled to 5.9% in the 1980s, it was still lower than China, Korea, and Indonesia. The improvement in India's worldwide position has been aided by a pick-up in GDP growth. As a result, India's worldwide economic standing has risen from eighth place in 2001 to fourth place in 2021. When GDP is measured in terms of purchasing power parity.

Poverty and Globalisation: Globalisation, in the form of increasing integration through trade and investment, is a major factor for the significant progress made in recent decades in lowering poverty and worldwide inequality. However, effective national policies, sound institutions, and internal political stability are all important factors in this frequently unnoticed success. Despite this progress, poverty remains one of the most important worldwide issues we face, with 1.2 billion people living in extreme poverty in the developing world. However, despite substantial population growth in impoverished nations, the share of the world population living in poverty has been slowly dropping since 2000, and the absolute number of poor people has stopped growing and looks to have dropped in recent years.

In order to reach this aim, India must focus on five key areas or actions. Technological entrepreneurship, new business opportunities for small and medium firms, the necessity of quality management, new opportunities in rural regions, and financial institution privatisation are among the topics covered. Technology manufacturing and technology management are two distinct areas of importance in the country. In rural India, there will be new opportunities. Rural involvement in the global race is critical to India's economic success. Because of its distinctive vision and branding strategies, the function of villages gained relevance once the new economic strategy was implemented. Food processing and packaging, for example, is an area where new entrepreneurs may have a significant impact. To fulfil global demand, it might be organised collectively with the support of co-operatives. It is vital to understand the current state of globalisation in order to chart a route for the future. It is critical to provide a fair playing field for all nations to gain the full benefits of globalisation.





It will be accomplished by President Bush's recent plan to abolish all tariffs on all manufactured goods by 2018. In reality, it has the potential to worsen existing inequities. Tariffs of 5% or less on all manufactured items will be removed by 2001, while tariffs of more than 5% will be reduced to 8%, according to this proposal. Starting in 2010, the 8% tariffs will be gradually reduced until they are completely gone by 2018.

Gross Domestic Product (GDP) Growth Rate: The Indian economy is going through a challenging period as a result of various unfavourable domestic and global trends; in the last two years, low agricultural performance has had a negative impact on domestic output and demand. According to the Economic Survey in 2000-01, the global economy decelerated and reported production growth of 2.4 percent over the previous year. Real GDP growth in 2001-02 was 5.40%. The first quarter's performance was 5.8%, while the second quarter's performance was 6.1 percent.

Importing and Exporting: In the fiscal year 2001-02, India's export and import were 32,572 and 38,362 million dollars, respectively. Many Indian enterprises have begun to establish themselves as credible international players. Agriculture exports make for around 13 to 18 percent of the country's overall annual exports. Agricultural items worth more than US \$ 6 million were exported from the nation in 2000-01, with marine products accounting for 23% of the total. In recent years, marine goods have emerged as the single greatest contributor to the country's overall agricultural exports, accounting for more than a fifth of total agricultural exports. Cereals (mostly basmati and non-basmati rice), oil seeds, tea, and coffee are additional important exports, accounting for around 5 to 10% of the country's total agricultural exports.

In terms of global integration, where does India stand?: India certainly falls behind in terms of globalisation. China, a huge portion of east and far east Asia, and eastern Europe are among the countries that have a clear lead. Let's take a look at a few indicators to see how far behind we are. · FDI into India has averaged roughly 0.5 percent of GDP over the last decade, compared to 5% for China. Brazil has a 5.5 percent share of the market. In contrast, China's FDI inflows currently approach \$50 billion each year. In India's case, it's merely \$ 4 billion. Consider global trade: during the last two decades, India's proportion of global merchandise exports has risen from .05 percent to .07





percent. China's market share has nearly quadrupled to nearly 4% in the same time span. According to IMF estimates, India's proportion in world commerce is comparable to that of the Philippines, a country with a 6 times smaller GDP. Given its size, closeness to markets, and labour cost advantages, India undertrades by 70-80%. Mr. BimalJalan, Governor of the Reserve Bank of India, made an intriguing comment last year. Despite all of the hype, we are now closer to becoming globalised than we have ever been in terms of any generally cited globalisation measure. In reality, regardless matter how we look at it, we are among the least globalised of the main countries. As AmartyaSen and others have pointed out, India has interacted with the outside world as a geographical, political, and cultural entity throughout history and continues to do so now. It must adapt, integrate, and contribute in order to survive. Even as we progress into what is known as a globalised world, which is marked by speedier travel and communication, more commercial links, a loss of political and economic sovereignty, and a growing embrace of democracy as a way of life, this goes without saying.

Conclusion: Globalisation has several ramifications for a country's economy. Interdependence and rivalry between economies in the global market have increased as a result of globalisation. This is evident in interdependence in terms of trade in products and services, as well as capital mobility. As a result, domestic economic trends are influenced by factors other than domestic policy and market circumstances. Rather, domestic and international policies, as well as economic situations, have an impact on them. This limited policy options open to the government, implying a loss of policy autonomy in national decision-making to some extent.

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STUDY OF WATER QUALITY OF DIFFERENT CITIES IN NARMADA RIVER BASIN

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Abstract : The Narmada River, India's third-longest river, became studied to decide its water first-rate. Water samples have been amassed from 17 sampling places at 6 main sampling stations. To generate the water first-rate index (WQI), 9 water first-rate parameters have been evaluated, accompanied via way of means of a multivariate statistical evaluation. The consequences confirmed that water first-rate withinside the higher Narmada ranged from superb to very negative, with superb representing about 12 percentage of pre-monsoon samples, correct representing 17 percentage, negative representing fifty nine percentage, and really negative representing 12 percentage of post-monsoon samples, however superb representing 17 percentage, correct representing 12 percentage, and negative representing seventy one percentage of post-monsoon samples. While the Narmada's water first-rate became low overall, human inputs consisting of domestic sewage and agricultural runoff had an effect on specific indicators, together with BOD, nitrate, and overall coli form. More studies is wanted to finish the water first-rate assessment.

Keyword: Water Quality of Narmada River, W.Q.I. (Water Quality Index).

Introduction: Rivers are an critical deliver of freshwater for life, however they're degrading due to the release of business and family wastewaters, agricultural runoff, and different factors. India has a large river machine with a complete every year discharge of 1,312 km. The Beas, Brahmaputra, Mahi, Narmada, and Pennar rivers are relatively clean, however the Brahmi, Ganga, Godavari, Kaveri, Krishna, Mahanadi, Satluj, and Yamuna, amongst others, are closely polluted. Organic and inorganic pollution, viruses and bacteria, and different contaminants have polluted maximum Indian rivers. Large quantities of sewage are generated in India's city areas, which might be often launched into water our bodies with out being nicely treated.





Agriculture sports in watersheds, on the alternative hand, are a primary reason of river pollution. The Narmada River, which begins offevolved in Amarkantak, Madhya Pradesh, and runs via the Maikal and Satpura hills, is one in every of India's maximum sizable rivers. It runs 1,312 kilometres west via Madhya Pradesh, Maharashtra, and Gujarat, inclusive of 1,077 kilometres internal Madhya Pradesh. The Narmada is bordered through lush forest in its better reaches, round Amarkantak. It flows from Amarkantak's highlands to Dindori, Mandala, Jabalpur, Narsinghpur, and Hoshangabad, assembly the water wishes of the region's full-size population (Census of India, 2011) - **Table 1**.

Table 1 shows the population distribution along the Narmada River's higher reaches (Census of India, 2011) (View from a table)

Sr. No.	District	Total population	Urban population (%)	Rural Population (%)	Population density (per km ²)
01	Anuppur	749,237	27.4	72.6	200
02	Dindori	704,524	4.6	95.4	94
03	Mandala	1,054,905	12.3	87.7	182
04	Jabalpur	2,463,289	58.5	41.5	473
05	Narsinghpur	1,091,854	18.6	81.4	213
06	Hoshangabad	1,241,350	31.4	68.6	185

Between Amarkantak and Hoshangabad, the Narmada, like different essential rivers in India along with the Ganges and Yamuna, is below strain from a whole lot of pollutants reasssets. Religious activities, public gatherings, swimming, and domestic effluent releases are all viable reasssets of threats (see Table 2).





Table 2: Locations of sample sites and pollutant sources in detail (Table view)

Sampling Sites	Geographic Locations	Sampling sites	Potential pollution sources to the river
Site 1 to site 4	Amarkantak (22°40.371' N 81°45.547' E)	1. Narmada main <u>kund</u> 2. Ram ghat 3. Vivekanand ghat 4. Kapil dhara	Forest runoff, ritual bathing, washing clothes/utensils, vehicles, some household discharges, etc.
Site 5 – 7	Dindori (22°56.812' N 81°04.627' E)	5. Chandan ghat 6. Dindori Bus stand 7. Manode	Domestic sewage and effluent discharges, bathing, washing vehicles.
Site 8–10	Mandala (22°36.320' N 80°21.760' E)	8. Sangam ghat 9. Rapta ghat 10. Ranrez ghat	Ritual activity near river banks, and wastewater discharge from densely populated towns.
Site 10–13	Jabalpur (23°08.001' N 79°48.018' E)	11. Gwari ghat 12. Tilwara ghat 13. Bheda ghat	Bathing, performing ritual acts and municipal sewage discharge.
Site 14–15	Narsinghpur (22°47.659' N	14. Barman ghat 15. Bandarbhan ghat	Agricultural runoff and occasional religious rituals.

Many studies were carried out on many factors of river water first-class. As a result, water first-class willpower using physicochemical and organic standards is needed a good way to examine with relevant standards. The entire water first-class at any specific second is not possible to determine. Discrete water first-class variables are not able to mirror real water first-class and are hard to explain first-class for a number of programs, which include drinking, bathing, gardening, and so on. Because of those difficulties, the water first-class index (WQI) technique turned into utilised, which can also additionally simplify datasets through lowering them to particular values. Excellent (WQI 50), acceptable (50 to one hundred), poor (one hundred to 2 hundred), and extraordinarily bad (2 hundred to 300) are used to classify the general first-class of a water frame and its appropriateness for one-of-a-kind programs including drinking, agriculture, and industry. The present day look at turned into endorsed in mild of the Narmada River's significance and the paucity of ecological statistics at the river's water exceptional.





It is an try to determine water exceptional in Madhya Pradesh's higher quantities of the Narmada River, from Amarkantak to Hoshangabad. WQI turned into expected the use of each spatial-temporal and pre- and post-monsoon fluctuations in water exceptional, in addition to PCA, FA, and CA to degree river water exceptional.

MATERIALS AND PROCEDURES: The study region and the sampling locations. The examine centered at the Narmada River's top reaches, from its supply in Amarkantak to Hoshangabad, Madhya Pradesh (Figure 1). The Narmada basin is positioned among 72o32 E and 81o45 E, and among 21o20 N and 23o45 N, having a drainage location of 98,796 km². To its north and south, the river flows among the Vindhyan and Satpura mountain ranges. A general of 17 sampling places had been selected for the overall exam from six sampling sites (Amarkantak, Dindori, Mandala, Jabalpur, Narsinghpur, and Hoshangabad) (Figure 1, Table 2). These places had been selected following a radical evaluation and primarily based totally at the perceived degree of danger to the river from many causes, together with natural, domestic, social/religious, and etc.

SAMPLE COLLECTION AND ANALYSIS: The studies became accomplished in 2017–18 for the duration of the pre-monsoon (May) and post-monsoon (October) seasons. Apart from the ones for assessing dissolved oxygen (DO) and biochemical oxygen demand (BOD), which had been accrued in BOD bottles, samples had been accrued in 1 litre PET bottles. Before collection, all bottles had been prewashed 3 instances with the sample. The DO samples had been constant on-webweb page, and all the samples had been saved in iceboxes till they had been introduced to the lab for exam the subsequent day. Temperature, pH, electric conductivity (EC), overall dissolved solids (TDS), and salinity had been all measured on-webweb page with a Hanna pH metre and a transportable Oakton multi-parameter tester. The Madhya Pradesh Pollution Control Board furnished overall coliform statistics. Using a hand-held GPS device, the coordinates of sampling places had been recorded (Garmin Etrex-20). DO and BOD had been decided the usage of the Winkler technique, alkalinity became expected the usage of titrimetric analysis, and overall and calcium hardness had been decided the usage of EDTA.

MULTIVARIATE ANALYSIS CORRELATION: The statistical technique of correlation





courting among the variables x and y is indicated via way of means of correlation coefficient values near to +1 or -1. Many studies have used the correlation to recognize physicochemical elements in connection to water.

$$r = \frac{N \sum (X_i Y_i) - (\sum X_i) \cdot (\sum Y_i)}{\sqrt{[N \sum X_i^2 - (\sum X_i)^2] [N \sum Y_i^2 - (\sum Y_i)^2]}}$$

here r = correlation coefficient

X_i and Y_i represent two different parameters, &
N = total number of observations.

WATER QUALITY INDEX (WQI): Various water excellent indices, including the Weighted Arithmetic Water Quality Index, National Sanitation Foundation Water Quality Index, Comprehensive Pollution Index, Carlson's trophic index, and Canadian Council of Ministers of the Environment Water Quality Index, were advanced globally to display floor water excellent of rivers. The Weighted Arithmetic Water Quality Index (WQI), that's a score displaying the interaction of numerous water elements on general water excellent, became used to evaluate the water excellent of the higher Narmada River withinside the context of floor water excellent. Each variable (pH, TDS, alkalinity, chloride, general hardness, DO, BOD, and nitrate, in addition to the bacterial loads, had been assessed on this study) became weighted (w_i) to compute WQI, as proven in Table 3.

Table 3: shows the relative weights of the parameters (Table view)





Parameter	MAC ^a (S _i)	Weight (w _i)	Relative Weight (W _i) ^b
pH	8.5	4	0.11
TDS (mg/l)	500	4	0.11
Alkalinity (mg-CaCO ₃ /l)	120	4	0.11
Chloride (mg/l)	250	3	0.09
T. Hardness (mg-CaCO ₃ /l)	300	2	0.06
DO (mg/l)	5	4	0.11
BOD (mg/l)	5	4	0.11
TOTAL		25	0.7

aMAC or equivalent (BIS, 1991)

bWi derived for this study.

Discussion of the Findings Physicochemical Properties of NARMADA River Water: Table four suggests the analytical outcomes for the river water samples. The Narmada River's pH ranged from mildly acidic to barely alkaline [Figure 2(a)]. The minimal pH changed into 6.nine at Narmada predominant Kund (the Narmada's source) and the most changed into eight.eight in Rangrej ghat at some point of the pre-monsoon season. The minimal pH for post-monsoon changed into 6.2, likewise at Narmada predominant kund, even as the most changed into eight.nine, additionally at Budhni ghat.

Table 4 shows the water quality in the Narmada River before and after the monsoon (Table view)

Parameters	MAC	Source	Pre-monsoon Range	Post-monsoon Range
pH	6.5–8.5	BIS, 1991	6.9–8.8	6.2–8.9
EC (μS/cm)	–	ICMR, 1975	83.1–323	74.8–336
TDS (mg/l)	500	BIS, 1991	59–230	52.9–238
Alkalinity (mg-CaCO ₃ /l)	200	BIS, 1991	10–118	52–228
Chloride (mg/l)	250	BIS, 1991	8.5–138.5	32–88.8
T. Hardness (mg-CaCO ₃ /l)	300	BIS, 1991	34–146	46–184
DO (mg/l)	5	ICMR, 1975	3.2–13.6	2.6–12.2
BOD (mg/l)	5	ICMR, 1975	1.1–10.8	0.4–9.8
Nitrate (mg-NO ₃ /l)	45	BIS	0.03–2.5	0.2–2.4
Total Coliform (MPN/100 ml)	5	BIS	2–50	2–46





***ICMR- Indian Council of Medical Research, 1975, BIS- Bureau of Indian Standards, 1991.**

A WQI turned into computed the usage of 9 physio-chemical parameters, along with pH, TDS, BOD, DO, alkalinity, chloride, overall hardness, nitrate, and overall coliform, to apprehend pollutants tiers withinside the river. WQI turned into observed to be appropriate at webweb sites 1, 2, and 3 (Narmada most important Kund, Ram ghat, and Vivekananda ghat) on the river's starting place due to the fact the water is in a strolling circumstance without a obstructions to its go with the drift and has self-cleansing capacity, while at web website online 4 (Kapil Dhara), the water is amassed via a test dam which paperwork a small pond once more and its overflow keeps because the Narmada river, sampling at Kapil Dhara.

Conclusions: The river's physicochemical properties were measured at 17 different sample locations between Amarkantak and Hoshangabad. The study's results were also used to compute WQI, PCA, and HCA. The river water quality is presently poor and unsatisfactory for everyday needs in both seasons, according to the calculated WQI. In addition, PCA explained three and two PCs, respectively, for the pre- and post-monsoon seasons. Based on identical water quality indicators, HCA defined three and two categories for the pre- and post-monsoon seasons. These clusters visually depicted seasonal fluctuations in water quality in terms of area and time, suggesting that urban pressure is a significant contributor to water quality degradation.

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WOMEN EMPLOYEES' WORK LIFE QUALITY AND STRESS-RELATED ISSUES

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Abstract : Work Productivity Women's lives have become a topic of discussion in society as a result of recent demographic, technological, and market-organizational shifts. (i.e., work and work environment). Individual jobs are being loaded and added with excellent output as work deadlines become shorter. It's difficult to strike a balance between job and family life when you're under pressure at work. The quality of human resources determines the productivity of any organisation or IT industry. The most fundamental financial metrics of operational efficiency and financial service quality. The main goal of this study is to identify the elements that impact women employees' happiness, concerns, and challenges in the modern day, as well as to recommend strategies to promote work-life balance. This study focuses on the IT industry. An attempt has been made in this paper to present an overview of numerous journals, books, doctoral theses, working papers, and internet sites, as well as pieces from newspapers.

Keyword: Work-life quality, working conditions, work pressure, family life, female employees, and professional life are all factors to consider.

Introduction: Quality of Work-Life was initially conceived in terms of work family conflict(Kahn et al.,1964), work family enhancement / facilitation (Grzywacz and Marks,2000), or, work family balance. Now a day's managing work life balance is a challenge for both women employers and employees particularly in service industry where employees are loaded with work at workplace and at the same time they have to balance their personal life. Work life and family life are two sides of the same coin. Creating and managing a balance between work and personal life is considered to be a work life balance issues. Increasing work pressure, globalization and technological advancement has an impact on balancing professional life and personal life. Greenhaus et al.(2003)





divided the concept of work-family balance has comprising three components. These are:

- Time balance, where by equal amounts of time are devoted to work and family;
- Involvement balance, whereby an equal level of psychological involvement in work and family roles exists;
- Satisfaction balance, whereby an equal level of satisfaction is derived from work and family roles.

Global labour market is becoming highly competitive and companies are outsourcing to reduce the labour cost. As a consequence, the employees feel impelled to put in longer hours to achieve and possibly exceed the employer' expectations in order to secure their jobs. Thus the 'long hours culture' and '24/7 life style' has come to dominate the lives of highly educated and skilled professionals and managerial personnel

Meaning: Quality of Work-Life is about people having a measure of control over when, where and how its achieved when an individual's right to a fulfilled life inside and outside paid is respected as the norm, to the mutual benefit of the individual, business and society.

Objectives:

- To study the work and family related factors that influence the workfamily balance of Women.
- To identify the work life balance factors influence for women employees satisfaction.
- To understand the challenges they face and the type of coping strategy they use to achieve work family balance.

Factors or Issues:

There are certain health related issues due to the work/life imbalances and stress at workplace. The outcomes of a stressful work are health related problems, which generally leads to quitting of job or quitting the industry. Some of the health issues are: tension, Sleeplessness, headache, Eye-strain, Repetitive strain injury, Backache. Detachment from the Family, Depression, The gradual realization that there are limited scopes in making a career owing to fewer growth opportunities is increasing the frustration levels in the organization. Coupled with growing mental the obvious end result. Eyesight Problems: Globally bank employees have to face eye related problems. While the quality of monitors





might impact these disorders, sitting continually without adequate breaks seems to be the truer reason. While this is already a problem in the IT industry, which some companies have overcome by use of anti-glare monitors. Constant struggle and effort to maintain a balance between the work and personal life can have serious implications on the life of an individual.

Time Factors: Majority of the MNCs or IT sectors having shift basis or time rotation basis work such as night shift work. It involves the stress and matter of the trusting staff and measuring outputs and achievements rather than the process. **Locality Factors** and Strict rules of that sector and the financial or economic status of the women employee.

