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GEOHYDROLOGICAL IMPLICATIONS OF FLOOD WATER MANAGEMENT IN SAHIBI RIVER BASIN IN SOUTH HARYANA

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ABSTRACT

Sahibi river emerges on the slopes of Aravalli hills in Rajasthan and forms an inland drainage basin covering sandy surface in south Haryana. When in spate during monsoonal period, its water traverses downstream of Masani in Haryana in the form of sheet-flow causing widespread damages in the lower catchment. The stream has frequently recorded moderate to high magnitude of floods through historic times as well as in the recent past. Various measures of flood control are adopted in the study basin which include among others a large number of check dams in the upper reaches. The man-engineered hydrologic cycle has seriously affected the flood behaviour and ground water hydrology of the river basin. Therefore, a rational and alternate plan of flood water management is required which could better suit to the peculiar physico-cultural setting of the region.

Key Words: Drainage Basin, Flood Behaviour, Natural Hazard, Flood Mitigation, Hydrologic Processes.

Floods occur in a variety of hydro-fluvial environments. High intensity and infrequent rainstorms in arid regions and pronounced soil moisture storage in humid areas are significant factors effecting water yield from catchments. Once the runoff has started, its pattern is controlled largely by the terrain characteristics of the drainage basin. High energy stream flow may at times spill over the channel margins and lead to the development of a flood plain. More people are affected by floods than by any other natural hazard, not least because human settlement has always been attracted to riverbanks and flood plains (Dodson, 1996). And , thus, arises the need to formulate short and long term action plans to get out of the pathetic cycle of flood disaster The present study deals with the case of Sahibi Floods in Haryana. Besides analysing the nature and damaging effects of floods in the study basin, it also reviews the validity of adopted flood control methods in modern context.

BASIN CHARACTERISTICS

Sahibi belongs to a category of inland ephemeral streams which emerge in semi-arid hot desertic environments. It rises in Aravalli hills of Rajasthan and loses its water to deep sandy formation of south Haryana. Inbetween, several torrents tribute to the main channel from either side. In Haryana, the Sahibi passes through a defined channel for a length of about 20 km, whereafter the channel begins to flatten out till it completely disappears (Fig.1). The basin in Haryana covers nearly 3750 sq. km in area.

The study area may be classified into three major morph-structural types as (i) Aravalli hills, (2) Sand- dune tract, and (3) Recent flood plain. The northern section of the Aravalli Range, in

which Sahibi flows in a northerly direction, stretches from the low ridges of Delhi to the isolated hills of Alwar and Jaipur.

The fluvial courses in the upper catchment are aligned to the synclinal structure of almost parallel and contiguous Aravalli ridges of 500-600 m general height. The sand- dune tract consisting of 3-6 m high dunes of varying nature spreads over the largest area of Rewari district of Haryana and slopes from west to east in the lower part. The major agency shaping the morphology of the lowest segment of the basin is fluvial, depositing assorted sediments from coarse to fine in successive flow regimes.

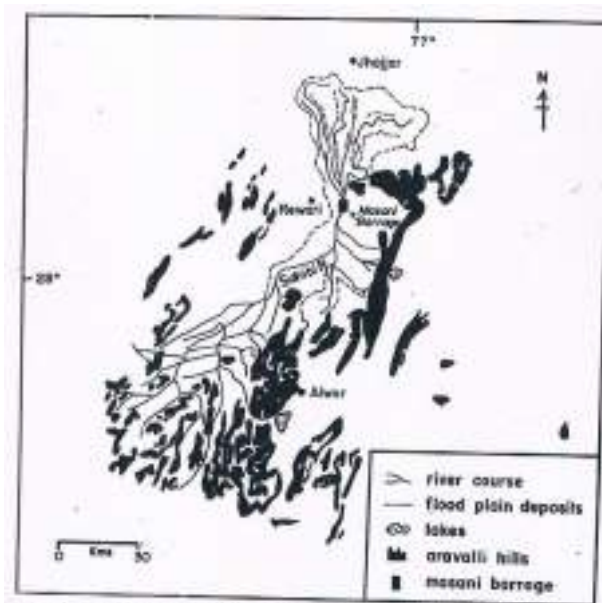


Figure 1. Sahibi River drainage system.

METHOD OF STUDY

The paper consists of three parts. Part one discusses the factors of flooding, its distributional pattern over space and time, and nature of flood hazards in the study basin. Part two describes the methods applied to control floods in the problem basin. Part three analyses the actual mechanisms by which the flood control has worked to effect surface and subsurface hydrologic change in the Sahibi basin.

The data used in this study are derived from various sources. The District and States Gazetteer of undivided Punjab (Prior to Independence), Vol. IV, reprinted in India (1985) provides valuable qualitative data on historic floods in Sahibi during 1845 across to 1909. Information on the flood flow conditions in recent times is based on the streamflow data reported for Sahibi at the site of Masani barrage near Rewari in Haryana. The flow record constitutes daily discharge series and confines to the monsoonal months of July through to October, as in rest parts of the year the stream remains largely dry. The above data are however available for the period between 1965 and 1984. The streamflow pattern for later period is developed from the available discontinued discharge series and personal communication with the barrage

engineers at Masani. The data on water table fluctuation and quality are procured from the Haryana State Irrigation and Tubewell Corporation (HSMITC) and, the Centre of Soil and Water Management at Haryana Agricultural University, Hisar. The Survey of India maps on 1:50000 scale are used to decipher the topographic characteristics of the drainage basin. The Sahibi river recent flood plain, its catchment area and river course are interpreted from the IRS-I A LISS-II (FCC) Film positives of 28th July, 1993, available on 1:50000 scale. Access to the above data is provided by the Haryana State Remote Sensing Applications Centre (HARSAC), Hisar.

VULNERABILITY TO FLOODING

Sahibi river provides fragile geo-hydrologic environment especially in its lower catchment. Because of the heavy floods and discharges, the flood prone river and its tributaries bring down large volumes of sediments which causes the aggravation of river beds and bring changes in the river courses. The flow regime and sediment yield in such an environment are largely controlled by the climatic, geologic and topographic characteristics of the drainage basin. Flow in the stream is largely confined to the summer monsoon season, as there is no permanent headwater in the catchment. The basin receives 546 mm normal annual rainfall. Some rains characterised by great intensity and long duration result to high energy surface flow conditions. By the shear force of its quantity, this rainwater erodes and transports large amount of silt and sand, corresponding to the extent of slope, towards the valley, generating a torrential stream with heavy sediment load. Downstream of Masani in Haryana, the flood water traverses downslopes in the form of sheet-flow. Its termination into an aerial delta near Jhajjar leaves behind a vast flood plain with active and abandoned channels, levees, and point-bar complexes. The divergent flow developing over the bars not only flattens the surface, but also restricts its downchannel extension. The flood flow of exceptionally high magnitude only manages to find its way to River Yamuna through the areas in Delhi State.

The process-response system of the Sahibi basin very nearly conforms to that observed by Parsons and Abrahams (1994) for more or less similar environmental conditions. As described by them, rainfall is meager and of high variability in deserts. And, the occurrence of high intensity short duration downpours produce short period peak floods which modify the channel geometry and rapidly change the channel courses.

As discussed above, floods in the Sahibi largely depend on intensity and duration of rainfall in the region. The other factors of importance are like exposure and inclination of ground, erosion resistance of rocks and rock material, form of drainage basin, and dimension of rain area. The upper part of the basin is rich in minerals such as barytes, building stones and copper. The intensive mining activity on hill slopes in the recent past has further exposed the poorly wooded lands to storm water for an uninterrupted run-off. Besides, the activities such as deforestation, pastoral grazing and farm practices also marginally contribute to flooding in the basin. The occurrence of massive quartzite as bed-rock close to the surface markedly lowers the ground loss and considerably increases the magnitude of stream flow. The geometric characteristics of the study basin find a significant orientation on the rate of surface runoff. The elongated intermontane gaps in the region provide paths of lesser resistance to the landflow resulting to instantaneous peak-flows in the lower parts of the catchment. Spatial variations in the rainfall also significantly contribute in determining the pattern of surface runoff.

Sahibi is notorious and sorrow for the people when it is in spate. Inundating vast tracts of land, it causes damage to crops and property and brings in misery to the community including epidemics and loss of life. Some of the episodic flood events experienced by the Sahibi basin during the past times as well as in the recent years are discussed herewith.

THE FLOODS

Table 1 provides informations on the historic floods in the Sahibi between 1845 and 1909. These informations are based on manual observations and relate to the nature of floods, the areas victimised, damaging effects, and also about some geomorphological changes expressed on the flood plain.

Table 1. Historic floods in the Sahibi (1845- 1909).

Sr. No.	Year	Description
1	1845	After heavy rain in Jaipur, Sahibi came down with great force, and flooded the town of Rewari. On this occasion, the old channel was silted- up in the Alwar area, and the flood created a new channel.
2	1883	Rewari was again flooded with 1 m deep sheet of water in the town. The flood water cleared northward causing considerable damage within and outside the town which include the sweeping of a large portion of the railway line.
3	1885	A peak discharge in the Sahibi caused extensive deposition of sand, particularly near the railway embankments where it was impeded.
4	1887	This flood was as detrimental to the area of Rewari as was the case in 1885 flood.
5	1888	The flood was said to have created several impediment flood channels through which the water continued to flow for 4-5 days. Therefore, 1888 flood might have been a serious event
6	1908 & 1909	In 1908 and 1909, high magnitude floods recurred after a lapse of about 20 years. They filled the depressions and slowly flooded the area over a period of a few days. However, the flood waters took nearly three weeks to drain off.

Flooding in the Sahibi continued to be as frequent as reported in the past. But, over a period of time the basin experienced certain changes in the flood behaviour. These changes relate to the magnitude of flood water and the extent of flood areas. Such changes are both nature and human induced. In the recent decades however, the marginal arid environment of the study basin has undergone micro-climatic transformation towards humidification partly due to increasing irrigational facilities in the region and methods adopted to check aridity on the frontiers. Such a change led to substantial increase in the basin yield over the period. On other hand, modification in cultural landscape by the construction of roads, railways, canals, etc. over the past few years has further worsened the situation by affecting the lines of gravity flow on the surface.

Floods in the past have largely been restricted to Rewari town and its environs. But recent floods of higher magnitude tend to affect vast areas covering the Rewari, Gurgoan, Jhajjar,

and Rohtak districts of Haryana. This is because of the divergent movement of high energy flood water towards the central low lands of the state. Fig. 2 shows the areas of frequent flooding, besides the location of flood control works. The above referred flood situations have reportedly arisen in the years 1957, 1964, 1967, 1977, 1978 and 1996, causing severe damages in the catchment area. Among these, the 1977- flood is termed as the most devastating in the known history of Sahibi floods in Haryana.

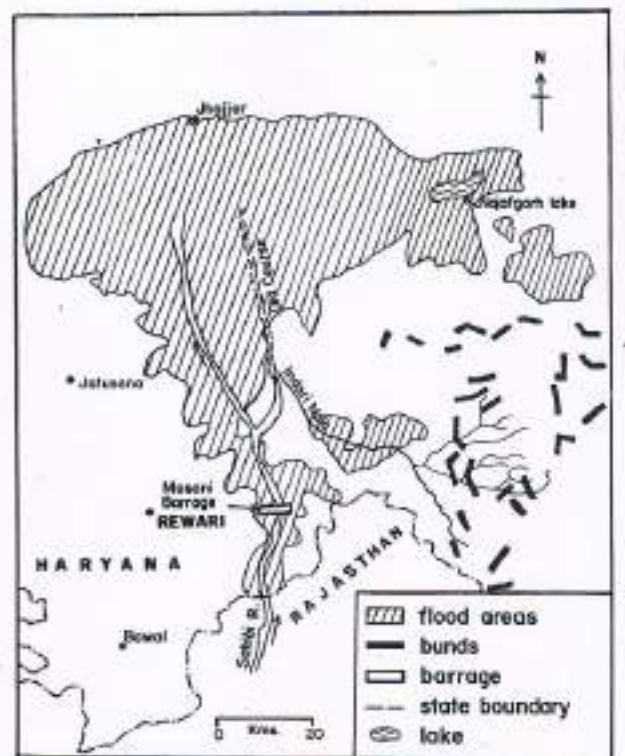


Figure 2. Flood prone areas and location of flood control works in lower Sahibi basin.

In the year 1977, moisture conditions in the catchment have been most favourable to produce substantial water yield. Besides some scattered rains at the beginning of the monsoon season, the area experienced two intensive storms in close succession between 28 July and 6 August amounting to 315 mm rainfall. The initial storm covered the entire catchment, while the latter confined to the lower parts of the catchment. The successive storm provided an effective mechanism for generating incremental overland flow in the lower catchment as the local demands of surface retention and storage have already been met by the antecedent precipitation and surface runoff. The accumulated volume of flow from the two storms inundated large areas in the states of Haryana and Delhi. During this flood, the maximum peak flow at Masani was reportedly observed 3028 m³ sec⁻¹. A vast sheet of water covered the areas for more than a month's period. A large number of villages in Haryana including some

towns like Farukh Nagar, Jhajjar and Bahadurgarh remained cut-off for days together. All important roads and railway lines have been breached and submerged. The extent of damage to standing crops, property, and livestock has been Rs. 9.75 crore, according to one estimate (Anonymous, 1982).

FLOOD MITIGATION MEASURES

Numerous measures of flood mitigation are adopted in the Sahibi basin with a view to lessen the damaging effects of floods on the biotic and abiotic elements of the system. Such measures are both offensive and defensive in nature. The former includes mechanisms by which the natural flow within the channel is arrested for varying lengths of time, such as by raising bunds and barrage across the river course. The latter type measures are to protect human settlements and other areas of interest by constructing ring bunds and diversion drains. Fig. 2 gives the geographical location of some of the above flood control works.

A large number of earthen embankments, locally called as bunds, are established to control the flood water in the Indori and other tributaries of the Sahibi. There are also traces of old masonry embankments in the region commonly known as 'Badshahi bunds'. In addition to the above, hundreds of ringbunds are also constructed on the outskirts of the settlements in order to raise the flood stage. Such bunds prove useful in moderate flood conditions, but are damaged partly or wholly by floods of high or very high magnitude like that experienced in the year 1977. Nevertheless, bunds are the most popular works of flood control in the study basin. After experiencing more than a century's worst flood in 1977, a barrage has been constructed across the Sahibi near village Masani in Rewari district. The objective behind the construction of barrage has been to store river water during the monsoon period and use it for irrigating areas of Pataudi block through the Jawahar Lal Nehru Canal system, and release the water downstream in case of high flood condition in the upper catchment.

As is also stated above, the high magnitude flood water spreads over the vast low lands in the lower reaches, and stands there for a long time causing widespread damages. Therefore, techniques are adopted to channelise this sheet of water, and drain it out through well defined water courses. In the region, two man-made channels viz. Drain No. 8 and Najafgarh Drain are used to divert the flood water towards the Yamuna River.

CURRENT CONCERNS

Human interferences into the natural hydrologic processes of the Sahibi basin over the past few years have not only altered the symbiotic relationship between man and its environs but also seriously affected the frequency and magnitude of hydrologic incidents. Tuan (1971) explains such a stress-related response in terms of the man structured world which deforms the medium of exchange between the energy and materials in an otherwise simple natural system. In the post 1977 flood period however, the channel course has been heavily engineered by erecting large number of check-dams and barrages in the upper catchment. Such engineering works considerably disturbed the long-established equilibrium between the interrelated geohydrologic variables. This destabilization of the basin set up is best expressed through the stream flow behavior and groundwater hydrology in the lower catchment.

The above described flood control works seem to be proving effective as the area experienced no disastrous flood between 1979 and 1995. But the absence of considerable amount of discharge in the river channel since long has resulted to Aeolian deposition and shrub-growth

in the river course of lower reaches. Water is no more a significant agent of gradation in this environment. The processes referred to above caused change in the stream flow behavior by reducing the capacity of drainage channels to carry the peak flows. Flooding in the changed geomorphic environment may be highlighted through the flood occurred in the year 1996. Due to unusual monsoonal rains in aforesaid year, the check dams constructed across the river course in the upper catchment failed to store the entire flow, thus released its large volume downstream. This released flow inundated vast areas with extensive damaging effects on the modified cultural landscape of south Haryana.

Sahibi floods in Haryana are blessing in disguise as these recharge the area with good quality water over the brackish groundwater (Duggal, 1977). But, due to non replenishment of subsurface water in the past two decades, the area provides signals of impending drought conditions. Table 2 gives the values of area falling under various water table fluctuation ranges during the period extending between June 1974 and June 1991. Nearly 70 percent of the area in

Table:- Area under various Water Table Fluctuation Ranges (1974-91)

Range in Water						
Mode of Function	0-1	1-2	2-3	3-4	4	Total
Rise, % area	6.67 (252)	5.33 (200)	8.00 (300)	2.67 (100)	8.00 (300)	30.67 (1152)
Fall % area	40.0 (1500)	18.7 (700)	10.6 (398)			69.3 (2598)
					Total	100.00 (3750)

Note: Figures in brackets indicate area in sq. km.

Lower reaches experienced decline in water table ranging from less than 1 m to more than 2 m and in rest of the 30 per cent area there is however rise in water table between 1 and 4 m. The increasing depth and decreasing quality of ground water over the years has affected the agricultural practices in the lower part of the Sahibi basin.

CONCLUSION AND RECOMMENDATIONS

The floods of moderate and high magnitude have frequently occurred in the history of Sahibi river drainage basin. The flood problem in this fragile semi-arid environment has been addressed to by adopting measures of flood mitigation seem to have proved effective to a considerable extent, but simultaneously they caused serious negative effects on the stream flow behavior and groundwater characteristics in the lower catchment.

In the light of the above facts, it is now required to switch over from traditional approach to the holistic one to meet out the flood hazards in the basin. The holistic approach envisages the basin in entirety for the purpose of planning, while the former is problem specific. In this context, the man made reservoirs established across the river courses should primarily be used as flow regulatory mechanisms allowing substantial amount of water to flow downstream well distributed on a time scale. As the river basin is shared by the states of Rajasthan and Haryana, an intergovernmental understanding is to be arrived at for evolving strategies of adjustment and prevention in which the ecological framework conditions are considered to be secured for sustainable development of the watershed.

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REVIEW OF THE BAIL SYSTEM IN OUR PRESENT ECONOMIC CONDITION

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ABSTRACT

The concept of 'Bail' emerges from the conflict between the 'police power' to restrict the liberty of a man who is alleged to have committed a crime and the presumption of innocence in favour of the alleged criminal by law of land. The state in its anxiety to protect its subject from the onslaughts of criminals has invested the police with power of arrest and of approaching the criminal courts with a prayer for keeping the accused in custody. But it would be not only improper but also unjust to keep an accused person under arrest with the object of punishing him on the assumption that he is guilty if he be eventually acquitted on trial.

Key Words: Bail, Economic Condition, Criminal.

The law of bails is not a static law but is growing all the time molding itself with the exigencies of time. Thus, in times of war and crisis it leans in favour of the society and the Government and in times of peace and tranquility it leans in favour of the individual and the subject. The modern concept in keeping person under trial in detention is to prevent repletion of the offender with which he is charged or perpetrating some other offence and to secure his attendance at the trial. However noble the concept may be it has to be, achieved within the framework of a man's right to liberty, which is the cherished right that he enjoys along with other rights collectively known as his freedom. This leads us to the consideration of fundamental rights which are based on concepts of freedom, justice and fair play.

Bail is the process of release under the guarantee that a person arrested on a criminal charge will appear for trial or examination when duly required, if he is temporarily released. The guarantee may take the form of an undertaking of a personal surety that he will produce the accused or forfeit a jurisdiction, take the form of deposit of money to be returned on the appearance of the bailed person. Thus, 'bail' literally means sum of money demanded by a law court, paid by or for a person accused of wrong doing, as security that he will appear for his trial, until which time he is allowed to go free.

Bail is broadly used to refer to the release of a person charged with an offence, on his providing a security that will ensure his presence before the court or any other authority whenever required. Objectively analyzed the criminal jurisprudence adopted by India is a mere reflection of the Victorian legacy left behind by the Britishers. The passage of time has only seen a few amendments once in a while to satisfy pressure groups and vote banks.

It must be recognized that bail is not meant as a punishment. It is meant to secure the appearance of the accused. When you are arrested, you are taken into custody. This means that you are not free to leave the scene. Without being arrested, you can be detained, however, or held for questioning for a short time if a police officer or other person believes you may be involved in a crime. For example, an officer may detain you if you are carrying a large box

near a burglary site. You can also be detained by storekeepers if they suspect that you have stolen something.

JUDICIAL TRENDS

As far as granting of bail is concerned the broad guidelines laid down in the Cr.P.C, but the courts have evolved certain standards. For the purpose of cancellation of bail the courts have also evolved certain guidelines. These are generally found in judgments of various High Courts and Supreme Court.

1. It was observed by **Krishna Iyer, J.**, in *Gudikanti Narasimhulu v. Public Prosecutor*,
The issue of bail is one of liberty, justice, public safety and burden of the public treasury, all of which insist that a developed jurisprudence of bail is integral to a socially sensitized judicial process. After all, personal liberty of an accused or convict is fundamental, suffering lawful eclipse only in terms of procedure established by law. The last four words of Article 21 are the life of that human right.
2. In *Balchandjain v. State of Madhya Pradesh*,
Bhagwati, J. who spoke for himself and A.C. Gupta, J. observed that the power of granting ‘anticipatory bail is somewhat extraordinary in character and it is only in exceptional cases where it appears that a person might be falsely implicated, or a frivolous case might be launched against him, or “there are reasonable grounds for holding that a person accused of an offence is not likely to abscond, or otherwise misuse his liberty while on bail” that such power is to be exercised.
3. In *State of Maharashtra v. Ramesh Taurani* the only evidence collected against the respondent was that he handed over an amount of Rs. 25 lacs to the contract killers (who according to the prosecution committed the murder of Gulshan Kumar). Apart from the fact that in the context of the prosecution case, the above circumstance incriminates the respondent in a large way, the Apex Court find that the Investigating Agency has collected other incriminating materials also against the respondent, to make out a strong prima facie case against him. It is trite that among other considerations with the court has to take into account in deciding whether bail should be granted in a non-bailable offence is the nature and gravity of the offence.
The Supreme Court therefore was of the opinion that the High Court should not have granted bail to the respondent considering the seriousness of the allegations leveled against him, particularly at a stage when investigation is continuing.
4. In *Dolat Ram v. State of Haryana* the Supreme Court while drawing a distinction between rejection of bail in a non-bailable case at the initial stage and the cancellation of bail already granted, opined:
Very cogent and overwhelming circumstances are necessary for an order directing the cancellation of the bail, already granted. Generally speaking, the grounds for cancellation of bail, broadly (illustrative and not exhaustive) are : interference or attempt to interfere with the due course of administration of justice or evasion or attempt to evade the due course of justice or abuse of the concession granted to the accused in any manner. The satisfaction of the Court, on the basis of material placed on the record of the possibility of the accused absconding is yet another reason justifying the cancellation of bail. However, bail once granted should not be cancelled in a mechanical manner without considering.

5. In *Dr. Bipin Shantilal Panchal v. State of Gujrat*, a three Judge Bench decision, the Supreme Court referred to the proviso to sub-section (2) of Section 167 of the Code of Criminal Procedure and held that though the aforesaid provisions would apply to an accused under NDPS Act, but since charge-sheet had already been filed and the accused is in custody on the basis of orders of remand passed under other provisions of the Code the so-called infeasible right of the accused must be held to have been extinguished. The Court observed thus:

Therefore, if an accused person fails to exercise his right to be released on bail of the failure of the prosecution to file the charge-sheet within the maximum time allowed by law, he cannot contend that he had an infeasible right to exercise it at any time notwithstanding the fact that in the meantime the charge-sheet is filed. But on the other hand if he exercises the right within the time allowed by law and is released on bail under such circumstances, he cannot be rearrested on the mere filing of the charge-sheet.

6. In *Bhart Chaudharty and another v. State of Bihar and another*, the Supreme Court held that, when the Court of Session or the High Court is granting anticipatory bail, it is granted at a stage when the investigation is incomplete and, therefore, it is not informed about the nature of evidence against the alleged offender. It is, therefore, necessary that such anticipatory bail orders should be of limited duration only and ordinarily on the expiry of that duration or extended duration, the court granting anticipatory bail should leave it to the regular court to deal with the matter on an appreciation of evidence placed before it after the investigation has made progress or the charge sheet is submitted.

As has already been discussed above, grant of bail is a rule and refusal to bail is an exception. Moreover, every accused person is presumed to be innocent until the final decision of the Court holding him guilty of the charge/charges made against him. There is no doubt that a person accused of certain charges, if not released on bail, certainly faces many handicaps to prove his innocence besides carrying a constant stigma in the society. Therefore, consequences of pre-trial detention are grave and are in gross violation of Articles 14 and 21 of the Constitution of India and against all the principles of equity, fair play and natural Justice.

DISCRETION OF COURTS IN GRANTING BAIL

Section 439 of Cr.P.C, has given wide powers to the High Court as well as to the Court of Session to grant bail. The jurisdiction of the High Court under the section 439 is not merely revisional but concurrent with that of subordinate Magistrate trying the case. The bail being a matter of judicial discretion vested in court, no court is bound by the decision of another court and the possibility of different conclusions being reached by different court on the same facts in the same circumstances cannot be ruled out as the principle analogous to *res judicata* which is not applicable to bail applications. So far as the limitation of the discretion of the court in granting the bail is concerned the court of Session and High Court have ample jurisdiction to entertain the bail application even if the offence is punishable with death or imprisonment for life and in a fit case, subject to other governing factors and there is no limitation in exercising the discretion in favour of granting the bail. But the general prevailing rule in the matter of bailable and non-bailable offence is that a person accused of a bailable offence has a right to be released on bail and grant of bail in case of non-bailable offence is the matter of discretion of court.

The Supreme Court considered at length the legal literature, both Indian and Anglo-American, and came to the conclusion that bail loosely used is comprehensive enough to cover release on one's own bond with or without sureties.

The following observations of the Supreme Court are worth noting:

“Bearing in mind the need for liberal interpretation in areas of social justice, individual freedom, and individual's rights, we hold that the bail covers both, release on one's own bond with or without surety. When surety should be demanded and what sum should be insisted on, are dependent on variables.”

FACTS CONCERNING THE ACCUSED BEFORE GRANTING HIM BAIL

1. The nature of the offence committed by the accused.
2. The length of his residence in the community
3. His employment status history and his financial condition.
4. His family ties and relationships.
5. His reputation character and monetary conditions.
6. His prior criminal records, including any record or prior release on recognizance or on bail.
7. Identity of responsible members of the community who would vouch for his reliability.
8. The nature of the offence charged and the apparent probability of conviction and the likely sentence in so far as these factors are relevant to the risk of non-appearance.
9. Any other factors indicating the ties of the accused to the community or barring on the risk of willful failure to appear.

The criminal jurisprudence system in India presumes anybody as accuse till he is not proved guilty hence the provisions relating to various cases of grant of bail has been inserted in the Criminal Procedure Code of India. The statutory provision with regard to the bail provides a lot of discretion and freedom to the court concerned to grant or refuse the bail to an accused.

One can easily say that to a large extent the discretion to grant bail in non-bailable, is vested with the courts only who are trying the matter, in some cases the court of sessions or the High Court have the powers to grant anticipatory bail.

CONSTITUTION AND BAIL

Right to Life

Repetition or perpetration of an offence and to secure the presence of the under-trial at the trial are the essential ingredient to put an accused in detention but such noble concept and the object of law has to be accomplished subject to a man's right to liberty viz. freedom which leads us to the consideration of fundamental rights which is the pulse of our heart. Article 21 of the Constitution of India provides complete safeguard to every Indian Citizen, irrespective of caste, colour, creed the rich and the poor alike for the protection of life and personal liberty. The said article reads as under:

“No person shall be deprived of his life and personal liberty except according to procedure established by law.”

The article 21 viz. right to life and personal liberty is most important than other rights mentioned in Articles 19-20 and 22 of the Indian Constitution. The main interpretation of this article infers that when the bail is denied then the person liberty of the accused is refused. Hence, when a large number of bail cases come to the higher court, the court interprets them in the light of article 21.

Protection against arrest and detention

The Article 22 reads the protection against arrest and detention in certain cases which envisages the rights of the arrestee after he is being arrested. This article consists of two parts. Clauses (1) and (2) apply to persons arrested or detained under a law otherwise than a preventive detention law and the clauses (4) to (7) apply to persons arrested or detained under a preventive detention law. The provisions of Article 21 may also supplement the various requirements laid down in Article 22. The information about the grounds of arrest is mandatory under clause (1) of article 22.

Poverty and Bail

Taking into consideration the conservative approach by the subordinate judiciary, the Supreme Court in some of its judgments made a rigorous analysis and laid down guidelines, while considering the grant of bail in the accused person belonging to all walks of life. In *Moti Ram v. State of Madhya Pradesh*, the Supreme Court subjected the relevant bail provisions to rigorous analysis, and by a process of close legal reasoning, succeeded in expanding and liberalizing the age-old concept of bail so as to make them more responsive to the needy and the poor.

While coming to the conclusion in regard to grant of bail more meaningful, practical and more useful for each and every citizen including the butcher, the banker, the candle stick maker, the bonded labour and pavement dweller, the Supreme Court addressed itself to three main issues:-

- A. Whether a person charged with a bailable offence can be released on his own bond without sureties.
- B. In case the bail is granted with sureties, what should be the criteria for quantifying the amount of bail?
- C. Whether a surety can be rejected simply because he or his estate is situated in a different district or a State of the country.

In this case, the Magistrate directed the petitioner (Moti Ram) a poor mason to furnish sureties for Rs. 10,000. Reacting on arbitrary approach of the said Magistrate the Supreme Court observed "It shocks one's conscience to ask a mason like the petitioner to furnish sureties for Rs. 10,000.

To add insult to the injury, the Magistrate has demanded sureties from his own district. What is a Malayalee, Kannadiga, Tamilian or Telugu to do if arrested for alleged misappropriation or theft or criminal trespass in Bastar, Port Blair, Pahalgam or Chandni Chowk? Equality before the law implies that even a vakalat or affirmation made in any state language according to the law in that State must be accepted everywhere in the territory of India save where a valid legislation to the contrary exists. We mandate the Magistrate to release the petitioner on his own bond in a sum of Rs. 1000.

The Supreme Court ends this judgment with the following observations:-“The best guarantee of presence in court is the reach of the law, not the money teg”.

A parting thought:

“If the indigents are not to be betrayed by the law including the Bail law, rewriting of many processes laws is an urgent desideratum and the judiciary will do well to remember that the geographical frontiers of the Central Codes cannot be disfigured by cartographic dissection in the name of language or province.”

ECONOMIC OFFENCES AND BAIL

In landmark ruling of the Supreme Court, while granting bails to the under-trial accused corporate personalities, namely, to Unitech Limited’s MD Sanjay Chandra, Swan Telecom’s Director Vinod Goenka, and Reliance Anil Dhirubhai Ambani Group’s executives Hari Nair, Gautam Doshi and Surrendra Pipara, the Hon. Justice Mr. G. S. SINGHVI and Justice Mr. H. L. DATTU of Supreme Court of India, recently adjudicated a landmark judicial precedence in the matters of CRIMINAL APPEAL NO.2178 OF 2011 that” in bail applications, generally, it has been laid down from the earliest times that the object of bail is to secure the appearance of the accused person at his trial by reasonable amount of bail.

The object of bail is neither punitive nor preventative. Deprivation of liberty must be considered a punishment, unless it can be required to ensure that an accused person will stand his trial when called upon. The courts owe more than verbal respect to the principle that punishment begins after conviction, and that every man is deemed to be innocent until duly tried and duly found guilty. From the earliest times, it was appreciated that detention in custody pending completion of trial could be a cause of great hardship. From time to time, necessity demands that some un-convicted persons should be held in custody pending trial to secure their attendance at the trial but in such cases, ‘necessity’ is the operative test.

In this country, it would be quite contrary to the concept of personal liberty enshrined in the Constitution that any person should be punished in respect of any matter, upon which, he has not been convicted or that in any circumstances, he should be deprived of his liberty upon only the belief that he will tamper with the witnesses if left at liberty, save in the most extraordinary circumstances. Apart from the question of prevention being the object of a refusal of bail, one must not lose sight of the fact that any imprisonment before conviction has a substantial punitive content and it would be improper for any Court to refuse bail as a mark of disapproval of former conduct whether the accused has been convicted for it or not or to refuse bail to an un-convicted person for the purpose of giving him a taste of imprisonment as a lesson. This Court, time and again, has stated that bail is the rule and committal to jail an exception.

It is also observed that refusal of bail is a restriction on the personal liberty of the individual guaranteed under Article 21 of the Constitution. In the case of *State of Rajasthan v. Balchand*, this Court opined: “The basic rule may perhaps be tersely put as bail, not jail.” In the case of *Gudikanti Narasimhulu v. Public Prosecutor, V.R. Krishna Iyer, J.*, sitting as Chamber Judge, enunciated the principles of bail. In *Gurcharan Singh v. State*, this Court took the view:” Unless exceptional circumstances are brought to the notice of the Court which may defeat proper investigation and a fair trial, the Court will not decline to grant bail to a person who is not accused of an offence punishable with death or imprisonment for life. The concept

and philosophy of bail was discussed by this Court in *Vaman Narain Ghiya v. State of Rajasthan*. More recently, in the case of *Siddharam Satlingappa Mhetre v. State of Maharashtra*, this Court observed that “Just as liberty is precious to an individual, so is the society’s interest in maintenance of peace, law and order. Both are equally important.” But at the same time, right to bail is not to be denied merely because of the sentiments of the community against the accused.

When the under-trial prisoners are detained in jail custody to an indefinite period, Article 21 of the Constitution is violated. In the case of *State of Kerala Vs. Raneef*, it is an important factor which should certainly be taken into consideration by the court is the delay in concluding the trial. When the investigating agency has already completed investigation and the charge sheet is already filed, therefore, their presence in the custody may not be necessary for further investigation.”

CONCLUSION

It is therefore concluded that there is urgent need for a clear provision. Undeniably, the thousands of under trial prisoners lodged in Indian prisons today include many who are unable to secure their release before trial because of their inability to produce sufficient financial guarantee for their appearance. Where as that is the only reason for their continued incarceration, there may be good ground for complaining of invidious discrimination. The more so under a constitutional system which promises social equality and social justice to all of its citizens. The deprivation of liberty for the reason of financial poverty only is an incongruous element in a society aspiring to the achievement of these constitutional objectives.

SUGGESTIONS

1. In addition to the provisions contained in Criminal Procedure Code 1973, regarding bail and bonds which is a general law of the land therefore, a specific law in this field should be enacted by parliament at par with English Bail Act 1976, or by following any suitable provisions contained in the Bail act of western countries since India has been following the legacy of those countries.
2. The author of this research paper is of the opinion and further recommend the enactment of a law by the parliament which could exercise checks and balances on the discretionary powers of the judicial authorities in respect of granting bail and accepting bonds, so that all the accused could get equal treatment under the well-known verdict of the Apex court which says “*Right is bail and Exception is Jail*”.

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AN EMPIRICAL STUDY OF FOREIGN EXCHANGE MANAGEMENT TECHNIQUES IN INDIA

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ABSTRACT

Exposure Management techniques are classified into internal and external techniques according to their basic origin. Internal techniques are mainly used as a part of company's regulatory financial management & aims at minimizing its exposure to exchange risk. These basically aim at reducing or preventing an exposed position from arising. The external techniques are used to provide protection against the possibility that exchange losses will result from the foreign exchange risk exposure which the internal measures have not been able to eliminate. These consists of basically the contractual measures to provide protection against an exchange loss

which may arise from an existing translation or exposed position.

This paper attempts to evaluate the various alternatives available to the Indian corporates for hedging financial risks. Hedging is a risk management technique, done to protect the foreign exchange exposures against the volatility of exchange rates, by using various internal and external techniques. Managing foreign exchange risk is a fundamental component in the safe and sound management of all institutions that have exposures in foreign currencies. It involves prudently managing foreign currency positions in order to control, within set parameters, the

impact of changes in exchange rates on the financial position of the corporates. The major parts of earnings of information technology come through exports in US dollars. The value of US dollar is fluctuating day by day which is, in turn, reducing the quantum of exports and profit margin of such companies. Every company that has exposure to foreign exchange risk must prudently manage & control its exposure together with management of other risks. Every company that has exposure to foreign exchange risk must prudently manage & control its exposure together with management of other risks. Foreign exchange risk

implies the exposure of a company to the potential impact of movements in foreign exchange rates. The risk that is caused by adverse fluctuations in exchange rates may result in a loss to the company.

Foreign exchange risk arises mainly due to currency differences in a company's assets & liabilities and cash flow differences. Such risk continues till the foreign exchange position is settled. This risk arises because of foreign currency cash transactions, foreign exchange trading, investments denominated in foreign currencies and investments in foreign companies. The quantum of risk is derived out by multiplying the magnitude of exchange rate changes with the size and duration of the foreign currency exposure.

Globalisation of financial markets and developments in exchange markets have resulted into complicated transnational exposure management. It is complex mainly because of (a) the increasing size and variety of exposures which companies incur as they grow globally and (b) the increasing volatility & fluctuations in exchange rates of the foreign exchange markets. Due to this complexity, a logical balanced approach is required in view of formulating company's foreign exchange risk management programme. The starting point in such a programme relates to decide the exactly amount of the assets which are under risk.

At micro economic level, transnational companies face varying degrees of business structural risks. Their need for information relevant to exposure identification differs. Therefore, no single exposure system may be appropriate for all companies. The appropriate system must be firmspecific. It must take into account the size of the company and its constituent units, the exposure objectives and strategy of the company, its operating and organizational characteristics and personnel strength. There are four basic characteristics which should be included in all exposure management method :

- (1) the information should be anticipatory;*
- (2) the reporting frequency must be adequate;*
- (3) the information flow should be related to the company;*
- (4) the rationale of the information systems.*

Keywords: Empirical, Exchange, Technique, Management.

Methods of Forex Risk Management

Exposure Management techniques are classified into internal and external techniques according to their basic origin. Internal techniques are mainly used as a part of company's regulatory financial management & aims at minimizing its exposure to exchange risk. These basically aim at reducing or preventing an exposed position from arising. The external techniques are used to provide protection against the possibility that exchange losses will result from the foreign exchange risk exposure which the internal measures have not been able to eliminate. These consist of basically the contractual measures to provide protection against an exchange loss which may arise from an existing translation or exposed position.

A. Internal Techniques

(i) Netting

Netting implies offsetting exposures in one currency with exposure in the same or another currency, where exchange rates are expected to move high in such a way that losses or gains on the first exposed position should be offset by gains or losses on the second currency exposure. It is of two types bilateral netting & multilateral netting. In bilateral netting, each pair of subsidiaries nets out their own positions with each other. Flows are reduced by the lower of each company's purchases from or sales to its netting partner.

(ii) Matching

The netting is typically used only for inter company flows arising out of groups receipts and payments. As such, it is applicable only to the operations of a multinational company rather than exporters or importers. In contrast, matching applies to both third parties as well inter-company cash flows. It can be used by the exporter/importer as well as the multinational company. It refers to the process in which a company matches its currency inflows with its currency outflows with respect to amount and timing. Receipts generated in a particular currency are used to make payments in that currency and hence, it reduces the need to hedge foreign exchange risk exposure. Hedging is required for unmatched portion of foreign currency cash flows. The aggressive company may decide to take forward cover on its currency payables and leave the currency receivables exposed to exchange risk; if forward rate looks cheaper than the expected spot rate.

In matching operation, the basic requirement is a two-way cash flow in the same foreign currency. This kind of operation is referred to as natural matching. Parallel matching is another possibility. In parallel matching, gains in one foreign currency are expected to be offset by losses in another, if the movements in two currencies are parallel. In parallel matching, there is always the risk that if the exchange rates move in opposite direction to expectations, both sides of the parallel match leads to exchange losses or gains.

(iii) Leading and Lagging

It refers to the adjustment of intercompany credit terms, leading means a prepayment of a trade Obligation and lagging means a delayed payment. It is basically intercompany technique whereas netting and matching are purely defensive measures. Intercompany leading and lagging is a part of risk-minimizing strategy or an aggressive strategy that maximizes expected exchange gains. Leading and lagging requires a lot of discipline on the part of participating subsidiaries. Multinational companies which make extensive use of leading and lagging may either evaluate subsidiary performance in a pre-interest basis or include interest charges and credits to overcome evaluation problem. Another important complicating factor in leading & lagging is the existence of local minority interests. If there are powerful local shareholders in the 'losing' subsidiary, there will be strong objections because of the added interest cost and lower profitability which results from the consequent local borrowing Government by implementing credit and exchange controls may restrict such operations.

(iv) Pricing Policy

In order to manage foreign exchange risk exposure, there are two types of pricing tactics: price variation and currency of invoicing policy. One way for companies to protect themselves against exchange risk is to increase selling prices to offset the adverse effects of exchange rate

fluctuations. Selling price requires the analysis of Competitive situation, Customer credibility, Price controls and Internal delays.

(v) Trading or Financing Pattern

Intercompany or transfer price variation refers to the arbitrary pricing of intercompany transfer of goods and services at a higher or lower rate than the market price. In establishing international transfer prices, one tries to satisfy a number of objectives. The firms want to minimize taxes and

at the same time win approval from the Government of the host country. Yet, the basic objectives of profit maximization and performance evaluation are also significant. Often, it is not possible to satisfy all these objectives simultaneously, so a company must decide which objectives are more important. As a result, particular transfer price may be established arbitrarily do fulfill the objective involving international considerations.

For the strong currency exporter, the defensive approach is the only option available for export invoicing since the home currency is probably the strongest currency acceptable to the customer. For the weak currency exporter, however, there may be significant gains from an aggressive currency-of-invoicing policy. In such circumstances foreign currency invoicing may be attractive to the exporter in expectation that the home currency equivalent sales proceeds would be changed by a foreign currency appreciation over the credit period. However, there are risks involved in switching from a weak currency to a stronger one. The relative strengths of the two currencies could reverse themselves in the future and hence currency of invoicing cannot be changed regularly. Price list adjustment & loss of customers credibility are hindrances in changing currency of billing.

(vi) Asset and Liability Management

This technique can be used to manage balance sheet, income statement and cash flow exposures. It can also be used aggressively or defensively. The aggressive approach reflects to increase exposed assets, revenues, and cash inflows denominated in strong currencies and to increase exposed liabilities, expenses, and cash outflows in weak currencies. The defensive firm will seek to minimize foreign exchange gains and losses by matching the currency denomination of assets/liabilities, revenues/expenses and cash inflows/outflows, irrespective of the distinction between strong and weak currencies. To archive these objectives, variables are grouped. Operating variables includes trade receivables and payables, inventory & fixed assets and financial variables cash, short-term investments and debt. The currency denomination of operating variables is determined by intrinsic business conditions, production and marketing factors.

Financial variables can be used for exposure management purpose and thus corporate financial management has more discretion over currency denomination. The scarcity of currency finance is often a major problem. The parent company would borrow the weak currency for long term while the subsidiary is usually restricted to short term borrowing. This is because (a) most subsidiaries are not individually listed on a stock exchange, so that the public issue of debt instruments is very difficult, hence, the bulk of long-term loans taken out by foreign subsidiaries are private placements; (b) many foreign subsidiaries are relatively small and not well known to the local financial community; and (c) host governments may be reluctant to allow term borrowing by expatriate subsidiaries.

B. External Techniques

External techniques are used by both exporters and importers as well as by multinational companies. The costs of the external exposure management methods are fixed and predetermined. The main external exposure management techniques are forward exchange contracts, short term borrowing, discounting, forfeiting & government exchange risk guarantees.

(i) Forward Exchange Contracts

Forward exchange contracts refer to agreements in which two parties agree upon the exchange rate at which currencies will be exchanged on future date or within future specified duration. Forward contracts reduces exchange risk element in the foreign transactions. Price is paid for the protectionism and best-cost alternative should be chosen to reduce the cost of purchase. There is, however, some disagreement on how to calculate cost of forward cover mainly because there are two kinds of cost involved an ex-ante cost and an opportunity cost.

(ii) Short term Borrowing

Another alternative to hedge risks in the forward market is the short-term borrowing technique. A company can borrow either dollar or some other foreign currency or the local currency. Through short term borrowing techniques, two major difficulties of the settlement dates and the continuing stream of foreign currency are easily solved. Short-term borrowing has some advantages over forward cover. The cost of short-term borrowing cover is the home currency amount which would have been received if the exposed receivable has been measurable. The foreign currency converted into home currency at the settlement dateless spot rate is the amount which the short-term borrowing technique yielded.

(iii) Discounting

This technique is used to resolve the problems of continuing foreign currency exposures and uncertain settlement dates. The discounting technique for covering receivables exposures is very similar to short term borrowing. In discounting techniques, the effective discount rate less the home currency deposit rate rather than the foreign currency borrowing rate less the home currency rate as is short term borrowing techniques, is the cost. The basic aim in discounting is to convert the proceeds from the foreign currency receivable into the home currency as soon as possible.

(iv) Forfeiting

Forfeiting can be used as a means of covering export receivables. When the export receivable is to be settled on open account except by bill of exchange, the receivables can be assigned as collateral for selected bank financing. In forfeiting one simply sells his export receivables to the factor and receives home currency in return. The cost involved include credit risks the customers, default risk, the cost of financing if the exporter wants to receive payment before the receivable maturity date and the cost of covering the exchange risk by the forward discount or premium. Forfeiting, therefore, tends to be expensive means of covering exposure. There may be offsetting benefits such as obtaining export finance and reducing sales accounting and credit collection costs.

(v) Government Exchange Risk Guarantee

Government agencies in many countries provide insurance against export credit risk and introduce special export financing schemes for exporters in order to promote exports. In recent years a few of these agencies have begun to provide exchange risk insurance to their exporters and the usual export credit guarantees. The exporter pays a small premium on his export sales and for this premium the government agency absorbs all exchange losses and gains beyond a certain level. Initially, such exchange risk guarantee schemes were introduced to aid capital goods exports where receivable exposures were of long-term nature. Government exchange risk guarantees are also given to cover foreign currency borrowing by public bodies.

All the various exposure management techniques are not available in all circumstances. This is mainly because of limitation imposed by the market-place and by regulatory authorities. Similarly, the availability of internal techniques is largely a function of the international involvement of each company.

(vi) Forward Contracts

Forward cover can be used to hedge purchases as well as sales. It may be two types namely forward purchases cover & forward sales cover. Forward purchase cover is extended to have terms and conditions related to export of goods & services. Period of delivery of currency should not be beyond seven days of the probable date of receipt as per the purchases forward cover. It can be extended for purchases of proceeds of foreign currency notes from licensed full fledged money changers, provided that the currency notes were exported through the bank, for realization and credit to the bank's account. All other requirements related to export can be hedged by it. Forward sales cover imports of goods & services in India, where the import is permissible as per the Import Control Regulation and repayment of foreign currency loans, approval from RBI for availing such loan must have been obtained. Such approval should contain the details of currency, amount of interest and the repayment procedure. The forward contract would have to provide for repayment in accordance with settled terms & conditions. Repayment liabilities under such loans would be carried forward for several years and it would not be possible to fix the forward rate for such future dates as the market would not predict rate beyond six to seven months.

(vii) OPTIONS

Options are rights & not obligations to make buy and sell decision. An option is a contract between two parties known as the buyer and the seller or writer. The buyer pays a price or premium to the seller for the right but not the obligation to buy or sell a certain amount of a specified quantity of one currency in exchange at a fixed price for a specified period of time. The right to buy is a call option and the right to sell is a put option. Futures are contracts to buy or sell financial instruments, for forward delivery or settlement on standardized terms and conditions. Future contracts are similar to forward contracts but are more liquid as these are traded on recognized exchanges.

(viii) SWAPS

Swaps refer to a contract between two parties, termed as counter-parties, who exchange payments between them for an agreed period of time according to certain specified rules. It is defined as a financial transaction involving two counter-parties who agreed terms to exchange streams of payments or cash flows overtime on the basis of agreed at the beginning of the

contract. Swap is like a series of forward contracts. Swaps involve a series of exchanges at specific futures dates between counter parties.

CONCLUSIONS AND SUGGESTIONS

Derivatives used for mitigating risk must increase due to the increased global linkages and volatile exchange rates. Firms must focus at development of sound risk management system and also need to formulate their hedging strategy. Foreign exchange risk management must be conducted in the context of a comprehensive business plan. Hedging should also be done without speculation. Further, in-correct application of hedging strategies along with no trade off between uncertainties associated with exchange rate and opportunity loss, makes a hedging foreign exchange risk itself a risk. In order to reduce the cost of hedging, it is suggested that the Government of India should revise its regulations wherein corporates should be allowed directly to deal in foreign currency derivative market in place of the banks which have so far been allowed to deal in foreign exchange market. In order to avoid delay in the implementation of hedging decisions, it is suggested that the corporates should be equipped with latest methods of technical analysis together with the introduction of statistical packages for better and accurate forecasting and timely action. Rupee- Dollar futures should be introduced in Indian stock exchanges as a new product of derivatives so as to provide another route for hedging forex risk.

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COALITION POLITICS IN INDIA: PAST EXPERIENCES AND FUTURE PROSPECTS

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ABSTRACT

The term “coalition” as is generally used in political science has gained currency out of the exigencies of a multi-party system in a democratic set up. It is a phenomenon of a multi-party government where a number of minority parties join hands for the purpose of running the government, which is otherwise not possible in a democracy based on majority party system. A coalition is formed when many splinter groups in the house agree to join hands on a common platform by sinking their broad differences and cobble a majority in the house. It is an astonishing chorus of discords. Though outwardly a coalition appears to be one solid mass, inwardly it is ridden by party foibles and frantic party fervours and bickerings and it is for this reason that coalitions prove to be transient.

Key Words: Coalition, INC, Politics, Party System.

The term “coalition” is derived from the Latin word *coalito* which is the verbal substantive of *coalescere*. *Co* means together and *alescere* means to go or to go together. According to the dictionary meaning, coalition means an act of coalescing, or uniting into one body, a union of persons, states or an alliance. It is a combination of a body or parts into one whole. In the strict political sense, the word “coalition” is used for an alliance or temporary union for joint action of various powers or states and also of the Union into a single government of distinct parties or members of distinct parties. According to F.A. Ogg, “... the term ‘coalition’ as employed in a political sense, commonly denotes a cooperative arrangement under which distinct political parties, or at all events members of such parties unite to form a government or ministry.” In the above context it would be interesting and rewarding to study Indian experience.

PAST EXPERIENCES OF COALITION POLITICS IN INDIA

In pre-Independent India, the Indian Government under the Prime Ministership of Pandit Jawaharlal Nehru in 1946 was the first formal coalition consisting of the Congress, the Muslim League, the Hindu Mahasabha, etc. After Independence, the credit for having first ever coalition under the present Constitution goes to what was then the PEPSU State. As no party could get a majority in the State Assembly in the first election of 1952, a coalition of non-Congress parties was formed in April 1952.

After Independence, the Indian National Congress (INC) had fought the first five elections (1952, 1957, 1962, 1967, 1971) under the dominating influence of Pandit Jawaharlal Nehru and Smt. Indira Gandhi. Their charismatic leadership always contributed to the success of the Congress Party. However, the Sixth Lok Sabha elections in India was historic and unique. It is without parallel and is undoubtedly a watershed in India’s post-Independence history. In one stroke the Indian electorate brought to an end thirty years of Congress Party’s dominant rule,

eleven years of government under the Prime Ministership of Mrs. Indira Gandhi, and twenty months of an emergency that has set India on a course of authoritarian government. Thus, for the first time in Indian Parliamentary history, the Indian Congress party was recognised as a main opposition party in Lok Sabha. In 1977, the first coalition was established at the centre under the leadership of Shri Morarji Desai as the leader of the Janata Party. This was marked the closure of the Nehru-Indira Congress regime, and the beginning of the Janata rule. Thus, for the first time in Indian parliamentary history, a non-Congress Government was installed at the centre. This was the first occasion since Independence when the Congress party was not in a position to form the government. Unfortunately, the Janata Party leaders could not make a proper use of the golden opportunity given to them by the people of India after their success to capture of government power at the centre. The intense power-struggle among the top three leaders, Shri Morarji Desai, Shri Charan Singh and Shri Jagjivan Ram proved ultimately a death-knell to the Janta Government. Thus, the first non-Congress Government formed at the centre on 24th March, 1977 with Shri Morarji Desai as Prime Minister went out of office after an existence of 2 years, 3 months and 22 days stumbling from crisis to crisis primarily because of internal bickerings and dissensions, although the formation of the government was welcomed all over the country as the dawn of a new era. The second coalition government was formed by the Janata (S) Party leader Chowdhary Charan Singh, on 28th July, 1979 with an outside support of the Congress (I) party. But Shri Charan Singh could not face the Lok Sabha when the Congress (I) had withdrawn its support to his government before the latter sought the Vote of Confidence from the Lok Sabha. Subsequently, the Sixth Lok Sabha was dissolved on 22nd August, 1979 and Shri Charan Singh was asked to continue till the elections. The Janata Party experiment – beginning with its victory in 1977 and ending in its collapse in 1979- turned out to be an ephemeral phase in modern Indian history. In 1980 mid-term poll, Mrs. Indira Gandhi had staged a comeback with tremendous majority of her party Congress (I), after her electoral debacle of 1977. Thus, the second coalition government at the centre headed by Shri Charan Singh was short lived.

The third coalition government was formed by BJP and Janata Dal with the alliance of all opposition parties during 01.12.1989 to 07.11.1990. V.P. Singh was the Prime Minister for the coalition government named as ‘National Front Government’ and ruled for 341 days. BJP withdrew the support on the question of Rath Yatra and Babri Masjid issues and the National Front government fell. The National Front government was split into two groups by the initiative of Congress-I resulting in yet another fourth coalition government the period of which was 10.11.1990 to 21.06.1991. Mr. Chandrasekhar was the Prime Minister of this coalition government who ruled for 224 days. Again Congress-I withdrew the support on the ground of telephone spying.

The fifth coalition government started in 1996 which took the title of United Front government. This government was formed by the alliance of regional parties which was supported by the national political party and the Congress-I Mr. H.D. Deve Gowda as the Prime Minister ruled for 325 days from 01.06.1996 to 21.04.1997. Again Congress-I opted for a change in the Prime Ministership, the reason being the Bofors case. The United Front government the changed the Prime Minister and Mr. I.K. Gujral became the Prime Minister of the sixth coalition government. After a few months Congress-I withdrew the support by

stating that the Jain Commission report should not include the name of DMK in its charges to which the United Front government rejected.

The seventh coalition government was formed in the 1998 election by BJP with the participation of various regional political parties numbering 13 namely AIADMK, PMK, MDMK, Rajiv Congress, Shiv Sena, Trinamul Congress, Samata Party and so on. In this case AIADMK withdrew the support due to the internal politics and the coalition government faced its defeat.

In 1999 Lok Sabha elections, the BJP and its allies in the National Democratic Alliance have secured a comfortable majority and Shri A.B. Vajpayee has become the Prime Minister of India for the third time on 13th October, 1999, a distinction that he shares with two of his predecessors, Pandit Jawaharlal Nehru and Smt. Indira Gandhi. In the political history of India he is the only non-Congress Prime Minister who is elected to this august office. In addition, the NDA government at the centre is the only coalition government in Independent India with the partnership of 18 different political parties to complete a full term of 5 years in office. This is the ninth coalition government in the series, which were formed by the non-Congress parties since 1977.

However, the period between 1996-1999 witnessed a personality-specific than policy-oriented and all the contentious issues were thrown out of window by the respective ruling parties in the name of stable and good governance. No single party on its own could gain absolute majority. There were three general elections and five governments in four years (1996-1999). With these factors in mind one may hope for the stability and good governance. We must ponder over the matter now in the light of our coalition experiments and experiences since 1996 and make such changes which may be found necessary to ensure a stable and good governance in contemporary India.

After the 2004 General Elections to the Lok Sabha, the United Progressive Alliance (UPA) led by the Congress (I) party has formed the tenth coalition government at the centre on 13th May, 2004 under the Prime Ministership of Dr. Manmohan Singh, with outside support from the Left parties. After three and half years the left parties withdrawal of support to the UPA Coalition government in the issue of Indo-US nuclear deal. But the UPA coalition government has successfully completed five year of its journey on 13th May, 2009 and moving forward further for fulfilling of its agenda, enlisted in its Common Minimum Programme. Let us hope that the UPA-II coalition Government too would be completed its full term of 5 years in office, like the previous NDA-II, UPA-I coalition Government, for stable and good governance in contemporary India.