Conclusion: There are no hard-and-fast rules on what constitutes an acceptable work/life balance - this will depend on the operational requirements of your business and the needs of your employees. **Flexible Working Practices** This includes parttime working, flexi-time, job sharing and home working. Certain employees have the right to request flexible working. Utilize the flexible working hours option of the organizations to get some free time. Human Resource Department can even provide Maternity leave, Paternity leave, Parental leave, Paid leave for short period of time, Working time reduction : Part time upon request, Crèche facilities. Making the working environment more attractive **Time Management:** It is one of the best solutions which can help to reduce the imbalance between the personal and the work life of the employees.

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**TRANS-BOUNDARY MIGRANT LABOURERS: A STUDY OF BHARIYAS (THE BURDEN-BEARERS)
OF NEPAL IN DARJEELING, INDIA**

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Abstract: If one destines his/her holiday tour in the popularly branded queen of hills called Darjeeling, a hill station in West Bengal, India, he/she may start to view nature's screened paints over it under the shadow of sky-needling pine woods as soon as his taxi enters Darjeeling. Jubilant at his arrival in Darjeeling, he might be awestruck seeing a bunch of people (often both male and female) holding Namlo, tokma and sometimes doko rushing towards a taxi, whichever reaches to the station. As soon as the taxi stops, the race among these people begins, to carry the luggages of arrivals to their stay spots. These people are seen carrying their client's burden on their back with the support of namlo (fixing on forehead as if, it sketches their fortune) and doko wearing the cloth re-fabricated with the mixture of dust and sweat-lines. One intricate question does prevails to evaporate within, if these burden-bearers feel the world left behind when they hold skyingbudens on their back. This picture is not confined to the centre of Darjeeling taxi stands only, tourist in Darjeeling can observe similar sight in other bustling spots like Ghoom, Jorbanglow, Chawrasta, Polo ground and in other places within the district town. The race among these burden bearers to port the goods, bargaining with clients for proper wages against their work, gathering and gossips among them, singing Nepali song (often and folk version), sweat and dust fabricated wears may amaze a person new in town for a while. It might be a negligible sight as compared to the magnificent beauty of Darjeeling. But a curious mind may sketch some probable questions to outline certain understanding about these Nepali burden-bearers and that this paper is trying to look for.

Keyword: Bhariya, Burden-bearer, Darjeeling, Nepal

Introduction: "Bharyama Bisayebhari Bhanjyangko Sitalu Chhayama!! Din-raat Bokchhu Bhari Khoiyya Suselerh, Pasinakodharapuchchhutopiphukalerh... AajBholi Bhanda Bhandai Jivan Bitne Bhayo...(Resting burden under this shadow to reinvigorate myself, un-soiling the sweat rolling down from my face for a while!!





I do backpack other's burden day and night, in the rhythm of my breath and rapid spawning sweat drops on my face...this way my life follows me and I keep hold of the burden" (author's loose translation of a Nepali-folk song, sung by a Bhariya during interview). Above two statements may not be significantly-less to seek permissible by this author to speculate, these can be substantial introductory lines of this paper in trying to portray somehow a vivid (of course, not colourful) picture of the day to day life that a migrant Nepali bhariya in Darjeeling lives.

Who are Bhariya(s)? : Bhariya is a Nepali dialectic term which is derived from the word Bhari which synonyms to "Burden" and coincides with "Bearer" respectively, and in English commonly used as porter. Burden bearing is a common and cheap means to transport goods including all home appliances as well as necessary carriageables in every nook and corner in the hilly set up where other means of portage are of no avail. It is a common means of transporting things in almost all third world countries which includes all south-Asian countries. But the methods of Nepali Bhariyas in treating treat with burden gives uniqueness. They can hold as much as 93 percent and 66 percent of their body by every ordinary male and female Nepali burden-bearers respectively. And in many occasions, some of them can bear double of their body on their back. These porters commonly use oversized Doko (Bamboo basket) on their back as a backpacker(s) with the hanging support of Namlo (Load-tap) and tokma (Resting stick). The important aspect which differ them from other porter is the support of head to the burden of back which makes both hands and shoulders free and they can save 65 percent of energy of the body in comparison of other methods of human burden bearers (Ebert, 2010). Ben Harder's A researched telecast by National Geography states that "If you've ever watched Nepalese porters in action, you might think they have superhuman strength" (Harder cited in Nepal 2009).

In un-dazing Darjeeling - Surveying the history that concern Nepali Bhariyas in Darjeeling : The Indo-Nepal relation was in no point of time had been new. Both the countries have shared similar 'geographical', 'historical', 'cultural', 'social' and 'economic' sphere since time immemorial. From the mythological narratives to modern history, the relation between two nations is one of close interaction. Both the countries have witnessed the mobility of people from one to another end. The primary reasons behind the movement of people are the social relations, cultural exchanges (pilgrimages, festivities, fairs, etc.) and trade and commerce. Apart from the interaction and mobility





of common people, the, colonial legacies to post colonial foreign policy strategies between the two nations are the major determinants in the relation between the two countries. In subscribing this corollary of the history it could be found that movement of Nepali speaking people in Darjeeling is not a new phenomenon and the migration of Nepali citizen in search of full time job is not recent. The historical events unfurl considerable evidences to understand the relation and contact between people of Nepal and present Darjeeling. The fights over Darjeeling between Nepal, Sikkim and Colonial India as well as the Indo-Nepal diplomatic ties support the arrival of Nepali people in Darjeeling. From 1642 AD, during the days of Phungtsog Namgyal to 1706 AD the Darjeeling was the part of Sikkim and it was stretched up to the Arun river of Eastern Nepal. After attack by grandson of Prithivi Narayan Shah, the consolidator of Nepal, the large part of Sikkim including Darjeeling became the part of Nepal. The Sugauli treaty between Nepal and British East India Company after Indo-Gorkha war in Dec 2, 1815 the claim over Darjeeling of Nepal was ended finally. As a result of Sikkim's support during Indo-Gorkha war to company administration it got reclaim again over Sikkim following the provision of Titalya treaty. Later in 1935, company leased Darjeeling from Sikkim of Rs 3000 per annum when it noticed the trade prospect with Tibet and administrative possibilities from the hill. Once it is added to British colonial part of India company administrators (Tamang cited in Chhetry, 2013) The treaty of Sugauli (sic) followed the recruitment of Gorkhas from Nepal in Company military service.

Similarly, colonial administrators encouraged to emigrate people from Nepal for economic and agricultural development. By the company estimation, Nepali people had been experienced in all type of manual and casual work in hilly terrace of Nepal and they were considered as suitable workers to be in Darjeeling for the developmental works carried by company which attracted porters from Nepal apart from others like tea plantation and construction workers. (Chelsea L. Booth, 2009). In post colonial India, the relation between porters of Nepal and Darjeeling remains intact due to the contribution of IndoNepal friendship and peace treaty 1950 (article vii) which allows the free movement of people and goods as well as the assurance of work permits of one country into another (Tamang, 2011). Hence to say, human history has never been permanent and stable. Human mobility has been an integral part of this history. From the inception, human being moved from one place to another in search of food, shelter and better livelihood. Apart from the prospects of better livelihood as the Network theory (Gibernau: 1997, 264) says, the interpersonal ties of kinship bonds, cultura-





affinities, religious similarity and shared community origins also play the crucial role to encourage people to migrant from one place to another. With the emergence of nation state system, the imaginary political lines started to be drawn on the geographical surface in the name of national border(s) of Nationstate. Political boundaries not only divided the earth surface but also the kinship bonds, cultural homogeneity. But, such mobility and relation between the people of two different sovereign political units became dependable on the relation and national policy of such sovereign units. And the former kinculturally as well as shared community homogeneous groups started to be recognized with different political nationality as well constitutional identity and the national border started to serve also as the cultural border to such previously homogeneous community. National borders were not only the source to bifurcate historical commonality into the constitutional identity of culturally parallel community, but it also became the source of discrimination against the constitutional beneficiary of citizens. Once the national border between the sovereign entities is defined, the homogeneous cultural units started to be fragmented because of the national borderline and the majority group of one cultural unit as insiders in one end of the border is alleged as outsider in another end of the border.

Border line(s) could never stop the mobility of human beings always, albeit, such borderline(s) confined the fragmented geographical units as sovereign state. Especially, when it gets attached to the question of livelihood. At this juncture, the Bhariyas (burden bearers) in Darjeeling of West Bengal India have become a topic of both academic and political discussion. While this paper deals with the Nepali Bhariyas who bear the burden on their back as full time profession for their livelihood in Darjeeling, it ascertains an embellishment on the terms Bhariya and Bhariyas that what it is and whom it addresses for in Darjeeling before much furthering the topic.

Briefing research schema: Rationale of the study: The Bhariyas are an indissoluble section of community in Darjeeling. Familiarly they are regarded as treasury of communication for locations where other means of communication are in avail or unable. More importantly, Darjeeling is hilly station where Bhariyas have unforgotten, attached and intimate role in augmenting the socio-economic life of people in this abode of hills. But despite their significant role in the socio economic life in dominant spheres of people here, such contribution of the community is not well (probably unnoticeably) documented. Through this study an attempt will be made to understand the community as





well as, the study expected to be a process for scholarly documentation of socio-economic status of the community in the region.

The Respondents: This study was carried in Ghoom, Darjeeling taxi station, Jorbanglow, Chawrasta, and Town Bazar of the Darjeeling town. For this study respondents were interacted for ten day. Total sample size taken was 50, ten in each location and had a composition of 28 male and 22 female respectively. The ethical aspect of research was kept in mind and therefore the purpose of the research was explained before proceeding with the interview. The respondents were interacted in local Nepali language due their convenience in communication. Limitation: The limitation of the research is that the entire Bhariya population of the district town could not be interviewed and the duration of research was also very short. Respondents were engaged on their works and interviewer had to wait them till they complete their work. Many instances the desired respondents could not be interacted due to their time constraints. Many things were not discussed openly by the respondents, the reasons for which are known to them. It was desired that the interviews would be one to one but at times there were interference from their group members.

Senders and Attractors: The present context The theoretical framework of migration study is considerably applicable here as well. There are various factors interrelated behind the interstate migratory nature of these manual workers. To understand the background of migration responding the portage in Darjeeling the pushing and pulling factors substituted as Senders and attractors.

Senders:-

- Most of these burden bearers in Darjeeling hail from the Dolokha district of Nepal which is lacking modern development. The chronic backwardness could not assist in modern way of agricultural system to the region where the agriculture is the only (to say dominant) means of livelihood. And the agricultural production which is carried despite of this constrains could not get proper market price in absence of proper transportation system since this region is untouched from the nearest well connected markets in point of view of communication. It lacks the liquid money in hand necessary for supplementary foods, medicine, clothes and other home appliances.
- The absence of proper education system and institutions contributing in regular illiteracy in the





region. The illiterate youths are compelled to choose this unskilled profession for their daily earning to assist family.

- The majority of inhabitants of Dolokhaare 'Thami' the tribe which is found skilled in portage. The incompetence in portage market in nearest locality shows the migration in search of similar market where challenge is possibly less and in such circumstance Darjeeling appears as a suitable hub.
- The political commotions are also standing as sender. During the Maoist stir (1996-2005), youth who were not agreeing to join same, were bound to escape to protect the life, since it was one of the most affected districts during the time.
- 'Muglaan Mania' is common phenomenon among the illiterate youth in Nepal. Muglaan is a Nepali term which denotes the foreign land. The uneducated youth who are unfamiliar with other languages for minimum communicative exchange prefer to choose Darjeeling as work spot where Nepali is commonly spoken medium and such youths engage in portage as it is easily accessible.

Leading Attractors and keepers

1. The open border system between Nepal and India gives an opportunity to people of both the countries to enter in each other's territory for social, cultural and economic purpose at any point of time.
2. Absence of official paper work to get the permission makes it possible to enter India in search of such manually earnable.
3. Kith and friend following found a highly contributing factor in migration of these porters. Youth who miss their friends in native, can meet here.
4. The attractive life style of returners attracts other able people of the village to follow same path, who return home on various occasions like marriages, festivals (Dasai, Tihar) and any other social celebrations. They usually hide the ground reality of their day to day works and living conditions as well. They appear to be attractive during their stay in the village while luring the youngsters with their fashionable wears of Darjeeling.





Daily life and locals' response: The Bhariyas do not have any definite time table to follow. People's need for them and the carriageables decide their time when they should take food staff and rest. Still, the common starter time is morning 5-6 am and evening up to late dusk until the burden available to shift, yet, 6-7 pm is commonly taken as return maker. Popular number is that of bachelors or who have family in their native place, yet the family holders are also in considerable number. Family holders are out for work, taking heavy breakfast or lunch and prepare dinner at their own room. People other than family holders either live in group of 5-10 or in personal room or in old public buildings. For this group, the diet in time is unknown, they take food only when they feel hungry. There is no any official figure is available but the informal sources like some locally informed people or some seniors of them talk about 400 bhariyas are working in different locations as well as various wards of Darjeeling like Chawrasta, Ghum, Taxis and bazaar, municipality area etc. The view of burden carrying women gives an open idea to understand the gender ratio among them. Some of male members shift up to 120 kgs of load and female 60 kgs in some cases. They move all type of carriageables like daily domestic useable or home appliances, tourist belongings, construction items and this makes them and locals interdependent. Nepali makes soft medium to bargain with locals as it is commonly understandable but the language barrier stand to deal with other national and international tourists where the local multilingualvoluntarily bridge the gap as interpreters. The intellectuals are helping them when some unwanted dispute arise among them or with others in case location, wage charge etc. But, many other factors are stand against them which affect their life mentally as well as emotionally. In some instances they are addressed with some derogatory remarks like 'khate', 'kode', 'pakhe', 'bhatuwa', 'bhariya', etc. They cannot escape from some local drunker who asked money from them in the form of local appropriation. Police found to charge cash money in pretext of foreign national as registration fee which never been materialized in the form of registration certificate or authentic license. The local vs outsider rivalry is disappointing phenomenon which visualizes Nepal nationals as inferior since Nepali speaking porters from Darjeeling remains upper handed over them and locals often prefer to local, taking the advantage of familiarities.

Inter-relation: There is no any formal organization to connect them rather the informal contact among them which itself found not less than formal relation. The area of work defines their meeting places. . Despite of work competition the attachment among friend circle, neighbors, and kinship -





remains distinctively visible. A common understanding in themselves helps them to manage at least a square meals a day. One who is unable to meet his food for a particular day is helped by the nearer one to manage it. The dear ones who already manage to fill his stomach for that particular day hands over his turn to the friend who finds it difficult to manage the same. During illness, only the friends and neighbours form the native land gather around to take care of him and medicate and at times, even take him back to his home in case of serious illness. They usually send it in cash through the friend who visits the village which at times fall prey to theft. Their economic and financial understandings are as such that they themselves contribute during acute financial crisis like deaths, marriages and other essential needs.

Conclusion: As I have tried to stress throughout the course of study in this, somewhat empirical and speculative deliberation as well, honestly. It is difficult for me, in fact, unable, to come to any significant conclusion on the basis of commentary I have presented above. I do believe, however, that the issue, problem, or to say, some aspects addressed in the preceding sections, show that there are areas of fruitful investigation and analysis still waiting to be explored with kin interest in research. Equally, there are many more important areas that this paper has failed to accomplish, in good extend, not touched at all. Research along some of the lines suggested (much free for beyond these) might teach us about the problems, issues and many other economic, socio-political, cultural (more other left unseen for me) related with Nepali Bhariyas in Darjeeling.

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IN JAMMU AND KASHMIR, ASSESSMENT AND UNDERSTANDING OF GUJJAR AND BAKERWAL WOMEN'S HEALTH

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Abstract : The Gujjars and Bakerwals, the third largest ethnic group in Jammu and Kashmir after Kashmiri and Ladakhi, constitute more than 20 per cent population of the State. They are the state's most populous Scheduled Tribe having a population of more than 20 lakh as per the 2011 census and one fourth of them are living nomadic life. Out of the total nomadic Gujjar and Bakerwals, 66 percent population of nomad Gujjar-Bakerwals who fall under Scheduled Tribe groups in the state of Jammu & Kashmir are living Below Poverty Line, revealed a survey conducted by Tribal Research and Cultural Foundation (TRCF), a frontal organization working for the cause of Indian tribes. The Gujjar and Bakerwal women's health in Jammu and Kashmir is the worst, because of lack of education, lack of awareness about health programs and their way of living nomadic life. Like many other places Gujjar and Bakerwal women's position in Jammu and Kashmir has been central in the upbringing of children, grazing their goats and sheep's and managing domestic affairs

Introduction: Jammu & Kashmir State is one of the States of Indian Union. In the seventeenth century when the Mughal emperor Jahangir set his eyes on the valley of Kashmir. He said that if paradise is anywhere on the earth, it's here, while living in a houseboat on Dal Lake. "Gar firdaus, baruhezaminast, haminasto, haminasto, haminast". If there is ever a heaven on earth, it's here, it's here, and it's here. It is also the northern Muslim dominated state of India with population more than one crore as per Census figures (2011). The State has its own Constitution besides the Constitution of India and enjoys the special status under article 370. J&K is compounded by militancy and armed conflict, which have taken a heavy toll of life and public property besides throwing normal life out of gear.

Gujjars and Bakerwals in J&K: The Gujjars and Bakerwals, the third largest ethnic group in Jammu



and Kashmir after Kashmiri and Ladakhi, constitute more than 20 per cent population of the State. The both groups of Gujjar community are without sufficient food, fodder. for their animals. They lack basic facilities like proper shelter, health, drinking water, and education. The Gujjars and Bakerwals in the state are the poorest, living in sordid conditions, had no access to education as they are of migratory characters. There is need to formulate a sustainable poverty eradication programme for migratory tribes as they deserved special attention due to toughest lifestyle, lacking economic freedom and food security owing to low-income and deficiency of resources.

Material and Methods: The present study was conducted among Gujjar and Bakerwal women residing in Jammu and Kashmir. Both primary and secondary sources of data were used in the study. The data was taken from interviews conducted by researcher, the census of India, report from the health sector of Jammu and Kashmir, papers published in journals and National Human Development Report of India.

Women's Health Status in J& K: Primary health care for women is a must as also ante-natal and post-natal care during pregnancy. There is no exception to the fact that the health status of a woman is determined by several factors, which include literacy, age at marriage, birth intervals, and nutritional status and after all, maternity care. Against the backdrop of the above needs, National Policy on Health (1982) took a serious note of integrating the health services for women and children under the 20point programme wherein high priority was accorded to the promotion of family planning services. It emphasised a substantial augmentation and provision of primary health care facilities on universal basis. Maternity and Child Health (MCH) were integrated with family welfare programme. The extended programme of immunisation and Universal Immunisation Programmes were visualised as major aids to MCH for better child survival and safe motherhood. This programme was introduced in 1974 with the objective of reducing mortality and morbidity (which is 44 per thousand) in the state due to Diphtheria, Pertussis, and Tetanus.

Gujjar and Bakerwal Women The tribal Gujjar and Bakerwal women of Jammu and Kashmir live in utter deprivation due to poverty, illiteracy, early marriage, nomadic way of life, superstitions, traditional neglect and lack of awareness about welfare schemes, mentioned by study conducted by -





Tribal Research and Cultural Foundation (TRCF). “The Gujjar and Bakerwal women are not aware of their rights and schemes launched by the government for their education, health and social uplift as they live in far-flung and difficult areas and are nomads moving from one place to another.” The facilities offered to the women in this community are inadequate. “This can be understood from the fact that there are only two Government Hostels, one each in Jammu and Srinagar in the entire state for about 1.2 million Gujjar women.” The misery and woes of Gujjar and Bakerwal women of Jammu and Kashmir is surpass the treatment meted to any other women belonging to 12 different Scheduled tribe communities of the State. It is an established fact that the Gujjar-Bakerwal women are much more hardworking as compares to the tribal women belonging to Bot, Beda, Balti, Mon, Changpa, Garra, Purig, Shin Dard, Brokpa, Gaddi and Sippi Tribes of Jammu and Kashmir. Unfortunately Gujjar and Bakerwal women life is still passing through the darkness of superstition and illiteracy. Although they are quite aware of their duties, they contribute their best for the betterment of the TRIBAL society of State. But unaware of their rights, they continue to suffer as sacrificial goat at the hand of their family and society alike. Since half century back the women in the society, have become enlightened and have brought revolution in their life style to the extent that they have entered the field of Space Research but the unfortunate Gujjar Woman still lives a primitive life for away from the light of learning and devoid of modern facilities.





Gujjar And Bakerwalwomens Health Health status is influenced by complex biological, social, and cultural factors that are highly interrelated. These factors affect men and women differently. Women's reproductive biology, combined with their lower socioeconomic status, result in women bearing the greater burden from unsafe sex-which includes both infections and the complications of unwanted pregnancy. Women's health of Gujjars and Bakerwals can be examined in terms of multiple indicators, which vary by geography, socioeconomic standing and culture. To adequately improve the health of Gujjars and Bakerwals women in of Jammu and Kashmir multiple dimensions of wellbeing must be analyzed in relation to India's health averages and also in comparison to men in Jammu and Kashmir. Health is an important factor that contributes to human wellbeing and economic growth. Currently, women of Gujjars and Bakerwals face a multitude of health problems.

Determinants of Gujjar and Bakerwal Women's Health Social Condition: The Nomad Gujjar Women is undergoing thorough exploitations. They have to attend all the chores of the house hold from cooking to selling milk and helping their men at farming and cattle feeding. The dull life style and hard working from morning to late night makes her physically as well as mentally fatigued. Beside this the nomad Gujjar Women had been the victim of superstitions and despite her excessive work load. She is not getting due respect and position in the Tribal Society. In Bakerwal-Gujjars the Women and girls are supposed to tend their herds throughout day and walk long distances with their children and house hold luggage on their back as they are mostly nomads. They have to cook meals and do some washing on their temporary stops and again pack for the next destination. Ultimately they get no time even to think of their social status.

Economic factor: Poverty underlies the poor health status, and Gujjar and Bacterial women represent a disproportionate share of the poor. Furthermore, the cultural and socioeconomic environment affects Gujjar and Bakerwal women's exposure to disease and injury, their diet, their access to and use of health services, and the manifestations and consequences of disease. Gujjar and Bakerwal Women belongs to poorest households have much higher fertility rates and which deteriorates their health conditions.





Malnutrition: Nutrition plays a major role in an individual's overall health; psychological and physical health status is often dramatically impacted by the presence of malnutrition. Gujar and Bakerwal women don't get proper and balanced diet which leads them to anaemic in terms of iron deficiency. One of the main drivers of malnutrition is gender specific selection of the distribution of food resources. Maternal malnutrition has been associated with an increased risk of maternal mortality and also child birth defects.

Domestic violence: Domestic violence is a major problem among Gujar and Bakerwal in J&K. Domestic violence-acts of physical, psychological, and sexual violence against women-is found across the state. The effects of domestic violence go beyond the victim; generational and economic effects influence entire societies. The prevalence of domestic violence of Gujjars and Bakerwals in state is associated with the cultural norms of patriarchy, hierarchy, and multigenerational families. Patriarchal domination occurs when males use superior rights, privileges and power to create a social order that gives women and men differential gender roles. The resultant power structure leaves women as powerless targets of domestic violence. Men use domestic violence as a way of controlling behaviour.

Results And Discussion: The Gujar and Bakerwal women are not aware of their rights and schemes launched by the government for their education, health and social uplift as they live in farflung and difficult areas and are nomads moving from one place to another. Determinants of Gujar and Bakerwal women's health, Social Condition, Biological determinant, Economic factor, Mulniturition, Domestic violence. Though the Central as well as the State Governments have launched a number of programmes and schemes for the betterment of rural as well as urban women like Indra Gandhi Matritva Sahyog Yojana, etc.

The observations for the signs and symptoms of anemia and malnutrition indicated that 90 percent of the subjects had pale cold skin, 89.5 percent had general weakness and 86.5 percent had yellow conjunctiva. Majority (90.5%) of the respondents showed clear cut presence of anemia having hemoglobin less than 10gm/dl. The results hold implications for professionals to introduce health programmes in order to improve the health of adolescent girls in particular. It further concluded that there is need for planning of health programme for Gujar community. Since the group of the study -





was nomadic, it is important to have health services at their doorsteps. The planner need to educate and implement health services at their doorsteps, which could help them to lead healthy life. A focussed approach to develop awareness regarding their health in general is required so that preventive measures can be taken to protect the young population from major illnesses. Gujar and Bakerwal women must have access to comprehensive, affordable and quality health care. A holistic approach to women's health which includes both nutrition and health services with special attention to the needs of women and the girl at all stages of the life cycle is another priority of the government. In view of the high risk of malnutrition and disease that women face at all the three critical stages of life cycle viz., infancy and childhood, adolescent and reproductive phase, government is focused on meeting the nutritional needs of women and widespread use of nutrition education to address the issues of intra-household imbalances in nutrition and the special needs of pregnant and lactating women.

Conclusion: Improving Gujar and Bakerwal women's health requires a strong and sustained commitment by governments and other stakeholders, a favorable policy environment, and well-targeted resources. Long-term improvements in education and awareness opportunities will play a positive role on the health of Gujar and Bakerwal women and their families. In the short term, significant progress can be achieved by strengthening and expanding essential health services for Gujar and Bakerwal women, improving policies, and promoting more positive attitudes and behavior towards Gujar and Bakerwal women's health. Outreach, mobile clinics and community based services can be helpful. Clustering services for women and children at the same place and time often promotes positive interactions in health benefits and reduces Gujar and Bakerwal women's time and travel costs, as well as costs of service delivery. Gujar and Bakerwal women should be empowered to make more informed decisions and to act on them. For example, public education and counseling can increase access to information about selfcare and about when care is needed or where it is available. Even where health services are readily available and affordable, Gujar and Bakerwal women may not use them if their quality is poor. Quality of care is a significant factor in a woman's decision to seek care, to give birth at a clinic instead of at home.

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The Investigative Role of the Media in the Indian context and Diversionary Efforts on Privacy

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Abstract: A journalist who is involved in investigative journalism is not simply reporting events in the press. It involves collecting news by taking the initiative to find the news. In this case, the information is not readily available. Since this type of newsgathering is hard to come by, it is referred to as investigative journalism. It is an act of press activism which, if done correctly, will help any nation greatly. Asked to be on their toes at all times, this method of information collection involves field work rather than sitting in the office.

Keyword: Investigative Role of the Media, Accountability of Journalism and Privacy of Journalism.

Introduction: Journalism that morphs into investigative journalism goes beyond mere reporting of events. It involves gathering news by taking initiative in order to gather information that is not easily available. It demands courage, knowledge of wide variety of things, support from the editor and the management and protection from the antisocial elements. Today this is the method of operation in prominent newspapers and television channels all around the world. Normally, this method of operation occurs in large newspapers and television channels around the world, the editors and management support it and protect it from antisocial elements. Papers like the Guardian and the British Broadcasting Corporation and Cable News Network (B.B.C. and C.N.N.) are a few examples. In their role of disseminating news, they follow high standards of ethical and value adherence. They are regarded as newsworthy and accountable to the government and the public. India has a few models like the abovementioned, like the Hindu and the Times of India, where there is an exertion with respect to the administration and editors to keep up with the fundamental norms of newsgathering. Be that as it may, for the most part this is certifiably not a typical practice among the media. We neglect to discover writers undertaking field work and going through difficulties to get -





news for the press in our country. Much of the time the matter is gotten from police or the unfamiliar detailing organizations or the neighbourhood specialists. This matter is then announced that is the explanation commonly the media when ensnared for a situation, discovers taking as a protection that the news was gotten from the police or different specialists. This shows their unreliability towards the confiding in broad daylight. In this above interaction of newsgathering numerous a period morals get dissolved for gain of information and business acquire. This is the issue looked in our country in the space of newsgathering. There is no system as of now to viably control this technique for newsgathering particularly with regards to security rights. In the accompanying passages this contention and the misdeeds engaged with it will be examined taking cases from U.S, U.K and in this cycle the European pattern will likewise be featured. After this, the issue as we experience in India considering the new innovation will be explained, finishing up with the potential ideas and suggestions. These conversations will empower us to comprehend this contention inside and out specifically with regards to security and its insurance in India. In India there is no lawful tension on the media to follow the code of morals as counted by the Press Council of India in 2010'. Subsequently this opportunity gives unjustifiable opportunity to the press to utilize any technique at all to get news. This could be through sting activities utilizing telephone tapping, whores, trespass and comparable techniques. It's anything but an inclination to the public that the press is over the law, and their offenses are pardoned while a private individual needs to confront the law. Numerous such issues are managed in this article in examination with the majority rule nations like Britain and United States of America. in Britain in August 2011, the media head honcho Rupert Murdoch was addressed by the parliament on the issue of telephone tapping of individuals, which shaped the wellspring of their news. Thus he and his article staff needed to endure disgrace and legal disputes. This case likewise elaborate cops, and because of this and the disgrace and co outcry, he needed to at long last close his newspaper "The News of the World". In situations where obviously the press acquired these data through illicit methods by activities, telephone tapping and different systems, however it may have a trace of validity in it, Practice isn't worthy as it violates different laws. Truth must be explored through lawful cons and not by any techniques. The item and the technique ought to both be lawful. Analytical Journalism isn't a permit to foul up however to be good examples for individuals of India as we mores towards more noteworthy objectives.





The media has done a great deal of good through analytical reporting and its activism. Activism is regularly requested from the press, yet normally this isn't restricted to issue which request social interest. They have violated numerous a private group's protection on the appearance of analytical news-casting. Eventually sometimes they don't discover anything advantageous yet the security is now disregarded. If the outcome does nothing but bad to the public then, at that point some type of pay ought to be given to the person in question. This isn't the lone matter which is upsetting as, today the columnists are all the more innovatively prepared in correlation even to the Police and the analytical offices. This makes the existence of a private individual more helpless as he is consistently under observation through minute cameras and journals and causes individuals to be careful out in the open and private spots.

However U.S. is the place that is known for press rights as is underscored in the First Amendment which denies any obstruction in this right, and despite the fact that there is no unequivocal insurance for protection in its Constitution, still no reason is given to press for submitting misdeeds during the time spent newsgathering. It was expressed in a Dietemann's case" , that the First Amendment gives the media no option to violate laws without any potential repercussions, regardless of whether real news is being distributed. This was a body of evidence against a columnist and a photographic artist. Jackie Metcalf the journalist and photographic artist William Ray went to place of, a known as a handyman specialist by the name of A. A. Dietemann. They rang the chime and Jackie Metcalf went about as though she had a knot in her bosom and as the specialist was leading the assessment, William took the photos. Life magazine later distributed this load of subtleties alongside pictures. Material was gathered to be utilized to convict Dietemann as Mrs. Metcalf handed-off her discussion with Dietemann through her transmitter in her tote. The handyman sued Time, Inc. for US Dollars 300,000/ - for intrusion of security. The Jury perceiving that Dietemann was not having clean hands granted the handyman just \$1,000/ - for intrusion of security. This choice set the trend that law breaking isn't permitted during the time spent news gathering. Writers should gather data which they can acquire through appropriate channel. Photographic artists can take photographs from a public spot without going through peculiar trapeze artistry like climbing or intruding or utilizing masks. Worth System Values and ethics are to be saved in news gathering. Morals are to be followed if individuals need to trust the news media, They should win the trust of individuals through the worth and morals that they follow.





in **cape Publications v. Extensions**, Hilda Bridges Pate had been seized by her antagonized spouse at gunpoint. He took her to their previous loft and constrained her to strip down to keep her from getting away. Then, at that point he shot himself to death. Police hearing the discharge came and surged her incompletely clad across the parking area as she grasped a kitchen towel to her body. Around then she was captured by this present paper's reporter. She battled that taking her photos in semi clad structure and subsequently distributing it, disregarded her security. The Court thought of it as a newsworthy story and granted no harms for her. Here people in general came in as a result of the discharge and press did nothing harming towards her or for the way toward gathering news.

Some Legislative Measures: Paparazzi has been causing unjustifiable obstruction in the existences of well known people and private people. There was part of pressing factor for enactment in US to manage press to remove the stock of independent picture takers providing nosy photographs to the press. California has passed a resolution forcing discipline for utilizing of sound or visual chronicle gadgets on private property for gathering news. The media houses are additionally rebuffed for purchasing these security attacking accounts or photos, regardless of whether the writer giving the material are not representatives of a media organization'.

Certain Exclusions: Except for administrative purposes, media was typically not permitted to barge in into private spots in America. Certain exemptions have since been followed. In *Ayeni v. CBC* , Tawa Ayeni, spouse of a man associated with associated with a Visa extortion, was at home with her child Kayoda, a minor. As of now, the US Treasury Department specialist accompanied a court order. Six government specialists went to the home around 6. 00 p.m. Mrs. Ayeni clad in her robe opened the entryway just marginally yet they pushed their direction in. Later at 8.15 p.m., the Treasury specialist entered with a CBS news team from "Road Stories". Mrs. Ayeni imagined that they were important for the warrant group and never realized they were CBS workers. Some other time when she came to realize that alongside government authorities, were press individuals. That is the point at which she brought a suit against CBS. CBS asserted insusceptibility as they said they had the authorization of the public authority specialists. the court permitted her claim and announced that CBS had no more noteworthy right than that of a cheat to be in the home to take pictures.





Examination-Dangers in Law: Investigation goes before dispersal of information. During the time spent newsgathering, the columnist ought to be very much aware of the lawful boondocks. He can't violate the law concerning protection, trespass and others. US Supreme Court has given no resistance to press from responsibility for misdeeds during the time spent newsgathering. The Court has concurred that the Press need some assurance during the interaction. As yet keeping in see the Constitutional right to assemble news, the Court went on as far as possible its application by expressing that the press has no "Sacred right of extraordinary admittance to data not accessible to the public generally? For this situation, the Court held that a writer has no advantage under the Constitution to retain from jury, data which he has gotten in certainty from some source. The Court dismissed the contention that the First Amendment ought to vaccinate news finders from criminal obligation. This instance of Bran burg was restoration of the choice in Dietemann.

Correlation U.S.A., U.K., INDIA: Intrusive newsgathering is another name by the most creative innovation, where the contraptions utilized are exact moment subsequently hard to see if you are under a microscope of a camera or video or not. In U.S. the option to press is ensured however not the option to submit wrongs for gathering news except if it is unequivocally in accordance with the social need of that time. While in U.K. the option to press is controlled under the Human protection gets need over press, which is the law in Article 8 of the European Union. While in India we have the Constitutional help for press under Article (a) yet there is no equal insurance for security in our Constitution. This is a major impairment as alongside this there is no solid enactment to secure the residents against the meddling newsgathering. The law in India is a long ways behind the mechanical headways of this time. The majority of this nosy news gathering is done through quick reconnaissance advancements. Small cameras only bigger than a lipstick case can be worn inside the dress and little recorders which can be hidden in a pocket is utilized for transmission of a news thing to a huge number of individuals. There are cases where the journalist is missing while at the same time listening in is occurring .For instance the shotgun mike can get sounds similarly as sixty yards away. No big surprise there is developing agreement among individuals to take care of meddling news gathering. In this manner analytical reporting has now being tended to as meddling news gathering. A 1996 survey led by the Center for Media and Public issues in the U.S. shown that 80% of respondents thought the media attacked singular security and 52% idea the media manhandled -





their First Amendment opportunity". Any law intended to ensure security should find some kind of harmony between both First Amendment rights and real factors concerning how and in what occurrences the press practice these rights.

Indian System of Newsgathering: Indian columnists have been staying up with press all throughout the planet. Indian press has been instrumental in bringing numerous issue into public stage. Numerous defilement cases have been accounted for and brought to the cutting edge by the press and other media. Yet, during the time spent news gathering numerous laws have been abused by writers. Energy is something worth being thankful for, yet it ought not hurt any individual until it is of such friendly significance. This obstruction can be crossed just if the broad communications shows substantial justification for breaking it, for reasons considered by open and government as defended. This avocation must be permitted as far as friendly interests like security, hostile to debasement, harmony, agreement and regarding the morals and opinions of individuals. Sting news-casting which chips away at the standard of acquiring data by double dealing – includes pantomime, lying and cheating, also hazard. It likewise requires shrewd promoting, e.g., the Lakshman tapes (Tehelka). One of the fundamental allegations against Tehelka.com was that the association utilized misleading intends to make a fast name for itself wherein it succeeded. However, many didn't endorse the strategies utilized. Sting news-casting ought to comprehend that it's difficult to consistently legitimize infringement of law. A secret camera or amplifier used to clandestinely record data is infringement of protection. Utilization of medications or call young ladies to take out data or trap official is crime. authorities is a wrongdoing. Also, in the Bofors case, Justice J.D. Kapoor noticed articulating the decision that the current case is a decent and evil model whi exhibits how the preliminary and equity by media can cause hopeless, irrevers limitless mischief to the standing of an individual and disregarding of his family, family members and by the general public. The Court said that such an individual is segregated, embarrassed and sentenced with preliminary. The Court referred to the instance of Punjabi pop artist Daler Mehndi whose release was looked for in an illegal exploitation case after his embarrassment and pseudo preliminary through media as they (police) have not had the option to discover the proof adequate in any event, for documenting the charge sheet.

Press Council of India: This body set up in 1978, has been given an obligation to forestall -





unfavourable comments against the press. The PCI accommodates rules for investigating crafted by Journalists. The PCI is managed exhaustively in the eighth section. These guidelines incorporate arrangements that revealing ought to keep up with exactness and reasonableness. It ought to be dependent upon prepublication eradication". The press has been asked not to meddle or attack the protection of an individual except if exceeded by veritable superseding public interest. However the PCI has its guidelines for keeping up with the harmony between open requirements and private advantages, it's anything but discovered to manage its work viably. They typically wind up requesting that the paper apologize or withdraw the harm causing article or distribute an amendment. These transgressors are not made to give any pay or harms to the person in question. These papers don't endure any substantial harms as there is no component of prevention in the discipline given for disregarding the guidelines/orders of PCI. Consequently, these transgressors, rather than getting more cautious in future, maybe become more agreeable as they probably are aware the degree to which PCI would go in rebuffing them. On account of an article in Indian Observero, named, "Misfortune of the Chastity Belt, the PCI maintained the grumbling against it. The article was in regards to conversation of the need and utilization of celibacy belts for ladies to save their virtue.

Conclusion: At last it very well may be reasoned that we in India can't have a press uncurbed and free. The Courts are as yet being liberal with the press in order to foster a solid opportunity of data framework in India. Today, alongside this, we additionally reserve the privilege to Freedom of Information Act 2005, which gives right to the press as well as to every single individual to get through the cover to get data of people in force, foundation and government. At the point when the right to data is raised to a high platform then it is time that the comparing obligation to secure the protection of its residents is additionally given a good platform. Today media opportunity can't be confused with a world without insider facts. Truth be told this is a dais; monetarily controlled to bring out man woven stories, which is intrinsically ensured. It was a standard issue to circulate pens, scratch pads and organizers during public interviews. Then, at that point it hopped from these free examples to greater presents like gold, vouchers and occasions. Political announcing was paid in covers having rupees at least 2000. As this political detailing expanded in news-casting the lines of detachment got obscured. Niira Radia, the famous lobbyist was essentially doing this, the columnists engaged with the Radia tapes were passing messages among corporate and the public authority to get





certain individuals into the bureau and for different reasons. This is the thing that the media is doing yet in an alternate field, managing individuals and realities to control people in power, uncovering their private realities for the media's benefits and advantages. The components of public interest versus security ought to be the test for choosing an argument in favor or against a media revealing. The Courts in India ought to decide the boundaries of both these rights. The media houses ought to be approached to make its ways for offer data to people in general under the RTI Act to determine whether the appropriate cycle of check has been followed to demonstrate reality in the announced matter. They ought to have a functioning Ombudsman which acknowledges protests from general society, mediates over it, bringing about delivering conciliatory sentiment, punishment and granting remuneration to the survivors of their detailing. The object of Ombudsman ought to be designated towards winning the certainty of the people in question and general society. Insightful reporting ought to be empowered uniquely through the legitimate edge work and this ought to be consolidated in the instructional classes by these media houses. The Press Council of India ought to have more teeth with regards to dynamic and approvals. It's anything but an impediment impact on the columnists. Unafraid of law and the public the media may walk ahead into illegal spaces of public safety on the affection of right to data. A solid enactment is the need of the time which will fix the limits of press and security. In this universe of expanding innovation and campaigning by the media houses, an individual is abandoned and vulnerable without any way to ensure him. In this position he can't protect himself. He is let all open and be to misuses and disgrace for public interest, which the media claims is the opportunity of data/press.