FUTURE PROSPECTS

Coalition governments will be more common in the future- It is generally understood that in the Parliamentary system of government one party get clear majority to form the government. But it is not always so and many of the countries in Europe have been having coalition government most of the time. Coalition's governments have been running in Japan also. In India the Congress had charismatic leaders in the past that could help it in getting a clear majority. But now in every state there are three or more parties with equally strong following and assertive leaders. So it will be difficult for any party to form a stable government without either a coalition or outside support. Coalition government will now be a

common feature at the Centre and in the States. It is the trend the world over and will grow here also.

Coalition governments will function Better- The causes which led to failure of coalition government in the past are gradually disappearing. There is no hegemony of any party now. There are several parties representing the interests of different sections of the society every political party knows that it will have to work in harmony with others to be able to run a government. The individualistic Indian character is diminishing. Now the Indians are living in multi-storied flats and sharing public utilities. The feudal system is also disappearing. People are learning to live together. This will be reflected in working of the parties also. Another encouraging sign is that judiciary, Election Commission and other institutions are becoming more assertive in forcing the Rule of Law. The public is also becoming more conscious. The Deve Gowda and Gujaral government's coalitions of 13 parties, BJP led National Democratic Aliens 24 parties and UPA -I 12 parties, functioned early well and have taken some very controversial decisions without creating much of disharmony.

Coalition governments will be more responsive- A coalition governments is generally more sensitive to the problems of the masses and is more responsive to their needs. It has to be noted that the Congress could drift away from Gandhi's ideals only because it was in a strong position most of the time. It stopped caring for the poor, and even for the laws of the land. Nehru had once remarked that even a lamp-post would win an election on Congress ticket. Similarly most of the disgraceful scams and gory incidents of the post-independence India have occurred only because there was a very strong party rule. In a coalition government there are several constitutions which act as a check on extreme action.

Both experts and political parties agree that the era of coalition politics has just begun and it's here to stay.

“At the time when regional political parties are assuming significance and the days of single party rule are over, there is no escape form coalition politics”- says Mr. Sharad Pawar, Union Agriculture Minister and President of the Nationalist Congress Party. Experts say that Coalition Politics is result of rise regional parties and agendas of National importance. One the reasons for the growing importance of regional parties has been their success in articulating the interests of the assertive backward castes and Dalits or ‘Untouchables’, these parties remain ‘regional’ in term of geographic location, but are national in terms of issues relevant to the country as a whole. Their role within the national coalition is also indicative of a more competitive and polarised party system. The continuity of coalition government (first under the NDA and Later UPA) confirms not merely the decline of one party rule and rise of regional and smaller parties, but a crisis of majoritarian political culture, based on the dominance of a single party led by a charismatic leader over a duster of smaller parties.

Both the coalition have faced the problem of internal disputes due to dustering of parties having differing manifestos, for the sustenance of a stable future of coalition politics, the parties must keep their common minimum program ahead of their on ideologies.

The era of coalition government has given both positive and negative signals. We should catch hold of positive signals like understanding and cooperation among regional and national political parties, common minimum programme, coordination committee, politics of consensus, culture of coalition politics etc. and try to evolve a unique model of parliamentary

government something like ‘Popular National Government’ which will be most suited to the our multi-cultural, multi-religious polity. If however, God forbid, we succumb to the degenerating forces unleashed by the era of coalition politics like pressure tactics, black-mailing, criminalization of politics, politicization of criminals, misuse of power for economic and political gains, nepotism, casteism, communalism etc. then not only democracy is doomed in the country but our survival as a constitutional state will be also in doubt. Thus our political system is on trial. We have to prove that we are fit for democracy and constitutional government.

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RELEVANCE OF GANDHIAN THOUGHTS IN THE CHANGING PRESENT SCENARIO

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ABSTRACT

Mahatma Gandhi has been given multifaceted thoughts on various issues which are still relevant even today. The main Gandhian thoughts which mainly includes the thoughts on means and ends. Cottage industry and basic education significance for uplifting the poor from rural and urban society rural development and panchayatiraj, truthfulness, untouchability and other socio-political thoughts. The paper examines the relevance of all these Gandhian thoughts on the current problematic areas. The philosophical views on various socio-economic and political issues which have been faced by the people belong to various strata of society. It has now become imperative to include all these philosophical views of Gandhi to our minds so that a practical solution may be checked out to solve the emerging socio economic problems in the present scenario.

Key Words: Gandhi, Philosophy, Social Change.

Mahatma Gandhi the father of the nation has played a notable and significant role for getting independence of India. He has given a true leadership, along with the other contemporary leaders, thought for freedom of India. Mahatma Gandhi's vital role has expedited the national movements such as quit India movement 1942, Dandi-March of 1930 and non cooperative movement have been some of major national movements during freedom struggle. He lived in South Africa and raised the voice against the apartheid problem of the bachelors in South Africa. He has expedited to movement against the racial discrimination and subsequently succeeded to a great extent as a result the Britishers have withdrawn the apartheid policy of racial discrimination in the South Africa.

GANDHIJI AS A GREAT MAN OF SUBSTANCE

Gandhiji was a man of substance and he has given a significant contribution for generating an opinion on various problems areas which are still relevant in our socio-economic and political lives. He has reviewed the religion, society and economy of different strata of society. He has also covered the thoughtful views on the basic education, means and ends cottage industry, untouchability, the truth, non-violence and reconstruction of society. The cumulative version of these thoughts has been given a name of thought as Gandhian thoughts.¹

In the words of Dr. V.P.Verma, "Gandhiji was a supreme national leader, a guide and teacher". In order to reconstructing the society and humanity, Gandhiji used emphases on the basic thoughts this vision has been considered as the thoughts on morality and political thoughts. However, Gandhiji used to make the experiment with truth like Buddha and Socrates who used to preach the public through their truthful views.

No doubt, the philosophical vision of Mahatma Gandhi acts as a true reflector to reveal a true image of his views which are still relevant in the changing scenario. In order to stabilize the society,

it become imperative to inculcate the Gandhian views of morality into the every one's mind. The Satyagraha and Non-Violence thought given by Gandhi has a great relevance in the political life.² Satyagraha is a word of Sanskrit which means Satya and Aghra. The meaning of Satya is right and justice and Aghra mean the request meaning thereby the request for justice. There is no place of violence in the Satyagraha and it so not believe in give a precious effect to anyone. The Satyagraha is such a precious effect to anyone. The Satyagraha is such a spiritual weapon, which is solo based on love. It is free from hate against the rival counterpart. In this context Mahatma Gandhi rightly said, "Satyagraha, is that principal, for which I want to live and I would like to die even for it."³

The device of Satyagraha which have been used by Mahatma Gandhi for taking the fully independence from Britishers as a result ultimately the Britishers have to leave India in August, 1947. During his freedom struggle, the Satyagraha, this includes strike, social boycott, protest, civil disobedience. Gandhi was a worshiper of non-violence. Non-violence means we are not supposed to harm any one by heart, promise and the action and everyone should be friendly treated. The non-violence of Gandhi teaches us to not bind us before injustice, but teaches us to resist to the constraint developers. According to G.N.Davan, non-violence is an education which teaches us a lesson to pave the way for reaching the non-violence self-power or truth. In short this is Satyagraha, it means fully spiritual or moral power which regulate the right or wrong.⁴

Gandhi's insistence on non-violence as a revolutionary weapon contributed to creating favourable conditions for mass participation of people, especially women.

Gandhi used to believe in Satyagraha and non-violence. "According to Gandhi, Non-cooperative movement can be proved conducive to encounter the Britishers." And these two basic traits of 'Satyagraha' subsequently become a base of national movement for freedom struggle.

Today, it becomes possible to mobilize the people, belong to different strata of society. Anna Hazare, recipient of the Padma Shree award for his outstanding contribution in social development, justifies the principles of Mahatma Gandhi to mobilize the people on the Lokpal Bill issue. Same procedure had been adopted by Baba Amte, few decades ago. However, it has been observed that the farmers, the students, the industrial and agricultural laborers usually adopt the same procedure for prevailing the authority in accordance with their demands.

Mahatma Gandhi used to advocate the Decentralization of policy. He was in favour of devolving the maximum powers to the Grampanchayat, so that the maximum progress may take place in the rural areas of India. This vision has brought a considerable change in our Panchayati Raj system through the 73rd constitutional amendments on Panchayati Raj in India. Under this amendment, various powers have been devolved to the Gram Panchayats. As a result, the people, belong to countryside, enjoy the rural employment at least for 100 days at their door steps. They are now receiving other socioeconomic benefits from various schemes and programs, sponsored by government and non-government organizations.⁵

Gandhi used to be a secular person. He has respected each and every religion and he never tried to take censure against any religion. He has tried to unite the Hindus and Muslims throughout his life.⁶ Gandhi's vision on secularism has very much affected India's policy on secularism. Now India is a secular state. In order to promote the rural economy, Gandhi used to promote the rural and cottage industries, so that every village may become self-

reliance in its self.⁷ In this context, various state governments have been making maximum efforts to make every villager independent. In this context, with the help of government and the non government organizations, the villagers are being benefitted through self help groups under various micro finance projects, funded by the various financial institutions. It has been observed that the state like Punjab and Haryana, the people from the countryside, now enjoying better life. The traits of 'lesbianism' now quite visible in our rural areas.

In order to ameliorating the social conditionals of the down cruddier, Mahatma Gandhi has taken some of ameliorating steps towards the 'untouchables' of Indian society. In this context, Gandhiji used to boycott the discriminative attitude of the people, who believe in social discrimination. This vision of Mahatma Gandhi, has facilities to abound the related laws in accordance with human rights. In the present period, the safe guard of 'dalits' is the true vision of Mahatma Gandhi.

Keeping in view the present scenario, the existing scenario has given rise to social instability, political arises, inter-class and inter regional economic disparity etc. It is therefore become imperative to review the ' Gandhian philosophy' in different perspectives, so that the growing flaws of society may be eliminated.

CONCLUSION

Mahatma Gandhi has been a friend, a philosopher and guide to the Masses. He has given his views on various socio- economic and political problems. He has own views on promoting an individual as well as a community. The thoughts o non violence, non cooperation, truthfulness, secularism, thought on morality and purity of ends ad means have a still relevant for our social stability. Gandhian thought provide a centripetal force for stable the society o a sustainable wag. It fulfills the relevancy of the principle of growth with justice for the people belong to every strata of society. It is expected to have the way to inculcate the right things into the wrong minds. It is also expected to have the way to modify the conflicting situation of the disputes among the students and teachers, entrepreneurs and the industrial workers, between lad lord and the agricultural laborers, between leaders and the masses. It will be conducive to stabiles the human relations at different levels. The Gandhian philosophy has a great relevance in the changing scenario. It is high theme to review the problems in view of Ghandhian view on multifaceted areas, aid try to find out practical approach to solve the problem systematically. Only then, this socio-economic problem will be solved in the changing scenario.

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AMBEDKAR'S VISION OF SOCIAL JUSTICE WITH SPECIAL REFERENCE TO WOMEN

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ABSTRACT

*Women status is that word we are all aware from it very well. But we also aware about the Women status very well in present scenario and past. Are we applying it in our lives? Either it is just a theoretical or actual practicable concept only? How can women be actually uplift or get real dignity life in society. To find the answer of the above questions and to highlight the concept of women status present paper has been made. Dr. Ambedkar felt very deeply the problem of women. Women have been considered as left hand and half of society but there actual position is not so good. In the Vedic period, medieval period as well in British period women had no right in the society. Women always harassed both at home as well as at their workplaces or general places from their male counterparts in this man dominated society. At that time the situation was very worst. So Dr. Ambedkar always tried his best to give women their proper place. He gave them equal opportunities by laws and through different enactments for them. After the **Jyotiba Phulle & Shavatri bai phulle Dr. ambedkar is the real Hero for Indian women.** Due to these enactments women actually get benefited from these. The paper had been divide into different segments namely Introduction, Objectives and Scope of the study, Methodology, women & constitutional rights, causes behind low status of women, Reformative steps taken by Dr. Ambedkar, protect women interests, many other reforms introduce, Different laws for women, Observations and Concluding remarks by Baba Shab. The present paper is a very good attempt in this regards.*

In the history of humanity woman as important factor as man, yet she has always been looked down as inferior creature. Women are subject to social discrimination are related to a fundamental principle of social order which doesn't recognize equality and not only practices inequality but justifies it as the highest code of religious and moral order. In the terms of Principles of equality of Hindu social order Dr. Ambedkar argues, "Does the Hindu social order recognize equality." The answer must be in the negative.

Key Words: Social Justice, Women, Discrimination, Vedic Period, Indian Constitution.

"Penury, betrayal, illiteracy and abuse are classic ingredients of our lives. Everybody talks about izzat, but izzat isn't going to feed my family, is it? You need money to survive and I had no other option,"--a statement given by a victim and worker girl of orchestra in Punjab.

Dr. Ambedkar; the idea of social order such where each individual is considered and respected as human being is not made to suffer only because accident of birth has relegated him to an inferior position. Where each individual finds the ways and means of enhancing his own

powers and potentialities. Most of the social reformers tried to uplift and restore women's glory through preaching, press, and platform. Among them a few notable reformers are *Rajaram Mohanrai, Ishwer chand vidya sager, Durgabhai Desmukh, Jyotiba Phulle & Shavatri Bai Phulle, Periyar Ramaswami, Shahu ji Maharaj, Swami Achuta Nand, Lord William Bentic. But Dr. Ambedkar is the chairman of drafting committee of constitution, has done a pioneering work to improve status of women by granting the fundamental rights to all the citizens irrespective of cast, creed, race, sex, place of birth, and as minister in Nehru cabinet he also introduced on 5 Feb. 1951 the Hindu code bill in parliament.* Which was for the betterment of the women of all sections of the society. Which was strongly opposed not only by the Hindu Mahasabha, but also by a section of orthodox congressmen who were against any change. The principles of monogamy and divorce introduced in the code were opposed vigorously.

Dr. Ambedkar supported his views on the ground that a woman's right to property was accepted by Brihaspati Samiti, divorce by Parshara Samiti to understand the contribution rendered by Dr. Ambedkar to liberate women from the cruel clutches of man, we have to trace the status of women from the pre-Vedic period to British Raj and also to analyze the role of judiciary in safeguarding the interests of women. Ambedkar emphasized on the status of women during that time. Steps taken by Ambedkar for the upliftment of the women at that time. Who Ambedkar worked for the illiterate and downtrodden. We also have to examine the historical background behind the causes of low status women.

STATUS OF WOMEN IN LATER VEDIC PERIOD

In the later Vedic period the condition of the women started deteriorating through sexual discrimination. The social status of woman was undermined, many restrictions were imposed on them & they were deprived of the human basic human rights. They were treated as bonded labourers. Although women were in majority in society, they were discriminated against, humiliated and ill-treated by men as the minorities suffered at the hands of majority. They were considered as one of the three 'W's – the *Wine, Women & Wealth*. The women were expected to show complete obedience to men. They were denied the poverty of men. *The Artha shastra stated that the sole aim of women is to get married and bear children. Bhishma and Yudhishtra believed that the women are the root cause of evil.* Brahminical law by upholding certain rules for women – like sati and celibacy of widows. A woman in the eyes of Manu was a thing of no value. It was Manu who was responsible for the degradation of woman in India. Man is born and brought up by his mother, a woman. It is an irony of fate that the same mother who bears the pangs of pregnancy, birth and brings up the child, is locked down upon by the same child after he becomes a man of full age. As a child, they should be under the direct control and supervision of her father. The father could give her in marriage to any one without her consent and authority. After being married, she should live under the direct supervision and control of her husband. As a mother, her son exercised authority over her, she was treated as a chattel or worse. She was deprived of education and personal property. Generally she had only the right to maintenance in the family. Tuslidhas has described in a couplet the position of a woman like this.

'kwnz] xaokj] <+ksy] i'kq] ukjh A

;g lc rkM+u ds vf/kdkjh AA

Surdas and women were the two chief section of the Aryan society which were flocking to join the religion of the Buddha and thereby undermining the foundation of Bramanic religion.

STATUS OF WOMEN IN MUSLIM PERIOD

Dr. Ambedkar even opposed the Indian Muslim Purdah system which is basically contrary to the real *purdah* system of Islam and observed: “As a consequence of the *Purdah* system a segregation of the Muslim woman is brought about. The ladies are not expected to visit the outer rooms, verandahs or gardens, their quarters are in the back-yard. All of them, young and old are confined in the same room. No male servant can work in their presence. She cannot go even to the mosque to pray and must wear *burka* (Veil) when she has to go out. These *burka* women walking in the streets is one of the most hideous sights one can witness in India. Such seclusion cannot but have its deteriorating effects upon the physical constitution of Muslim women. They are usually victims to anemia, tuberculosis and pyorrhea. Their bodies are deformed with their backs bent, bones protrudes, hands and feet crooked. Rims, joints and nearly all parts ache. Heart palpitation is very often present in them. The result of this pelvic deformity is untimely death at the time of delivery. Purdah deprives Muslim women of mental and moral nourishment. Being deprived of healthy social life, the process of moral degeneration must and does set in. Being completely secluded from the outer world, they engage their minds in petty family quarrels, with the results that they become narrow and restricted in their out-look”. Later in the medieval period Muslims invaded India and introduced the *purdah* system

WOMAN AND AMBEDKAR’S MOVEMENT

Right from the days of *Mook Nayak* and *Bahishkrit Bharat*, Oppression of woman remained a major plank of Dr. Ambedkar’s movement. He involved woman in all his social struggles. In Mahad Satyagraha woman participated in large numbers. The temple entry movement gave him a courage to criticize the Hindu society Vehemently, Dr. Ambedkar made an in-depth study of Hindu scriptures i.e. *smirtis and shastras*, the fundamentals of Hindu faith that ordained graded socio-religious, economic and cultural status to the chaturvarnas and threw the women in the dustbin of Shudra category. He realized the irrationality, inhumanity and hollowness of Manu smirti. Manu had prescribed a number of laws with respect to women which were totally inhuman and irrational:

1. By a girl, by a young woman or even by an aged one, nothing must be done independently even in her own house.
2. A woman shall not perform the daily sacrifices prescribed by the Vedas. If she does it, she will go to hell.
3. A wife, a son and a slave, these three declared to have no property, the wealth which they earn is for one to whom they belong.
4. Liquor, slaying women, Surdas, Vaishyas, kshatriyas and atheists (are all) minor offences.

In the light of these laws, Dr. Ambedkar observed that Manu was basically responsible for the fall of Hindu women.

WOMEN AND CONSTITUTIONAL GUARANTEES

Dr. Ambedkar has give equal status to women at par with men by providing many provisions in the constitution. V.R Krishana Iyer is of the view that the constitution quickened by social conscience, has added invincible legal missiles for women's liberation. Our constitution forbids sexual discrimination and guarantees social and economic justice to women. The constitution in its preamble guarantees

- (i) Social, economic and political justice
- (ii) Freedom of thought, expression, belief, faith and worship,
- (iii) Equality of status and opportunity and
- (iv) Fraternity assuring the dignity of the individual and national unity to all the citizens of India without nay discrimination of caste, creed or sex.

Women and Constitutional Rights:-

In constitution help women to improve their status and to compete with their male counterparts. eg. state shall not deny to person equality before law or the equal protection of the laws with in the territory of India. state cannot be discriminate any citizen on the ground of religion, race, caste, sex, place of birth or any of them. There shall be equality of opportunity for all citizen in matters relating to employment or appointment to any office under the state. Prohibition of employment of children below the age 14 years. The state make provision for just and human condition of work and maternity relief. State provide a uniform civil code to all citizens throughout territory of India

Women and Hindu Code Bill:-

Dr. Ambedkar Most important contribution in relation to the elevation of the status of women in India was his initiative to draft and introduce the **Hindu Code Bill** in the constitution assembly. India's first law minister & Chairman of the drafting committee of the constituent assembly, he thought it appropriate to free women from age old enslavement by reforming the Hindu social laws created by Manu. The **Hindu Code Bill**, the most formidable legislative measure of modern India sought among other reforms

Hindu code bill contained new rules on seven different matters i.e.

- (i) Right of to property of a deceased Hindu who has died intestate without making a will, to both male and female
- (ii) The order of succession among the different heirs to the property to a deceased dying intestate.
- (iii) The law of maintenance
- (iv) Marriage
- (v) Divorce
- (vi) Adoption
- (vii) Minority and guardianship

CONCLUCISION

Dr. Ambedkar has played an important role in the progress of this bill and in introducing the code before Parliament he has shown his determination to perusable the legislature to see it

through without delay. It is well known that Dr. Ambedkar can legitimately and justly feel for the substantial work done by him in the drafting of our constitution. We can say that Dr. Ambedkar is national leader. He is not a Hero of a particular cast or community. His work is for whole society like women, poor, down trodden, farmers, dalits, Muslim and upper caste also. Dr. Ambedkar established new rule and regulation. Dr. Ambedkar given mirror to Society change or women gets their good destination. It is possible all due to Bharat Ratan Baba Shab Dr. Bhim Rao Ambedkar efforts, given dignity life to women in Indian society. Women and other all community should be thankful to him. In this new Era women is free in India. They can choose their profession, their life, their occupation, dress, jobs according to qualification, as well as partner. But in the option of partner the girl is not too much free. According to Indian society 97% girls are depends on their parents. They have to marriage according to them, in that case the girl are much reserve or have no right. The girls and parents have to change mind according to the time. The inter-caste marriage is not accepted by the one part of society that is harassment on family or girls too. Girl can speak in free independent Indian society. The bill of 33% for women is a great example of that. Now society is going to change or now people are satisfied with her one girl child. It is my great hope one day society will totally change, Indian new era will start from the women face. **Baba Shab Ambedkar** wish assumed be fulfill. That will be great opportunity for Indian society and then we can says the real social justice with female.

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ROLE OF JAINISM IN SPIRITUAL AND SOCIAL GROWTH

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ABSTRACT

Jainism have a strong tradition of social entrepreneurship. Jains revere the ascetic who has renounced possessions, and this makes them put their wealth, power or good works in perspective, avoiding arrogance or self-righteousness. The ethics of Jainism stress the importance of the family, the equality of men and women, reverence and care for the old, love and nurturing of the young. Social solidarity is viewed in inclusive terms, encompassing the whole of society, not merely the Jain community. This is because Jainism is founded on a belief in cultural diversity the equally important search for shared values and truths beneath apparent differences. Another aspect of Jainism has radical implications: the idea that social solidarity extends to the whole of the natural world. Religious development is not a material growth but a process that seeks to recreate a system which re-opens the fountain springs of life-force and knowledge operating in individuals and in the entire community. It leaves behind the conventional concept of 'adjustment' of the individual to a given condition, but tries to create a new, more pleasant situation.

Keywords: Attitude, Ethico-spiritual Paradigm, Materialistic, Progress, Capitalism.

It is the most unique trait of Jainism to maintain a note of overall universal identity in matters of religious and social order in the society. From the social history of India it is apparent that Lord *Risabha*, the first *tirthankara*, has been responsible for the growth of Jainism in the history of Indian religion and culture. *Risabha* who founded the social order and family system, taught to mankind the art of cultivation of land and some other different arts. After him all the *tirthankaras* in Jain institution contributed to develop more or less the same values in their times.

The twenty fourth *tirthankara* Lord Mahavira after attaining supreme knowledge known as *kevalya*, visited for full thirty years the different parts of the country esp`ecially Eastern and Northern parts and propagated socio-spiritual values throughout. The impact of Lord Mahavira's contribution lies in successfully ushering in the social situation of his time and making institutional and other arrangements for the perpetuation of his socio-religious order. Mahavira is one of those few personalities who raised his voice for individual emancipation in social and religious matters. He did not incarcerate himself to individual upliftment, but dedicated himself to the growth of a new imaginative social order for the healthiest orientation

of the individual's excellence. Though he was a man of highest saintly values, yet social values got his fullest consideration. Those who regard Mahavira only as a spiritual messenger do great injustice to him. In fact, like Lord Rishabha he also serves as a pioneering illustration of both ethico-spiritual realization and social reconstruction.

Lord Mahavira advocates the ethical discipline of five vows not only for the salvation of individuals but also for the survival and growth of the complete society. In his message of *Ahinsa* and other corollaries in relation thereto, the social good in its ultimate analysis is shown to be dependent upon the moral and ethical growth of the individual. There is no opposition between the good of the community and the good of the individual. The two are inextricably inter-linked with each other. In his view, individual development is not to be over emphasized at the cost of civilization. This is the reason he has introduced two types of ethical codes, one for ascetics and the other for householders, technically. As a result, the social division is found in the basic organization of the Jain community. When one speaks of a Jain community, there must be the description of two orders, the mendicant and the lay order. While one refers to the group of people who fully exert themselves to realize the ethico-spiritual values in their entirety by overcoming attachment and entirely aversion, the later denotes is the group of people who perform social duties and practice in a limited manner the ethico-spiritual values keeping in view the importance of these values in individual and social life. Thus, to some extent, all members of the Jain community, whether the lay or the mendicant, may be said to practice the values non-violence etc. The outward expression of the practice is characterized by two explicit schemes of vows and restraints called minor and major vows, technically known as *Anuvrata* and *Mahavrata* respectively.

In the perspective of a social order the Jainas have developed the whole set of community laws regulating the application of the ideal of *Ahinsa*. Ethico-spiritual values have been given supreme importance within the social order, allowing the hard-working lay person to progress towards the status achieved by the mendicant in and through the *Anuvratas*. It has summarized the progressive course steadily to the renunciation of all violence. On the one hand, this course steadily widens the scope of the application of *Ahinsa* on the part of a layperson and on the other; it restricts the opportunities for violence in society.

In modern times, the word 'social growth' has been used so indiscriminately that it has become almost impossible to define. This is due to the fact that means of achieving it are sometimes confused with its objectives. The objective is obviously to develop a social system in which there is no exploitation of man by man and everyone has equal opportunities to fulfill his basic needs and to develop his capabilities. But it does not mean that everyone will thereby become equal in their lot, e.g., in matters of material prosperity and cerebral, moral or spiritual achievements. The key to socially sustainable growth is the creation of inclusive and accountable institutions and the strengthening of social capital across socio-cultural groups and trust between state and citizens to create socially cohesive societies. Social policy has both intrinsic and instrumental value: intrinsic in terms of creating equality of opportunity, and instrumental in terms of strengthening legitimacy of public institutions and social amalgamation.

Hence, what is required is the making of conditions in which they become encouraged and also have identical opportunities to develop their faculties. All this is possible only when the policies and strategies of social progress are governed by some ethico-spiritual values. This

must be adequately clear to everybody that the necessity of the ethico-spiritual values of self-imposed control are not based on fear of laws, but on the firm assurance that self-control is the surest way for one's social good and spiritual uplift.

"Social growth is a process that seeks to recreate a system which opens up the fountain springs of life-force operating both in individuals and in the community. It leaves behind the conventional concept of 'adjustment' of the individual to a given condition, but tries to create a new, more pleasant situation, which can make a progressive symmetry between the individual and the community possible. The new situation may comprise of a new set of values, attitudes and practices and different, more sustainable and effective 'institutions' – that is, structures and organizations to translate those values into practice."

If socialism is promoted only for the materialistic progress in the name of raising the living standard or the growth of collective well-being of society governed only by materialistic considerations, then it would create contradictions. For unless there be simultaneously a change in the mental milieu of the members of the society, mere changes in the material condition in terms of socialistic criteria will be of no avail. The impression of the accustomed ways of living would stand opposed to the changed material conditions of society.

Social growth is a course, which results in the transformation of social structures in a manner, which improves the capacity of the society to fulfill its aspirations. Society develops by consciousness and social consciousness develops by organization. The process that is subconscious in the society emerges as conscious knowledge in pioneering individuals. Growth is a process, not a programme. Its power issues more from its subtle aspects than from material objects.