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**बालाघाट जिले में स्वास्थ्य एवं पोषण: आदिवासी क्षेत्र के विशेष सन्दर्भ में****DOI No. <https://doi.org/10.17605/OSF.IO/NHFYJ>**

डॉ. प्रशांत डहाटे
सहायक प्राध्यापक, भूगोल
शास. जटाशंकर त्रिवेदी स्नातकोत्तर महाविद्यालय,
बालाघाट (म.प्र.)

पचीन काल से ही भारत में जनजातियों का अस्तित्व रहा है और तभी से यह हमारे लिए कौतुहल का विषय रहा है। इनकी अदभूत संस्कृति और नैसर्गिक जीवन ने हमें सदैव आकर्षित किया है। इसी आकर्षण ने देश-विदेश के विद्वानों को इन पर शोध कार्य हेतु प्रेरित भी किया है। सदियों से पीड़ित और शोषित इन जनजातियों को आज सरकार भी राष्ट्र की मुख्य धारा से जोड़ने के लिए प्रयत्नशील है। आज आवश्यकता इस बात की है कि इनके विभिन्न पहलुओं का सूक्ष्म विवेचन और गहन विश्लेषण किया जाय। आज भी आदिवासी अपने ही आस-पास के पारिस्थितिकतंत्र पर निर्भर होते हैं वे अपने खाद्य पदार्थों के लिये मुख्य रूप से स्थानीय कृषि तथा कुछ सीमा तक आस-पास के वनों पर निर्भर होते हैं। इनके आहार पर प्राचीन परम्पराओं रीति-रिवाजों का अत्यधिक प्रभाव पड़ा है आहार मात्रा में अपर्याप्त तथा असंतुलित है परिणामस्वरूप अधिकांश जनजातिय परिवार अल्पपोषण एवं कुपोषण से प्रभावित है।

उत्तम रीति से जीवन व्यतित करने के लिये स्वस्थ रहना आवश्यक है जब तक कोई व्यक्ति पूर्ण रूप से स्वस्थ नहीं होता वह अपने जीवन का सम्पूर्ण उपयोग नहीं कर सकता। अतः स्वस्थ रहना व्यक्तिगत हित के साथ-साथ समुदाय के हित में भी जरूरी है। हमारे शरीर के सभी अवयव दिन और रात क्रियाशील अवस्था में रहते हैं। यदि वातावरण के साथ सामांजस्य स्थापित करते हुए हमारे समस्त अवयव सुचारू रूप से कार्य करते हैं तो हमारा शरीर स्वस्थ माना जाता है यदि शरीर की प्राकृतिक एवं सामान्य क्रियाओं में कोई रुकावट या गड़बड़ी देखी जाती है तो शरीर अस्वस्थ या बीमार माना जाता है।





स्वस्थ एवं पोषित रहने के लिए जो चीजे आवश्यक है उसमें सब से प्रमुख भोज नहीं है संतुलित भोजन से व्यक्ति का उचित पोषण होता है व पोषण का स्तर उत्तम होने पर ही व्यक्तिपूर्ण रूप से स्वस्थ बन सकता है। व्यक्ति का पोषण स्तर भोज्य पदार्थों की उपलब्धता खान-पान की आदतों के द्वारा प्रभावित होता है अल्पपोषण से व्यक्ति कमजोर, भारहीन व ऊंचाई में सामान्य से कम हो जाता है। इसके विपरीत अत्यधिक पोषण से व्यक्ति को अत्यधिक वजन व मोटापा ग्रसित कर लेता है।

प्रस्तुत शोध पत्र का उद्देश्य आदिवासी परिवारों में खान-पान की आदतें, खाद्य पदार्थों का उपभोग प्रतिरूप, पोषक तत्वों की उपलब्धता, रवार्थ एवं पोषण दशाओं का अध्ययन, क्षेत्र में पर्यावरण प्रदुषण, विभिन्न रोगों एवं उपलब्ध स्वास्थ्य सुविधाओं की समीक्षा करना तथा स्वास्थ्य एवं पोषण संबंधी

समस्याओं के निराकरण हेतु सुझाव एवं नियोजन प्रस्तुत करना है। इसके लिए बालाघाट जिले के आदिवासी विकासखण्डों के 4-4 आदिवासी ग्रामों के 25 प्रतिशत परिवारों का अध्ययन साक्षात्कार, अनुसूची से प्राप्त आंकड़ों के आधार पर किया गया है।

प्रस्तुत शोध पत्र प्राथमिक आंकड़ों पर आधारित है, आंकड़ों का संकलन चयनित ग्रामों के परिवारों के मुखिया से साक्षात्कार द्वारा अनुसूची के माध्यम से किया गया है। जिसमें पारिवारिक संरचना, भूमिस्वामी, भूमि उपयोग एवं शस्य प्रतिरूप, खान-पान की आदतें एवं खाद्यान्न उपभोग प्रतिरूप पोषण एवं स्वास्थ्य संबंधी दशा एवं पर्यावरण प्रदुषण एवं तदजन्य रोग, शासकीय, अर्धशासकीय एवं निजी सुविधाएं स्वास्थ्य एवं पोषण संबंधी विभिन्न समस्याओं से संबंधित प्रश्न सम्मिलित किये गये हैं।

सर्वेक्षित परिवारों में खाद्यान्नों का प्रति व्यक्ति प्रतिदिन उपभोग प्रतिरूप निम्न प्रकार से पाया गया है। सर्वेक्षित परिवारों में कैलोरी का प्रति व्यक्ति प्रति दिन औसत उपभोग 2069.1 कैलोरी है। प्रोटीन का प्रति व्यक्ति प्रतिदिन औसत उपभोग 48.5 ग्राम है। वसा का प्रति व्यक्ति प्रति दिन औसत





उपभोग 9.6 ग्राम है। कैल्शियम का प्रति व्यक्ति प्रति दिन औसत उपभोग 185.4 मि.ग्रा. है लौह का प्रति व्यक्ति प्रति दिन औसत उपभोग 7.4 मि.ग्रा है। ये सभी पोषक तत्व अनुशासित मात्रा से बहुत कम है।

अध्ययन क्षेत्र के आदिवासी परिवारों के खाद्यान्न उपभोग प्रति रूप में पोषक तत्वों की मात्रा आय वर्गों के अनुरूप भिन्न-भिन्न है। आदिवासी परिवारों में पोषण का स्तर बहुत ही निम्न है। आदिवासी के भोजन में पोषक तत्वों की मात्रा अनुशासित मात्रा से बहुत कम है। जिसका स्पष्ट प्रभाव उनके वजन, ऊंचाई एवं स्वास्थ्य पर दिखाई पड़ता है।

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ANALYTICAL STUDY OF SOMATOTYPES THROUGH THE PERSPECTIVES OF CONSTITUTIONAL PSYCHOLOGY

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Abstract: Somatotyping was once thought to be an art, talent, or method that one had to "become excellent at." For researchers, this was disappointing. It was difficult enough to design an experiment that needed naked images of the individuals, let alone deal with the steep learning curve required to make valid judgments that were essentially educated guesses. Experiments must be replicated and evidence must be verified in science. Because Sheldon and a few of his close collaborators were the only ones who knew how to use these strategies, it's simple to see how a conflict of interest may arise. A somatotype that necessitated interpretation may be favoured above the anticipated experimental outcomes.

Keyword: Somatotype, Personality, Constitutional Psychology, Morphological Components.

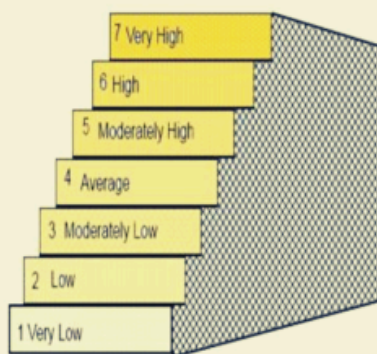
Introduction: Emotional means concerned with your emotions and the way you are feeling rather than physical health or condition. Deprivation means that you do not have or are prevented from having something that you need or want (Collins 1987). Deprivation has many faces: the child grows in a culturally and educationally non-stimulating home, handicapped by environmental deprivation; the presence of a non-caring, non-loving mother, tending for maternal deprivation; the child is unloved and rejected by his parents, suffers emotional deprivation; and the child who lives in institutional care yet again experiences emotional deprivation. The destitute children are put up in the orphanages and it can be said that they are emotionally deprived. Children come to orphanages not according to their own will but their destiny brings them there. The health problems of children residing in orphanages are complex and clearly related to the sub-standard living conditions in the institutions. Growth failure secondary to emotional deprivation can be transient or sustained depending on the duration of institutionalization.





According to Census of India (2001), India has 391,399,591 children in the age range of 0-19 years, accounting for the second largest child population in the world. The unofficial reports present that there are 32 million destitute in our country. While some are eking out a miserable and endangered existence, struggling for survival on streets, at stations or as child labour, a large number are in orphanages and institutions, which are run either by the government or NGOs. Data regarding orphans and orphans in need is not available in government records. UNAIDS (2006) provides information that in India, the children(0-17 years) orphaned due to all causes by the end of 2005 are estimated to be 25,700,000 as compared to the world estimate of 132, 700,000.

Sheldon wanted to do more than merely confirm the existence of certain components of physique. He wanted to produce a useful scientific tool for measuring the effects of these components. Therefore, a numeric value needed to be applied to each of the components. He chose a scale of seven degrees. Odd numbers are a good choice for this kind of scale, because it allows a central balance point. A verbal equivalent of his scale looks like this:

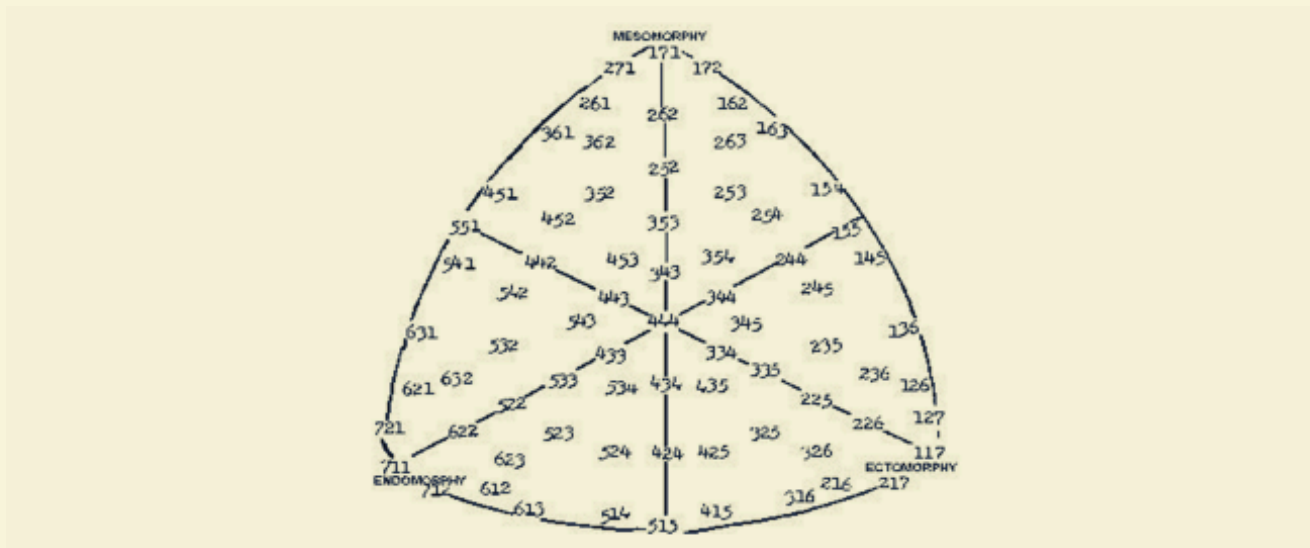


Working with somatotypes over time, Sheldon became so sensitive to the subtleties that it enabled him to expand this to a 13 point scale. 1, 1½, 2, 2½, 3, 3½... The final form for expressing a somatotype numerically is with three numbers, where the left number represents the degree of endomorphy, the middle number indicates the degree of mesomorphy, and the final or right number represents the degree of ectomorphy. An extreme endomorph is represented as a 7-1-1. An extreme mesomorph is represented as 1-7-1. And finally the numbers 1-1-7 represent an extreme ectomorph. A 4-4-4 would be a balanced somatotype with each of the three components being equally -





represented. Another part of Sheldon's work that persists is his chart of somatotypes. It is an attempt to aid in the visualization of the relationships between the various somatotypes. A tetrahedron would be the ideal way to view the relationships, but this is a serious challenge for the average person's spatial abilities. Instead, he flattens it out into a curvilinear triangle, also referred to as a Reuleaux triangle. The figure below is how this is typically illustrated.



Making Somatotyping Objective: Originally, somatotyping could best be described as an art, skill, or technique that you had to “get good at.” This was discouraging to researchers. It was hard enough to put together an experiment that required nude photographs of the subjects, let alone dealing with the long learning-curve to be able to make accurate assessments that were basically educated guesses. Science is about replicating experiments and verifying the evidence collected. Since Sheldon and some of his close associates were the only ones skilled in these techniques, it is easy to see the danger of a conflict of interests. A somatotype that required interpretation might be weighted in favor of the desired experimental results. Sheldon was not ignorant of the need to make somatotyping completely objective. Throughout his career he experimented with various direct physical measurements of a subject in addition to the photographs. Finally, around 1968, he published a paper answering .





criticisms of his methods Viewing Somatotypes through the perspectives of Constitutional.

Psychology: The constitutional perspective, which examines the relationship between the structure of the human body and behavior, seeks to answer this question (Genovese, 2008). The first comprehensive system of constitutional psychology was proposed by American psychologist William H. Sheldon (1940, 1942). He believed that your body type can be linked to your personality. Sheldon's life's work was spent observing human bodies and temperaments. Based on his observations and interviews of hundreds of people, he proposed three body/personality types, which he called somatotypes. The three somatotypes are ectomorphs, endomorphs, and mesomorphs. Ectomorphs are thin with a small bone structure and very little fat on their bodies. According to Sheldon, the ectomorph personality is anxious, self-conscious, artistic, thoughtful, quiet, and private. They enjoy intellectual stimulation and feel uncomfortable in social situations. Actors Adrien Brody and Nicole Kidman would be characterized as ectomorphs. Endomorphs are the opposite of ectomorphs. Endomorphs have narrow shoulders and wide hips, and carry extra fat on their round bodies. Sheldon described endomorphs as being relaxed, comfortable, good-humored, even-tempered, sociable, and tolerant. Endomorphs enjoy affection and detest disapproval. Queen Latifah and Jack Black would be considered endomorphs. The third somatotype is the mesomorph. This body type falls between the ectomorph and the endomorph. Mesomorphs have large bone structure, welldefined muscles, broad shoulders, narrow waists, and attractive, strong bodies. According to Sheldon, mesomorphs are adventurous, assertive, competitive, and fearless. They are curious and enjoy trying new things, but can also be obnoxious and aggressive. Sheldon (1949) also conducted further research into somatotypes and criminality. He measured the physical proportions of hundreds of juvenile delinquent boys in comparison to male college students, and found that problem youth were primarily mesomorphs. Perhaps it's because they are quick to anger and don't have the restraint demonstrated by ectomorphs. Maybe it's because a person with a mesomorphic body type reflects high levels of testosterone, which may lead to more aggressive behavior.





Studies on the role of extreme maternal neglect and emotional deprivation on the development of children are exceedingly rare in the last decade of the last century. The effects of bleak care due to institutionalized environment were studied initially by Goldfarb (1945) and Spitz (1945). A longitudinal follow up study by Stock and Smythe (1976), over an 11 year period of emotionally undernourished children exhibited reduced intellectual and physical development. Data on the changes in somatotype with reference to socioeconomic differences are meagre (Bodzsar, 1982; Rangan, 1982). Mortan's (1967) report on the Medford boys, aged 9 to 16 years showed that the somatotypes clustered about 3-4-3, with a tendency towards increasing ectomorphy. Rangan's (1982) study elucidated that boys from middle and lower class are more ectomorphic than those from upper class, which had central somatotypes and higher endomorphy. He speculated that low mesomorphy and high ectomorphy for his subjects may be in part genetic and in part due to undernutrition. Talwar et al. (1994) studied somatotypes of 499 Punjabi girls belonging to higher and lower income groups of Chandigarh. They concluded that higher income group girls were more endomorphic than their lower income group coevals at all age levels (9 to 16 years). The mesomorphic component exhibited a trend of decrease in both the groups. While the lower socio-economic group girls showed higher mesomorphic rating compared to their counterparts. There is also an indication that the three components of somatotype do not vary on regular basis with age ; they may increase at one age and decrease at the other. This is at par with the findings of Tanner (1970); Kansal (1981) on Jat Sikhs and Baniyas of Punjab ; Eiben (1985) on Hungarian boys ; Bhasin and Singh (1992) on Bodhs and Baltis of Ladakh and J&K and Kumar et al. (1997) on Delhi-born Bengali Kayastha boys. It can be summarized that good nutrition is not enough for the smooth outcome of emotional development but more important is the element of joie de vivre which is enhanced by emotional security itself. Results of the different study elaborate that the emotionally deprived adolescents, on the whole do not grow like their contemporary control counterparts. Importantly, growth in children refers to more than just height and weight patterns but to extends to the other variables including somatotype as well.

Somatotype described in relation to Morphological Components: In the framework of our research (Suchomel 2000) focused on characteristics of school-aged individuals with low (significantly below-average) and high (significantly above-average) level of basic motor performance, we studied the relation between somatotype and motor performance.





In the submitted contribution we present our findings. A lot of researches focused on methods of determination of somatotype have been done by various authors (Hippokrates; Hallé and the French School with Rostan and Sigaud; De Giovanni and the Italian School with Viola; the German School with Kretschmer and Conrad; Škerlj with Brožek and Hunt; Lindegård; Sheldon and his followers Parnell, Heath, Carter and Howells; Tanner; in the Czech Republic Blažek; Greil and Baudisch and many others), the survey of which was published by Bok (1972), Greil, Baudisch (1994). We found the method according to Heath and Carter (Heath, Carter 1967, Carter 1975) the most suitable for the purpose of our research. Recently, this method has been the most widespread method of determining the so-called anthropometric somatotype, it seems well elaborated and acceptable for physical education research (Bok 1972). The authors of the method followed up the works of Sheldon et al. (1940) that had introduced the term somatotype of an individual and defined it as a relation of morphological components expressed by three figures.

Somatotype described in relation to the Momentary Morphological State: Somatotype describes the momentary morphological state of an individual. Different somatypes have different morphological predispositions to physical activity and their reactions to physical activity are different, too. To a certain extent, according to the morphotype, we can predict the level of motor performance since the child's lower school age. Apart from other neurophysiological and psychological factors, suitable somatotype, especially the dominance of the mesomorphic component, is one of the conditions of excellent performance at various sports (Riegerová, Vodička 1992, Riegerová 1994). The relation between somatotype and motor performance has been studied by a series of Czech experts. At first, the subjects of studies were top sportsmen in some disciplines (Štěpnička 1977). After that, research dealing with children population of pre-pubescent and pubescent age followed (Štěpnička et al. 1976, 1987, Bursová 1990a, 1990b, Chytráčková 1990, 1995, Netolická 1991, Riegerová 1984, Riegerová, Vodička 1992). Summarizing the results of the studies mentioned above we can state that the relation of the individual components of somatotype to motor performance is rather ambiguous.

Conclusion: From the point of the work of Bursová (1990b) published an interesting analysis of the somatic characteristics of selected motorically considerably above-average and motorically





considerably below-average boys. Unfortunately, the results of this research cannot be fully used due to quite a low number of participants (7 motorically above-average and 9 motorically below-average boys of different ages). In the conclusions, the author stated that the motorically above-average individuals, as for their somatic characteristics, showed a significant similarity. The selected individuals were characteristic by ectomorphic mesomorphy or mesomorphic ectomorphy, with very low endomorphy. On the contrary, the significantly below-average individuals did not show any tendency which would unambiguously characterize their somatic profile. At present, school-aged children can be divided into categories of somatotypes according to their motor performance suggested by Štěpnička et al. (1976) and into 5 categories marked A to E adapted by Chytrácková (1990). The best results in the motor performance tests were reached by boys and girls from the D category (with dominant ectomorphy) and the B category (with dominant mesomorphy).