The practice of ethico-spiritualism can bring social growth in a real sense. It will be recalled that among the five vows prescribed for right conduct one is *Aparigraha*, i.e. limiting one's possessions and giving the excess in charity. This is the highest form of socialistic mentality and is condition for non-violent and spiritual uplift. It results in a real and sustainable growth of man and society. For such socialistic bent of mind we need to pursue simple living and high thinking. In Jainism, all souls are regarded as basically comparable and they all suffer from the same disease of ignorance that is delusion. This is enough reason for achieving individual excellences and social good.

Similarly, non-violence is an integrated concept and foundation of all sorts of values. It has relation with the different aspects of social life. The cause of deterioration in society is that our social scientists have neglected the role of non-violence and other ethico-spiritual values in developing social sciences and framing social policies accordingly. This is why harmony and cohesion of our society is becoming subject to different kinds of threats in the form of corruption, disparity, violence, criminal and terroristic activities and different types of cultural conflicts. Due to the negligence of ethico-spiritual perspective in social growth, the politics of today has become nothing more than mere diplomacy. Economic system is working for imbalanced growth of man and society and as such it has failed to achieve welfare of mankind. Education, by neglecting values, has become uninspiring. Instead of promoting cultural values it promotes materialistic attitude. Similarly, the study of psychology is unable to transform the consciousness of human beings.

Looking at the present scenario of the world there is a great need to rethink, rearticulate and redefined the whole concept of social growth, keeping philosophy of spirituality, non-

violence, self-restraint and non-possession in centre. The question is – How is it possible to develop such a social structure when the present sociology is based on the Darwinian motto of “Survival of the Fittest” and the concept of “Violent class-struggle” given by Karl Marx? The extreme competitiveness of capitalism as evidenced in the present world inevitably increases violence in society. The real social progress based on socialistic ideals must eschew the principles of Darwin and that of Marx. This is possible only if the spirit of non-violence be made the pivotal mover of the ways of life both in the individual and the social sphere. This type of socialism of non-violence can be built on the basis of universal principle given by Acarya Umasvati, viz., “*parasparopagrahoj*” i.e. one life is dependent on other, are followed. To materialize these principles, society needs to inculcate the spirit of interdependence, relativity, friendliness, communal harmony, tolerance and co-existence.

The Ethico-spiritual paradigm of Jainism since its very inception has been engaged in the noble task of uplifting individual as also the social life by revitalizing the society with the awakening of moral and spiritual values in all walks of life. Jainism is eco-human centric in approach and spiritualistic in its depth as against the mere anthropocentric model of social growth takes exclusively the interest of man into consideration, all other things are treated as subservient to and mere meant for fastening the interest of man. But the model of social growth based on the principle of non-violence takes the entire environment into account and thereby makes the real social growth possible.

Thus, the Jainism lays stress on Ethico-spiritual model keeping in view not only the growth of the entire social and the environmental milieu as well to ensure the social growth in the true sense of the term.

Paradigm shift is a characteristic feature almost of all knowledge society. However, in some cases such as physical sciences, paradigm constitutes a dynamic structure, which makes for visible progress, while in other cases, e.g. in social sciences such things do not happen. It is a matter of common observation that society advances in paradigmatic stages, but knowledge of society does not do so. In the domain of human action the movement from Stone Age to Metal age, from Metal age to Industrial age, from Industrial age to Technological age and from Technological age to the age of Globalization and Post Modernism distinctly marks a paradigm shift. It does not necessarily indicate social progress in terms of the well being of all. Social growth of today has become a target of adverse criticism of an increasingly large number of people. It's monopolistic, exclusively and imperialistic attitude do not predict for the well-being of society. Though developed society has virtues, yet it is not free from many engulfing problems such as robberies, murder, casticism, terrorism, corruption, environmental pollution, and addiction to intoxicating substances, degradation of moral values, communalism, etc. Balanced social growth would establish and ensure global harmony and mutual cohesion between the different segments of the society. It would thereby have no room for the emergence of social evils that beset the present state of social growth.

Attempts are no doubt continuously undertaken by the authorities at the helm of affairs. Newer and newer problems are in the offing as time goes on. In this scenario, the ethico-spiritual paradigm of social development of Jainism can vigorously present itself as a case in point. It can act as an eye opener to what should be done to usher in a society free from all undesirable social phenomena eating into vitals of social life. For this reason that an in-depth

study and research based analysis of the ethico-spiritual paradigm of social development as suggested in Jainism is all the more necessary.

Ethico-spiritual model will help us to understand the role of the transcendental states and powers of man in the field of social growth. In this modern era the concept of ethics and spirituality has been kept aside, and man fails to understand the implications and depth of human existence and his potentialities. One should try to understand the ethico-spiritual values under a much wider and deeper perspective. Jainism is particularly concerned with ethics, with matters of right and wrong, with morality in its widest sense. At this point let us remember that to the Jain the great ethical principles are five in number. Most important is non- violence, towards all living creatures. The other four are truthfulness, sexual restraint, not taking the property of others, and not seeking to accumulate excessive possessions.

The Ethico-spiritual Paradigm seems to be the cure of all social evils and it will act as a corrective step to check the current deviation, thus it is the crying need of the time to focus the utility of such paradigm to the society and this spirit will not only make clear its endemic discomfort but also endow it with a new intellectual force and liveliness which will help to inaugurate a new era of LOVE, peace and human harmony at the individual, institutional and society level. In the post-modern era, thus moral and spiritual values alone can provide the healing touch and make the attempts of social growth meaningful for the individual and the society at large.

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NORMALIZATION TECHNIQUES IN MULTI MODEL BIOMETRIC SYSTEM AND ITS PROBLEM FORMULATION

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ABSTRACT

Multimodal biometric systems consolidate the evidence presented by multiple biometric sources and typically provide better recognition performance as compared to systems based on a single biometric trait. Multimodal biometric recognition systems are expected to be more reliable due to the presence of multiple, fairly independent pieces of evidence. These systems are able to meet the stringent performance requirements imposed by various applications. Unidiomatic systems have to contend with a variety of problems such as noisy data, intra-class variations, inter-class similarities or distinctiveness, non-universality, spoof attacks; interoperability issues. Multibiometric systems address noisy data problem by providing multiple sensors and multiple traits. Intra-class variations and inter-class similarities can be avoided with multiple samples and multiple instances of same trait. These systems also provide sufficient population coverage with multiple traits to address the problem of non-universality. They also deter spoofing since it would be difficult for an impostor to spoof multiple biometric traits of a genuine user simultaneously. They also impart fault tolerance to biometric applications so that they continue to operate even when certain biometric sources become unreliable due to sensor or software malfunction or deliberate user manipulation. One of the most fundamental issues in an information fusion system is to determine the type of information that should be integrated by the fusion module. A generic biometric system consists of four modules namely sensor module, feature extraction module, matcher module and decision module. In a multimodal biometric system, fusion can be performed depending upon the type of information available in any of these modules. Fusion prior to matching includes fusion at the sensor and feature extraction levels and fusion after matching includes fusion at the match score and decision levels. It is generally believed that a fusion scheme applied as early as possible in the recognition system is more effective. Score normalization refers to changing the location and scale parameters of the match score distributions at the outputs of the individual matchers, so that the match scores of different matchers are transformed into a common domain. The match score is a measure of similarity or dissimilarity between the input and template biometric feature vectors. Biometrics provides a reliable and natural solution in establishing the identity of an individual based upon person's unique body features. Biometric features

are unique to each individual and remain unaltered during a person's lifetime. These features make biometrics a promising solution to the society. Fusion of multiple biometric traits for human authentication performance improvement has received considerable attention. In this chapter, a multimodal biometric recognition system based on fusion of three biometric traits viz. palm print, fingerprint, face, has been proposed. Fusion of these three biometric traits is carried out at the matching score level. Based on the proximity of feature vector and template, each subsystem computes its own matching score. These matching scores are heterogeneous and thus, normalization is done to transform these scores into a common domain before combining them. Then, these normalized scores are finally combined into a total matching score, which is passed to the decision module. To compare the proposed multimodal system with the existing unimodal systems, an ROC curve has been plotted and it has been found that the proposed system gives a considerable performance gain over the existing unimodal systems.

Key Words: Multimodal, Biometric Trait, Fusion, Software Malfunction, Sensor, Proximity.

Multimodal biometric systems consolidate the evidence presented by multiple biometric sources and typically provide better recognition performance as compared to systems based on a single biometric trait. Multimodal biometric recognition systems are expected to be more reliable due to the presence of multiple, fairly independent pieces of evidence [JAI, 2004A]. These systems are able to meet the stringent performance requirements imposed by various applications. Unidiomatic systems have to contend with a variety of problems such as noisy data, intra-class variations, inter-class similarities or Distinctiveness, non-universality, spoof attacks; interoperability issues [ROS, 2004]. Multibiometric systems address noisy data problem by providing multiple sensors and multiple traits. Intra-class variations and inter-class similarities can be avoided with multiple samples and multiple instances of same trait. These systems also provide sufficient population coverage with multiple traits to address the problem of non-universality. They also deter spoofing since it would be difficult for an impostor to spoof multiple biometric traits of a genuine user simultaneously. They also impart fault tolerance to biometric applications so that they continue to operate even when certain biometric sources become unreliable due to sensor or software malfunction or deliberate user manipulation. One of the most fundamental issues in an information fusion system is to determine the type of information that should be integrated by the fusion module [JAI, 2006].

A generic biometric system consists of four modules namely sensor module, feature extraction module, matcher module and decision module. In a multimodal biometric system, fusion can be performed depending upon the type of information available in any of these modules. According to Sanderson and Paliwal [SAN, 2002] various levels of fusion can be classified into two broad categories: fusion before matching and fusion after matching. This classification is based upon the fact that once the matcher of a biometric system is invoked, the amount of information available to the system drastically decreases. Fusion prior to matching includes fusion at the sensor and feature extraction levels and fusion after matching includes fusion at the match score and decision levels. It is generally believed that a fusion

scheme applied as early as possible in the recognition system is more effective. The amount of information available to the system gets compressed as one proceeds from the sensor module to the decision module as shown in Figure -1 [ROS, 2006].

Figure -1

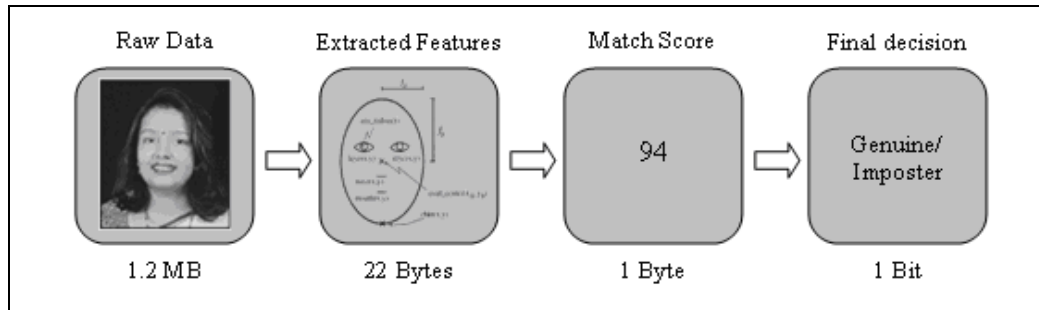


Figure-1: Amount of information available at four modules in a biometric system Integration performed at the feature level typically results in a better improvement than at the matching score level. This is because the feature representation conveys the richest information about the biometric data than the matching score, while the decision labels contain the least amount of information about the decision being made. However, it is difficult to achieve integration at the feature level because the relationship between the feature sets of different biometric systems may not be known and the feature representations may not be compatible (for example, it is difficult to combine the minutiae points of a fingerprint image with the eigen-coefficients of a face image). Furthermore, most commercial biometric systems do not provide access to the feature sets, which they use in their products. In such cases, integrations at the match score or decision levels are the only options. Next to the feature sets, the match scores output by the different matchers contain the richest information about the input pattern and also it is relatively easy to access and combine the scores. Therefore, fusion at the match score level is the most common approach in multimodal biometric systems [JAI, 2004B].

In this paper, the authors of this thesis have presented a fused palm-finger-face recognition system. In the proposed system, feature vectors are extracted independently from the pre-processed images of palm print, fingerprint and face. The feature vectors of query images are then compared individually with the enrollment templates which are taken and stored during database preparation for each biometric trait respectively. The individual matching scores generated after matching of query images with database images are passed to the fusion module. Fusion module performs score normalization and fusion of normalized scores by weighted sum rule. Weights associated with each biometric trait for a specific user indicates the importance of corresponding biometric characteristic possessed by the user. These individual normalized scores along with their weights are finally combined into a total score by sum rule, which is passed to decision module which declares the person as genuine or an imposter. The identity established by this system is more reliable than the identity established by individual biometric systems. Integrating multiple biometric traits improves recognition performance and reduces fraudulent access. The proposed multimodal biometric system overcomes the limitations of individual biometric systems and also meets the response time as well as the accuracy requirements.

REVIEW OF SCORE NORMALIZATION TECHNIQUES AND PROBLEM FORMULATION

Score normalization refers to changing the location and scale parameters of the match score distributions at the outputs of the individual matchers, so that the match scores of different matchers are transformed into a common domain [ROS, 2006]. Integration at the match score level is generally preferred due to the presence of sufficient information content and the ease in accessing and combining match scores. The match score is a measure of similarity or dissimilarity between the input and template biometric feature vectors. Some issues need to be considered prior to combining the scores of the matchers into a single score. The matching scores at the output of the individual matchers may not be homogeneous. For example, one matcher may output a distance or dissimilarity measure (a smaller distance indicates a better match) while another may output a similarity measure (a larger similarity value indicates a better match). Further, the outputs of the individual matchers need not be on the same numerical scale (range). Finally, the matching scores at the output of the matchers may follow different statistical distributions. Due to these reasons, score normalization is essential to transform the scores of the individual matchers into a common domain prior to combining them. Score normalization is a critical part in the design of a combination scheme for matching score level fusion [JAI, 2005].

When the parameters used for normalization are determined using a fixed training set, it is referred to as fixed score normalization [BRU, 1995]. In such a case, the matching score distribution of the training set is examined and a suitable model is chosen to fit the distribution. Based on the model, the normalization parameters are determined. In adaptive score normalization, the normalization parameters are estimated based on the current feature vector. This approach has the ability to adapt to variations in the input data such as the change in the length of the speech signal in speaker recognition systems. For a good normalization scheme, the estimates of the location and scale parameters of the matching score distribution must be robust and efficient. Robustness refers to insensitivity to the presence of outliers. Efficiency refers to the proximity of the obtained estimate to the optimal estimate when the distribution of the data is known. Although many techniques can be used for score normalization, the challenge lies in identifying a technique that is both robust and efficient.

SOME NORMALIZATION TECHNIQUES ARE BRIEFLY DISCUSSED

(1) Min-max Normalization: This is the simplest normalization technique. Min-max normalization is best suited for the case where the bounds (maximum and minimum values) of the scores produced by a matcher are known. In this case, we can easily shift the minimum and maximum scores to 0 and 1, respectively. However, even if the matching scores are not bounded, we can estimate the minimum and maximum values for a set of matching scores and then apply the min-max normalization. When the minimum and maximum values are estimated from the given set of matching scores, this method is not robust (i.e., the method is highly sensitive to outliers in the data used for estimation). Min-max normalization retains the original distribution of scores except for a scaling factor and transforms all the scores into a common range [0, 1].

(2) Decimal Scaling: It can be applied when the scores of different matchers are on a logarithmic scale. The problems with this approach are lack of robustness and the assumption that the scores of different matchers vary by a logarithmic factor.

(3) Z-score Normalization: This is the most commonly used score normalization technique. It is calculated using the arithmetic mean and standard deviation of the given data. This scheme can be expected to perform well if prior knowledge about the average score and the score variations of the matcher is available. If we do not have any prior knowledge about the nature of the matching algorithm, then we need to estimate the mean and standard deviation of the scores from a given set of matching scores.

(4) Median and Median Absolute Deviation (MAD): These are insensitive to outliers and the points in the extreme tails of the distribution. However, the median and the MAD estimators have a low efficiency compared to the mean and the standard deviation estimators. Therefore, this normalization technique does not retain the input distribution and does not transform the scores into a common numerical range.

The authors of this paper decided to make use of min-max normalization technique. Since the matching scores outputs by three biometric (palm print, fingerprint and face) are heterogeneous, so, score normalization is needed to transform these scores into a common domain, prior to combining them. Z-score and Median-MAD normalization techniques do not produce a common numerical range for the normalized scores and also does not retain the original distribution of scores. Decimal scaling normalization technique is based on the assumption that the matching scores should vary by a logarithmic factor. Thus, min-max normalization technique seems best because it is simple, retains originality of distribution of scores and also convert the scores of different matchers into a common numerical range.

The three biometric traits (palm print, fingerprint and face) perform better individually but fail under certain conditions. Face recognition is friendly and non-invasive but its accuracy is affected by illumination, pose and facial expression. Face recognition systems must be robust to these variations. Face detection in the input image is affected by variability associated with human faces (color, texture, expression, pose, etc.) [ROS, 2003]. In case of fingerprint recognition, poor quality fingerprint image may create problem. The enhancement module of the fingerprint recognition system recovers the ridges present in the fingerprint image but the loss due to cuts and scars present on the fingerprint image may create problem in extraction of minutiae points [JAI, 2004B]. The palmprint provides a larger surface area compared with the fingerprint, so that more features can be extracted for personal recognition. It is non-intrusive and has accuracy higher than fingerprint [FEN, 2004]. Among the three biometric traits considered by the authors, palmprint outperforms fingerprint and face. Thus in such a situation multimodal biometric systems could be more efficient in arriving at the final decision. The impact of problems associated with individual biometrics can be reduced by fusing them. To address the above mentioned problems, a novel fusion at match score level for palm print, fingerprint and face is presented by the authors of this thesis [CHA, 2009A].

Proposed Multimodal Biometric System

To overcome the problems faced by individual biometrics (palm print, fingerprint and face), a novel combination is proposed for the recognition system. Here, more than one biometric is

used to arrive at a final decision. The integrated system provides anti spoofing measures by making it difficult for an intruder to spoof multiple biometric traits simultaneously.

Image Acquisition and Feature Extraction

This section describes image acquisition and feature extraction of palm print, fingerprint and faces biometrics. Here, Principal Component Analysis (PCA) approach is used for palm print and face. Minutiae-based approach is used for fingerprints.

1. -Palm print Recognition: Palm print is one of the relatively new physiological biometrics due to its stable and unique characteristics. Palm prints have a number of unique advantages—they are rich in features such as principal lines, wrinkles, and textures and these provide stable and distinctive information which is sufficient for separating an individual from a large population [HAN, 2003]. The area of the palm is much larger than the area of a finger and as a result, palm prints are expected to be more distinctive than the fingerprints. Biometric palm print recognizes a person based on the principal lines, wrinkles and ridges on the surface of the palm as shown in Figure-2. These line structures are stable and remain unchanged throughout the life of an individual. An important issue in palm print recognition is to extract palm print features that can discriminate an individual from the other.

Figure -2

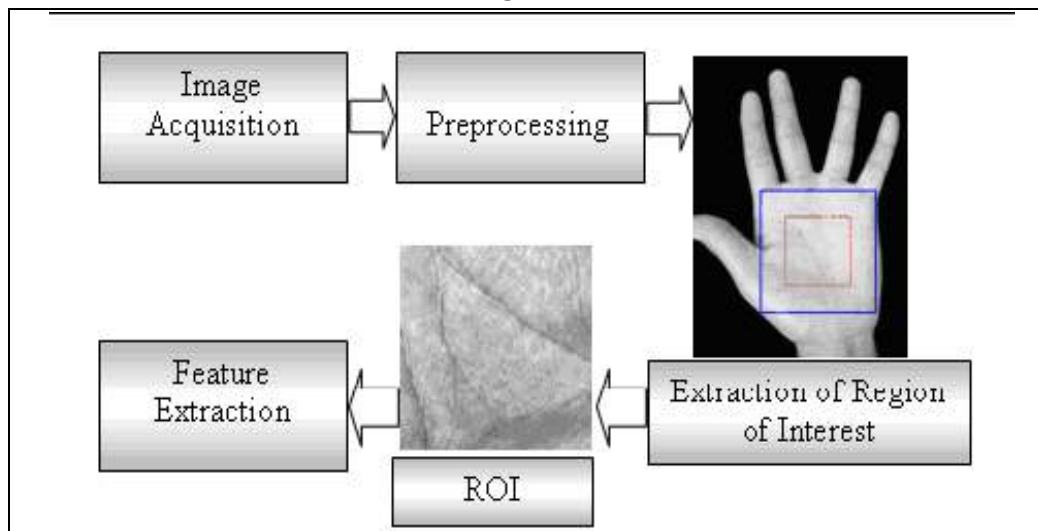


Figure -2: Steps involved in feature extraction of palm print here, PCA approach can be used that transforms palm print images into specific transformation domains to find useful image representations in compressed subspace. It computes a set of basis vectors from a set of palm print images, and the images are projected into the compressed subspace to obtain a set of coefficients. New test images are then matched to these known coefficients by projecting them onto the basis vectors and finding the closest coefficients in the subspace. The basis vectors generated from a set of palm print images are called Eigen palm [LU, 2003B]. Recognition is performed by projecting a new image into the subspace spanned by the eigenpalms and then classifying the palm by comparing its position in palm space with the positions of known

coefficients. The matching scores (MS_{palm}) between two palms print feature vectors can be calculated using the Euclidean distance [HAN, 2008].

2. Fingerprint Recognition: Fingerprint is one of the most widely used biometric traits. The main reason behind the use of fingerprint biometric is that it is the most proven technique to authenticate the individual. The fingerprint is basically the combination of ridges and valleys on the surface of the finger. The lines that create fingerprint pattern are called ridges and the spaces between the ridges are called valleys or furrows

Figure-3

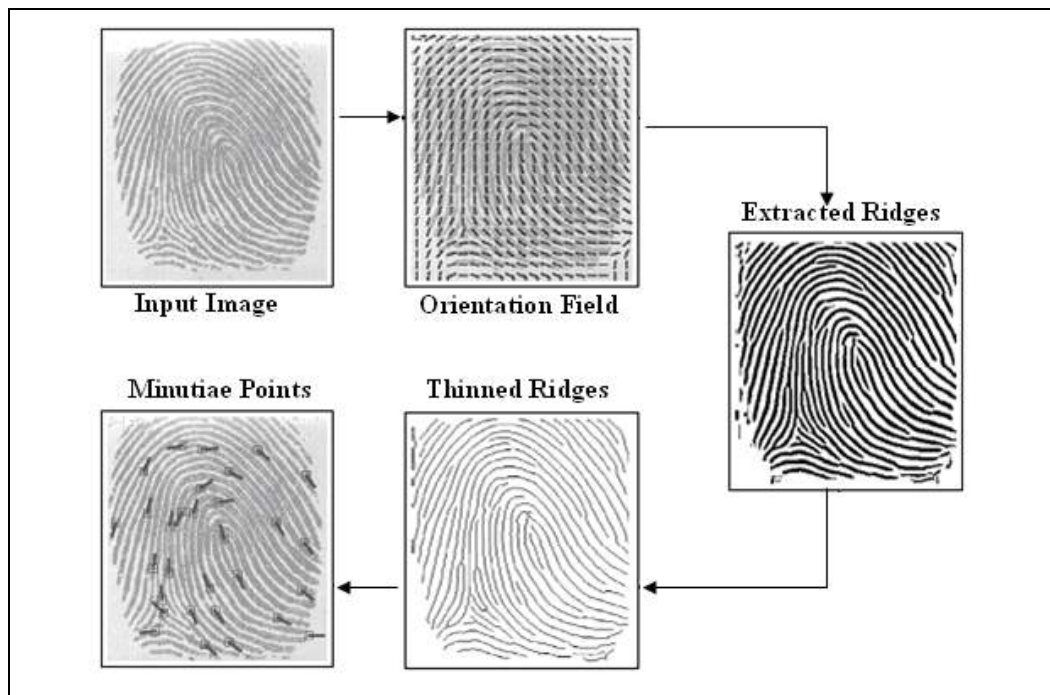


Figure-3: Steps involved in feature extraction of fingerprint Once a high-quality image is captured, there are several steps required to convert its distinctive features into a compact template as shown in Figure-3. This process is known as feature extraction. The major steps involved in fingerprint recognition using minutiae matching approach after image acquisition is image enhancement, minutiae extraction, matching [HON, 1998A]. The goal of fingerprint enhancement is to increase the clarity of ridge structure so that minutiae points can be easily and correctly extracted. The enhanced fingerprint image is binarized and submitted to the thinning algorithm, which reduces the ridge thickness to one pixel wide for precise location of endings and bifurcations. This processed image is used to extract minutiae points, which are the points of ridge endings and bifurcations. The location of minutiae points along with the orientation is extracted and stored to form a feature set. The minutiae based matching consists of finding alignment between the template and the input minutiae sets that result in the

maximum number of minutiae pairings [JAI, 1999A]. This pairing generates a similarity score (MSfinger) which is passed to the decision module.

3. Face Recognition: Face recognition involves extracting a feature set from a two-dimensional image of the user's face and matching it with the templates stored in the database. The feature extraction process is often preceded by a face detection process during which the location and spatial extent of the face is determined within the given image. To recognize human faces, the prominent characteristics on the face like eyes, nose and mouth are extracted together with their geometry distribution and the shape of the face [COL, 2005] as shown in Figure-4.

Figure-4

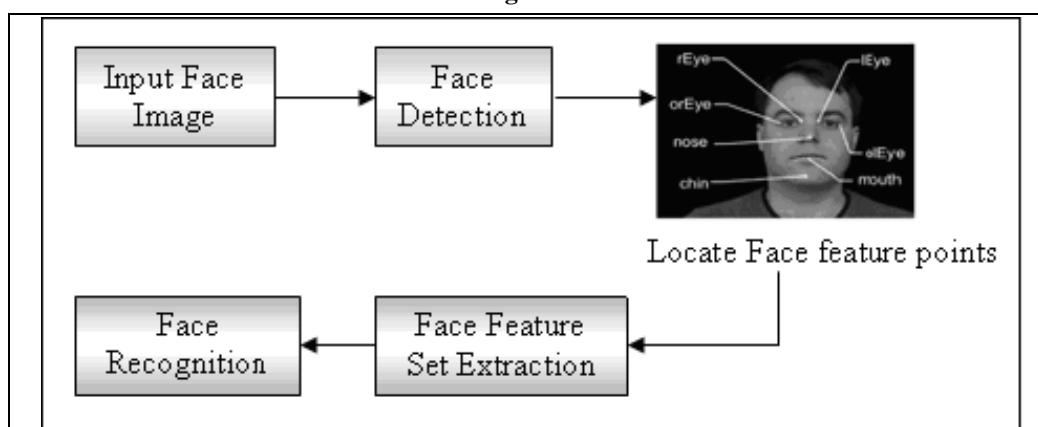


Figure -4: Steps involved in feature extraction of face. Human face is made up of eyes, nose, mouth and chin etc. There are differences in shape, size and structure of these organs, so the faces differ in thousands ways, and we can describe them with the shape and structure of these organs in order to recognize them. These feature points and relative distances between them make some patterns in every input signal. These characteristic features are called eigenfaces in the facial recognition domain (or principal components). Once the boundary of the face is established and feature points are extracted, the eigenface approach can be used to extract features from the face [TUR, 1991]. In this approach a set of images that span a lower dimensional subspace is computed using the principal component analysis (PCA) technique [LU, 2003]. The feature vector of a face image is the projection of the original face image on the reduced eigenspace. The matching score (MSface) is generated by computing the Euclidean distance between the Eigen face coefficients of the template and the detected face.

ARCHITECTURE OF THE PROPOSED SYSTEM

Figure-5 shows the architecture of the proposed multimodal biometric recognition system integrating palmprint, fingerprint and face. Palmprint, fingerprint and face recognition, all involve image preprocessing, feature extraction, matching and decision-making. In the operational phase, the three biometric sensors capture the three biometric characteristics individually from the person to be identified and convert them to a raw digital format. It is further processed by the three feature extraction modules individually to produce a compact

representation. This representation is of the same format as the templates stored in the corresponding databases taken during the enrollment phase. The three resulting representations are then fed to the three corresponding matching modules. Here, they are matched with templates in the corresponding databases to find the similarity between the two feature sets. The matching scores generated from the individual recognizers are then passed to the fusion module. Finally, fused matching score ($MS_{final} = MS_{palm} + MS_{finger} + MS_{face}$) is passed to the decision module where a person is declared as genuine or an imposter.

Figure:-5

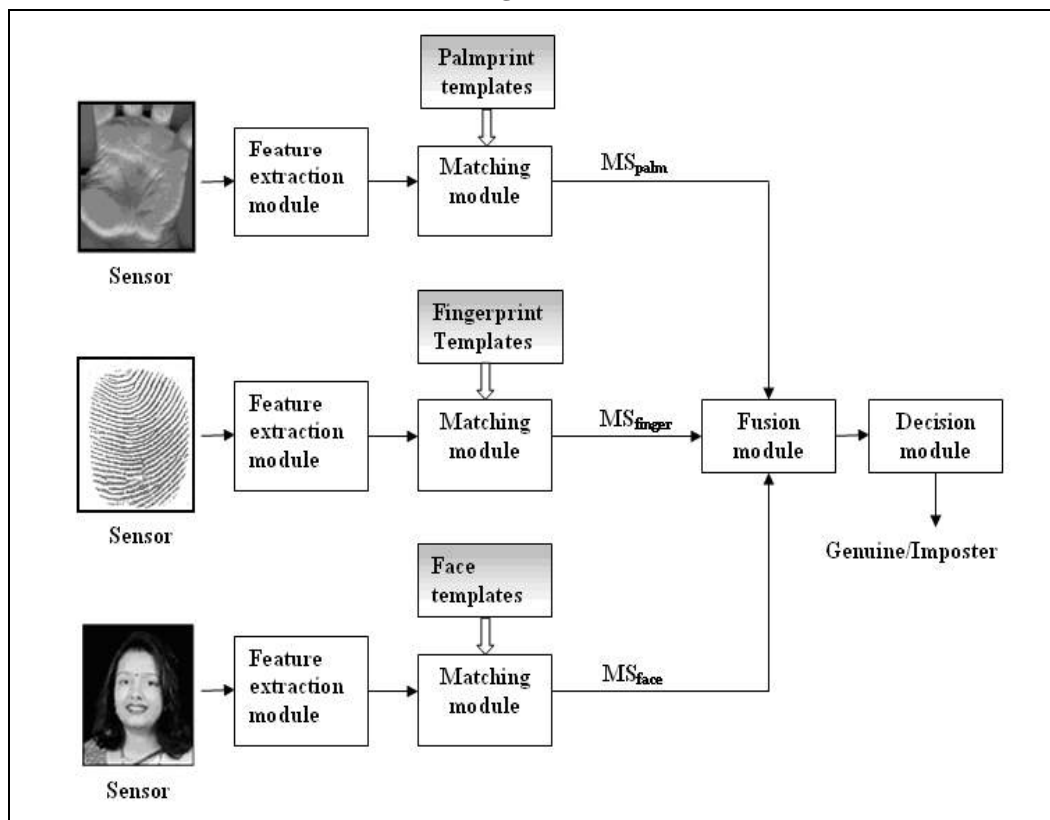


Figure 5: Architecture of the proposed multimodal biometric recognition system

Fusion Module: Scores generated from individual biometric traits are combined at matching score level using sum rule. MS_{palm} , MS_{finger} and MS_{face} are the matching scores generated by palmprint, fingerprint and face recognition systems respectively. The first step involved in fusion is score normalization. Since the matching scores output by the three traits are heterogeneous because they are not on the same numerical range, so score normalization is done to transform these scores into a common domain prior to combining them [JAI, 2005]. Min-max normalization. Fingerprints are represented using minutiae features, and the output of the fingerprint matcher is a similarity score. Face images are represented using eigen-

coefficients, and the output of the face matcher is a distance score. Palmprint images are also represented as eigenpalms and the matching score is generated as distance score. Prior to combining the normalized scores, it is necessary that all the three normalized scores are transformed as either similarity or dissimilarity measure. The final matching score MS_{final} is passed to the decision module and is compared against a certain threshold value to recognize the person as genuine or an imposter. Each biometric matcher produces a match score based on the comparison of input feature set with the template stored in the database. These scores are weighted according to the biometric traits used for increasing the influence of more reliable traits and reducing the importance of less reliable biometric traits. Weights indicate the importance of individual biometric matchers in a multibiometric framework. The set of weights are determined for a specific user such that the total error rates corresponding to that user can be minimized.

COMPARISON OF THE PROPOSED SYSTEM WITH THE UNIMODAL SYSTEMS

It has already been proved that fusion of multiple biometrics improve the recognition performance as compared to the single biometrics [HON, 1999]. The performance of any biometric system is usually represented by the ROC (Receiver Operating Characteristic) curve. The ROC curve plots the probability of FAR (False Accept Rate) versus probability of FRR (False Reject Rate) for different values of the decision threshold (t). FAR is the percentage of imposter pairs whose matching score is greater than or equal to t and FRR is the percentage of genuine pairs whose matching score is less than t [JAI, 2004A].

SUMMARY

Biometrics provides a reliable and natural solution in establishing the identity of an individual based upon person's unique body features. Biometric features are unique to each individual and remain unaltered during a person's lifetime. These features make biometrics a promising solution to the society. Fusion of multiple biometric traits for human authentication performance improvement has received considerable attention. In this chapter, a multimodal biometric recognition system based on fusion of three biometric traits viz. palm print, fingerprint, face, has been proposed. Fusion of these three biometric traits is carried out at the matching score level. Based on the proximity of feature vector and template, each subsystem computes its own matching score. These matching scores are heterogeneous and thus, normalization is done to transform these scores into a common domain before combining them. Then, these normalized scores are finally combined into a total matching score, which is passed to the decision module. To compare the proposed multimodal system with the existing unimodal systems, an ROC curve has been plotted and it has been found that the proposed system gives a considerable performance gain over the existing unimodal systems.

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EDUCATIONAL REFORMS DURING BRITISH INDIA AND AFTER INDEPENDENCE

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ABSTRACT

The education in India has a rich and interesting history. It is believed that in the ancient day, the education was imparted orally by the sages and the scholars and the information was passed on from one generation to the other. After the development of letters, the gurukul systems of education come into existence. The gurukul were the traditional Hindu residential schools of learning. Historical background of Indian education includes the involvement of Vedas, Puranas, Ayurveda, Yoga, Kautilya's Arthashastra which has significantly contributed to the development of education in Modern India. The present education of India is also influenced by the spread of different religious institutions such as Buddhism, Jainism, Arya Samaj, Ram Kishan Mission as well as Bhakti and Sufi movements. The present system of education was introduced and founded by the British in the 20TH century, by the recommendations of Macaulay. It has western style and content. The British government did not recognize the traditional educational system as a beautiful tree which was destroyed during the British rule.

Key Words: Education, Reforms, National Policies and National Commissions.

The educational reforms in India started from Macaulay's minute on Indian education in 1835. He introduced English-medium education in India, which called for an educational system to create a class of anglicised Indians who serve as cultured intermediaries between the British and the Indians, and brought to an end a lively debate on the appropriate language for education and administration.

WOOD DESPATCH, 1854

On July 1854, Charles Wood provided definite directions for a policy on education. The despatch appraised oriental learning and regretted the adoption of the downward filtration theory and admitted that the education of the masses had been totally neglected. The sought to encourage indigenous education and planned a coherent policy of education.

MAIN FEATURES OF WOOD DESPATCH

CURRICULUM OF EDUCATION

1. Place to oriental language and literature.
2. Special place to the western knowledge and science.
3. Limited permission for religious education.

MEDIUM OF INSTRUCTION

1. Native languages and English to be the medium of primary education.
2. English to be the medium of higher education.

ESTABLISHMENT OF GRADED SCHOOL

1. Primary school
2. Middle school
3. High school
4. College
5. University.

EXTENSION OF MASS EDUCATION

1. Downward filtration theory hereby stands rejected. Education will be made available not only for higher classes but for everyone.
2. The number of primary and secondary schools will be increased education
3. Scholarship will be given to the poor and meritorious students.

WOMEN EDUCATION

1. Girls school will be given special grants
2. Individual help to women education will be encouraged.

TRAINING OF THE TEACHERS

1. Training teacher in India will be organized on the pattern of teacher training in England.
2. Scholarship for the teacher doing their training period will be organized.

GRANT IN AID SYSTEM

This report was declared that the financial aid will be given to every educational institution in respective of their religious denomination. Provision is to sanction this grant on different subjects like building construction, science laboratory, construction scholarship, salaries to teachers etc.

ENCOURAGEMENT OF THE ORIENTAL LITERATURE VOCATIONAL EDUCATION

1. Appropriate arrangement of vocational arrangement will be made in India.
2. Educated person will be provided government job on the basis of their qualification and work efficiency.

EDUCATION OF MUSLIMS

Special school will be opened for the education of Muslim children.

IMMEDIATE EFFECT OF WOOD'S DESPATCH REPORT

- Education department of each province of the British India was put under the Director of Public Instruction (DPI). The DPI exercised overall educational institutions of a province starting from primary schools to colleges.
- The DPI took care of the maintenance or the standard of education .under the DPI, school inspect or worked to control and administer of the educational system.
- The despatch also encouraged Indian education in Sanskrit, Arabic and Persian languages and text of English languages were translated into Indian languages.

- Government laid emphasis to make the education secular and religious teaching in school was discouraged training school were opened to train the teachers in modern knowledge and teaching methods.
- The despatch also laid stress on technical and women education and made provision for award of scholarship for proficiency in studies to encourage meritorious students.
- Immediate effect was the established three universities in India on the pattern of university of London in 1857, the universities of Calcutta (Kolkata), Bombay (Mumbai) and Madras (Chennai) were established and three medical colleges were functioning in the country one each at Calcutta and at Roorkee for technical education.

No doubt, the education policy of the company government in India helped in propagating the modern ideas in India and led the country towards modernization.

INDIAN UNIVERSITIES ACT 1904

The educational reforms of 1901-1904 were further taking a giant leap towards higher education. In India on 21st March 1904, the Indian universities act passed into law, addressing issues raised in the report of the universities Committee. The act particularly strengthened the government of India's control of higher education in the five existing universities at Calcutta, Bombay, Madras, Lahore, and Allahabad. The act also provided 5 lakh rupees for five years to execute these changes. In April 1905, the government of India established the agricultural research institute at Pusa, Bengal. From his establishment emerged the central college of agriculture which was given 130,000 pounds grant for agricultural research experiment, education and demonstrations.

ELEMENTARY EDUCATION BILL 1911

The nationalist movement had brought the question of mass education to the forefront on 16th March 1911, Gopal Krishan Gokhale Indian freedom fighter (1866-1915) introduced a bill concerning the enforcement of free and compulsory elementary education, as a result, the government itself had to review its policy on education, but it rejected by the imperial legislative assembly. No doubt, Gokhale failed but the indirect results of his attempt were valuable. The state administrative machinery began to move a little faster and the nation became conscious of the need for educating the masses.

ROLE OF INDIAN CONGRESS AND MUSLIM LEAGUE

In 1910, the Indian congress and Muslim League at their session at Allahabad and Nagpur respectively passed resolution in favour of free and compulsory education, as a result, the government itself had to review its policy on education. In 1912, government declared its educational policy the field of school education was clearly separated from higher education.

CONCEPT OF PUBLIC SCHOOL IN INDIAN EDUCATION

In 1935, with the opening of the Doon school at Dehra Dun and it proved highly successful with a dedicated emphasis on high quality of teaching and learning.

WARDHA SCHEME OF BASIC EDUCATION

On courses of time conference were held, more committees were formed on this important subject. In 1937, Gandhi ji introduced new scheme of basic education the scheme of basic education formulates the following proposals; free universal and compulsory education should be provided for all boys and girls between the ages of 7-14 this education should be imparted

in the mother –tongue of the child. All education should centre round some basic craft chosen with due regard to the capacity of children and the needs of the locality. The committee suggested spinning and weaving, cardboard and wood work, kitchen –gardening, agriculture and fishery as obviously suitable crafts. The selected craft should be both taught and practiced so that the children are able to produce which can be used and may be sold to meet part of the expenditure on the school. This craft must not be taught mechanically but its social and scientific implications are to be studied side by side. In this craft-centered education all the subjects to be taught were to be integrally related to be selected craft or the child's physical and social environment. But Gandhi ji was faced with dilemma when the congress ministers resigned in 1940, after the outbreak of second world war.

INDIAN EDUCATION AND CONSTITUTION

In 1950, a number of important provision which had a direct or indirect bearing on education was included in the constitution:

ARTICLE 45, provision for free and compulsory education for children.

ARTICLE 29, provision for educational protection of interest of minorities as a fundamental right .

ARTICLE 30, Right of minorities to establish and administrator educational institution.

ARTICLE 15, Prohibition of discrimination on grounds of religion, race , sex ,caste or place of birth.

UNIVERSITY EDUCATION COMMISSION 1948

The first commission to be approved was the university education commission in 1948, under the chairmanship of DR. S. RADHAKRISHNAN. It remarked that secondary education was the real weak spot in our entire education machinery . The commission suggested that the standard of admission in the university course should correspond to that of the current intermediate examination, after the completion of 12 years of study at a school and an intermediate college; that in each province a large number of intermediate colleges should be established, and that, in number of occupational institutions should be opened. The commission suggested that the course of study in the ninth and tenth classes may include.

SECONDARY EDUCATION COMMISSION (1952)

The recommendations of Dr.Radhakishnan were reinforced by the Secondary Education Commission appointed in September 1952 with Dr. L. S. Mudiliar as chairman. The report was submitted to the first Parliament in 1953. Reflecting the needs of the ruling classes, the report in the chapter, reorientation of Aims and Objectives, notes that one of the (Indians) most urgent problems is to improve productive efficiency to increase the national wealth, and thereby to raise appreciably and standard of living of the people. The report went on to recommend the setting up of technical schools, polytechnics, Strengthening multi-purpose education, central technical institutions etc., in fact the infrastructure that would procure a large technical manpower. Establishment of multi-purpose schools was a major contribution of this commission.

EDUCATION COMMISSION (D.S. KOTHARI) 1964-66

After the appointment of Mudiliar Commission, to deal with all aspects and sectors of education and to advise Government for evolution of a National System of Education in the

country, the Education Commission was appointed under the chairmanship of D.S. Kothari. Based on this commission's report, the National Policy on Education 1968 was formulated. This commission reviewed the development of education in India in the modern period and particularly since independence and came to the conclusion that Indian education needs a drastic reconstruction, almost a revolution, to realize the constitutional goals and to meet the various problems facing the country in different sectors. This comprehensive reconstruction, said the commission, has three main aspects:

1. Internal Transformation;
2. Qualitative Improvement
3. Expansion of Educational Facilities

INTERNAL TRANSFORMATION

The Commission in the opinion of the Commission, "no reform is more important or urgent than to transform education to endeavour to relate it to the life, need and aspiration of the people". This is extremely significant because it is only such a transformation that can make education a powerful instrument of social, economic and cultural transformation necessary for the realization of our national goals and has emphasized the following programmes to bring about this transformation:

- Science Education
- Work Experience
- Vocational Education
- Common Schools
- Social and National Service
- Language Policy
- Promotion of National Unity
- Elasticity and Dynamics

QUALITATIVE IMPROVEMENT

The commission has emphasized the need for dynamic and evolving standards of education. For this purpose the Commission has recommended the adoption of the following measures.

1. Utilization of Facilities:
2. Organization of Educational Structure and Teachers Stages and Education:
3. The Commission recommended drastic changes in curricula, teaching methods and evaluation.
4. Selective Development.

EXPANSION OF EDUCATIONAL FACILITIES:

The education commission at all stages, has recommended expansion of education facilities, but more priority was given for internal transformation and qualitative improvement. The following programmes were recommended:

1. Adult Literacy.

2. Primary Education: good and effective primary education should be provided to all children. The objective of the educational policy should be to provide five years of such education by 1975 and seven years of such education by 1985.
3. Secondary and Higher Education: this should be expanded on a selective basis and the output of educational institutions should be broadly related to manpower needs or employment opportunities.

It is criticized that the commission did not give a clear picture of developed. The Education Policy Resolution of 1968, in fact has very little to do with overall recommendations, of the Kothari Commission. The following six recommendations of the commission were picked up by the government and intensive efforts were made to implement them:

- Use of regional language as medium of instruction at the university stage.
- Non formal education.
- Education for the people i.e. Elementary and Adult Education.
- 10+2+3 Pattern.
- Teachers Salaries.

NATIONAL EDUCATION POLICY 1968

Based on the government report and recommendations of the education commission (1964-66), the primeminister Indira Gandhi announced the first National Policy on Education in 1968, which called for a radical restructuring and equalize educational opportunities in order to achieve national integration and greater cultural and economic development. The policy called for fulfilling compulsory education for all children up to the age of 14, as stipulated by the constitution of India and the better training and qualification of teachers. The policy called for focus on learning of regional languages outlining the three language formula to be implemented in secondary education, the instruction of the English language, the official language of the state where the school was based, and Hindi, the national language. Language education was seen as essential to reduce the gulf between the intelligentsia and the masses. Although the decision to adopt Hindi as the national language had proven controversial, the policy called for use and learning of Hindi to be encouraged uniformly to promote a common language for all Indians. The policy also encouraged the teaching of the ancient Sanskrit language, which was considered an essential part of Indians culture and heritage. The NPE of 1968 called for education spending to increase to six percent of the national income.

NATIONAL EDUCATION POLICY 1986

Having announced that a new policy was in development in January, 1985, the government of Prime Minister Rajiv Gandhi introduced a new National Policy on Education in May 1986. The new policy called for special emphasis on the removal of disparities and to equalize educational opportunity, specially for Indian women, Scheduled Tribes and the Scheduled Caste communities. To achieve these, the policy called for expanding scholarships, adult education, recruiting more teachers from the SCs, incentives for poor families to sent their children to school regularly, development of new institutions and providing housing and services. The NPE called for a child centred approach in primary education and launched “operation blackboard” to improve primary schools nationwide. The policy expanded the Open University System with the Indira Gandhi National Open University, which had been

created in 1985. The policy also called for the creation of “rural university” model, based on the philosophy of Indian leader Mahatma Gandhi, to promote economic and social development at the grassroots level in rural India.

NATIONAL EDUCATION POLICY 1992

The National Policy on Education was modified in 1992 by the government programme of action (POA), 1992 under the National Policy on Education 1986 envisaged conduct of a common entrance examination on all Indian basis for admission to professional and technical programmes in the country. For admission to Engineering and Architecture/Planning programmes, Government of India vide Resolution dated 18 October 2001 has laid down a Three-Exam Scheme (JEE and AIEEE) at the national level and the state level Engineering Entrance Examinations (SLEEE) for state level institutions- with an option to join AIEEE . this takes care of varying admission standards in these programmes and helps in maintenance of professional standards. This also solves problems of overlaps and reduces physical, mental and financial burden on students and their parents due to multiplicity of entrance examinations.

RECENT REFORMS

A number of national policy of education and the program of action schemes and programmes were launched in pursuance of the emphasis embodied in the NPE and POA. These included:

-The **Operation Blackboard Scheme** started in 1987-88, which aimed at improving the classroom environment by providing infrastructural facilities, additional teachers and teaching-learning material to primary schools.

-The scheme of **Restructuring and Reorganisation of Teacher Education**, started in 1987, aims to strengthen the institutional base of teacher training by taking up special programmes for training of teachers in specified areas and other non institutional training programmes.

-The **District Primary Education Programme** launched in 1994, is assisted by the world Bank, European Commission, Department for International Development of the United Kingdom, the Netherlands and the United Nations International Children Emergency Fund. Its aims at operationalizing the strategies for achieving UPE/UEE through district-specific planning and disaggregated target setting in low female literacy districts and builds on the successful total literacy Campaign which has created a favourable climate for universalization.

-Another externally-assisted programme with a specific focus on a gender is **Mahila Samakhya**, started in 1989 in five states. It aims to promote womens education and empowerment in rural areas, particularly women in social and economically marginalised groups.

-The National Programme of Nutritional Support to primary education commonly known as **mid- day programme** was launched in 1995. It aims to give a boost to universalization of primary education by increasing enrolment, retention, and attendance and simultaneously improving the nutritional status of students in primary classes.

-The scheme of **non formal education**, introduced in 1977-78 on a pilot basis and expanded in subsequent years, focused on out of school children in the 6-14 age group who have remained outside the formal system due to socio-economic and cultural reasons. The scheme was initially limited to ten educationally backward states, covering urban slums, hilly, tribal and desert areas.

- The **Sarva Shiksha Abhiyan** was launched towards the end of the Ninth Plan to achieve the goal of UEE through a time-bound integrated approach, in partnership with states. The programme, which aims to provide elementary education to all children in the 6-14 age-group. Spend on education as proportion of GDP has increased from 3.8% to 6% (target).
- Government to introduce **Computer Education Training** in 108,000 government and government aided schools at a total expenditure of GBP 1 billion, which will benefit 15 million students and help train 1 million teachers in computer literacy.
- 6000 new high quality model schools to be set up, with at least one school in each revenue block.
- Allocated an outlay of GBP 4 billion under the supervision of the Prime Minister for Skill Development Mission.
- Expansion with the establishment of 30 new universities.
- Right to Education Bill came into force on the 1st of April 2010. RTE will provide compulsory and free education for all children between 6 to 14 years of age.
- FDI allowed in Education Sector as India becomes an attractive economy to facilitate students avail quality learning in competitive world.
- Abolishment of compulsory CBSE board exam for class X from 2010-11 and introduce of grading system to de-traumatize education. Comprehensive Compulsory Evaluation in place of examination.
- Foreign Examinational Institutions (regulation of entry and operations) Bill. The Bill seeks to regulate the entry and functioning of foreign education providers in India.
- Autonomous, Independent agency for assessment and accreditation in higher education wo major bills that promise to change the face of higher education-accreditation of higher educational institutions and setting up of educational tribunals, cleared.
- HRD to formulate a policy for public-private partnerships in school education. Various models would be evolved “on how best to get private investment in schools”.
- Uniform core curriculum proposed for Mathematics and Science in all school boards across the country. This will ensure the level of uniform and equivalence of equality and pave way for a common entrance exam for admission to professional courses.

CONCLUSION

India has paid considerable attention on education at different levels since independence. Improvement in literacy rates and enrolments at different levels of education reveals that these efforts have been rewarded to some extent. The infrastructure for the development of education has been expanded greatly. However, the issues and problems of access, equity, quality, relevance and inclusiveness in education, especially in elementary education of the country right from the beginning continue to haunt it even today.

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THE ROLE OF VEDANTA IN THE MAJOR NOVELS OF R.K. NARAYAN

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ABSTRACT

*In R.K. Narayan's novels including **The Financial Expert, The Vendor of Sweets, The English Teacher, The Guide** and **A Tiger for Malgudi** there is a subdued, silent, subterranean flow of Vedanta. The Vedantic philosophy of self and self-realization, the concept of Maya or illusion, Avidya or ignorance, the concept of Nishkama Karma or action without attachment, the four Purusharthas and Ashramas have been artistically incorporated and comprehensively elaborated in his novels by R.K. Narayan. These novels are a spiritual odyssey of the protagonists. Narayan's protagonists initially lead a hectic, indulgent and active life. They become a prey to Maya as they have desires and longings of one or other type. Their obsession for possession becomes the root cause of their sorrows and sufferings. Their agony makes them realize their real self. They start understanding the value of life based on moral and spiritual values. In the course of the novel, they are reformed from bad to good and from good to better. This reformation generally culminates in the total realization. Narayan uses the technique of flashback to help the protagonist resort to self-analysis and self-criticism. In this process the protagonist realizes standing of life. This results in a certain fulfillment of the self, however small or insignificant this self-realization may appear, yet it is there. This realization or discovery of 'self' on the part of the protagonist, shows his awareness of Vedantic philosophy which lays at the heart of all R.K. Narayan's novels. R.K. Narayan, in his novels, deals with the themes including attachment and its consequences, obsession for materialistic possessions and its aftermaths, and realization of the essence of life or man's initial steps on the path of renunciation or sannyasa. In the course of the novels, the worldly possession and attachments lose their values and the protagonist's mind is immersed in spiritual faith. The novelist executes all the themes skillfully. His diverse themes unfold various aspects of Vedanta. Narayan's chief protagonists, too weak to absorb sorrows, losses and frustrations, resort to self-analysis, self-realization and awareness of true essence of life. This spiritual maturity is the absorption of the essence of Vedanta. Narayan's Vedantic philosophy, inherent in his works can be viewed through the ups and downs of the protagonist's life. The chief protagonists are placed between the ethos of long-cherished traditions and maturity. They are constantly striving to achieve maturity. They are constantly striving to achieve maturity. They face a clash between traditionalism and modernism which gradually generates a sense of moral duty on one hand and the sense of wrong doings and guilt on the other. Throughout*

the novel this clash goes on parallel strata and finally the hero descends on the real and Vedanta ground.

Key Words: Self-realization, Reformation, Self-Illumination, Renunciation, Metaphysics.

A perusal of R.K. Narayan's novels from Vedantic points of view reveals that the novelist's philosophic vision is at work in these novels. Narayan's *The Vender of Sweets* is concerned with the search for meaning by the chief protagonist, Jagan. Jagan, a prosperous widower, a sweet vendor and an ardent worshipper of goddess Lakshami, believes in *The Bhagwad Gita* which is a source of principles and values for him. In the beginning of the novel one comes to know that his soul has been captivated by Maya. He has a strong and profound attachment to his son, Mali as well as the money. He longs for salvation through his son but he is disappointed as Mali wastes his money and brings home an American girl, Grace. Jagan gets the greatest shock when he comes to know that Mali and grace are not married.

Jagan now realized that his salvation lies not in reforming his son but it lies in the realization of his self and his ultimate purpose of life. He renounces the world of illusion for the sake of realizing the ultimate truth. He may not be successful but he has surely found a new path which he wishes to explore. He realizes:

"I am off to a retreat. I'm sixty and in a new janma."¹

The liberation of soul from Avidya through lower level of awareness is the initial step in the Vedantic way of life as enunciated in *The Bhagwad Gita*. The path leading to the realization of one's true self is abound in worldly hurdles and obstacles in the form of attachments. Jagan does not know the way to this end. Gradually he starts realizing the need to retreat:

"Yes, yes, God knows that I need a retreat. You know, my friend, at some stage in one's life one must uproot oneself from the accustomed surroundings and disappear so that others may continue in peace."²

Jagan is set for spiritual destination in the journey of life. The wayward behaviour of his son shatters his illusions. He detaches himself from the worldly life and his routine. He feels that his hankering after money has given him nothing. So he decides to reduce the prices of sweets as he declares that he has had enough. The Hindu scriptures emphasis the need to renounce the world after fulfilling one's responsibilities in this world of Maya. Jagan agrees to the age old ancient wisdom and renounces the world. William Walsh in his essay *Narayan's Maturity* thinks:

"What is necessary to make this Jagan into a world renouncing Jagan was supplied by the Indian religious tradition."³

Jagan may not have become a saint but he is definitely on the path of self-realization. His transformation is not instantaneous. This spiritual journey is a painful and gradual process. Everyone has to work for his truth, he is transformed and his quest for higher values of life begins. The urge for conversion lies deep in the subconscious which is the storehouse of religious sentiments. Now, he is free from worldly attractions. Eternity begins to unfold before him. Commenting on Jagan's renunciation Jayant K. Biswal writes:

"From the tame docility of his earlier life and from the bondage of his shop and son, he moves to metaphysical experiences."⁴

Jagan, ultimately, abandons Mali and Malgudi and reaches an alienated and deserted place of silence and tranquility. The world of flesh is left behind and the world of spirit is acquired. He searches for the spiritual meaning of life. His realization is based on the Vedantic philosophy. Praising Narayan's skill of using the Vedantic philosophy in his novels Patrick Swinden comments:

“Narayan was to find more efficient ways of bringing Hindu Mythology from the background into the foreground of his novels”⁵

R.K. Narayan's most popular novel *The Guide* consists of two cycles of events. The first cycle of events completes with Raju's rise and fall as a tourist guide. He seduces Rosie and from a successful tourist guide he becomes manager of the famous dancer Nalini. This part of the novel is the story of attachment and its inevitable consequences. The other part of the story of the story is adventures of Raju as a Swami. It has for its theme the progress towards realizing one's true self. The first part ends with Raju landing himself in jail for forgery. The second cycle ends with Raju's sagging down in the river.