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External charges Modelling in SrS:Ce AC Thin-Film Electroluminescent (ACTFEL) Device

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Abstract: A simple model for the creation of external charge in blue emitting SrS:Ce ACTFEL display device is presented. The model includes HSPICE Fowler-Nordheim diode which has previously been successfully used for the simulation of the ZnS:Mn display device. This model can be modified to explain the behavior of the generation of the external space charge due to tunnel injection in SrS:Ce device. Running simulation through HSPICE Fowler-Nordheim diode with proper parameter optimization gives result very much close to that measured from the experiments.

Keyword: ACTFEL , HSPICE Fowler-Nordheim diode, Monochrome and flat panel display (FPD), SrS:Ce display device, Phosphor.

Introduction: An alternating current thin-film electroluminescent (ACTFEL) displays are the future of display devices. They are rugged , lightweight and portable, low power consuming, wide viewing angle , fast response , and unlike cathode ray tube, do not emit radiation. Crisp images and good contrast are further advantages. Since the decay time of the emission is about one millisecond or less, full video capability is achieved. During the last few years thin film electroluminescence (TFEL) has emerged as one important technical application of optical properties in II–VI compounds.¹ The thin film electroluminescent structure, schematically shown in Fig. 1, is almost ideal for a flat panel display. Light is generated in a less than 2 μm thick thin film stack, which is deposited on a glass substrate. In this ACTFEL device an active layer doped with cerium (SrS:Ce) is sandwiched between the two dielectric layers followed by conductive layers. All layers are transparent except the back conductive layer. In the basis mode of operation, an alternating voltage is applied across any two crossing electrodes. When this voltage exceeds the ‘threshold voltage’ , light is emitted from the active layer.





EL mechanism (the generation of electrons, acceleration of these electrons to optical energies, and collision excitation of the Ce ions yielding light emission) occurs within the film or at the surface of the SrS:Ce layer. A bright blue light in the visible region with a relative broad spectrum is emitted. Since the inception of thin-film EL display device, the field of high brightness, high brightness, high stability efficient phosphor for thin-film electroluminescence continues to develop with efforts now underway in several groups around the world.²⁻⁷ A novel inorganic phosphor material grown by solvo-thermal synthesis (a technique which does not include toxic gases or high temperature processing steps), for new application in display and lighting technology have been reported.⁸ The nano crystal of inorganic phosphor have also been reported which exhibit efficient luminescence even at room temperature and are characterized by ultra-fast electron-hole re-combination rate.⁹ This revelation started a new race for better sources and displays. Since , different techniques have been developed for nano-crystal fabrication¹⁰⁻¹¹ and many studies of electro-optical properties of semiconductor nano-crystals doped with luminescence centres were presented.^{12,13-14} Light emitting capacitor (LEC) are widely used in which phosphors are used instead of dielectric material.¹⁵ Thin film electroluminescent night lamp have also been introduced which are capable of giving 50 years of continuous illumination. Another most important use of TFEL devices are in liquid crystal displays, where these are used as backlight display, powder phosphor-based electroluminescent materials are used.¹⁶ They provide gentle, uniform illumination for the entire display with very less power consumption. Electroluminescent lighting is now used as an application for public safety identification involving alphanumeric characters on the roof of vehicles for clear visibility from an aerial perspective.¹⁷ Electroluminescent wire (EL wire), has also made its way into clothing as many designers have brought this technology to the entertainment and nightlife industry.¹⁸ Engineers have developed an electroluminescent "skin" that can stretch more than six times its original size while still emitting light. This hyper-elastic light-emitting capacitor (HLEC) can endure more than twice the strain of previously tested stretchable displays.¹⁹ SrS:Ce is particularly used for blue color in monochrome and multicolor flat panel ACTFEL display. Luminescence behavior of SrS:Ce device is substantially different from that of typical ZnS:Mn devices and it is very difficult to explain its luminescent and electrical properties by the models developed for ZnS:Mn devices. In fact SrS:Ce device exhibits dynamic space charge effects, charge collapse, and other non-ideal electrical characteristic. Several preliminary , qualitative models for SrS:Ce device have been reported.^{20,21,22-23}





but still no comprehensive model is developed to exactly explain the luminescent property of this device. Singh and Morton presented an analytical model to explain electroluminescence in SrS:Ce display device. They described physical processes in terms of rate equations and field, current and luminescence waveforms are calculated for one set of device parameters. The shape of the calculated waveforms is similar to the shape of the experimentally observed waveforms.²⁴ Another analytical model was given by Singh et al. to explain electron transport and luminance mechanism in blue emitting SrS:Cu,Ag ACTFEL display device. The model is able to simulate the dominant features of the experimental luminance and current waveforms.²⁵

Fowler-Nordheim diode is selected for the simulation of generation dynamic space charge in the SrS:Ce device. Only pure tunneling is considered as the dominant process of charge transport in the device. The device parameters are shown in **table-1**.

Characterization of Dynamic Space charge in SrS:Ce Device : In **Fig. 2** , the typical trapezoidal waveform applied to the ACTFEL device is shown, labels shows different important points of the applied waveform. The ideal Q_e – V_{app} curve of an ACTFEL device is shown in **Fig. 3** , **Fig. 4** shows the measured Q_e – V_{app} curve of SrS:CeACTFEL device, which is operated at 100 Hz frequency for 20, 40, and 60 volts above threshold. The Q_e – V_{app} curve of evaporated ZnS:Mn ACTFEL device is an ideal one , hence is same as shown in **Fig. 3** . A comparison between **Fig.2** and **Fig. 4** shows dramatic differences which are discussed on a point-to-point basis. A comparison of the Q_e – V_{app} curves of ideal **Fig. 3** , and SrS:Ce, **Fig. 4** , shows dramatic differences which are discussed on a point-by-point basis. Starting at point A, the polarization charge for the SrS:Ce device does not exhibit monotonically increasing behavior, but rather is such that the polarization charge for the 60 V above threshold curve is greater than the polarization charge for the 20 V above threshold curve, but is less than the 40 V above threshold curve. This is caused by the larger amount of leakage charge for the 60 V above threshold curve. Similar to the ideal Q_e – V_{app} curve, the slope of the Q_e – V_{app} curve from point A to point B is equal to the total device capacitance, C_t , indicating that there is not a detectable amount of charge moving in the phosphor layer below the turn-on voltage. Turn-on occurs at point B, with the curves exhibiting turn-on voltages which are not monotonically decreasing with increasing voltages above threshold. It can be shown that the turn-on voltage of the 60 V above threshold curve is higher than the turn-on voltage of the 20 V above threshold curve, which is higher than the turn-on





voltage of the 40 V above threshold curve. This turn-on behavior is most likely due to a difference in the amount and distribution of space charge in the phosphor layer at the turn-on voltage. Moving from point B to point C, the slope of the Q_e – V_{app} curve is not equal to the insulator capacitance as in the ZnS:Mn (ideal) curve, but rather first exceeds the insulator capacitance, and then falls below it. This behavior was first noted by Smith who denote it as a “hook” in the Q_e – V_{app} curve and identified the cause as a phosphor layer negative differential resistance effect.²⁶⁻²⁷ The current terminology is to call this an effect of dynamic space charge. Finally, between points D and E, the slope of the Q_e – V_{app} curve is changing rather than constant as is in ideal case e.g. same as for the ZnS:Mn device. It is difficult to see this on a Q_e – V_{app} curve; however, the slope of the Q_e – V_{app} curve is steeper nearest point D. This effect is steeper nearest point D. This is due to there being a sufficient phosphor layer electric field to ionize bulk traps or shallow interface traps which results in conduction across the phosphor layer.²⁸

Simulation of SrS:Ce ACTFEL Device: As have been discussed in previous section that SrS:Ce ACTFEL display device exhibits non-ideal characteristics and HSPICE Fowler-Nordheim tunneling diode (actually developed for ideal ZnS:Mn device) can not be used to simulate the SrS:Ce device. Through this paper an approach has been made to simulate the Q_e – V_{app} characteristics of the ALE SrS:Ce device. Device parameters are extracted from old research papers²⁹ and are listed in **Table 1**.

The circuit topology of the basic Fowler- Nordheim diode is shown in Fig. 4. The two capacitors, C_{itand} and C_{ib} , represent the capacitances of the top and bottom insulators, respectively. In series with and sandwiched between these capacitors is a Fowler-Nordheim tunneling diode, which accounts for current transport across the phosphor. A “phosphor resistance,” R_p , is added in parallel with the diode to account for charge leakage across the phosphor.³⁰⁻³¹

Result and Discussion : The simulated curve considering the Fowler-Nordheim tunneling with the device parameters listed in Table 1 is shown in **Fig. 4** and **Fig. 5**. It is obvious that leakage charges are accurately simulated. Note that, electrical characteristic of SrS:Ce device depends strongly on how the device is fabricated. The experimental Q-V curve taken for simulation in this study of ALE SrS:Ce fabricated using atomic layer epitaxy method where negative differential resistance is negligible (**Solid line in Fig. 3**)



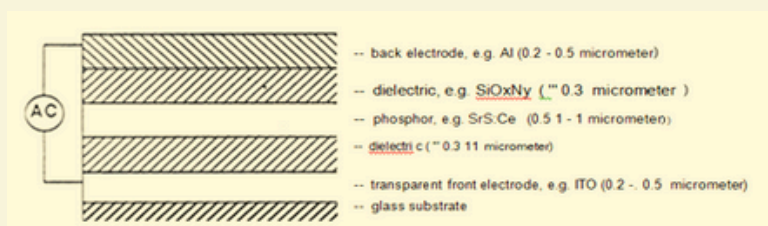


Table

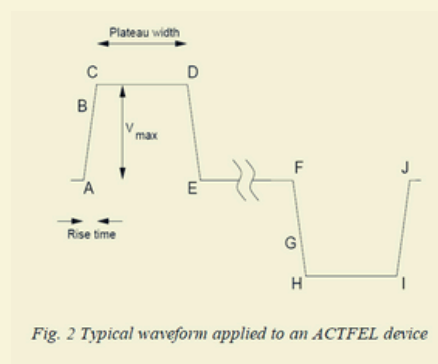
<i>Parameter</i>	<i>value</i>
<i>Material</i>	<i>ALE SrS:Ce</i>
<i>Frequency</i>	<i>100 Hz</i>
<i>Thickness</i>	<i>500 nm</i>
<i>Trap depth \square_{\square}</i>	<i>0.58</i>
<i>Dielectric constant</i>	<i>9.4</i>
<i>Threshold voltage</i>	<i>77.8 Volt</i>
<i>Carrier effective mass</i>	<i>0.25 m_0</i>
<i>Series resistance</i>	<i>100 Ohm</i>
<i>Insulator capacitance</i>	<i>39.8 nF/cm²</i>
<i>Phosphor Resistance*</i>	<i>0.65 M Ohm</i>

List of Figures

Figures No. 1



Figures No. 2



Figures No. 3

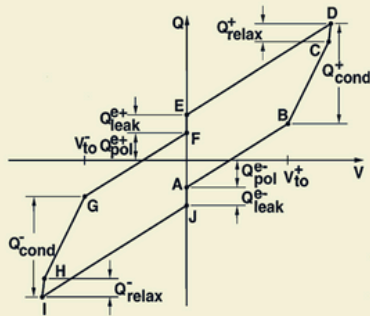


Fig. 3 An idealized Q - V curve showing important points and various charges and voltages

Figures No. 4

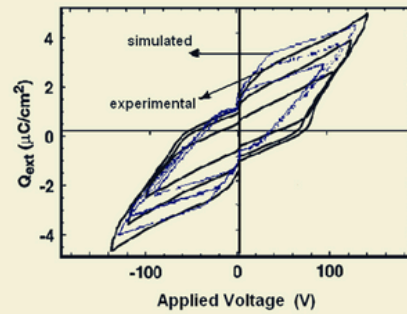


Fig. 4 External charge versus applied voltage (Q_{ext} - V_{app}) family of curves for an ALE deposited SrS:Ce ACTFEL device taken at 20, 40, and 60 V above threshold. Solid – experimental, dotted blue corresponds to simulated

Figures No. 5

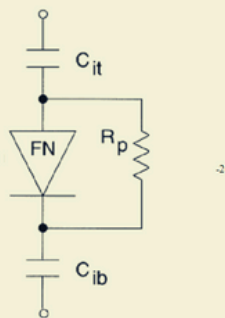


Fig. 5 ACTFEL equivalent circuit using the SPICE Fowler-Nordheim diode model. Notice that the diode conducts under both applied voltage polarities.

Figures No. 6

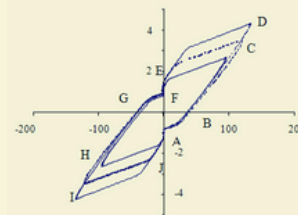


Fig 6 Simulated (Q_{ext} - V_{app}) family of curves for an ALE deposited SrS:Ce ACTFEL device taken at 20, 40, and 60 V above threshold



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EFFECT OF HALO AND FULL HALO CORONAL MASS EJECTION ON GEOMAGNETIC FIELD VARIATION OF EARTH

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Abstract: Coronal mass ejection and speed a large amount of mass and magnetic field into heliosphere causing major geomagnetic disturbances and cosmic ray intensity. Halo CMEs expand rapidly and appear to surround the occulting disk of the observing coronagraph. Coronal mass ejections (CMEs) play a main role in the enhancing of geomagnetic activity. It is important to note from earlier investigations that majority of Halo CMEs produces large geomagnetic storms. Many researchers show that the double peak in geomagnetic field 2012 (solar cycle 24) is the second peak is larger than the first. In recent studies CMEs particularly Halo CMEs are being investigated as responsible factor in geomagnetic disturbances. In the present analysis, we have considered Halo CMEs to derive influence on geomagnetic activity. In this study we analyze the effect of Halo CMEs on geomagnetic field of earth after the occurrence of Halo CMEs during solar cycle 23 and 24. The relationship between CMEs geomagnetic storms. In the two hemispheres, the most solar cycle shows a double peak due to the out of face activity. We have studied the effect of Halo Coronal Mass Ejections on geomagnetic field of earth for the period of 1996 to 2012 which cover the solar cycle 23 and ascending phase of solar cycle 24. We have adopted the three analysis super epoch method in our analysis. Solar Geophysical daily value of geomagnetic field monitor are taken three analysis. In recent studies CMEs, particularly Halo CMEs and Full Halo CMEs are being investigated as responsible factor in geomagnetic disturbances. In present analysis, we have considered Halo CMEs to derive their influence on geomagnetic activity. Analysis indicated that effect of Halo CMEs on geomagnetic field of earth after the occurrence of Halo CMEs.

Keyword: Coronal mass ejection, geomagnetic field, Halo and Full Halo Coronal mass ejection.

Introduction: Coronal mass ejections (CMEs) are magnetized plasma structures that erupt from the sun and propagate into the heliosphere. The mass content of CMEs ranges from $\sim 10^{12}$ to 10^{16} g, wider CMEs being more massive. The CME kinetic energy ranges from 10^{27} erg to 10^{32} erg making CMEs the most energetic phenomena in the heliosphere. First time reported in 1971, the phenomenon of CME using the seventh orbiting solar observatory (OSO-7). CMEs which appear to surround the occulting disk of the coronagraph in the sky plane projection and expand rapidly are known as Halo CME. The CMEs have angular width $\geq 180^\circ$ are known as Halo CME. As special type, those surrounding the occulting disk i.e. which an apparent angular width of 360° are called the Full Halo CMEs. The CMEs having angular width $120^\circ \leq \theta \leq 360^\circ$ are considered as partial Halo CMEs. The Halo CME data used in our analysis downloaded from NASA websites (<http://gsfc.nasa.gov/CME-list/halo/list.html>). Extensive observation started from SOHO, Halo CMEs have been considered in solar-terrestrial studies. The ability of CMEs to cause geomagnetic storms is known as geoeffectiveness, which is measured in terms of geomagnetic index such as "disturbance storm time" or Dst. In this paper we have studied the variation of AP Index and Halo CMEs for the selected period.



Data and Method of Analysis: We have used entire Halo CMEs and AP Index (solar geophysical daily value) during the solar cycle 23 and ascending phase of solar cycle 24. We have Data observed by SOHO /LASCO from 1996 to 2012 and taken from SOHO /LASCO CME Catalog (<http://cdaw.gsfc.nasa.gov/CME-list>). For this purpose chree analysis of super pose epoch have been applied for the study period 1996 to 2012. Analysis for -4 to 8 days has been plotted for the Halo CMEs. Zero day are crossed to occurrence date of Halo CMEs. The daily value of geomagnetic interplanetary index AP taken from solar geophysical data books/internet website (<http://nsdc.gsfc.nasa.gov/omniweb>). Daily values of oulu (0.78cm) neutron monitor data have been taken for analysis.

Result and Discussion: We have taken the phase of solar cycle 23 and 24. We have considered the Halo CMEs interval 1996 to 1999, 2000 to 2002 for solar cycle 23 and 2008 to 2012 for solar cycle 24. Webb concluded that the average travel time from onset of halo CMEs to the onset of the storms of earth was 3.3 days (11). In a similar study, singh and shrivastav (12) showed that the geomagnetic storms occur with days from 2 to 5 days from the onset of Halo CMEs. In this study, chree analysis of superpose epoch have been applied for the period 1996 to 2012. Chree analysis is a procedure for analyzing one set of measurement during epoch selected on the basis specific type of features in second set of measurements. The result of analysis for -4 day to 8 days has been plotted for the Halo CMEs. Zero days are crossed to occurrence date of Halo CMEs. As values obtain from the chree analysis are plotted in fig 1 for the period of 1996 to 1999, which cover the ascending phase of solar cycle 23. It indicated effect of Halo CMEs on geomagnetic field of earth after the occurrence of Halo CMEs. The analysis has been extending for the years 2000 to 2002, covering the maximum phase of solar cycle 23. Result of analysis for this interval is plotted in fig 2. This high solar activity period shows similar result as observed in ascending phase of solar cycle 23. Further, we have again extended our analysis for the period of 2008 to 2012, which cover the ascending phase of recent solar cycle 24. The analysis has been performed on the yearly basis. The result of chree analysis are showing fig 3, 4, 5 one can easily observe the value of AP index for Halo CMEs event almost each year starting from 2008 to 2012. In this paper, we have considered Full Halo CMEs influence on geomagnetic activity. The results of chree analysis plotted in fig 6, 7, 8 for the years of 2010, 2011 and 2012 respectively. One can easily observe the increases in Ap values for FHCME event each years starting from 2010 to 2012. Significant increases are seen after the onset days. Double peaks of increase are seen for each year. Conclusions: In this paper, Effect of Halo and Full Halo CMEs on geomagnetic field variation of earth has been presented and concluded.

- (1) We can observe the increase in geomagnetic field in influence of Halo CME. The increase is more prominent after 4 days to 5 days after the zero days for the period of 1996 to 1999. Similar result as observed in ascending phase of solar cycle 23. However, increases are concentrated one day earlier, i.e. 3 to 4 days after the onset days of Halo CMEs.
- (2) Increase is almost found 2 to 3 days after the zero days. However, year 2009 depicts increase on zero days, which trend is slight different from others.
- (3) Result of our analysis indicates a significant influence of Halo CMEs on geomagnetic field variations.
- (4) It is theoretically interpreted that compression and raping of magnetic field line leading Edge of the Halo CME and of the ambient.





- (5) Large increases are observed after three to four days from onset days of FHCMEs year of 2010 shows slightly different trend, when large increase is seen after two days from zero days.
- (6) Result of this analysis indicates that influence of FCMEs on geomagnetic activity is slightly high in comparison to Halo CMEs.
- (7) Halo and Full Halo CMEs produce increases in geomagnetic activity on short-term basis.

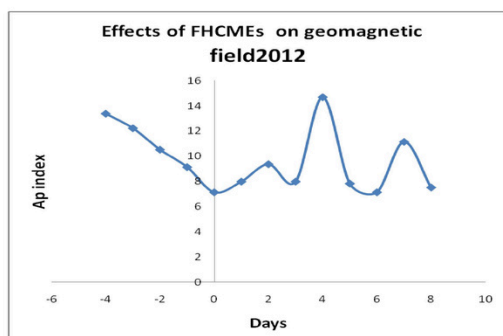


Fig (8) Effects of Full Halo CMEs on geomagnetic field variation (Ap index) for the period of 2012.

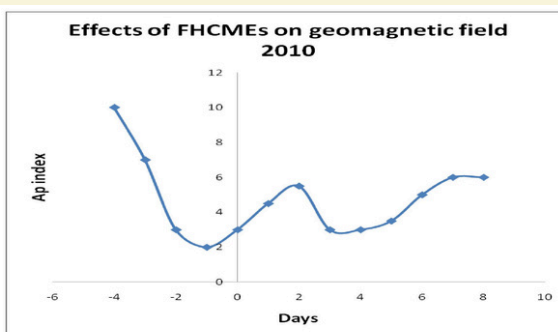
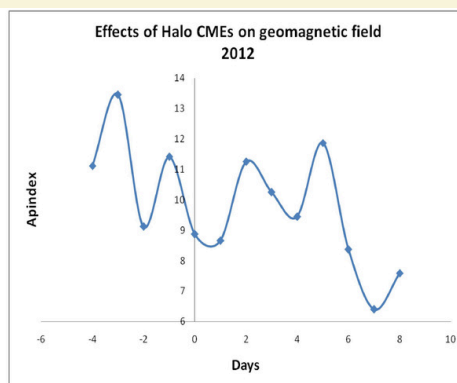


Fig (6) Effects of Full Halo CMEs on geomagnetic field variation (Ap index) for the period of 2010

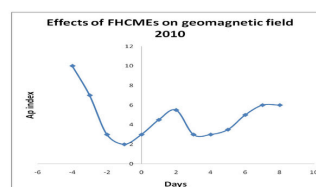


Fig (6) Effects of Full Halo CMEs on geomagnetic field variation (Ap index) for the period of 2010

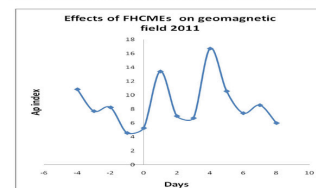
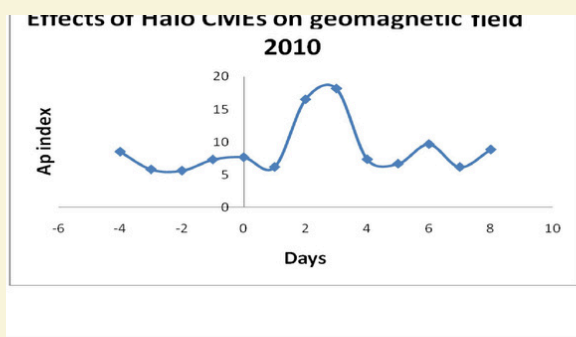


Fig (7) Effects of Full Halo CMEs on geomagnetic field variation (Ap index) for the period of 2011.



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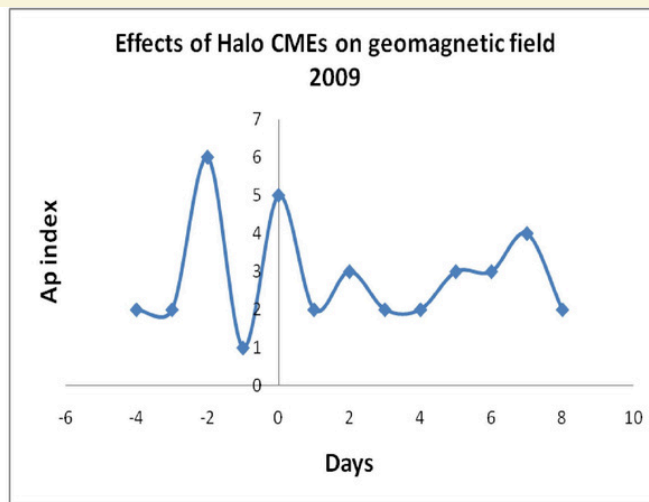
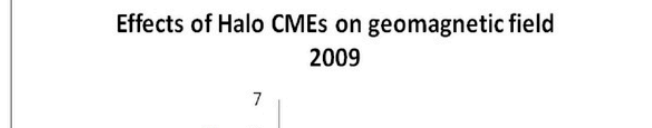
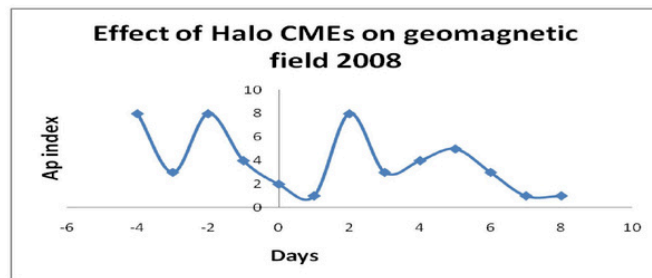


Fig (3) Effects of HCTEs on geomagnetic field variation (Ap index) for the period of 2008-2009





A Study of Rural Development in India Problems and Prospective: With special reference to Balaghat district

<https://doi.org/10.17605/OSF.IO/8MERK>

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Abstract: Business expansion is a test in the circumstances of the country in the time of globalization. According to the 2011 census, 68.84% of the people in India's rural areas have a source of income. Individuals in the regions of the country experience the ill effects of no occupation, helpless infrastructure, conveniences which can be dealt with by the development of rural business visionaries. "Country entrepreneurship can be described as a business enterprise gifted at the height of the provincial local area, which can take a position in the fields of diligence such as business, industry, development, and a productive factor for practical improvement. as it goes". However, these natural trades are facing various issues like frenzy of visionary threats, absence of speculation, lack of education and competition from metropolitan businessmen. The country's business visionaries accelerate the rule of life and purchasing power of individuals in villages by providing freedom of work to the general population. This paper is an attempt to look at the value of issues and difficulties for provincial business in relation to rural reform in India and possible ideas to address the issues.

Keyword: Rural Development in India, Opportunities in Rural India.

Introduction: Rustic advancement is the advancement of improving the personal satisfaction and monetary prosperity of the general population living in provincial regions. Today, Inclusive natural improvement is an additional particular idea than the thought of peaceful development of prior, in more extensive terms, extensive natural growth is on working on the personal satisfaction of every single rustic individual. All the more explicitly, general peaceful development covers three different yet bound together degree: Economic feature, Social angle, and Political viewpoint. Financial element envelops giving both inclination and freedoms to the dejected and low-pay families in -





demanding, advantage from the monetary development. The social perspective backings the cultural development of poor and low-pay families, advances sexual orientation libertarianism and ladies' strengthening, and gives social wellbeing nets to vulnerable gatherings. The political measurement works on the chances for poor people and low-pay individuals in provincial regions to effectively and similarly partake in the supporting cycles at the rustic local area level.

Objectives of the Study:

- To contemplate provincial advancement procedures in India.
- To look at the imaginative thoughts for rustic advancement in India.
- To decide the issues looked by rustic improvement in India

Methodology: This exploration is essentially distinct in nature. Optional wellsprings of information have been utilized for this together from various distributed sources like books, magazines, papers and magazines and sites.

Country Development Strategies In India:

- Grant MSP (Minimum Support Price) for an assortment of harvests to the ranchers, independently from insofar as Crop Insurance.
- Provide Life Insurance to every one of the ranchers who are basically performing horticulture.
- Instead of plentiful direct money under the control of ranchers, the Government has to bring to the table liberated from cost all imperative information sources like prominence seeds, manures, and pesticides, and so on.
- For buying Tractors, Electric Motor Water Pumps, and so forth On aid, the Government ought to give a credit office to the ranchers.
- Electricity for ranchers ought to be proliferating on sponsorship rates.
- As there could be no different exercises separated from farming in country regions, the Government should close by advance office to the intrigued learned youth for beginning Startups to diminish joblessness.
- Make more grounded and make greater the current Agricultural Markets in collection to the setting up new Agricultural Markets.





Use of Local Resources: For instance: If there are water assets like waterways and tanks close by the towns, in the late spring itself, commitment should be made to tap this asset by eliminating tear in the tanks, building new repositories, bunds, trenches, and at the same time support the current ones, with the goal that the water can't go waste. Also, in case there are any mines like iron, coal, and stones, they ought to be exhumed so that limited occupants can be given work.

Foundation of Rural Industries: All the town businesses go under the accompanying general classes: There is a wide scope of administrations including portable fix, agribusiness gear adjusting, and so on, Which are naturally attempted under this classification

New companies: They are innovative endeavors, which are just barely arisen organizations plans to gather commercial centre need, need or issue by fostering a potential plan of action roughly items, administrations, cycles.

PC and Internet Services: Providing Computer instruction and Repairing Services, Internet-based trade like E-Commerce, Rail and Bus Ticket booking, Digital Marketing Agency – Examples: Social Media Marketing, Email & Marketing.

The Problems Faced For Rural Development In India: A portion of the issues looked for rustic advancement in India are as per the following;

- The financial, work, and administrative resources given to the execution of country progression programs are lacking.
- Better use of common improvement activities can be ensured just if those responsible for real execution are paid reasonably well, appropriately ready, and sufficiently roused. In any case, this has not been done now.
- It is when in doubt dynamically saw that the objections of one program battle with those of others, and there are no institutional instrument for obliging them. In this manner, various undertakings totally bomb in fulfilling their objections. Additionally, they also impact various undertakings.
- large part of the time, instruments of country progression are not fittingly picked, and their levels are not consistent with the objectives they attempt to achieve.





Conclusion and Suggestions: Work Intensive Techniques: As there is camouflaged repetition in our horticulture area, work thorough procedures ought to be taken on in rustic assembling units. Teach the Rural Entrepreneurs: Government and NGOs available various plans and prospects to the provincial business visionaries. However, they are ignorant of these plans and openings because of their lack of education. So they ought to be educated by leading studios and classes related with their industry. Checking provincial advancement programs by providing the perfect data at the perfect time, giving ideal and satisfactory appreciation, and determined inspiration of investors, Panchayat is mixing pioneers and giving help mankind will prompt the extension of rural business venture and thusly rustic turn of events.

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Critical Study of Panchayati Raj System in India on the Basis of Constitutional Compulsions: With special reference to Balaghat district

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Abstract: In India, majority of its population lives in the rural areas of the country and along these lines the popular government should consequently start to guarantee great governance and better functioning of the vote based system which we want. To stretch out popular government to the provincial India, the arrangement of Panchayati Raj was set up in India. The Panchayati Raj framework is certainly not another idea and thusly is considered as a standout amongst other methods of administration of the rustic India.

Keyword: Panchayati Raj System in India, Panchyati Raj New challenge

Introduction: India, primarily, is a place known for its towns and about 72% of the total population of India lives in rural areas. So the provincial areas shape the roots for administration in India and a majority government should start later. Mahatma Gandhi also said that the turn of events and the main components for administration should not be large urban areas but cities as this is the place where India lives. In India, we have a special framework for administration at the city level. The administration of such a small unit of India is done by institutions called Panchayati Raj Institutions. The Panchayati Raj institution gets its reality from the constitution under the head of Panchayats under Part IX. The account of the Panchayat is not just one or two years old; Rather it has been common in India for ages.

In the mean time, during the arrangement of the Constitution of India, in the Constituent Assembly, Panchayati Raj was held under the heads of Directive Principles of State Policy under Part - IV of the Constitution chiefly due to the political insecurity of the new government and the scarcity of assets and hence it was not basically workable for the recently framed India to have a third level of the -





Governance which was directly at the most minimal level in the country.

After the Indian freedom, there were different panels that attempted to give a legitimate construction to the Panchayati Raj in India. These are;

- Balwant Rai Mehta Committee, 1957: this board principally it upheld for the essential degree of organization be at the Block level.
- K. Santhanam Committee, 1963: upheld that the Panchayati Raj Institution (PRI) be given the forces to exact assessment and it ought to become as the primary hotspot for the subsidizing of the organization.
- Ashok Mehta Committee, 1978: This board recommended that the Panchayati Raj Organization will be a two level body which ought to work at the Zilla level and the Mandal level. The nodal region would be at the Block Level (dealt with by the Block Advancement Officer) and Zilla Parishad will play a warning part to both, the State Government and to the Block level establishment.

Structure of the Panchayats: Despite the way that the fundamental construction of the PRIs is vague over the states of India, it is depicted through different orders in different states. The structure of the Panchayat is as follows...

- Zilla panchayat : Each Panchayat under a Zilla Parishad picks one/two/three people straightforwardly. Leaders of the relative multitude of Block Panchayats are in like manner ex-officio people from the Zilla Parishad. In a couple of communicates the Member of Authoritative Assembly (MLA) and Member of Parliament (MP) of the district/body electorate are moreover ex-officio people.
- Block panchayat or panchayat samiti: Every Gram Panchayat under a Block Panchayat picks one/two/three people explicitly to the Block Panchayat. Gram Pradhans are ex-officio people from the Block Panchayats.
- Gram panchayat: A Gram as portrayed under the Act (which implies a town or a lot of towns) is isolated into somewhere around five democratic socioeconomic (again depending upon the amount of electors the Gram is having). From every one of these democratic socioeconomic one





section is picked. Body of these picked people is known as the Gram Panchayat. Size of the Gram Panchayats varies by and large from one state to another.

- Gram sabha: In a huge piece of the states, each casting a ballot public of the people from the Gram Panchayat is known as the Gram Sabha and all of the citizens of a similar body electorate are people from this body. Regardless, in a couple of communicates this is called Ward Sabha/Palli Sabha, etc.

Features of 73rd Amendment of the Constitution: After the proposals of the L. M. Singhvi Committee, the Panchayati Raj Institutions were given a Constitutional status under Part IX of the Constitution. The Part was added by the temperance of the Seventy Third Amendment Act.

Current Issues in Panchayati Raj: Even get-togethers execution of the Panchayati Raj Institutions in India in pretty much every state, still there is by all accounts different issues that are yet to be managed to guarantee powerful interest of these institutions. Some of them are: In India, there are around 2,32,278 panchayats at the town level; 6022 at the middle of the road level; 535 at the area level still the panchayats has negligible forces to create income. They don't have the forces to impose charges and thusly they are colossally reliant upon the State Government for financing. Consequently it is only a utilitarian independence as it is by all accounts a lengthy structure for the State Government and no other administering body even subsequent to having a Constitutional status. Out of the absolute panchayats, 27 lakh individuals are chosen all through India wherein 37% are ladies; 19% are SC and 12% are ST.

Conclusion and Suggestions: The idea of panchayati raj is definitely not a new one in India. There have been follows wherein the said framework has been discovered working successfully in organization of the little units of the nations, similar to the towns. This idea has been recognized by different Constitutional designers and remembering the Constituent Assembly's expectation as a main priority, this has been given a Constitutional status under Part IX by the uprightness of the Seventy Third Amendment. Even following twenty years of the working of the panchayati raj in India unavoidably, there have been arious issues in its successful working. It would not be right to say that the panchayati raj establishments have begun assuming their regulatory part in the way it was -





believed to be. However, the issue comes at the phase of the contribution from the significant partner, for example the general population on the loose. The organization is today instigated by different sick practices like the intermediary casting a ballot or the debasement everywhere or the impact of the ideological groups. Start the change at first focusing on individuals, which incorporate teaching the citizens to the extent making them skillful to comprehend their privileges and obligations.

The job of the ideological groups is additionally exceptionally tenacious in the Panchayati Raj framework and subsequently these issues should be tended to at the soonest. Hence, it very well may be seen that the Panchayati Raj Institutions have worked far in executing the target that they were thought with. However there come different issues today that should be tended to. In India, most of the populace has a place with the provincial regions and consequently it is required that the organization of such units is made powerful.

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Uses of Gold Nanoparticles for Drug Delivery System

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Abstract: Colloidal gold nanoparticles have been around for centuries. Historically, the use of gold nanoparticles has been predominantly found in the work of artists and craftsman because of their vivid visible colors. However, through research, the size, shape, surface chemistry, and optical properties of gold nanoparticles are all parameters which are under control and has opened the doors to some very unique and exciting capabilities. The purpose of this chapter is to review some of the important discoveries and give background in regard to gold nanoparticles. First, the most common wet chemical methods toward their synthesis are reviewed, specifically discussing routes toward spherical colloidal synthesis and controllable rod formation. Next, because many applications of gold nanoparticles are a result of their magnificent interactions with light, some of the basic optical-electronic properties and the physics behind them are elucidated. Finally, by taking advantage of the optical-electronic properties, numerous proven applications for gold nanoparticles are discussed, as well as their predicted applications in the future. Multi-functional gold nanoparticles have been demonstrated to be highly stable and versatile scaffolds for drug delivery due to their unique size, coupled with their chemical and physical properties. The ability to tune the surface of the particle provides access to cell-specific targeting and controlled drug release. This chapter describes current developments in the area of drug delivery using gold nanoparticles as delivery vehicles for multiple therapeutic purposes.

Introduction: The future success of nanotechnology is similar to capturing a wild horse: powerful and full of potential but must be tamed before it will be useful. The taming of any beast requires a deep understanding of the basic fundamental traits that govern behavior, which, for a nanomaterial, is a combination of primarily composition, size, and shape. In order to advance nanotechnology for -





applications in bioengineered devices and high speed electronics, development of methods to understand and control the behaviours of nanomaterials is needed. A nanomaterial may be defined as any material (insulator, conductor, semiconductor), which has been controllably synthesized on the size range of roughly 1.5 to 100 nm. At this size and dimensional range, essentially any material will exhibit different properties than it would as an atomic cluster or as the larger bulk material. In fact, a change in the nanomaterial's size confers dynamic properties upon the system, and is commonly used to manipulate the light absorption and photoluminescence properties, as well as magnetization and electrical conductivity. Metallic gold nanoparticles have long been a popular choice of nanomaterial for many scientists to work with due to their facile methods of synthesis, the high degree of control over shape and size, their long-term stability in a wide variety of solvents and pH conditions, and their conducive nature toward surface-molecule (ligand) modification. The ability to controllably choose the ligand attached to a nanoparticle (NP) surface, such as proteins or nucleic acids, introduces a means by which the nanoparticle may be directed to a targeted site in a body or in a cell for either detection, diagnostics, or therapeutic purposes. Further, the effective use of a nanomaterial probe requires an understanding of both the relationship that exists between the material type chosen and the physical dimensions of the nanomaterial as well as the effect of ligands on the optical-electronic properties of the NP. The purpose of this chapter is to provide an overview of the wide variety of different gold nanomaterials and their optical, electronic, and magnetic properties. At the end of this discussion, a review of their use in medicine and diagnostic applications will be discussed.

Nanomaterials are of great interest in biology and medicine, owing to their numerous applications including DNA/ protein detection,¹ biomolecular regulators,² cell imaging³ and cancer cell diagnostics.⁴ Currently, the use of nanomaterials as drug delivery systems has become an emerging area in the field of nanomedicine. A wide variety of nanomaterials, such as nanotubes,⁵ nanorods,⁶ and nanoparticles,⁷ have been explored as carriers for delivering “small-molecule” drugs, proteins, and genetic materials, exploiting their unique dimensions and specific physical and chemical properties. These novel drug delivery systems offer the opportunity to improve poor solubility, limited stability, biodistributions, and pharmacokinetics of drugs as well as offering the potential ability to target specific tissues and cell types. Multi-functional gold nanoparticles are attractive organic-inorganic hybrid materials composed of an inorganic metallic gold core surrounded by an organic and/or biomolecular monolayer.





They provide many desirable attributes for the creation of drug delivery systems. First, the core materials of gold are chemically inert and nontoxic.⁸ Second, essentially monodisperse nanoparticles can be fabricated with tunable core shape and size, providing a wide range of attractive properties, including controllable plasmon resonance for photo-thermal therapeutic treatments using a light at the visible or near infrared (NIR) regions.⁹ Third, the unique nanoscale dimension of gold nanoparticle provides a large surface area for efficient conjugation and protection of drugs and targeting ligands.¹⁰ The attachment of payload can be readily achieved by either noncovalent interaction (e.g., DNA, RNA or proteins via electrostatic interaction) or covalent chemical conjugation of “small molecule” drugs. Finally, the well-defined surface chemistry allows modulation of monolayer properties of nanoparticles in highly divergent fashion with a wide range of ligand functionality. This provides an effective drug delivery system to ensure cellular uptake, controlled payload release, and specific cells targeting.

Recently, a number of reviews concerning nanoparticle-based biological applications have been published, focusing on biosensing,¹¹ diagnostic applications,¹² and nanoparticle-biomolecule assemblies.¹³ In this chapter, we will detail the advances made in multi-functional gold nanoparticles as drug delivery systems. Focus is given to the use of these systems for controllable and targeted release of the drug.