In terms of Vedanta, Rosie may be compared to Maya. She is a symbol of the Samsara. Raju is victim of Maya. He is alluded into taking false for real. According to Sankara's belief, jiva forgets the real purpose of life under the influence of Maya. According to Vedanta, every individual is capable of gaining self-knowledge and he, ultimately, gains it because it is the ultimate goal of his life to realize his true nature. Raju, in the beginning deviates from his goal but later he sets for self-realization as S.C. Harrex says:

“He commits the cardinal Hindu mistake of falling into the trap of Maya becoming imprisoned by his passion for attachment and the illusionary bounds of self.”⁶

According to the Vedantic philosophy, to correct oneself, one needs to know one's shortcomings. This is the first step in the realization of one's self. Raju realizes his mistakes when he recalls his past. He makes up his mind to abandon this illusory world of Maya by becoming a saint. The process of saintliness and transformation is gradual and painful. When he is ready to undertake the fast without any personal motive, he is following the philosophy of *The Gita* which enunciate the philosophy of Karma i.e. to do one's duty without any desire for reward. Lakshmi Holmstrom, in this context comments:

“The theme of attachment and its consequences is present but it becomes subsidiary to another theme, the progress towards realizing one's true nature. This theme again leads to the idea of release from the wheel of existence and Narayan uses the idealized role of the mythical sage to explore it.”⁷

Eventually, the sinner turns a saint. The transformation of his character is complete when the writer comments:

“For the first time in his life he was learning the thrill of full application, outside money and love, for the first time he was doing a thing in which he was not personally interested.”⁸

Raju, ultimately realizes the real essence of his life and ascends the spiritual ladder so that the jiva may be one with God. R.K. Narayan's most philosophic novel *A Tiger for Malgudi* is the story of a 'Tiger Hermit' and the tiger named Raja. In the story the "Tiger Hermit" employs his powers to save the tiger and transform it working on the basis that, deed within, the core of personality is the same in spite of differing appearances and categories, and with the right approach one could expect the same response from a tiger as from any normal human being.

According to *The Bhagwad Gita*, God is present in each and every being and particle. Each and every being has a soul and that soul has deep and strong intercommunication with God. Narayan seems to follow the same principle of *The Bhagwad Gita* in his novel *A Tiger for Malgud*.

Before coming in contact with the Master the tiger (Raja) was a dweller of the forest. At that time he ruled over the denizens of the forest. Almost each and every being of the forest was afraid of him. In fact, before having any spiritual knowledge, he was trapped by Maya. Though the Hindu scriptures talk about the influence of Maya on man, all beings come within the dazzling ambit of Maya. Narayan deliberately picks up the elementary passion, i.e. Tamsik Gunas in a spontaneous form in a beast. In *The Bhagwad Gita* indolence, ignorance and illusion are attributed to Tamo Guna which generates possessiveness, anger and a sense of attachment. Raja is also occupied with these layers of darkness.

Narayan traces various stages of evolution in Raja. Some human weaknesses like Kalesh and Vikara are the elementary obstacles on the way of evolution. *The Bhagwad Gita* says that the annihilation of human weaknesses and evils is really the first step on the path of transformation in the self and realization of the self. In the novel Raja undergoes some abrupt and drastic changes and eventually realizes his self. This transformation from a beast into an enlightened soul is the central theme of the novel. The novel is, in fact, a practical document of the Indian philosophy. Talking about the spiritual aspect of the novel R. P. Chaddas writes:

“This is almost a spiritual odyssey from the early wild days through the circus and then to the training by the ring master.”⁹

According to the Hindu scriptures, man’s spiritual evolution starts with the transformation of his attitude. After that bloody fight he undergoes the process of transformation. Raja epitomizes the three Gunas as prescribed in the Indian philosophy. He represents philosophy. He represents the Tamsik Guna in the initial stage of his life in the jungle. His Rajasik Guna is overwhelmingly expressed in the captain’s company. His emotions and desires correspond to Rajas Guna at this stage of his life. Satva Guna overpowers Rajas Guna when he is in the company of his spiritual Guru, the Master. They lead a pure, peaceful and selfless life in the Mempri forest.

According to the Vedantic philosophy and Hindu metaphysics, the journey to self-realization is incomplete without the mentor, the Guru. Following this age-old tradition, Narayan gives the role of the Guru to the Swami and his Shishya is Raja. Swami guides Raja on the path of spirituality. He preaches him that on the way of getting spirituality one has to suffer a lot. Under the profound influence of the Swami’s spiritual and moral preaching, Raja determines to undergo the process of purgation and purification. He passes through the process of repentance and remorse after every hunt. He curtails his hunting activities and prefers buds and root or hunger to reckless hunting as he says:

‘I tried to attain some kind of purification by reducing the frequency of seeking food.’¹⁰

Raja’s attitude towards life keeps on changing and getting refined. In the beginning his sole aim was to hunt the wild animals but, now in the company of the Swami, he thinks more about the inner self than the outside world. According to the Vedantic philosophy, one who renounces the outside world can realize the inner transformation. Raja, eventually wants to shed his physical encasement in order to achieve sublimity. According to the Vedantic

philosophy, Moksha or salvation is the supreme spiritual ideal. Moksha is a state of undiminishing bliss which puts an end to all hurries and worries of the earthly life as well as all sacrifices, quells, doubts and discontentment. Once one attains Moksha then there is no retreat to Samsara. It is the realization of one's real self. The Swami attains this state of realization:

“I achieved complete anonymity, and shed purpose of every kind.”¹¹

According to the Vedantic philosophy, man enters the Vanprastha Asharam only when he gets himself free from all the earthly duties. Both the Swami and Raja have got themselves free from all the duties and responsibilities of the worldly life to attain spirituality. Now they are the seekers of self-illumination. They spend maximum of their time in prayers and philosophical discourses. The tiger feels the inner transformation and a touch of spirituality in his soul. They, eventually become successful in attaining self-illumination they liberate themselves from all illusions. The darkness of Avidya vanishes in the end and they realize their soul getting illuminated with the celestial light of the sublimity.

In short, Narayan does not leave his chief protagonists unchastened. They eventually understand the value of leading life based on moral and spiritual values. They, ultimately realize the essence of life or true self. This realization or rediscovery of the self on the part of the protagonist shows his awareness of the Vedantic philosophy which lays at the heart of all R.K. Narayan's novels.

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STUDY OF ELASTIC CONSTANTS FOR VARIOUS SOLIDS UNDER VARYING CONDITION OF TEMPERATURE AND PRESSURE

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ABSTRACT

The equation proposed by Liu and He seems to be suitable for temperature dependence of bulk modulus for low temperature range. In this paper, a new relationship for the temperature dependence of elastic constants are given using a new expression for the temperature dependence of bulk modulus and the formulation derived from Tallon's method based on thermodynamic analysis. The proposed relationship is applied to study elastic constants of NaCl, KCl, MgO and CaO. The results obtained are compared with experimental data under the effect of high temperature.

Key Words: Elastic Constants, Temperature Dependence, Bulk Modulus.

The theory of the temperature dependence of elastic constants was first developed by Born and Co-workers [1]. In this theory, the temperature dependence of elastic constants arises from the variation of the lattice potential energy due to anharmonicity. The knowledge of elastic constants is essential to interpret the thermodynamic and elastic dimensions of solids at high temperatures. The elastic constants provide a ground for examining of Earth's deep interior [2]. The behaviors of elastic constants under the effect of high pressure and high temperature have attracted the attention of the theoretical as well as experimental workers [3-6] because of their requirement in geophysical and geochemical problems. The ceramic science requires the knowledge of temperature dependence of elastic properties of materials. It is useful to propose a simple and straight forward method for predicting high temperature elastic constants. Potential independent methods have advantage over interionic potential [7-8] based methods because for complicated solids, minerals etc. it becomes difficult to write potential. One of the most interesting properties of ionic crystals is the fact that their elastic constants do not satisfy Cauchy relation. This reveals that the central or pair-wise potentials are not entirely adequate and one should also take into the account the existence of non-central and many-body interactions.

THEORY

Liu and He [9] obtained the equation

$$\frac{K_T}{K_{T_0}} = \exp \left[-\delta_{T_0} \alpha_0 (T - T_0) \left(1 + \frac{\delta_{T_0} \alpha_0 (T - T_0)}{2} + \frac{\delta_{T_0}^2 \alpha_0^2 (T - T_0)^2}{3} \right) \right] \quad \text{----- (1)}$$

Where K_{T_0} is the value of K_T at initial temperature $T = T_0$ and at atmospheric pressure.

The isothermal Anderson Gruneisen parameter is defined as

$$\delta_T = - \frac{1}{\alpha_{K_T}} \left(\frac{\partial K_T}{\partial T} \right)_P \quad \text{----- (2)}$$

α and K_T are the coefficient of volume thermal expansion and isothermal bulk modulus respectively.

$$\alpha = \frac{1}{V} \left(\frac{\partial V}{\partial T} \right)_P \quad \text{_____ (3)}$$

$$\& K_T = \frac{1}{V} \left(\frac{\partial P}{\partial V} \right)_T \quad \text{_____ (4)}$$

Equation (1) is used to compute the value of K_T at different T using the input data [12] given in table (1).

The results obtained from [10] are included in table (2) for sake of comparison. It is found that equation (1) improves the results and hence equation (1) seems to be suitable for temperature dependence of bulk modulus. This encourages extending equation (1) for the study of the variation of elastic moduli.

This method is adequate for small expansions with the approximation that α depends linearly or quadratically on temperature [10]. Singh et al [11] suggested that α depends on third polynomial of temperature as

$$\alpha = \alpha_0 + \alpha_0' (T - T_0) + \frac{\alpha_0''}{2!} (T - T_0)^2 + \frac{\alpha_0'''}{3!} (T - T_0)^3 \quad \text{_____ (5)}$$

Where α_0 , α_0' and α_0'' are respectively first, second and third order temperature derivative of α at initial temperature $T = T_0$.

Here most widely used thermodynamic approximation is that product αK_T remains constant.

$$\text{Using equation (2) we have } \delta_T = - \frac{1}{\alpha^2} \left(\frac{\partial \alpha}{\partial T} \right)_P$$

Assuming δ_T to be independent of T [13] we get

$$\alpha_0' = \left(\frac{\partial \alpha}{\partial T} \right)_P = \delta_{T_0} \alpha_0^2 \quad \text{_____ (6)}$$

$$\alpha_0'' = \left(\frac{\partial^2 \alpha}{\partial T^2} \right)_P = 2 \delta_{T_0}^2 \alpha_0^3 \quad \text{_____ (7)}$$

$$\alpha_0''' = \left(\frac{\partial^3 \alpha}{\partial T^3} \right)_P = 6 \delta_{T_0}^3 \alpha_0^4 \quad \text{_____ (8)}$$

Where δ_{T_0} is the value of δ_T at T_0 and atmospheric pressure i.e. $P = 0$.

So equation (5) can be written as

$$\alpha = \alpha_0 + \delta_{T_0} \alpha_0^2 (T - T_0) + \delta_{T_0}^2 \alpha_0^3 (T - T_0)^2 + \delta_{T_0}^3 \alpha_0^4 (T - T_0)^3 \quad \text{_____ (9)}$$

From equation (2) and (9) we may get

$$\frac{K_T}{K_{T_0}} = \exp \left[-\delta_{T_0} \alpha_0 (T - T_0) \left(1 + \frac{\delta_{T_0} \alpha_0 (T - T_0)}{2} + \frac{\delta_{T_0}^2 \alpha_0^2 (T - T_0)^2}{3} + \frac{\delta_{T_0}^3 \alpha_0^3 (T - T_0)^3}{4} \right) \right] \quad \text{_____ (10)}$$

The generalized form of equation (10) is

$$\frac{M}{M_0} = \exp \left[-\delta_{M_0} \alpha_0 (T - T_0) \left(1 + \frac{\delta_{M_0} \alpha_0 (T - T_0)}{2} + \frac{\delta_{M_0}^2 \alpha_0^2 (T - T_0)^2}{3} + \frac{\delta_{M_0}^3 \alpha_0^3 (T - T_0)^3}{4} \right) \right] \quad \text{_____ (11)}$$

This equation may be written for second order elastic constants (SOEC) in the form

$$\frac{C_{ij}}{C_{ij_0}} = \exp \left[-\delta_{ij_0} \alpha_0 (T - T_0) \left(1 + \frac{\delta_{ij_0} \alpha_0 (T - T_0)}{2} + \frac{\delta_{ij_0}^2 \alpha_0^2 (T - T_0)^2}{3} + \frac{\delta_{ij_0}^3 \alpha_0^3 (T - T_0)^3}{4} \right) \right] \quad \text{_____ (12)}$$

This equation may be used to compute the temperature dependence of Second Order Elastic Constants (SOEC) of NaCl, KCl, MgO and CaO. The results thus obtained are given table (III-VI) along with experimental data [12, 14].

RESULTS AND DISCUSSION

In case of NaCl, KCl, MgO and CaO there are only three Second Order Elastic Constants (SOEC) C_{11} , C_{12} and C_{44} . For these four ionic solids under study the results obtained for elastic constants give good agreement with the available experimental data [12, 14]. The results obtained are reported in Table (III - VI) along with experimental data for comparison.

The variation of C_{11} with the temperature is found to be larger as compared with C_{12} and C_{44} . The constant C_{11} represents elasticity in length. A longitudinal strain produces a change in volume without a change in shape. The volume change is related to the temperature and produces a large change in C_{11} . Constant C_{12} and C_{44} are associated with elasticity in shape. The temperature strain produces a change in shape without change in volume. Hence C_{12} and C_{44} are less sensitive as compared to C_{11} .

Eq. (12) may be extended to calculate SOEC of more complicated solids and minerals like CaF_2 , Mg_2SiO_4 etc. It is also evident from the results that the deviation is found in high temperature. The calculated value of percentage deviations at highest temperature are reported in table (VII). Keeping these results into consideration it can be suggested that if the dependence of volume thermal expansion α is taken on higher polynomial of temperature say fourth polynomial the results will be better.

Table I. Values of input parameters [12] α_0 is $[10^{-6}K^{-1}]$

Parameters	NaCl	KCl	MgO	CaO
α_0	118	110	31.2	30.4
δ_0	5.2	5.84	5.3	6.19
δ_{110}	6.27	7.48	6.27	7.3
δ_{120}	0.051	-3.31	-2.49	-2.0
δ_{440}	2.34	3.05	2.57	2.9

**Table II. Values of Bulk Modulus K_T in $[10^3 \text{ Bar}]$ at different temperature T for NaCl
 $\delta_{T_0} = 5.95 [10]$**

T (K)	K_T		
	Ref [10]	Exp [12]	Present
300	240.0	240.0	240
400	219.7	224.1	223.2
500	199.9	205.0	206.3
600	180.9	188.0	189.6
700	151.2	174.0	172.9
800	145.6	156.0	156.6
900	128.8	140.9	140.6
1050	107.4	119.0	117.5

Table III. Calculated values of C_{11} , C_{12} and C_{44} (in GPa) at different temperatures along with experimental data [12] obtained under Adiabatic Condition for NaCl

T (K)	C_{11}		C_{12}		C_{44}	
	Exp.[12]	Present	Exp.[12]	Present	Exp.[12]	Present
300	49.5	49.5	13.2	13.20	12.79	12.79
350	47.6	47.7	13.3	13.20	12.62	12.61
400	45.8	45.8	13.4	13.19	12.43	12.44
450	44.1	44.0	13.5	13.19	12.26	12.26
500	42.4	42.2	13.6	13.18	12.09	12.08
550	40.5	40.4	13.5	13.18	11.90	11.91
600	38.7	38.5	13.2	13.18	11.71	11.73
650	37.0	36.7	13.1	13.17	11.52	11.55
700	35.4	34.9	13.1	13.17	11.31	11.38
750	33.7	33.2	12.9	13.16	11.10	11.20

Table IV. Calculated values of C_{11} , C_{12} and C_{44} (in GPa) at different temperatures along with experimental data [12] obtained under Adiabatic Condition for KCl

T (K)	C_{11}		C_{12}		C_{44}	
	Exp.[12]	Present	Exp.[12]	Present	Exp.[12]	Present
300	40.1	40.1	6.6	6.6	6.35	6.35
350	38.4	38.5	6.8	6.7	6.28	6.24
400	36.9	36.8	7.0	6.8	6.21	6.14
450	35.4	35.2	7.1	7.0	6.15	6.03
500	33.8	33.5	7.2	7.1	6.11	5.92
550	32.3	31.9	7.3	7.2	6.05	5.82
600	31.1	30.2	7.5	7.3	5.96	5.71
650	29.7	28.6	7.7	7.4	5.87	5.60
700	28.2	27.0	7.7	7.6	5.79	5.50
750	26.6	25.4	7.7	7.7	5.69	5.39
800	25.2	23.9	7.8	7.8	5.57	5.29
850	23.5	22.3	7.7	7.9	5.57	5.18

Table V. Calculated values of C_{11} , C_{12} and C_{44} (in GPa) at different temperatures along with experimental data [12] obtained under Adiabatic Condition for MgO

T (K)	C_{11}		C_{12}		C_{44}	
	Exp.[12]	Present	Exp.[12]	Present	Exp.[12]	Present
300	298.96	298.96	96.42	96.42	157.13	157.13
400	292.94	293.11	97.17	97.17	155.78	155.87
600	280.62	281.41	98.00	98.67	152.84	153.35
800	268.22	269.72	98.54	100.17	149.68	150.83
1000	255.74	258.05	98.74	101.66	146.52	148.31
1200	243.32	246.39	98.38	103.16	143.06	145.79
1400	230.96	234.78	97.56	104.16	139.54	143.27
1600	219.04	223.22	96.44	106.16	136.24	140.76
1800	208.18	211.75	95.02	107.66	133.12	138.24

Table VI. Calculated values of C_{11} , C_{12} and C_{44} (in GPa) at different temperatures along with experimental data [12] obtained under Adiabatic Condition for CaO

T (K)	C_{11}		C_{12}		C_{44}	
	Exp.[12]	Present	Exp.[12]	Present	Exp.[12]	Present
300	220.5	220.5	57.67	57.67	80.03	80.03
400	215.7	215.6	57.96	58.02	79.35	79.32
500	210.7	210.7	58.23	58.37	78.70	78.62
600	205.9	205.8	58.44	58.72	77.94	77.91
700	201.2	200.9	58.66	59.07	77.18	77.20
800	196.6	196.0	58.81	59.42	76.46	76.50
900	192.0	191.1	58.98	59.77	75.72	75.79
1000	187.2	186.2	58.98	60.12	74.92	75.09
1100	182.7	181.3	58.96	60.47	74.17	75.98
1200	178.1	176.5	58.99	60.82	73.48	73.67

Table VII. Percentage Deviations at Highest Temperature using Present Theory for which the experiments data are available

Solids	Temperature	C_{11}	C_{12}	C_{44}	K_T
NaCl	750 K	2.01	2.01	0.81	5.33
KCl	850 K	6.04	2.85	7.00	6.97
MgO	1800 K	1.6	13.31	3.83	4.23
CaO	1200 K	0.94	3.10	0.34	0.51

CONCLUSION

A simple and straight forward method has been presented to study elastic properties of NaCl, KCl, MgO and CaO under varying conditions of temperature and pressure. This method can be extended to more complicated solids like minerals of geophysical importance and application at higher temperature.

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ANCIENT REPUBLIC STATES: STUDY OF DOWNFALL THEORIES

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ABSTRACT

The tribal republics of North West enjoyed political existence for more than one thousand years in the history of India. During this period, they displayed their dominance and achieved a great heroic reputation. On the basis of literary and archaeological sources, it seems that they flourished from 6th century B.C. to 4th century A.D. These were Sixteen Mahajanpadas in 6th Century B.C., some of them were republics. Lastly all these janapada became the part of Mauryan Empire. After decline of Mauryan Empire there was emergence of some Republics with tribal features. Their power and prestige however seems to have suffered considerably at the hands of Samudragupta, the Gupta emperor, as their subsequent history is unknown. Let us now look into the causes for the disappearance of the republican form of government in its struggle against monarchy by C. 400 A.D.

Key Words: Arathsastra, Ancient Indian History, Republic State, Monarchy.

1. KAUTILYA'S THEORY

Kautilya, an exponent of the Arthashastra theory said that the happiness of man in society was possible through the governmental functions only under a king. According to him royal authority is the primary basis of social existence. A state of war and violence over powers a society. If there is no coercive authority to conduct the affairs of the people, the end of such a state of war and violence is possible only under the regal authority.¹

When this great statesman started to carve out a big empire for Chandragupta Maurya, the whole of northern India was studded with numerous republican states. The very existence of these republics was incompatible with the imperialistic designs and centralized monarchical constitution of Kautilya.² The Indian Machiavelli proceeded with the task of annexing the republics with a grim resolve. His aim was to make his master the sole monarch of all the republics.³

Thus, the Mauryan Prime Minister laid down the imperial policy towards these republics in specific terms: "Those which are united (in a league) should be treated with the policy of subsidy and peace, for they are invincible. Those which are not united should be conquered by army and disunion, thus, the monarch (ekraja) should behave towards the samglia.⁴ As a result of this hostile policy, the weaker republics succumbed and were lost in the ambitious territorial sea of the imperialists.⁵

It is some time argued that the adoption of Kautilya's policy by Chandragupta Maurya led to the disappearance of the republican states which has existed since the early Vedic According to A.K. Majumdar⁶ that this accusation, however, is not tenable. Firstly, Kautilya advocated the destruction of kingdoms as well, and the Maurya empire stood on the graves of smaller

states, both republican and monarchies. Secondly Kautilya does not show any hostile attitude towards the samghas. He begins the chapter XI on samghas by stating 'The gain of a samgha is the best among gains of an army and an ally. It should however be emphasized that Kautilya ends his chapter with a benevolent attitude towards the samghas to whom his advice is: 'The samghas should also guard themselves against these deceitful tribes by single monarch, and the samgha-mukhya (head of the clan) should remain just in behaviour towards the members of the samgha, beneficial, amiable, self-controlled, mix with people and act according to their will.'⁷ This shows that Kautilya had to particular animus against the republics and had warned them against the guiles which a king might adopt towards them. The result of this policy was that the stronger republics like the Yaudheyas, the Malavas, etc. survived Mauryan Imperialism.⁸ Thus, the individual dies, but the spirit survives. Hence the Kautilya's policy and Mauryan imperialism proved to be a temporary setback. Dr. Shobha Mukerji⁹ concluded that the beginning of the end of the history of Indian republics had actually taken place during the Mauryan Empire.

2. INTERNAL DISUNITY OF THE REPUBLICS

The weakness of the gana does not lay either in the organization or the military power. The real danger is more internal than external because enemy can be suppressed, vanquished and kept out by a well balanced policy. But the actual danger is in internal politics created by the disgruntled and disloyal section of the organisation.¹⁰ They alone form the clog in the wheel of a gana's progress.¹¹ Internal dissensions led to breaking of ganas. By this we should understand that sometimes internal jealousies, personal rivalries and acute partisan feeling caused to their downfall. This weak spot in the republics was underlined both in the Arthashastra and the Santi-Parva by Kautilya and Bhishma respectively. The Buddhist literature¹² also throws some light on this very particular reason.

Kautilya excels in unscrupulousness, ingenious devices, and most shocking and perverse means, which he invented and used for the one end of sowing dissension among the republics. He lays down the crooked doctrine thus. "Spies gaining access to all the corporations (republics) and finding out jealousy, hatred and other causes of quarrel among them, should sow the seeds of a well planned dissension among them".¹³

Similarly, the Santi Parva¹⁴ stresses that internal dissension and disunity are the root cause of the ruin of the ganas.

The most important part of the discourse in the Santi Parva, are the slokas from 23-31 where the pattern of government of the ganas is described. The author of the Santiparvan, therefore makes it clear that the department of intelligence and secrecy of the resolution of state should remain in the hands of the president.¹⁵ It is very difficult for a policy to be kept secret when the knowledge is shared by many. All the members of the gana do not deserve to be admitted to such knowledge, but the leaders among them (gana-mukhyah) should meet secretly and take decisions which would secure the welfare of the entire gana.¹⁶

Economic resources and self protective powers increase if the units of a republic remained together. Disunion amongst the equals and disloyalty to superiors are the death knell for the self governing people. Thus the small republics used to be broken into still smaller units. The north western region presented the sorry spectacle of a disunited house. This part of India was divided into a number of states. They "engaged in petty internecine feuds and jealousies due to which some of them found their chance in seeking alliance with an alien aggressor".¹⁷ This

paved the path of an easy fall of the militarily powerful republics. Dr. Shobha Mukerji¹⁸ points out that “there was no towering personality of the type of Chandragupta Maurya who successfully repelled the invasion of Selukos Nikator, nor was there any statesman like Sri Krishna to bring the disgruntled leaders under his able leadership by policy of self-restraint and tolerance.

3. FOREIGN INVASIONS THEORY

Foreign invasion was another cause for their downfall. It is said that Alexander the great destroyed democracy in Greece by design, and in Indian by accident.¹⁹ In his campaign against India, Alexander came across many republics. The soil of Punjab, studded with the numerous republics, half republics and kingdoms, were destroyed by the Greek army. The Greek historians said that the small republics and principalities showed the highest order to bravery, patriotism and knowledge of strategy. We find that Malavas the Kshudrakas and the Katlias bitterly opposed the invader. In spite of their firm resistance, they were subjugated, one after the other, by Alexander.²⁰ Even Chandragupta Maurya got advantage of the republican states at a time when they had hardly recovered from the heavy loss in men and material, sustained from the Greek invasion. The impact of the Greek invasion was too heavy. Kautilya’s imperialistic policy could therefore attain easily.

We come across these republics again after the Mauryas when they start their struggle against the foreign powers. Lack of a strong, and stable government after Pushyamitra Sunga resulted in turmoil and confusion in northern India. From the second half of the first century B.C. or the middle of the first century A.D. north and north western parts of India provided a rich field to the foreigners the Indo-Greeks, Scythians and Parthians for the satisfaction of their political ambitions.²¹ It has been suggested that the Audumbaras, Kunindas and other were subjugated by Menander.²² But it is not based on solid ground.²³ Numismatic and other evidences rather point to their independent existence. Though the tribes succeeded in maintaining their independence against the Indo-Greeks, they had to bow before the Kushanas. The Malavas and the Yaudheyas had suffered reverses at the hands of the Sakas. Both these tribes stood against the intrusion of the foreign invaders, the Scythians Satraps. The Malvas fought against the forces of Nahapana and the Yaudheays those of Rudradaman. In both the instances the foreigners gained the victory.²⁴ Usavadata, the son-in-law of Nahapana, boasts in one of his Nasik inscription of having defeated the Malayas²⁵ (Malavas) (41-45 era). Altekar thinks that they were subjugated by the Scythians in C 150 A.D. While Junagarli inscription 150 A.D. refers to the encounter of the Yaudheyas with Rudradaman and their defeat. The other political corporations may also had to face these foreign invasions and met with similar fate.²⁶

4. MIGRATION THEORY

The establishment of Kushana supremacy over a major portion of northern India resulted in a temporarily eclipse the fate of the tribes.²⁷ Practically no tribal coinage can be assigned with certainty to the palmy days of Kushana domination covering about a century, from about the middle of the first century A. D. to about the middle of second century A.D. It has been suggested that under the pressure of the barbarous foreign inroads of Indo Greeks and the Northern Satraps, they left their home and hearth in the dear and fertile land of their glorious ancestors in north and north west and migrated to the dreary desert of Rajasthan.²⁸ But they did not forget their fertile land and aspired to be back. They fulfilled this ardent desire after defeating Kushanas in area occupied by them in Punjab towards the close of the second

century A.D. Dr. Altekar²⁹ has given the credit to the Yaudheyas for their victory over the Kushanas. Thus the foreign invasions and subsequent migration of these tribal republics must have weakened them, and resulted in a temporary eclipse of the fortunes of the tribes.

5. LACK OF FOREIGN POLICY

The gana states developed their internal organization and reached a standard of perfection.³⁰ But they never cared to develop a sound policy for conducting relations with other states. Foreign policy was totally unknown to them. Naturally before encountering the larger states they could hardly imagine, how mass massacres and monetary losses could be saved by diplomatic relations. The political realism of a gana government is deeply marked in the *cra* (espionage), *mantra* (counsel), *bala* (armed forces). *Samadanavibledana* (means of diplomacy) and skilled foreign policy,³¹ we have to admit that except in skilled foreign policy Indian republics attained distinction in all the other features.³² In this way, lack of sound foreign policy, may also have contributed for their decline and disappearance.