Synthetic Strategies: In comparison to most inorganic nanomaterials, gold nanoparticles can be synthesized in the largest variety of shapes and sizes. The most common shape, and arguably one of the easiest to synthesize, is the simple sphere. In the synthesis, gold chloride is added to aqueous solvents in the presence of a reducing agent. Gold nanoparticles are quickly formed, as observed simply by the change in the color of the solution (light yellow goes to red). Growth is rapid and no crystallographic face is favored over others when a neutral stabilizing agent such as citrate is used to bind the surface. In most solution-phase synthetic methods, stabilizing agents such as phosphine, thiol, carboxylate, or amine containing molecules are often used. These molecules are important primarily in mediating the interactions between the NP surface and the surrounding bath. Without stabilizing agents, particles in solution are more susceptible to either oxidation or the attractive interparticle Van der Waal's forces which cause them to aggregate and precipitate from solution. The most successful approaches to controlling nanoparticle size and dispersity are therefore often -





dependent upon the choice of ligand, surfactant, or stabilizing agent.

Shaped Control Metal Nanoparticle Synthesis: Metallic nanorods differ from spheres because they have a particular aspect ratio in which the material is elongated along a single dimension, keeping the other two dimensions approximately equal. In order to synthesize nanorods, it is necessary to limit growth direction to a single axis. Physically, this is accomplished by reducing metal salts inside either rod-shaped micelles such as those formed in solution by cetyltrimethyl ammonium bromide (CTAB), or by a hard template approach such as anodized porous alumina.⁴ The use of a spherical gold nanoparticle as a seed may aid the rod growth inside a micelle to form gold and silver nanorods of high uniformity and controllable aspect ratio in solution.⁵ The advantage of hard templated routes for nanorod synthesis is the ease of adjusting the length and hence the aspect ratio of the rod. Further, this method can be used to prepare rods up to microns in length. Micellar templates, on the other hand, require less work or special equipment and may be more practical for large scale synthesis but have greater difficulty in controlling the morphology and aspect ratio of the rod.

Experimental Uses of Gold Nanomaterials: Many of the properties of gold nanometal colloids make them particularly amenable to biological applications, namely: they are highly customizable in size, shape, and surface chemistry, they are stable in a wide variety of environments, they are inert, non-toxic, and they have controllable optical-electronic properties. In this section, we will discuss the use of these materials for biological sensing and medical therapeutic applications. Gold NPs demonstrate massive dipole interactions with light rays, and, like we mentioned earlier, these SPR bands are very sensitive to their environment. Plasmon resonance is the basis behind a popular analytical technique for biomolecular detection, where the index of refraction changes upon biomolecular binding (e.g., protein) to thin gold films. Mirkin and coworkers used such a technique to monitor nucleic acid interactions through shifts in colloidal gold SPR bands.²⁴ As previously described, the aggregation of gold nanoparticles may be characterized by a drastic shift in color from red to blue. The color shift is a result of the interacting electric fields of neighboring particles and has a tendency to lower the resonant frequency of plasmon oscillations (lower energy SPR absorption band.) The closer particles get to one another, the greater the magnitude of this shift. Shifting SPR energies therefore give the basis for colorimetric tests using capture-target biomolecular binding -





schemes. Figure 8 (left) demonstrates this colorimetric scheme for the detection of specific DNA strands. When gold nanoparticles containing a specific recognition strand of DNA are introduced to a solution in which the complementary strand is also bound to gold nanoparticles, the proper hybridization will draw the nanoparticles together and shift the SPR frequency to lower energy. A change in the color of the solution leads to the detection of the DNA strands. The use of gold nanoparticles in biomolecular detection schemes have advanced rapidly by Mirkin's group to include not only shifting in the SPR bands for colorimetric detection but to incorporate silver ion reduction into the detection platform for enhanced detection sensitivity via darker color intensity or surface-enhanced Raman spectroscopy (SERS).²⁵ Using a surface-based capture assay, a gold NP containing a specific sequence of single-stranded DNA will bind to a patterned surface of different complementary sequences. After washing the slide to remove non-specifically bound NPs, only the patterned regions of interest contain gold NPs via DNA hybridization. The NPs can then be detected either colorimetrically by reducing silver ions onto the gold NPs for an enhanced color change, or using SERS. The use of many spots combined with the unique DNA sequence on each spot can be used for high-throughput analysis and detection of genes or for profiling hereditary disease or genomic-based pathogen detection. In addition to Mirkin's group, Libchaber et al. demonstrated the use of gold nanoparticles to detect single basepair mismatches of complementary DNA by using the quenching species of a fluorescent molecule.²⁶ Figure 8 (right) demonstrates the experiment performed by Libchaber et al. in which a hairpin loop of single-stranded oligonucleotide sequence was synthesized to contain a small gold NP at one end and a fluorescent dye at the other. When the oligonucleotide is wrapped up in the hairpin loop, the fluorescent dye and the NPs are very close together and the dye is incapable of emitting photons of light. However, if a matching oligonucleotide sequence, or sequence to be detected, with a perfect complementary match is introduced into solution, the hairpin structure will unravel to form a linear double-stranded structure that is more stable than the hairpin conformation. As a result, the dye and NP are spatially separated and this leads to the dye emitting photons of light. The output output correlates to the concentration of the sequence to be detected, which can be from cells or tissues associated with a disease. Although the ability for a gold NP to quench the fluorescence of a dye molecule is clear, the mechanism responsible for this observation requires further elucidation. Aside from colorimetric assays and -





NSET fluorescence quenching, the SPR of spheres, rods, and even gold shells is being hotly pursued for the potential use in photothermal therapy. The SPR band, as described earlier, is a gigantic dipole, with extinction coefficients ranging into the billions ($M^{-1}cm^{-1}$) if the particles are large enough. It was realized that this massive absorption feature could extend metallic nanoparticles toward therapeutic purposes. Gold NPs are (mostly) non-photoluminescent structures where the absorbed energy by the NP are mostly dissipated to the surrounding environment as heat. If the NP exists in an environment such as a tumor cell, then the heat dissipated by the NP through light absorption will locally destroy its environment, leaving the healthy neighboring cells alone. To accomplish this goal, of course, the gold NPs must first target specific cancerous cells and not internalize into the healthy ones. The use of specific targeting antibodies, such as Herceptin's affinity for breast cancer, may be employed toward this end. Studies to understand the cell's uptake dependence on shape and size are being performed,²⁷ as well as the efficiency of photothermal therapy to destroy specific cells while leaving healthy cells in tact are being performed in-vitro.²⁸⁻³⁰ Rod-shaped NPs may prove to be particularly useful for photothermal therapy because the longitudinal plasmon mode in the near IR wavelength range will be more accessible for external illumination through skin tissue or blood than is the transverse plasmon mode. We have provided some descriptions of the applications of metallic NPs. Since the application of this technology is so broad (and difficult to describe all applications), we recommend the interested reader to some excellent recent reviews on this topic.

Biological Properties of Gold Nanoparticles: Gene therapy is a highly promising approach for the treatment of genetic disorders.¹⁴ One of the current limitations with this process is in the design of effective gene-delivery vectors for transporting plasmid DNA, small interfering RNA (siRNA), or antisense oligonucleotides controllably and specifically into living cells. Although viral vectors are very effective,¹⁵ they have raised many safety concerns such as unpredictable cytotoxicity and immune responses.¹⁶ In this regard, nonviral synthetic materials have been developed as gene delivery carriers.¹⁷ To be effective, those materials must meet several requirements, such as the ability to condense DNA into compact complexes which can be readily taken up by cells, the efficient protection of DNA from degradation by nucleases, and the release of DNA in functional form. Nanoparticles provide attractive scaffolds for the creation of DNA delivery vectors due to their tunable attributes, such as size, shape, and surface functionality. Rotello et al have demonstrated that





gold nanoparticles covered with quaternary ammonium groups interact with plasmid DNA through electrostatic interactions,¹⁸ resulting in effective protection of DNA from enzymatic digestion.¹⁹ These highly stable DNA-nanoparticle complexes provide an effective vector for gene delivery. The effects of varying nanoparticle monolayer (e.g., positive charge coverage and various lengths of unfunctionalized alkane thiols) as well as DNA-to-nanoparticle ratios were systemically investigated to establish the optimal parameters on the efficiency of transfection of mammalian 293T cells (Fig. 1).²⁰ The results showed that an excess amount of nanoparticles was required to enable the DNA-nanoparticle complex overall positive charge for effective cellular uptake. It is also found that amphiphilic particles were superior to purely cationically-functionalized systems on the transfection efficacy, which was ~8-fold more efficient than polyethyleneimine (PEI), a widely used gene delivery agent, and 60-fold more efficient than reported silica nanoparticles.²¹ In a subsequent study, Klivanov et al have modified the surface of gold nanoparticles using branched 2 kDapolyethylenimine (PEI) to investigate their transfection efficiencies into monkey kidney (Cos-7) cells.²² It was found that the transfection efficiency varied with the PEI:gold molar ratio in the conjugates, with the best one being a dozen times more potent than the unmodified polycation. Their study also suggested that increasing the hydrophobicity of the transfection agent could enhance cellular internalization. Very recently, Nagasaki and coworkers described a novel cytoplasmic delivery system of siRNA using gold nanoparticles.²³

The thiolated siRNA was coated on the surface of gold nanoparticles with poly (ethylene glycol)-blockpoly(2-(N,N-dimethylamino)ethyl methacrylate) copolymer (PEG-PAMA). These PEGylated gold nanoparticles containing thiols on the siRNA showed a significant RNAi activity in HuH-7 cells. Positively charged synthetic materials are generally used as nonviral transfection vectors to ensure cellular uptake. Mirkin et al have recently shown that gold nanoparticles (Au NP) attached with single stranded oligodeoxynucleotides that feature negative charges can be used for gene therapy (Fig. 2).²⁴ Fluorescence images obtained by incubating the cells with DNA (labeled with a fluorophore) conjugated nanoparticles revealed their cellular uptake. The DNA on particle surface binds with its complementary strand with higher affinity compared to the unmodified DNA. Moreover, the DNA strand conjugated with the particle is less susceptible to nuclease activity.





These properties render the NP-DNA conjugates excellent intracellular gene regulation agents. By conjugation of antisense DNA with gold nanoparticle, the protein expression level was controlled. EGFP-expressing C166 cells were incubated with antisense DNA functionalized nanoparticles (ASNP). Due to EGFP gene knockdown, reduction in fluorescence intensity was observed in cells incubated with ASNP compared to untreated cells from two photon excitation confocal laser microscopy experiments. This approach provides a highly efficient gene regulator in terms of high loading of the antisense DNA with little or no toxicity at the concentrations studied.

Protein Engineering approaches of Gold Nanoparticles: Gold nanoparticle can likewise deliver proteins and peptides of interest. Insulin dependent diabetes mellitus (IDDM) is characterized by the marked inability of the pancreas to secrete insulin because of autoimmune destruction of the beta cells of the islets of langerhans. Current treatment for IDDM includes insulin administration via subcutaneous route. Research is underway for systems to deliver insulin transmucosally and avoid the traumatic subcutaneous and intramuscular routes. In recent works, Sastry et al have demonstrated that gold nanoparticles have the capability of binding with insulin and hence can be used as insulin carriers.²⁵ 4 nm core bare nanoparticle and aspartic acid capped nanoparticle were loaded quantitatively with insulin presumably via covalent attachment and hydrogen bonding, respectively. Subsequently, they have shown administration of insulin-loaded nanoparticle in diabetic Wistar rats via oral and intranasal routes resulted in a substantial diminution of blood glucose levels.

Gold Nanoparticle As a Drug Delivery Vehicles: Glutathione (GSH) mediated release represents a nonenzymatic approach to the release of therapeutic agents in a controlled fashion after delivery to the cells. This strategy is based on the huge difference in intracellular GSH concentration (1.5-10 mM^{26,27}) compared to intercellular GSH levels (e.g., 2 +M in red blood plasma).²⁸ Recently, delivery vehicles based on disulfide linkages have been reported the advantage of this method to release DNA and drug molecules inside cells.^{29,30} Although this approach can be effective, it is a challenging task to tune the reactivity of the disulfide linkage. Additionally, thiol-disulfide exchange reactions can occur with cysteines on the surface of proteins in bloodstream, thus altering the drug carrier's pharmacokinetic profiles. However, monolayer protected nanoparticle drug carriers can be expected to resist the exchange with proteins because of the steric shielding of the organic thiol -





monolayers on the surface. More importantly, the tunable chain lengths and headgroup functionalities on the monolayers can be used to manipulate the release of payload in response to GSH. In recent studies, an intracellular concentration of glutathione (GSH) has been employed as a trigger to restore the transcription of cationic nanoparticle-bound DNA.³¹ Trimethylammonium-functionalized mixed monolayer protected clusters (MMPCs) 1 and 2 (Fig. 3A), with different sidechain lengths bind with DNA molecules strongly through electrostatic complementarity. Therefore, the transcription of DNA by T7 RNA polymerase is completely inhibited at an appropriate stoichiometry. The DNA-particle complexes were stable at extracellular GSH concentrations but labile at intracellular GSH levels, showing dose-dependent recovery of DNA transcription (Fig. 3B). These phenomena are attributed to the place-exchange of the cationic residues of the nanoparticles with anionic GSH which diminishes the overall positive charge of the particles and subsequently attenuate its electrostatic affinity towards the DNA backbone. Because MMPC 2 with a longer tether was more stable against ligand-exchange than MMPC 1, MMPC2 showed significant recovery of DNA transcription only at higher GSH concentrations. Therefore, the release of DNA and recoveries of DNA transcription can be tuned through the choice of monolayer coverage and intracellular GSH levels. Recently, Rotello et al have demonstrated GSH-mediated release of a fluorophore model of “small molecule” drug from a monolayer protected gold nanoparticle. The gold nanoparticles (AuNP) used in this work feature a 2.5 nm core and a mixed monolayer composed of a tetra(ethylene glycol)lyated cationic ligand TTMA and a thiolated Bodipy dye, HSB DP.³² The TTMA ligand is used to generate a cationic surface to enhance cellular uptake. The dye molecule doped into the particle monolayer provides an analog for hydrophobic drugs and allows facile detection of payload release. Moreover, gold nanoparticles provide excellent fluorescent quenchers, allowing the timely observation of release of HSB DP from nanoparticles. GSH-mediated release was first observed in Human liver cells (Hep G2). After the cells incubated with AuNP, strong fluorescence from Bodipy was observed (Fig. 4A). The results clearly show that multifunctional cationic nanoparticles efficiently penetrated cell membranes and that the payload dye molecules were successfully released in living cells. The release of payload from AuNP surfaces arose from GSH, which was confirmed by using glutathione monoester (GSH-OEt) as an external stimulus to trigger HSB DP discharge (Fig. 4B). GSH-OEt can offer a method to transiently manipulate intracellular GSH concentrations. In this experiment, mouse embryonic fibroblast cells containing ~55% lower GSH levels than Hep G2, were first treated with varied -





concentrations of GSH-OEt, and followed by incubating with AuNP. Increased fluorescence intensity was clearly observed with increasing GSH-OEt concentration (Fig. 4B). This dose-dependent increase in fluorescence effectively demonstrates that GSH is responsible for releasing dye molecules from the AuNP carrier. Several groups have taken advantage of surface chemistry on the MMPCs to realize the small molecular releasing. For example, Schoenfisch and coworkers showed the efficient release of NO was established by means of diazeniumdiolate-modified MMPCs.³³ However, photochemical release of materials represents a useful orthogonal dissociation mechanism. This approach provides external control over payload release in a unique site- and time-specific fashion.³⁴ To provide transport and photorelease of DNA, Rotello developed a photolabile nanoparticle that can be converted from cationic to anionic upon irradiation of light, thus releasing DNA (Fig. 5).³⁵

This monolayer features a photosensitive o-nitrobenzyl ester linker with a quaternary amine headgroups for DNA binding. Near-UV irradiation cleaves the nitrobenzyl linkage, releasing the positively charged alkyl amine leaving behind a negatively charged carboxylate group. Effective release was established in vitro using a T7 RNA polymerase assay. DNA transcription was restored upon light irradiation. Cell culture studies demonstrated effective uptake and release of FITC-labeled DNA after incubation for six hours followed by UV irradiation. More importantly, a high degree of nuclear localization was observed for the released DNA (Fig. 6), one of basic criteria for DNA delivery. Physical properties of nanoparticles can also be used as a tool for drug delivery in living cells. Skirtach et al have demonstrated the release of the encapsulated drug inside a nanoengineered polyelectrolyte-multilayer capsules in a controlled fashion at a remote place.³⁶ Fluorescently labeled polymer was taken as a model for drug molecule and doping of the microcapsules walls with metallic nanoparticles helps to discharge the encapsulated material. Nanoparticles absorb the energy from a laser beam of biologically friendly near-infrared (NIR) region. The absorbed energy causes local heating, and results in disruption of the shells of multilayer-capsules and hence release of the encapsulated material.

Drug Delivery System of Gold Nanoparticles: Site-specific drug delivery can be achieved through





a transmembrane receptor mediated endocytosis pathway. This can be accomplished by conjugating a drug delivery vehicle with a ligand that specifically recognizes the receptor. Transferrin (TF), a protein, can be employed as a ligand since many tumor cells overexpress transferrin receptors on their surface. He et al have reported the enhanced uptake of transferrin-conjugated gold nanoparticles by tumor cells.³⁷ AFM images were taken to visualize the endocytosis process of TF-gold nanoparticles in human nasopharyngeal carcinoma cells. A “bumpy surface” was observed on the cells after incubation with Au-TF nanoparticles for 5 h. The cellular uptake of Au-TF conjugates was confirmed by transferrin competition experiments using confocal scanning laser microscopy. Images were taken after incubating the cells with nanoparticles alone, fluorophore-labeled Au-TF and Au-albumin nanoparticles (Fig. 7). Only cells treated with Au-TF nanoparticles showed considerable fluorescence. Conjugation of folic acid on the surface of drug delivery systems (DDS) provides another strategy for targeted drug delivery since folic acid receptors are upregulated in various tumor cells.³⁸

Recently, Andres and coworkers have successfully demonstrated the specific uptake of folate-conjugated gold nanoparticles by folate receptor-positive tumor cells.³⁹ A polyethylene glycol (PEG) chain was anchored by thiooctic acid and folic acid on opposite ends and the conjugate was grafted onto 10 nm diameter gold nanoparticle to provide a biocompatible DDS. These nanoparticles exhibited excellent stability over a wide range of pH (2.5-11.5) and electrolyte concentration (0-0.25 M NaCl). The possibility of cellular uptake was investigated by TEM imaging of KB cells, which actively express folate receptors on their membrane, and WI-38 cells, as negative control, after incubation with various AuNP constructs for 2.5 h. Significant uptake of folic acid conjugated AuNP was observed into KB cells, whereas negligible cellular uptake was detected in three controls: (1) incubation of KB cells with PEG-linked AuNP lacking folate, (2) exposure of KB cells with folate conjugated AuNP in presence of excess free folic acid, and (3) exposure to cells that do not overexpress folate receptor. To date, a few research groups have studied the interaction of gold nanoparticle in vivo. Paciotti et al investigated the effect of injecting TNF bound to 28 nm gold nanoparticles into tumor-bearing mice.⁴⁰ They found that the particles preferentially accumulated in the tumors. and that the particle-bound TNF was somewhat more effective at diminishing tumor mass than free TNF. The preferential accumulation of particles in tumors is a promising result indicating potential for the therapeutic bound particles. More recent studies by this group⁴¹ have demonstrated -





enhanced efficacy with particles featuring TNF and a thiolated paclitaxel prodrug.

Conclusions: In this chapter, we have reviewed recent advances on the applications of drug delivery by means of gold nanoparticles. Gold nanoparticles have unique chemical and physical properties (e.g., tunable core size, mono-dispersity, low toxicity, large surface to volume ratio, facile fabrication and multi-functionalization) that facilitate their use in drug delivery applications. At the same time, the release of payloads on gold nanoparticles can be controlled by intracellular glutathione or external light. Despite the many advances that have been made, there are still many significant questions awaiting to be answered through systemic study of the delivery process such as cellular uptake, payload release rate and in vivo immune response and toxicity.