6. ECONOMIC CAUSES OF DOWNFALL

A good economy is always a backbone of a prosperous state. It is very interesting to study the economic conditions of these tribal republics through their coinage. We find that some of the tribes, like Arjunayanas, Asvakas, Kulutas, Rajanyas, Malavas, Sibis, Trigartas and Uddehikas based their coinage exclusively on copper.³³ The Yaudheyas, the Audumbaras and the Kunindas followed the bimetallic system by issuing the both silver and copper coins. While one silver coin definitely belongs to the Vemakis, the Vrishnis are represented by a singular coin, a unique silver piece. It is therefore highly possible that these two tribes issued copper coins also.³⁴ The tribal states were not rich enough to issue gold coins in imitation of the Indo-Greeks and Kushanas. Perhaps they had weaker economic condition in comparison to Kushanas and other dynasties as their area was not connected with outside world. So far as copper coinage is concerned, most of these states were economically handicapped, could not resort to silver coinage for a long time. It seems that due to poor economic condition they could not face the challenges offered by the foreign powers as well as other indigenous monarchical powers and thus became extinct.

7. IMBALANCE OF POWER

Decentralization of power, of an extreme form, is another drawback, which caused their downfall. The administration of these republics was organized in a different way. Altekar pointed out that the republics, like the Yaudheyas and the Kshudrakas and the Malavas, were divided into the provinces each governed by separate administration. These provinces were further divided into cities. Numerous cities of the state constituted separate government units completely autonomous and administered by their leading heads. The villages in the gana states must have had their own Panchayats. Shobba Mukherji³⁵ points out that decentralization of power of this type may have resulted in the formation of local groups. The beginning of the end of republican states can be seen in the formation of these local groups with local interests.

8. EXTENSION OF GUPTA EMPIRE

Some tribes like the Arjunayanas, Kulutas, Kunindas, Malavas, Yaudheyas and other who survived the onslaughts of the Kushanas maintained their independent existence till the 4th century A.D. as is indicated by Allahabad pillar inscription. They ultimately lost their political importance and were heard no more.³⁶ Jayaswal has attributed their eclipse and destructions to

the imperialism of the Guptas.³⁷ Samudragupta, destroyed the Malavas and the Yaudheyas. Altekar has offered a different view. According to him the Gupta imperialism never interfered with their autonomy and thus it cannot be held as fatal to the republics.³⁸ He further says that their territories were never directly administered by the Guptas. It should be remembered that prior to the Gupta imperialism, they had successfully survived the Mauryan and Kushana imperialism.³⁹ The Allahabad pillar inscription also informs us that the republics of the Malavas and the Arjunayanas, the Yaudheyas and the Madras had only accepted in a general way the imperial position of Samudragupta. They offered him tribute, retaining their internal autonomy. Nevertheless, the rise of Gupta imperialism must have weakened the tribes. K.K. Dasgupta points out that some of the tribes like the Agras, Asvakas, Audumbaras, Vemakas, Vrishnis etc. seem to have already merged with other tribes or dwindled in importance as they have not left any independent coinage attributable to the third-fourth century A.D.

9. INFLUENCE OF MONARCHY

Altekar⁴⁰ is of the view that the real reason of downfall of republican states is monarchical influence. The Nandsa inscription of third century A.D. show that Malaya government had passed into the hands of hereditary chief and his family, who claimed their descent from Ikshvaku race. The Bijaygarh inscription of third century A.D. refers to Yaudheya chief as Maharaja Mahasenapati. In the seventh century A.D. Varahmihira refers to a king of the Yaudheyas.⁴¹ Similarly we find some republican chiefs bearing monarchical titles on their coins like Rana on Audumbara and Maharaja on Kuninda coins. This is a clear evidence of their constitutional transition. Thus there was no distinction between the gana polity and monarchies. The leadership of republics passed in to the hereditary rulership who were military leaders and claimed the title and epithets of monarchs. Moreover, unitary leadership facilitated by the kingship was a better protection than group leadership in wars.⁴² It is also suggested that with the rise of a powerful monarchy, the psychology of the nation was entirely changed and outlook became lofty and magnanimous. It was a psychology directly borrowed from the emperor. The small republican states and their ideals did not make much impression under this loftiness of ideas.⁴³ Apart from Gupta imperialism the migratory nature of the people of Malaya and Yaudheya perhaps sapped their vitality and ultimately contributed to a change in the pattern of government.

CONCLUSION

As summarised by S.N. Misra "we can only visualise the eternal stream of time, the eternal stream of time, the cosmic flux, ever changing, and the ever new. At one stage of that eternal flux, environment favoured republicanism and human urges of liberty and organised existence expressed through them. In the dynamic process of history the environment changed and the republics succumbed to the forces of human enchainment, viz., imperialism. They were the products of history which failed to meet the challenge of the changing political climate, and thus became extinct. Their gallant history is a tragic epic spread over glorious centuries".

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A STUDY OF AWARENESS AND ATTITUDE OF UNDERGRADUATE STUDENTS TOWARDS E-LEARNING

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ABSTRACT

Information Technology is now playing a vital role in the modern human lives. It has revolutionized the way one used to live. Now it has made its mark on every phase of the world. One cannot now imagine a world without computers and without information technology. The use of electronic media and tools is central to many higher education teaching and learning strategies, but adoption of new technology is more often negatively received by staff, although enthusiastically embraced by students. Longer term, it has been questioned whether universities will meet the needs of shifting knowledge-based societies and increasingly diverse student populations (Rolfe et al, 2009). Every field of human activity may it be his daily life, official life, educational life and business life; everything is influenced under the cover of Information Technology. In recent years, the use of computer as educational tool has become more and more popular. It focuses on the importance of incorporating new technology i.e. Internet educational field. There is hardly any area which remained untouched by the net boom.

Key Words: E-learning, IBM, HTML, Empowerment, Portability.

The letter 'E' stands for electronic and it relates to the use of the Internet to undertake the wide range of activities including learning. The trend is to transform conventional learning to E-Learning. E-Learning is becoming a continuous process with no confinement on age, time and location. In this regard the concept of learning at a place, at a specific time and in presence of instructor is replaced by anytime, anywhere, any one learning which will be the future pattern.

MEANING OF E-LEARNING

E-Learning occurs whenever the learner is ready to learn appropriate learning is powered up. Instructions are given electronically and learners attend lecture. Lectures are broadcasted according to the learner's suitability. The growing interest in E-learning seems to be coming from several directions. These include organizations that have traditionally offered distance education programs either in a single, dual or mixed mode setting (Naidu, 2006).

The term E-Learning is technology oriented tool to facilitate learning environment which covers a wide set of application of computer Based learning. It is technologically mediated learning either from a distance or in face to face classroom setting computer assistance learning to provide training educational or learning material in electronic format which includes text, videos, audio, animation, virtual environments. It permits at an accelerated pace, opening up new vistas to knowledge transfer.

E-Learning assists learning process through the use of electronic files. E-Learning provides more supporting material which can be made available through website.

DEFINITIONS OF E-LEARNING

Marc Rosenberg (2001) confines E-learning to the internet as: the use of internet technologies to deliver a broad array of solutions that enhance knowledge and performance. It is based upon three fundamental criteria: networked delivered to the end-user via a computer using standard internet technology focuses on the broadest view of learning

Allison Rossett (2001) defines E-learning as: Web-based training (WBT), also known as E-learning and on-line learning, is training that resides on a server or host computer that is connected to the World Wide Web.

HISTORY OF E-LEARNING

E-Learning has its roots in postal correspondence course starting with Sir Isaac Pitman's 1940 courses in short hand. E-learning as we know it has been around for ten years or so. During that time, it has emerged from being a radical idea—the effectiveness of which was yet to be proven—to something that is widely regarded as mainstream. First use of computer in teaching was the collaboration between the Stanford University and IBM (International Business Machine) in late 1950. Then in the late 1960s Internet came which was used by US department of Defense commissioned the nation's learning universities to develop a communications system. It proves an affective information showing tool for global community of academics and professional researches. It gave birth of e-mail and file transferring. Internet took shape in 1991 with the www. With the help of HTML (Hyper Text Markup Language) learning starts very frequently and easily.

ASPECTS OF E-LEARNING

E-Learning includes 5 'E's which are said to be different aspects or main characteristics of E-Learning. *E-learning, an instructional strategy for imparting needed knowledge, skills, and attitudes in organizations, is here to stay. Its viability, effectiveness, and potential to return tangible benefits to organizations depend largely on how it is designed, delivered, and evaluated* (Derouin et al, 2002).

1. Exploration: - E-Learning provides tool for the learner to explore information.
2. Experience: - E-Learning gives the learning experiences to the learners through internet in all areas. It encourages learners to explore to change this material for self learning.
3. Engagement: - It provides innovative and new ways of learning through internet to the learner, which helps the community.
4. Ease of use: - It provides digital learning environment and handy tools to the learners. This environment helps in transmission.
5. Empowerment: - Learner grasps the content easily at its own pace. It develops the habit of self learning.

IMPORTANCE OF E-LEARNING

Any time learning: - The students do have to attend a classroom or study as per timetable. E-Learning can be at any time whether at morning at evening after classroom periods or before classroom lecture.

Anywhere learning: E- learning programmers have global target audience as people from all area can learn at their own pace and their own place. This allows professional to learn at any place around their busy schedule.

Interactive multimedia course ware: - Interactive multimedia courses were making learning interesting and engaging. This intuitive content integrates audio-video graphics, pictures, animations, visuals, demonstration and case studies and is imported via virtual classroom. This leads to significantly higher relation level among the students.

Online library facility: - Students can access information from digital libraries of colleges and universities worldwide via exhaustive online library.

ADVANTAGES FOR E-LEARNERS

Convenience and Portability

- (i) It is Time-Accessible on learner's Schedule i.e. 24X7 any place.
- (ii) It eliminates geographical barriers.
- (iii) It provides class notes, online reading material down load or print facility to the students.
- (iv) It provides reinforcement exercise and practice testes and revision time to learners.

Individualized learning

- (v) It provides individualized self-directed experience for all learners.
(Disadvantaged, disabled, exceptionally gifted and at remote locations).
- (vi) It provides different learning tools to match individual learner's style.

Personalized learning support: -

It can locate target individual learning preferences. It provides personalized information, advice, and guidance services.

Self: -Paced

Learner is controlled and directed by himself not by instructor. He is neither too slow, not too fast.

Flexibility and Selective Learning: -

Learner is not necessary to follow linear path, learning may proceed in any direction of learner's choice.

Self motivation: -

E-Learning makes the learner self-motivated to succeed.

SIGNIFICANCE OF THE STUDY

In this fast changing world, every aspect of life is transforming at a rapid rate. Human beings have to keep up with this pace and update their knowledge and methods of working. This has affected educationists, educators and learners equally. While teachers face the difficulty of creating an amalgam of traditional teaching and technology, the learners are confronted with newer methods of acquiring knowledge.

One of the most recent trends in learning is the internet supported learning or in short E-learning. This concept has revolutionized the entire learning process. Students, who are not internet-friendly, face tough competition because those who are internet-friendly have better access to information. Therefore it is important to study the awareness of E-learning and developing proper attitude towards it.

E-Learning makes learning exciting, engaging and compelling. Hard and boring subjects can be made easier, more interesting and appealing with E-learning. Learning is a social activity, and e-learning means that powerful and enduring learning experiences can be achieved, not just through content, but through the use of online communities and networks. Here learners are encouraged to communicate, collaborate and share knowledge. In this way, e-Learning can support "learning through reflection and discussion".

Thus, this study assumes significance in the present Indian scenario of education. Checking the awareness and attitude of the undergraduate students will also provide direction to the educators about the ways and means of getting the best output from the students, transforming the whole educational set up, making classrooms technology oriented and adjusting the methods according to the needs of the global world.

OPERATIONAL DEFINITIONS OF THE TERMS USED

E-learning: It is the intentional use which includes communication and networked technology in process of teaching learning. E-Learning is technology oriented tool to facilitate learning environment which covers a wide set of application of computer based learning.

Under graduate students: Students who study in bachelor degree courses of colleges of districts falling under Ambala Division of Haryana State.

Attitude: It is an opinion that one has about someone or something that can reflect a favorable, unfavorable, or neutral judgment.

Awareness: According to all words.com, awareness can be defined as the state or level of consciousness where sense data can be confirmed by an observer.

According to Oxford Dictionary of Sports Science and Medicine, awareness is the state of being fully conscious of pertinent stimuli and really experiencing a task or situation. It requires the ability to totally focus attention on a task.

DELIMITATIONS OF THE STUDY

1. The study will be delimited in terms of the sample size, i.e. 450 students studying in undergraduate courses of colleges of districts falling under Ambala Division of Haryana State. Out of 450 students from 15 colleges, 225 will be males and 225 will be females.
2. The study will be delimited in terms of the study fields chosen for data collection .i.e. Science, Commerce and Arts.
3. The sample chosen will be restricted to students studying in the colleges of districts falling under Ambala Division of Haryana State.

OBJECTIVES OF THE STUDY

1. To study the awareness of undergraduate students towards e-learning.
2. To study the attitude of undergraduate students towards e-learning.

3. To compare the awareness of male and female undergraduate students towards e-learning.
4. To compare the attitude of male and female undergraduate students towards e-learning.
5. To compare the awareness of urban and rural undergraduate students towards e-learning.
6. To compare the attitude of urban and rural undergraduate students towards e-learning.
7. To compare the awareness of undergraduate students towards e-learning on the basis of their stream.
8. To compare the attitude of undergraduate students towards e-learning on the basis of their stream.
9. To compare the awareness of undergraduate students towards e-learning on the basis of their income group.
10. To compare the attitude of undergraduate students towards e-learning on the basis of their income group.

HYPOTHESES

1. There will be no significant difference between the awareness of male and female undergraduate students towards e-learning.
2. There will be no significant difference between the attitudes of male and female undergraduate students towards e-learning.
3. There will be no significant difference between the awareness of urban and rural undergraduate students towards e-learning.
4. There will be no significant difference between the attitudes of urban and rural undergraduate students towards e-learning.
There will be no significant difference between the awareness of undergraduate students towards e-learning on the basis of their stream.
5. There will be no significant difference between the attitudes of undergraduate students towards e-learning on the basis of their stream.

REVIEW OF RELATED LITERATURE

Seyal (2000) conducted a study on Understanding Students' attitudes toward e-Learning: Evidence from Bruneian Vocational and Technical Education. The objectives of the study were: (a) To develop and validate a suitable instrument to measure e-learning attitudes of students. (b) To assess the e-learning attitudes of the students and to find out the difference in the attitudes, if any, on the basis of demographics. He concluded that students are likely to have little resistance, if college authorities decide to introduce e-learning management system (eLMS) as a new medium of learning in order to make use of new innovations like multimedia technology. The introduction of such new learning and instructional tool would provide tremendous improvement in the field of educational technology, provided the participation of learners and facilitators in new course design and implementation is encouraged during all the stages of e-LMS implementation

Sherman et al (2000) investigated the internet gender gap among college students by comparing the usage patterns & attitude of three cohorts of students in 1997, 1998 & 1999. They also compared the attitude of men and women towards the technology.

Tsai, Chin and Yuan (2000) described an attempt of using a www based concept map testing system. Which was developed to access high school student's concepts in physics? A ninety Taiwanese eleventh grader were tested through the on-line system. The objectives of the study were: To judge the speed of information technology in transferring. To find whether on line test is a fair system or not? They concluded that the speed of information Technology is more than the traditional method adopted by the teacher. Online test is a fair system to test the student's performance.

Siman (2001) studied the usage of technology as a replacement for rather than a supplement to a traditional text book. Their objectives were To assess the advantages and disadvantage of technology compared to traditional media. To find the short coming of the technology along with the practical suggestion medias. She concluded that the technology is more useful than traditional media. There are certain limitations like operational limitations and the practical knowledge about the use of e-Learning.

Paris (2004) conducted a study on E-Learning: A study on Secondary Students' Attitudes towards Online Web Assisted Learning. The objectives of the study were Rank OWAL activities in preference to PAL activities and Prefer the multimedia aspects of OWAL such as animation, movies, graphics and synchronous sound. Generally it would appear that where one media format may not enhance the learning process of one student, it may enhance the learning process of another. He concluded that Rank OWAL activities positively in preference to PAL activities and indicates that some students engage in and accept the use of OWAL to supplement their learning, if not at school, then at home. The data indicate that OWAL activities would aid in the learning process of students because students have positive attitudes towards the use of OWAL.

Kai wen cheng (2006) students level of satisfaction in applying e-Learning in Taiwan. The main findings were Student's level of satisfaction in applying e-Learning for business courses is pretty high. Gender school system and computer skills do not affect student's level of acceptance in applying e-Learning courses.

Horva et al (2007) conducted a study on Practical E-Learning for the Faculty of Mathematics and Physics at the University of Ljubljana. The objectives of the study was to maintain the usability of the Web Classroom while striving for the next goal of providing all of the available classes as web-enhanced classes. They concluded that will be thoroughly examined and incorporated in the strategy of improving and extending the online courses. Another survey is also being preformed to get the lecturers' opinions on e-learning. The results will help us maintain the usability of the Web Classroom while striving for the next goal of providing all of the available classes as web-enhanced classes

Yaghoub, Shokri & Gholiniy (2011) conducted a study on Assessing agricultural insurance agents attitude towards e-learning application in teaching them.the objectives of the study was Agricultural Product Insurance Fund used a new approach through the Private Insurance Agents (PIAs) which provide efficient and effective insurance services to farmers. Providing training courses for PIAs is associated with many problems, because they are scattered in cities and villages. They concluded that PIAs attitude to e-learning is relatively positive. Results also showed that there is significant difference between Computer and Internet skills, average hours worked with the Internet and computer, Experience in agricultural product Insurance and attitude towards e learning system.

Haw (2011) conducted a study on Beware of online forums on distance learning discussion. The objectives of the study were to identify, interpret and evaluate major themes of contemporary business and administration theory and practice, to comprehend and evaluate developments and critically examine the relationships between such changes and contemporary. He concluded that with the explosion of knowledge and technology one can experience a sea change in the level of aspirations of the learner. In making all such changes it is imperative to inculcate cognitive and meta cognitive skills among our coordinators to serve better in knowledge society.

RESEARCH DESIGN

POPULATION, SAMPLE AND SAMPLING TECHNIQUE

Population: The population for the study consists of the students studying in undergraduate courses of colleges in Ambala Division of Haryana State.

Sample: The sample will consist of 450 students of Science, Arts and Commerce streams of undergraduate courses of 15 colleges of districts under Ambala division of Haryana State. Out of 450 students from 15 colleges, 225 will be males and 225 will be females.

Sampling technique: Stratified random sampling technique will be used to draw out sample from the population. At the first stage, 3 districts from Ambala division will be selected randomly. At the second stage, 5 colleges each from the selected districts will be choose by simple random technique. At the third stage, 30 students from each college will be selected. The selected 30 students will comprise of 10 students each from science, arts and commerce stream. From each stream, equal number of male and female students will be selected randomly.

TOOLS TO BE USED

The researcher will use the following tools for collecting the relevant data concerning the study:

1. Biographical Information Sheet for collecting general information and data.
2. Student's Attitude towards E- leaning (SATEL) scale developed by Saxena & Aggarwal (2010).
3. Student's Awareness of E-Learning (SAEL) scale developed by Saxena & Aggarwal (2010).

STATISTICAL TECHNIQUES TO BE USED

For deriving meaningful results from the collected data, the researcher will use the following statistical techniques:

Percentages, Means, Standard deviation, T- test and other appropriate statistical techniques.

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ICT AND HIGHER EDUCATION IN INDIA

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ABSTRACT

Information and communication technologies (ICT) have become common place entities in all aspects of life. Educators strongly feel that ICT is the most valuable tool to overcome the problem of illiteracy. Across the past twenty years the use of ICT has fundamentally changed the practices and procedures of nearly all forms of Endeavour within business and governance. The present age is called as “Era of Information Technology”. IT represents a significant factor in the rapidly changing relationship between user and information. It is well recognized that Information and Communication Technology (ICT) has immense plausible potential for the structural growth of a country. The new information and communication technologies of Internet and multimedia have revolutionized the field of education. Communication is the basic to all communication between teacher and student, between institution and government and between peers. So visual aids gain much attention of students more than verbal teaching. The future trends of internet and multimedia will influence and change the traditional methods of teaching and learning and enlarge the sphere of dissemination of knowledge and information. The demand of computer technology in education and training has enhanced the ability of quality education in various educational organizations and training institutes. Academics are now being challenged by the rapidly growing new information technologies of multimedia, internet, WWW and other virtual computer technologies, which demands changes in the styles, attitudes and skill towards information handling.

Key Words: ICT, Higher Education, Training, Technology.

Information and communication technology (ICT) is a force that has changed many aspects of the way we live. There have been a number of factors impeding the wholesale uptake of ICT in education across all sectors. These have included such factors as a lack of funding to support the purchase of the technology, a lack of training among established teaching practitioners, a lack of motivation and need among teachers to adopt ICT as teaching tools. But in recent times, factors have emerged which have strengthened and encouraged moves to adopt ICTs into classrooms and learning settings. If one was to compare such fields as medicine, tourism, travel, business, law, banking, engineering and architecture, the impact of ICT across the past two or three decades has been enormous. The way these fields operate today is vastly different from the ways they operated in the past. But when one looks at education, there seems to have been an uncanny lack of influence and far less change than other fields have experienced. A number of people have attempted to explore this lack of

activity and influence. These have included a growing need to explore efficiencies in terms of program delivery, the opportunities for flexible delivery provided by ICTs, the capacity of technology to provide support for customized educational programs to meet the needs of individual learners, and the growing use of the Internet and WWW as tools for information access and communication. These factors and many others are bringing strong forces to bear on the adoption of ICTs in education and contemporary trends suggest we will soon see large scale changes in the way education is planned and delivered as a consequence of the opportunities and affordances of ICT. This paper seeks to explore the likely changes we will see in education as ICT acts as a powerful agent to change many of the educational practices to which we have become accustomed.

1. THE IMPACT OF ICT ON *WHAT* IS LEARNED

Conventional teaching has emphasized content. For many years course have been written around textbooks. Teachers have taught through lectures and presentations interspersed with tutorials and learning activities designed to consolidate and rehearse the content. Contemporary settings are now favouring curricula that promote competency and performance. Curricula are starting to emphasize capabilities and to be concerned more with *how* the information will be used than with *what* the information is.

COMPETENCY AND PERFORMANCE-BASED CURRICULA

The moves to competency and performance-based curricula are well supported and encouraged by emerging instructional technologies. Such curricula tend to require:

- access to a variety of information sources;
- access to a variety of information forms and types;
- student-centred learning settings based on information access and inquiry;
- learning environments centered on problem-centred and inquiry-based activities;
- authentic settings and examples; and
- teachers as coaches and mentors rather than content experts.

Contemporary ICTs are able to provide strong support for all these requirements and there are now many outstanding examples of world class settings for competency and performance-based curricula that make sound use of the affordances of these technologies. For many years, teachers wishing to adopt such curricula have been limited by their resources and tools but with the proliferation and widespread availability of contemporary ICTs, many restrictions and impediments of the past have been removed. And new technologies will continue to drive these forms of learning further. As students and teachers gain access to higher bandwidths, more direct forms of communication and access to sharable resources, the capability to support these quality learning settings will continue to grow.

II IMPLEMENTATION OF ICT

Experiential learning with the help of modern ICT is both encouraged and required as part of the self-learning processes. This paper first presents the information on usage of ICT in our institution and next the assessment of using the CAI package by the staff and students of five colleges in Haryana.

i) Use of ICT in various facets of teaching and learning the usage of ICT in our institution TBAK College for Women was analyzed. The college offers 5 UG and 5 PG programmes with the student strength of 1000. ICT is predominantly used in teaching and learning process for all the courses offered. Information on curricular strategies, Curricular-Transactional Strategies and use of ICT and nature and purpose of use by the students and faculty was collected from the 25% randomly selected samples of the total strength with the help of specially designed questionnaire and the results of the same are discussed.

ii) Assessment of the developed CAI package

Initially CAI packages were used as a module of ICT to enhance retention of concepts and theories taught to students. Two packages were developed one for teaching Dietetics and the other was for teaching C-Programming. The developed package was assessed for adequacy and usability.

Information literacy

The growing use of ICTs as tools of everyday life have seen the pool of generic skills expanded in recent years to include information literacy and it is highly probable that future developments and technology applications will see this set of skills growing even more. Traditionally generic skills have involved such capabilities as ability to reason formally, to solve problems, to communicate effectively, to be able to negotiate outcomes, to manage time, project management, and collaboration and teamwork skills. Another way in which emerging ICTs are impacting on the content of education curricula stems from the ways in which ICTs are dominating so much of contemporary life and work. Already there has emerged a need for educational institutions to ensure that graduates are able to display appropriate levels of information literacy, “the capacity to identify and issue and then to identify, locate and evaluate relevant information in order to engage with it or to solve a problem arising from it”. The drive to promote such developments stems from general moves among institutions to ensure their graduates demonstrate not only skills and knowledge in their subject domains but also general attributes and generic skills.

THE IMPACT OF ICT ON *HOW* STUDENTS LEARN

Just as technology is influencing and supporting what is being learned in schools and universities, so too is it supporting changes to the way students are learning. Moves from content-centred curricula to competency-based curricula are associated with moves away from teacher-centred forms of delivery to student-centred forms. Through technology-facilitated approaches, contemporary learning settings now encourage students to take responsibility for their own learning. In the past students have become very comfortable to learning through transmissive modes. Students have been trained to let others present to them the information that forms the curriculum. The growing use of ICT as an instructional medium is changing and will likely continue to change many of the strategies employed by both teachers and students in the learning process. The following sections describe particular forms of learning that are gaining prominence in universities and schools worldwide.

STUDENT-CENTRED LEARNING

Technology has the capacity to promote and encourage the transformation of education from a very teacher directed enterprise to one which supports more student-centred models like this:

1. Moves towards problem-based learning

The proliferation of capability, competency and outcomes focused curricula Increased use of the Web as an information source, Internet users are able to choose the experts from whom they will learn the use of ICT in educational settings, by itself acts as a catalyst for change in this domain. ICTs by their very nature are tools that encourage and support independent learning. Students using ICTs for learning purposes become immersed in the process of learning and as more and more students use computers as information sources and cognitive tools, the influence of the technology on supporting how students learn will continue to increase.

Knowledge Construction

The strengths of constructivism lie in its emphasis on learning as a process of personal understanding and the development of meaning in ways which are active and interpretative. In this domain learning is viewed as the construction of meaning rather than as the memorization of facts. Learning approaches using contemporary ICTs provide many opportunities for constructivist learning through their provision and support for resource-based, student centered settings and by enabling learning to be related to context and to practice. As mentioned previously, any use of ICT in learning settings can act to support various aspects of knowledge construction and as more and more students employ ICTs in their learning processes, the more pronounced the impact of this will become.

These principles posit that learning is achieved by the active construction of knowledge supported by various perspectives within meaningful contexts. In constructivist theories, social interactions are seen to play a critical role in the processes of learning and cognition . In the past, the conventional process of teaching has revolved around teachers planning and leading students through a series of instructional sequences to achieve a desired learning outcome. Typically these forms of teaching have revolved around the planned transmission of a body of knowledge followed by some forms of interaction with the content as a means to consolidate the knowledge acquisition. In the past educational institutions have provided little choice for students in terms of the method and manner in which programs have been delivered. Students have typically been forced to accept what has been delivered and institutions have tended to be quite staid and traditional in terms of the delivery of their programs. ICT applications provide many options and choices and many institutions are now creating competitive edges for themselves through the choices they are offering students. These choices extend from when students can choose to learn to where they learn.

Contemporary learning theory is based on the notion that learning is an active process of constructing knowledge rather than acquiring knowledge and that instruction is the process by which this knowledge construction is supported rather than a process of knowledge transmission. The concept of flexibility in the delivery place of educational programs is not new. Educational institutions have been offering programs at a distance for many years and there has been a vast amount of research and development associated with establishing effective practices and procedures in off-campus teaching and learning. Use of the technology, however, has extended the scope of this activity and whereas previously off-campus delivery was an option for students who were unable to attend campuses, today, many more students are able to make this choice through technology-facilitated learning settings. The scope and extent of this activity is demonstrated in some of the examples below.