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Outline of Judicial Control Over Administrative Proceedings in The Present Indian Context

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Abstract: Administrative law is the body of acceptable constraints and affirmative action produced by the legislature and courts to maintain and perpetuate the rule of law, and it serves an important social function. Any system of government, with the exception of dictatorship, requires a strong, independent, and impartial court. The judiciary in each country plays a critical role in interpreting and applying the law and resolving conflicts between citizens and between citizens and the state. Where a written constitution exists, such as in India, the courts also have the responsibility of ensuring the supremacy of the constitution by interpreting and applying its contents and keeping all powers within its bounds. Judicial review is an essential pillar and a cornerstone of the checks and balances system, with which no democracy worth its name can function. Judicial Review is a part of the state's judicial power. The first section of this paper discusses administrative action in the context of administrative law and judicial review. In addition, the author will discuss the grounds for judicial review as well as the remedies available for judicial review of administrative actions. To conclude, judicial review is critical in providing protection to both the general public and administrative authorities.

Keyword: Pivot of administrative control, Judiciary and Administrative Tribunals Criticism

Introduction: Administrative action is any activity that isn't parliamentary or judicial in nature. It is focused on the treatment of a specific issue and lacks universality. There are no procedural requirements for gathering evidence and considering arguments. It is based on subjective satisfaction, with policy and expediency being the driving factors. It does not decide whether or whether a person has a right, but it can have an impact on that right. However, this does not imply that while the authority is using administrative authorities, natural justice norms can be wholly disregarded. In the case of A.K. Kraipak v. Union of India the Court held that in order to determine whether an -





administrative authority's action is quasi-judicial or administrative, must first look at the nature of the power conferred, the people to whom it is given, the framework within which it is given, and the consequences. Review by the Courts of Administrative action is a component of enforcing constitutional discipline on administrative agencies as they exercise their authority. It originated in England and has since spread to other common law countries.

The concept of judicial review was also brought to India by England. India's structure was based on the English prerogative with a pattern provided by the Court of King's Bench in order to conduct general supervision over officials/authorities performing judicial or non judicial responsibilities in accordance with the law. Despite the fact that administrative action is discretionary and based on subjective satisfaction, the administrative authority must operate in a fair, impartial, and reasonable manner. The courts pull out the golden thread of reason and meaning in a law during the judicial review process; they shape and bend the law, disclose its fitness and nuances, smooth the angularities, and strike down the bad law.

ADMINISTRATIVE PROCEEDINGS: In India, administrative law was viewed as a separate body of law in the mid-twentieth century. The state's tasks were few and limited until well into the nineteenth century, consisting of maintaining public order, conducting foreign affairs, and determining the disposition of the armed forces. Nowadays, things are very different. The state intervenes heavily in the lives of its citizens in order to safeguard the public and maintain law and order. Administrative actions are those that are carried out in accordance with administrative legislation. A legal action involving the conduct of a public administrative body is known as an administrative action. This type of action might compel an authority to act in a specific way. It does not decide a right, but it may have an impact on one. When utilising "administrative authorities," natural justice norms must be respected. The term "administrative action" refers to the ability to take action while being administratively inconspicuous. It denotes the ability to do a task or make a discretionary decision. The administrative authority with discretion is given an option, and is thus free to act as it sees fit. **ROLE OF JUDICIAL REVIEW** Judicial review has been regarded as a vital and fundamental prerequisite for the development of a mature civilization in order to protect citizens' liberty and rights. In India, the High Courts and the Supreme Court have a large amount of judicial review power. The ability of the court to review the activities of other levels of government, -





particularly the power to declare illegitimate actions taken by the legislative and executive branches as 'unconstitutional,' is known as judicial review. Judicial review refers to the examination of administrative activities by courts in order to ensure their legality. Administrative authorities are granted powers by statutes, which must be exercised within the parameters set forth in the statutes. Judicial Review is the ability of courts to rule on the constitutionality of government legislative and executive acts that fall within their jurisdiction. When the Indian Legislature, Executive, and Judiciary have hurt fundamental ideals and denied Indian citizens rights guaranteed by the Indian Constitution. In India, the courts have a broad range of judicial review powers under statutory and constitutional laws. It is important to note that judicial review is governed by both constitutional and legislative restrictions. These powers must be exercised by the courts with restraint and discretion. It is not expected of the courts to step outside the bounds of their authorised judicial assessment influences. In the form of Article 13, the Indian constitution expressly allows for judicial review. Under Article 32 and 226 of the Indian Constitution, the Supreme Court at the national level and the High Courts at the state level, respectively, have the power to examine administrative decisions through different writs such as habeas corpus, mandamus, certiorari, prohibition, and quo warranto. The writs that we follow in India were borrowed from England, where they have a lengthy history of development, and they have accumulated a number of technicalities as a result.

ADMINISTRATIVE ACTION REVIEWED BY HIGHER JUDICIARY: Administrative law is, in a sense, centred on judicial scrutiny of administration. It is, without a doubt, the most appropriate means of determining a public authority's legal competence. The competence of a public authority, the scope of a public authority's legal powers, the adequacy and fairness of the procedure, the evidence considered in arriving at the administrative decision and the motives underlying it, and the nature and scope of the discretionary power are all aspects of an official decision or an administrative act that may be scrutinised by the judicial process. Administrative activity is subject to judicial oversight, which provides important safeguards against abuse of power. The founders of the Constitution made earnest attempts to include specific articles in the Constitution to enable the courts to exercise effective oversight over administrative activity, because our Constitution was established on the solid foundations of rule of law. Pure administrative action encompasses both statutory and non statutory activities that can be submitted to judicial review in a variety of ways, with the most -





appropriate remedy being the issuance of a writ. The Supreme Court of India held in *State of Bihar v. Subhash Singh* that judicial review of administrative activities under Articles 32 and 226 of the Indian Constitution is lawful, and that judicial review of administrative actions is an important aspect of the rule of law. The Supreme Court stated in *Federation of Railway Officers Association & others v. Union of India* that where a policy is inconsistent with the Indian Constitution and the law is arbitrary or irrational or leads to abuse of power, the court will intervene because judicial review of administrative actions is an important part of the rule of law. The court declared in the case of **Union of India v. S.S. Ahluwalia** that when penalties are imposed on the basis of disciplinary proceedings, the court can only intervene if the punishment granted for the offences accused is insufficient.

THE BASIS FOR A GLOBAL JUDICIAL REVIEW: The doctrine-ultra-vires is the administrative law's fundamental structure. It is regarded as the cornerstone of judicial review to ensure that the administration's actions are under control. The term "ultravires" refers to an action that is carried out in an extreme manner or outside of the limits of the performing party. In the case of **Council of Civil Service Union v. Minister of Civil Service**, Lord Diplock of England provided the grounds for judicial review. Though not exhaustive, these grounds for judicial review provide a solid foundation on which the courts might use their authority. In India, there are five general grounds for judicial review, which are as follows;

- Error of Jurisdiction,
- Irrationality,
- Improper Procedural Practices,
- Proportionality,
- Expectations that are reasonable.

Error of Jurisdiction- The phrase 'jurisdiction' refers to the ability to make decisions. A 'lack of jurisdiction,' 'excess of jurisdiction,' or 'abuse of jurisdiction' may exist. In all three of these cases, the court has the authority to dismiss an administrative action as being *supra vires*. A situation of 'lack of jurisdiction' occurs when a tribunal or authority lacks the authority or jurisdiction to make a decision. The court has the authority to review this administrative action if the authority exercised jurisdiction that it was not authorised to. Excess of jurisdiction refers to a circumstance in which an authority possessed jurisdiction over a matter at the outset but afterwards overstepped its bounds, causing its -





actions to be illegal. All administrative functions must be legitimately and equitably exercised. If indeed the powers are misused, there will be grounds for judicial review.

Irrationality- The discretionary power granted on an administrative authority should be exercised reasonably, according to a broad accepted norm. A judgement by an administrative authority might be deemed irrational if it defies logic or common moral norms in such a way that no reasonable person applying his intellect to the issue could have come to the same conclusion. In the Associated Provincial Picture House v. Wednesbury case, which eventually became known as the 'Wednesbury test,' 'irrationality' was devised as a ground for judicial review. In order to conclude the right to interfere, the court set three conditions. i. The defendant considered factors that should not have been considered, ii. The defendant omitted to examine elements that should have been considered, iii. The decision was so irrational that no reasonable authority would consider imposing it. The court determined that it could not intervene to overturn the defendant's judgement just because it disagreed with it.

Improper Procedural Practices- It is a failing to comply the established processes. Procedural Impropriety encompasses two areas: failure to follow statute-mandated regulations and failure to follow the basic common-law rule of justice. Ridge v Baldwin is a one-of-a-kind case in which procedural fairness demonstrates its demand on judicial review, regardless of the sort of body deciding the case. Ridge, the Brighton Chief Constable, was suspended on allegations of obstructing the course of justice. Despite the fact that the claims against Ridge were dismissed, the Judge chastised Ridge's behaviour. Ridge was then fired from the police department, but he was not invited to the meeting that concluded his removal. He was later given the opportunity to speak with the committee that had declined his appeal. Ridge then went to the House of Lords, claiming that the committee had broken all of the natural justice rules. This case is significant because it emphasises the connection between a person's right to speak and his ability to access the facts of the case against him. Proportionality: Proportionality refers to the fact that the administrative action in question should not be more forceful than is necessary. According to the principle of proportionality, the court must consider the benefits and drawbacks of the activity in question. Such actions cannot be supported unless they are beneficial and in the public interest. The goal of this concept is to strike a balance between methods and aims.





Expectations that are reasonable- When a public entity rescinds from a representation given to a person, this doctrine provides as a cause for judicial review to preserve the interest. A legitimate expectation emerges in the mind of the complainant who has been persuaded to believe that specific procedures will be followed in obtaining a decision, either explicitly or implicitly. The expectation is grounded in reality. This theory has developed to provide remedy to people who have been mistreated as a result of a breach of their legitimate expectation and have been unable to prove their claims in court.

LIABILITY FOR UNLAWFUL ADMINISTRATIVE PROCEEDINGS: Administrative agencies in modern democratic countries like India have extensive discretionary powers. In the lack of explicit norms, etc., the exercise of those powers frequently becomes subjective. As a result, maintaining control over discretionary powers is critical to ensuring that the "rule of law" prevails in all government decisions. :There is no concept more fundamental to our system of law than the preservation of the rule of law itself and the constitutional protection offered byjudicialreview,"Lord Dyson stated. Articles 32 and 226 of India's constitution provide for the enforcement of fundamental rights as well as judicial review of administrative actionthrough the use of writs. Articles 32 and 226 of the Indian Constitution empower the Supreme Court and High Courts to grant prerogative writs such as habeas corpus, mandamus, prohibition, certiorari, and quo warranto to preserve basic rights guaranteed in Part 3rd of the Constitution. For judicial review of administrative actions, there are five sorts of writs available...

Habeas Corpus, Mandamus, Prohibition, Certiorari and Quo warranto.

CONCLUSION: The concept of judicial review in India is fairly broad. However, the administration is afforded certain precautions in terms of confidentiality. However, the enormous power provided to administrative bodies, as well as the concept of delegated legislation, make the argument of judicial review veryvalid and crucial. The scope of judicial review is similarly fundamental to the American context; in fact, judicial review is crucial to the American constitution. In our country, judicial review has been updated through various case law, but one principle stands out for the Finality Clause: our constitution vests powers in the President, and in the event of a conflict, the President's decision is considered final. As a result, judicial review is critical in order to protect both the general public and





administrative officials. Administrative law is, in a sense, centred on judicial examination of administrative actions. It's a great approach to find out if a government agency has legal jurisdiction. The fundamental aspect of our Constitution is judicial scrutiny. Judicial review has become an important topic of administrative law since administrative agencies' powers have grown dramatically. The primary goal of judicial review is to defend people's interests from administrative authorities' abuse of power or illegal activities. The founders of the Constitution made earnest attempts to include specific articles in the Constitution to enable the courts to exercise effective oversight over administrative activity, because our Constitution was established on the solid foundations of rule of law. Pure administrative action encompasses both statutory and non-statutory activities that can be submitted to judicial review in a variety of ways, with the most appropriate remedy being an appropriate writ issued under Articles 32 and 226 of the Indian Constitution.

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Overview of Indian Women's Rights in Global, National and International Forum

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Abstract: Human rights are the fundamental rights that every individual must have since he or she is a part of the human family. India's constitution also ensures that men and women have equal rights. However, there is a significant gap between theory and practise in India when it comes to women's human rights. Males are always thought to be superior to society in Indian civilization, which is ruled by men. Women in India are frequently subjected to discrimination, injustice, and disgrace. Despite the fact that women in India have more rights than males, their living conditions are nonetheless deplorable. By concentrating on the many crimes committed against women in India, the paper will shed light on their human rights and how all of their fundamental rights are being violated in India.

Keyword: Article 14-15, Rights of women, Women in India.

Introduction: Equal rights for men and women are guaranteed by India's constitution. "The State must not refuse to any individual within the territory of India equality before the law or equal protection of the laws," says article 14. Article 15 reads, "The State must not discriminate against any citizen solely on the basis of religion, race, caste, sex, place of birth, or any combination of these factors." However, it appears that currently there is a significant gap between theory and practise. In India, women have long been seen as second-class citizens to males. Despite the fact that the constitution stipulates equality and non-discrimination on the basis of gender, women in Indian culture are constantly discriminated against and dishonoured. The constitution of India has conceded equivalent freedoms to the people. Agreeing to article 14-"The State will not deny to any individual equity under the watchful eye of regulation or the equivalent assurance of regulations inside the region of India". Furthermore, Article 15 states - „State will not victimize any resident on grounds just of religion, race, standing, sex, spot of birth or any of them,. Be that as it may, today, it appears





that there is a wide bay among hypothesis and practice. The women in India have continuously been viewed as subordinate to men. However the articles contained in the constitution commands fairness and non - segregation on the grounds of sex, ladies is generally separated and disrespected in Indian culture. Albeit different endeavors have been taken to work on the situation with ladies in India, the sacred dream of orientation equity is miles from turning into a reality. However, Human Rights are the base privileges which are obligatorily realistic by each person as he/she is an individual from human culture. However, it has been observed that every single right of the ladies is being disregarded in some manner. The violations against women in India are expanding at an extremely high speed. The National Crime Records Bureau (NCRB) had anticipated that development pace of wrongdoing against ladies would be higher than the populace development by 2018, which was viewed as obvious. The table beneath addresses a rundown of top 5 most perilous urban areas in India with regards to wrongdoings against women.

RANK	NAME OF THE CITY	PERCENTAGE OF CRIMES AGAINST WOMEN IN INDIAN CITIES
1ST	DELHI	16
2nd	HYDERABAD	8.1
3rd	BANGALORE	6.5
4th	AHMADABAD	6.4
5th	MUMBAI	5.8

Source: crimes in India – 2018, NCRB, Ministry of Home Affairs

There is a need to talk about the privileges of the ladies independently as ladies addresses the greater part the number of inhabitants in India, yet she is segregated and abused in each circle of her life. Just ladies are a prey to wrongdoings, for example, assault, share, lady of the hour consuming, lewd behavior, selling and importation, prostitution and dealing and so on. the men as a casualty to this multitude of wrongdoings? The response is "NO". This year there has been 20% expansion in ladies dealing, obtainment of minor young ladies represented 19.8%, importation of young ladies represented 4.9% and purchasing of young ladies for prostitution represented 2.3% approx.





Then the way that these Human Rights are useful to ladies? However government is finding a way various ways to work on the state of ladies in India, yet there is far to go. The paper will concentrate on the different common freedoms of ladies in India and how they are being abused. Albeit exceptional privileges are being given to lady when contrasted with men, yet they are least useful to them.

WOMEN HUMAN RIGHTS IN INDIA:

1. Right to equality
2. Right to education
3. Right to live with dignity
4. Right to liberty
5. Right to politics
6. Right to property
7. Right to equal opportunity for employment
8. Right to free choice of profession
9. Right to livelihood
10. Right to work in equitable condition
11. Right to get equal wages for equal work

Violence on Women's Rights: It has been more than once said nowadays that ladies in India are partaking in the privileges equivalent to men. In any case, in all actuality, the ladies in India have been the victims from past. In prior times as well as, have ladies needed to confront segregation, unfairness and disrespect. Allow us now to talk about the wrongdoings done against the ladies notwithstanding being given privileges equivalent to men. These focuses will make sense of that proceeds with infringement of basic liberties of ladies in India.

The earlier times when there was discrimination against women:

- Devadasis - was a strict practice in certain pieces of southern India, where ladies were hitched -





to a divinity or sanctuary. In the later period, the ill-conceived sexual abuse of the devadasi's turned into a standard in some piece of the country.

- Jauhar alludes to practice of the intentional immolation of all spouses and girls of crushed heroes to stay away from catch and resulting attack by the foe. The training was trailed by the spouses of Rajput rulers, who are known to put a high premium on honor.
- Purdah is a training among certain networks of expecting ladies to cover their bodies to cover their skin and disguise their structure. It shortens their entitlement to connect uninhibitedly and it is an image of the subjection of ladies.
- Sati is an old custom in Indian culture where widows were immolated alive on her better half's memorial service fire. Albeit the demonstration should be intentional on the widow's part, having been some of the time constrained on the widow is accepted.

At present, there has been a change in the way of discrimination against women: At present, with the change in technology, the discrimination against women has also changed. For example eye teasing. Victimization the young lady youngster begins the second she goes into the mother's belly. The youngster is presented to distinctions in sexual orientation since birth and lately even before birth, as sex - assurance tests prompting feticide and female child murder. The home, which should be the most reliable spot, is in the same place as ladies mort presented to viciousness. On the off chance that a young lady kid opens her eyes in any capacity, she is killed after her introduction to the world by various horrible techniques in certain pieces of the country. Consequently the vital „right to life“ is denied to ladies. In India, men are generally thought to be better than ladies and are given more inclination. The „World Human Rights Conference in Vienna“ initially perceived orientation - based viciousness as a common freedoms infringement in 1993. The equivalent was announced by „United Nations Declaration „in 1993.

Violence in right to education: Training is considered as method for improvement of character and mindfulness. Schooling is quite possibly the main basic freedom however the place of ladies' schooling in India is not in any manner agreeable. Youngsters might be purchased up to accept that they are fit distinctly to specific callings or sometimes to act as spouses and moms.





In spite of in the improvement in the proficiency rate after freedom, there keeps on being enormous hole between the education levels of people. Close to a large portion of the ladies populaces are even unfit to perceive language characters. No less than 60 million young ladies need admittance to essential schooling in India. Because of huge level of uninformed ladies in India, they are not even mindful of their fundamental basic liberties and can never battle for them.

Violence in the Political Right: The political status of ladies in India is extremely inadmissible, especially their portrayal in higher political organizations - Parliament and common Legislation which is of extraordinary under - portrayal which hampers their successful job in affecting the public authority drives and strategies with respect to ladies' government assistance and advancement. Their portrayal has been not able to Reach even 10% in Lok Sabha. Along these lines obviously:

- There is male control in Indian governmental issues and practically every one of the gatherings' give next to no help to ladies in political decision notwithstanding their vocal help for 33% reservation of seats for ladies in Parliament and Provincial Legislation.
- Indian Women have made drives in political investment however they have not been acknowledged in governmental issues.

Property rights violence: In the vast majority of the Indian families, ladies don't possess property in their own names and don't get portion of parental property. Because of powerless requirement of regulations safeguarding them, ladies keep on having little admittance to land and property. Truth be told, a portion of the regulations victimize ladies, with regards to land and property privileges. However women have been given freedoms to legacy, yet the children had an autonomous offer in the tribal property, while the girl's portions depended on the offer got by the dad. Thus, father could whenever exclude little girl by denying his portion yet the child will keep on having an offer by his own doing. The wedded girls confronting badgering have no privileges in genealogical home.

As per the World Bank report, hunger is the significant reason for female fruitlessness. The presence of inordinate hunger among female youngsters when contrasted with male kids is fundamentally because of contrasts in the intra - family distribution of food between the male and female kids. Typically, the male individuals are taken care of before the female individuals from the family.





As per Human Development Report, in rustic Punjab, 21% of young ladies in low pay families experience the ill effects of serious hunger as contrasted and 3 % of young men in a similar family. Indeed, even the low pay young men are far superior than upper pay young ladies. Young lady children are less bosom - took care of than kid infants. 60% of young lady children are brought into the world with low birth weight. At times because of monetary misery and normal catastrophes like floods, dry spells or tremors, the oppression the female youngster increments. Also it has been affirmed by different investigations that the young lady's eating routine is substandard compared to the kid's eating regimen both in quality and amount. Young men are given more nutritive food varieties like milk, eggs, margarine, ghee, natural products, and vegetables when contrasted with young women.

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