The communications capabilities of modern technologies provide opportunities for many Learner to enroll in courses offered by external institutions rather than those situated locally. These opportunities provide such advantages as extended course offerings and eclectic class cohorts comprised of students of differing backgrounds, cultures and perspectives.

2. In many instances traditional classroom learning has given way to learning in work-based settings with students able to access courses and programs from their workplace. The advantages of education and training at the point of need relate not only to convenience but include cost savings associated with travel and time away from work, and also situation and application of the learning activities within relevant and meaningful contexts.

The freedoms of choice provided by programs that can be accessed at any place are also supporting the delivery of programs with units and courses from a variety of institutions.

There are now countless ways for students completing undergraduate degrees for example, to study units for a single degree, through a number of different institutions, an activity that provides considerable diversity and choice for students in the programs they complete as:

Through online technologies learning has become an activity that is no longer set within programmed schedules and slots. Learners are free to participate in learning activities when time permits and these freedoms have greatly increased the opportunities for many students to participate in formal programs.

The wide variety of technologies that support learning are able to provide asynchronous supports for learning so that the need for real-time participation can be avoided while the advantages of communication and collaboration with other learners is retained.

EMERGING ISSUES

A number of other issues have emerged from the uptake of technology whose impacts have yet to be fully explored. These include changes to the makeup of the teacher pool, changes to the profile of who are the learners in our courses and paramount in all of this, changes in the costing and economics of course delivery.

EXPANDING THE POOL OF TEACHERS

In the past, the role of teacher in an educational institution was a role given to only highly qualified people. With technology-facilitated learning, there are now opportunities to extend the teaching pool beyond this specialist set to include many more people. The changing role of the teacher has seen increased opportunities for others to participate in the process including workplace trainers, mentors, specialists from the workplace and others. Through the affordances and capabilities of technology, today we have a much expanded pool of teachers with varying roles able to provide support for learners in a variety of flexible settings. This trend seems set to continue and to grow with new ICT developments and applications. And within this changed pool of teachers will come changed responsibilities and skill sets for future teaching involving high levels of ICT and the need for more facilitative than didactic teaching roles (eg. Little john et al., 2002).

EXPANDING THE POOL OF STUDENTS

In the past, education has been a privilege and an opportunity that often was unavailable to many students whose situation did not fit the mainstream. Through the flexibilities provided by technology, many students who previously were unable to participate in educational

activities are now finding opportunities to do so. The pool of students is changing and will continue to change as more and more people who have a need for education and training are able to take advantage of the increased opportunities. Interesting opportunities are now being observed among, for example, school students studying university courses to overcome limitations in their school programs and workers undertaking courses from their desktops.

SUMMARY AND CONCLUSIONS

In particular the paper has argued that ICTs have impacted on educational practice in education to date in quite small ways but that the impact will grow considerably in years to come and that ICT will become a strong agent for change among many educational practices. Extrapolating current activities and practices, the continued use and development of ICTs within education will have a strong impact on:

What is learned;

How it is learned;

When and where learning takes place;

Who is learning and who is teaching.

To ensure that the opportunities and advantages are realized, it will be important as it is in every other walk of life to ensure that the educational research and development dollar is sustained so that education at large can learn from within and that experiences and activities in different institutions and sectors can inform and guide others without the continual need for re-invention of the wheel. Once again ICTs serve to provide the means for much of this activity to realize the potential it holds.

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CUSTOMER RELATIONSHIP MANAGEMENT & ITS SIGNIFICANCE IN HOSPITALITY INDUSTRY WITH SPECIAL REFERENCE TO UTTARAKHAND STATE OF INDIA

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ABSTRACT

Customer Relationship Management (CRM) is a comprehensive approach for creating, maintaining and expanding customer relationship. CRM is a way of thinking about and dealing with customer relationships. CRM in hospitality industry is a challenging task because of its unique and distinct features. CRM is about entire customer cycle. When CRM strategy is implemented, data is captured and analyzed about targeted customers and their targeted buying habits. The past several years have witnessed an explosion in CRM tools, especially software applications. The purpose is to identify, attract and retain valuable customers that help business to sustain profitable growth. To effectively implement a customer relationship management, it is very important to identify real knowledge about different types of customers from plethora of internal and external data, figures and surveys. A correct approach has the potential to give an organization a strategic advantage in design and implementation of a CRM solution. The present study conducted in the Uttarakhand state of India and the aim of this paper to focuses on the various approaches of CRM used in hospitality sector for effective relationship management and its significance in the same. A well structured questionnaire has been used to obtain the information required for the study.

Key Words: Customer Relationship Management, Hospitality, Population, Demographic Profile.

Customer Relationship Management (CRM) is a comprehensive approach for creating, maintaining and expanding customer relationship. CRM is a way of thinking about and dealing with customer relationships. CRM does not belong just to sales and marketing, it is not the sole responsibility of the customer service group or of the information technology team but touches all areas of the organization. It can be the single strongest weapon even before the workforce. CRM helps, especially in the Hospitality industry to capture and analyze data about the targeted customers, their preferences and buying habits in hospitality industry which helps to understand and predict customer's behavior. Customers want to visit again or to do business with organizations that understand what they want and need. CRM is about managing

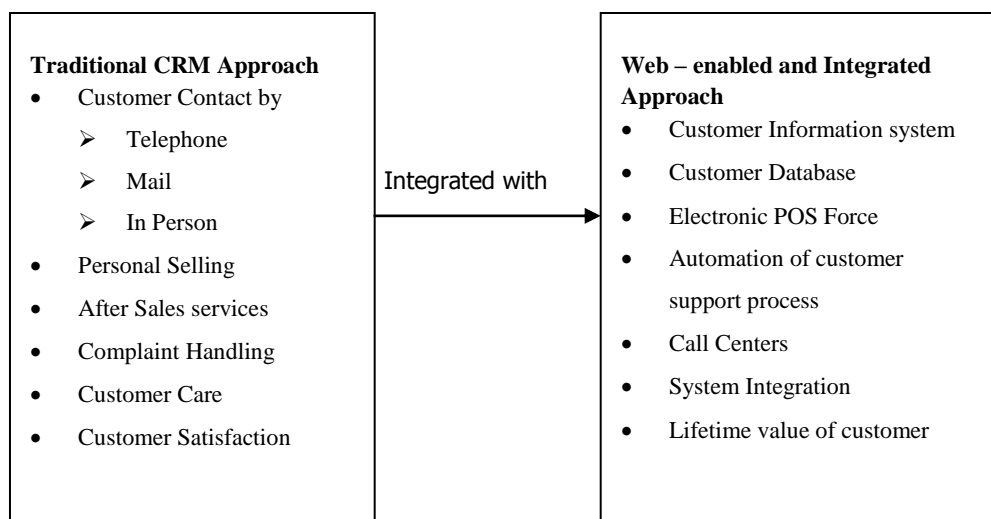
relationships more effectively so you can drive down costs while at the same time increasing the viability of products and service offerings. It is crucial to know about the purpose of CRM before implementing a strategy or approach. Having a customer database is not the same thing as a CRM strategy.

To add more clarity about CRM intention and implementation, think for a moment about the customers;

- What drives them to do business with any organisation?
- Why customers choose to do business with any organisation?
- In what ways does any organisation need to enfold customers in the same business, so that you can better understand what they want and need—and more effectively provide it?
- What customers need and want to have happen during their encounters with any organisation?
- What will drive customers to continue to do business with any organisation?

The answers to such questions will clarify to CRM strategy. Make sure that all the team members know about the implemented CRM strategy, the tools used to support that strategy and the tools used to support that strategy. CRM is a way of doing business that touches all areas of any organization. This reflects that there is the need to form strong internal partnerships around CRM.

A Technology Driven Approach; might be expanded to provide better and more useful information in effectively managing customer relationships.



HOSPITALITY INDUSTRY IN CRM

Hospitality industry has some unique characteristics that make it different from other industries. Due to high involvement of customers in the service delivery process in hotels, variability in production standards is a major concern. This is especially true of the many hotel services where employees and customers interact in the absence of supervision. According to Palmer (1998), there are two dimensions to variability;

- The extent to which production standards vary from a norm, both in terms of outcomes and of production processes.
- The extent to which a service can be deliberately varied to meet the specific needs of individual customers.

In the Hospitality industry, expectations are created by the promise. Expectations may also be influenced by prior experience, opinions of friends and associates or on the image of the hotel. Every guest walks into a moment of truth with an expectation, so, it is really the moment of truth that defines value for a guest. For a hotel, therefore, service quality is of utmost importance, especially in view of the fact that a lot of employee- guest interactions are carried out in the absence of direct supervision.

Till date, relationship management has been largely ignored by most industries outside the service sector. Classical marketing theory and practice has focused on customer acquisition rather than customer retention. However, due to the intrinsic nature of the service industry, customer relationships are critical to ensure customer loyalty. This is especially true of the hospitality industry, where relationships create more value for the customer than factors like price and product features, and therefore enhance the lifetime value of the customer to the organisation. The leading hotel brands have always made the effort to go beyond customer satisfaction and ensure value through relationships rather than transactions, resulting in high levels of customer delight and subsequently, loyalty. Recent studies have vindicated this approach, showing that customer satisfaction is not sufficient to build loyalty. Moreover, there has been a convergence in recent years, between the service and manufacturing industries and the latter can adapt the customer retention strategies of the former to build greater loyalty.

Chain hotels, at least the good ones, have been managing guest relationships since long before the CRM tools we know today ever existed. So, fortunately that the seeds of a good CRM strategy were already in place. Front desk employees often asked guests if they are visiting for a special occasion. Information about anniversaries and birthdays is passed on to the restaurant, where complimentary champagne or a special cake is offered to them. Sometimes, housekeeping took part and added special room decorations for them. Hotels prepare customer bank through natural approach to creating, maintaining and expanding guest relationships. There were a lot of "happy accidents" that resulted in happy guests. But there were even more missed opportunities.

There are numerous definitions of Customer Relationship Management (CRM) by various experts on the subject. The CRM process in hotels is governed by the basic principle that good service does not guarantee customer satisfaction. And satisfaction does not guarantee loyalty. There is therefore, a need for strong customer relationships to build loyalty. For the hospitality product, the customer relationship is governed by the moment of truth. This fundamental truth, combined with the unique characteristics of the service industry has traditionally focused the

complete attention of the service provider on the customer. Even a market share oriented approach would necessarily need to take care of the customer. Where the service can be deliberately varied to meet the specific needs of individual customers, an opportunity arises for the hotel to utilize the variation to build customer relationships based on the unique preferences and requirements of individual customers. This may take the form of mass customization for key segments or individual customization for key guests.

BRIEF ABOUT UTTARAKHAND

Uttarakhand became the 27th state of the Republic of India in November 2000. Carved out of the state of Uttar Pradesh, Uttarakhand mainly comprises the hilly regions of Uttar Pradesh. The state borders Himachal Pradesh in the northwest and Uttar Pradesh in the South, and has international borders with Nepal and China. The State's 13 Districts can be grouped into three distinct geographical regions, the High mountain region, the Mid-mountain region and the Terai region. This is the land where the Vedas and Shastras were composed and great Indian epic, the Mahabharatha, was written.

A picturesque state, Uttarakhand has magnificent glaciers, majestic snow clad mountains, panoramic views of the Himalayas, dense forests and the valley of flowers, as well as some of Hinduism's most sacred pilgrim sites. A paradise for tourists lying in the north of the vast and beautiful expanse of India, cradled in the awesome beauty and calm serenity of the Stately Himalayas, Uttarakhand, the Devbhumi (land of Gods) has attracted tourists and pilgrims from world over since time immemorial. Culturally, Uttarakhand has a rich and vibrant heritage.

Sacred pilgrimage destinations of Shri Badrinath, Kedarnath, Gangotri, Yamunotri the sacred Sikh pilgrimage of Hemkund, Lokpal, Nanakmatta and Meetha, Reetha Saib and Piran Kaliyar have drawn pilgrims and seekers for spiritual fulfillment to Uttarakhand. The holy river Ganga and Yamuna have their sources in the bills within this State. The Queen of Hills, Mussoorie, the Lake District of India – Nainital, Kausani, Pauri, Lansdowne, Ranikhet, Almora, Pithoragarh, Munsyari and many more attractive tourists destinations are part of Uttarakhand. Number of local fairs and festivals are organized throughout the year.

LITERATURE REVIEW

Today, organizations firmly believe that customer retention is more profitable than customer acquisition. In the present scenario with such a fierce competition, hotels are implementing customer relationship management approaches with the help of latest technology aids. Bowen & Shoemaker, 1998, in their study mentioned hospitality organizations to be unlikely to develop strong customer relationships and therefore, customer loyalty by merely providing high levels of service quality. CRM is considered as an essential strategic issue and needs to be addressed carefully for the success of an organization.

Relationship marketing is a distinct management discipline as it shifts focus on customer relations rather than revenue and market share (Sheth & Parvatiyar). CRM involves identifying and rethinking all strategic processes that take place between an organization and its customers (Payne & Frow, 2005).

According to Gustafsson et al, 2005, Customer retention is possible with the help of customer satisfaction, affective and evaluative commitment. The basic objective of CRM is fulfilled only when the customer has a relationship with the hotel, and not just with a few customer contact employees. Effective CRM goes beyond service; it involves implementing systems

and processes to ensure that the marketing process promises, builds an environment for effective delivery, and finally delivers the promise in a manner that exceeds the customer's expectation, thus adding value and building the relationship.

CRM is a complex and holistic concept requiring appropriate business processes and integrated systems. It also mandates effective system integration, information sourcing, targeting, leadership and evaluation with CRM strategies (Zineklin, 2006).

OBJECTIVES OF THE STUDY

The core theme and objective of all Relationship Management is its focus on cooperative and collaborative relationship between the organization and its customers. The objectives of this study are:

- to study the impact of Customer Relationship Management practices in the Hospitality Industry.
- to know the various techniques used to make it more effective and the outcomes of relationship management.
- to study the factors responsible for failures of relationship management and how to avoid them.

RESEARCH METHODOLOGY

To achieve the objectives of the study, the Normative Survey Method was best suited and therefore applied by the researcher.

Population and Sample

The study was carried out in the hospitality sector of the Uttarakhand state of India.

Selection of sample

The selection of subjects was done by convenient sampling method; with a sample size of 50 has been used for the study. Total 85 questionnaires were distributed among the respondents and only 50 duly filled questionnaires were considered for data analysis & study.

Development of questionnaire

The questionnaire was prepared after looking critically at the literature review related to this field. In order to ensure validity and reliability of the questionnaire, it was presented to 5 specialized people in the fields of Hospitality and tourism across the country. Some questions were changed to clarify the meaning and some questions were changed according to their suggestions in a way that is more appropriate with the aim of this study.

Collection of data

The investigator made systematic efforts to collect reliable and valid data from the duly filled questionnaires by the respondents. Star category hotels and organizations of good repute of Uttarakhand region were visited for the same. but the secondary data is also used as per the requirement in the study collected from various literatures, books, magazines, review articles, internet etc.

Statistical tools used for analysis of data

Simple statistical tools, mean & percentage have been used to analyze the data obtained from the primary sources.

Delimitation of the study

The present study was restricted to Uttarakhand state of India. Hence, the result of the study will not be equally applicable to rest part of the country.

RESULTS AND DISCUSSION

The present study was undertaken to investigate “Customer Relationship Management in Hospitality Industry with special reference to Uttarakhand”. The results obtain in present investigation are discussed under following sub heads:

- Demographic Profile of the Respondents
- Impact of CRM in Hospitality Industry

Demographic Profile of the Respondents

Table 1

Table 1 represents the demographic profile of the respondents. From the table it was observed that 74% of the respondents were male and 26% of the respondents were females. The maximum respondents (70%) were above 35 years of age followed by 24% of 25-35 years and 6% were below 25 years. Among them 82% of the respondents were associated with hotels (or working with hotels) and only 18% were working with travel and tourism.

2. Impact of CRM in Hospitality Industry

SN	Profile	N=50	Percentage (%)
1.	Gender		
	a.) Male	37	74%
	b.) Female	13	26%
2.	Age		
	a.) 35 +	35	70%
	b.) 25 – 35	12	24%
	c.) Below 25	03	6%
3.	Organization		
	a.) Hotels	41	82%
	b.) Travel & Tourism	09	18%

Table 2

S.No.	Question	N = 50	Percentage (%)
1.	Do you think CRM is required in Hospitality Industry?		
	• Yes	49	98%
	• No	01	2%

2.	How many employees work in your organization? 1-50 50-100 100-300 300<	15 28 5 2	30% 56% 10% 4%
3.	How often do you use CRM tactics? • Frequently • Very often • Daily basis • Not frequent	25 12 6 7	50% 24% 12% 14%
4.	Which function of CRM system seems the most important to you? • Contact Management • Sales Management • Marketing Management • Project Management • Problem Management • Activity planning and task delegation • Reports creation • Data export	27 06 07 00 06 01 01 02	54% 12% 14% 00% 12% 2% 2% 4%
5.	How do you prefer communicating your customers to develop better relationship? • Letter • Phone • E mail • Others	04 09 34 03	8% 18% 68% 6%
6.	What practice do you use to enhance customer relationship? • Maintaining history cards • By wishing them occasionally	36 14	72% 28%
7.	How often the organization conducts training programs for employees to meet customers' expectations? • Regular basis • Once a year • Twice a year • Not very frequent	22 14 03 11	44% 28% 06% 22%

8.	What tools do you use to follow CRM practices in your organization?		
	• Comment cards	12	24%
	• Suggestion book	19	38%
	• Feed back form	13	26%
	• Personal interaction	06	12%
9.	What action do you take after receiving customer feedback?		
	• Immediate action taken	17	34%
	• Research and analysis	11	22%
	• Meeting with concerns	14	28%
	• No measures taken	08	16%
10.	Did you do SWOT analysis for effective CRM?		
	• Yes	33	66%
	• No	17	34%
	If yes, which approach do you follow?		
	• Traditional CRM approach	19	58%
	• Web-enabled and integrated approach	14	42%

2. IMPACT OF CRM IN HOSPITALITY INDUSTRY

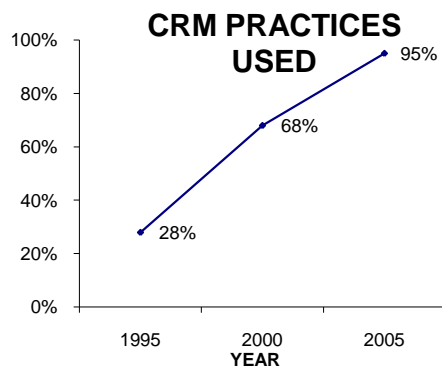
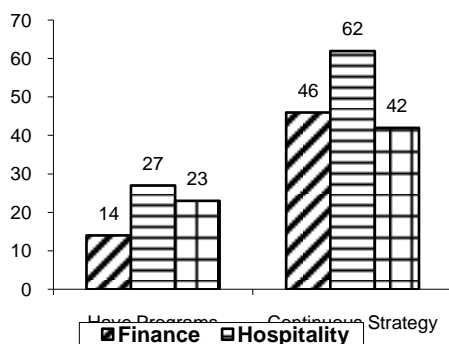
Table 2 represents the impact of CRM in Hospitality Industry. From the table it was observed that 98% believed that CRM is required in hospitality industry. The organizations with 50 – 100 employees were 56% followed by 30% of organizations with 1-50 employees. 10% of the organizations were 100-300 employees where as 4% had more than 300 employees.

About 50% of organizations were frequently using the CRM tactics and only 12% were using them on daily basis. The results obtained depicted that contact management (54%) was considered the most important function of CRM followed by marketing management (14%), sales management (12%), problem management (12%), data export (4%), activity planning & task delegation and report creation (2% each) respectively. Project management was not considered as important function of CRM. 68% of the respondents responded email as the best communication source to develop good relationship with the customer whereas, 18% preferred phone followed by letter 8% and others 6% respectively. History cards (72%) were considered best to enhance customer relationship while 28% wished their guests occasionally for the same purpose. The percentage of conducting training programs for employees by organizations to meet customers' expectations on regular basis, once a year, twice a year and not very frequent was 44%, 28%, 6% and 22% respectively. Suggestion book (38%) was the most common tool used to follow CRM practices in the organization followed by feedback form (26%), comment card (24%) and personal interaction (12%). From the data it was also

observed that after receiving customer feedback, immediate action was taken by 34% of the organizations. 28% organizations meet with the concerns while 22% did research and analysis of the feedback received. Surprisingly, 16% of the organizations took no measure for these feedbacks. For effective CRM, 66% organizations favoured SWOT analysis. For this, 58% used traditional approach where as 42% followed web-enabled and integrated approach. Many research investigations were undertaken by the researchers in this area of research and are supporting the findings of the present investigation.

A survey conducted by G. Shainesh and Ramesh Mohan (2003) showed that over 60% hotels have indicated that they have a continuous information. In most of the services, opportunities to come in direct contact with their customer are high in comparison to other business who have intermediaries and hence have a arms length relationship with their customers.

Another survey conducted by kapil Chaturwedi and Anil (2004) gave a clear vision of increasing use of technologies in the CRM practices. The survey was conducted in the leading hotels of India



CONCLUSION

Relationship is a natural corollary to any interaction. The challenge before hospitality industry is to balance between long-term goals and short-term gains. Top management must define its policy in this regard. Great care is required as hospitality is a very delicate term. It is useful to project customer revenues and costs on a time scale and carefully plan customer acquisition program. An organization must judiciously allocate its energy towards various categories of existing and potential customers. Managers must get into relationship dynamics within each category, and give it appropriate treatment so that it stays healthy and vibrant. No matter how well an organization is doing, there is always room for improvement and continuously assessing the strategic vision enables the organization to stay ahead of changes in that corner of the world. The internet is playing a key role in the management of a CRM strategy and this is true for hospitality industry also as the above activities move from the written word to the 'web'. Another important factor is that effective customer relationship is not just the function of infrastructure and facilities, technology and information, comfort and food, people and warmth, it is a process of planning organizing staffing coordinating,

controlling and budgeting. A holistic approach which leads organizations to develop customer centric process, integrate technology through customer oriented approaches, motivate employees to perform to their full potential through empowerment needs to be managed most efficiently for the best of results.

From the outcome of the study it can be concluded that majority of the organizations in the Uttarakhand region are following CRM tactics to earn more customers. It is an effective tool and with proper training to employees this could yield better results. In nutshell, application of CRM techniques in hospitality industry helps to satisfy the global customers' demands and customer satisfaction is directly proportional to customer retention, which in fact helps in the growth of business in any industry. In today's competitive environment, CRM practices are mandatory and in future too, it is expected to come out with more fruitful results.

RECOMMENDATIONS

In the era of globalization, quality control and quality management hold the key to success for any organization. In particular, this is true with some service-oriented industry where changes come rapidly and where customer satisfaction through quality product is a challenging task. Hospitality Industry offers delicate and specialized services and the guests have high expectations of the services. CRM is one of the key tools to fight this cut throat competition and in creating superior brand equity and better results.

On the basis of the study, we would like to recommend few suggestions which can be implemented profitably by the industry;

1. Customer feedback must be analyzed and steps to overcome any lacuna should be implemented on priority basis.
2. Maintaining suggestion boxes at every point of interaction with the customers.
3. Employees' satisfaction surveys are also very important to apply Customer Relationship Management practices.
4. Regular track of the sales data for further leads and follow up is essential.
5. Effective CRM software should be installed to improve guest satisfaction, lower operating costs, build guest loyalty and increase revenues.
6. Having Guest History programs – keeping a databank of customer profiles along with details of personal preferences like amenities preferred, special requests, eating habits, sending birthday cards to regular guests and even their spouses would help in winning them for repeat business and good publicity.

Giving recognition awards to attract old customers and make them feel special goes a long way in maintain the brand image.

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A STUDY OF MOBILE AD HOC NETWORK ROUTING PROTOCOL

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ABSTRACT

An Ad hoc network is a collection of wireless mobile hosts forming a temporary network without the aid of any centralized administration or infrastructure. Such networks have no fixed topology due to the high degree of node mobility. Hence, efficient and reliable routing is one of the key challenges in mobile ad hoc networks. Many routing algorithms have been proposed and developed for accomplishing this task. Therefore, it is difficult to determine which protocol performs best under a number of different scenarios. Hence, this paper presents a review of the typical representatives of routing protocols designed for MANETs.

Key Words: MANET, Routing Protocols, Proactive, Reactive, Hybrid Protocols, AODV, DSR.

MANETs are autonomously self-organized and self-configuring networks without infrastructure support. In such networks, since node mobility is very high the network may experience frequent and unpredictable topology changes. Mobility and the absence of any fixed infrastructure make MANETs very attractive for time-critical applications. Ad hoc network applications include students using laptop to participate in an interactive lecture, business associates sharing information during a conference and search & rescue operations. Recently, Mobile Ad Hoc networks became a hot research topic among researchers due to their flexibility and independence of network infrastructures such as base stations. The infrastructure less and the dynamic nature of these networks demand new set of networking strategies to be implemented in order to provide efficient end-to-end communication.¹ MANETs can be deployed quickly at a very low cost and can be easily managed. Need of a routing algorithm arises whenever a packet needs to be transmitted to a node via number of different nodes. Several routing protocols exist for wired networks, which can be classified as using either the distance vector or the link-state algorithm. These algorithms were designed for use in wired networks where topology changes are infrequent. An ad-hoc routing protocol must be able to decide the best path between the nodes having unidirectional links, minimize the routing overhead to enable proper routing, minimize the time required to converge after the topology changes and maximize the bandwidth utilization. Therefore, developing support for routing is one of the key research areas in MANETs. The rest of the paper is organized as follows. Section II discusses the classification of routing protocols. Section III introduces the various important routing protocols methodology. Finally, conclusion is done in section IV.

1. CLASSIFICATION OF ROUTING PROTOCOLS

The inadequate and limited resources in MANETs have made designing of an efficient and reliable routing strategy a very challenging task². An intelligent routing algorithm is required to efficiently use these limited resources while at the same time being adaptable to the

changing network conditions such as network size, traffic density, nodes mobility, network topology and broken routes. Numerous routing protocols have been proposed and developed for ad hoc networks. Such protocols must deal with the limited resources available with these networks, which include high power consumption, low bandwidth and high mobility. Existing routing protocols can be classified in many ways, but most of these are done depending on routing strategy and network structure³. According to the routing strategy, routing protocols can be categorized as Table driven, On-demand driven and Hybrid (see Fig. 1), while depending on the network structure they are classified as flat routing, hierarchical routing and geographic position assisted routing.

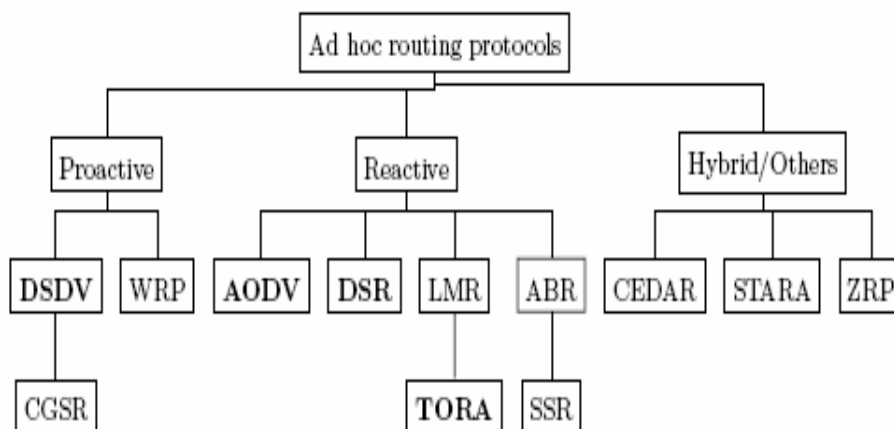


Fig.1 Classification of Ad Hoc Routing Protocols

2.1 Table Driven Routing Protocols: Proactive protocols are also known as “Table-driven” routing protocols. In this protocol, each and every node maintains complete information about the network topology by continuously evaluating routes to all the nodes. Hence, they maintain consistent and up-to-date routing information. These protocols are known as proactive since they maintain the routing information before it is needed. Each and every node in the network maintains routing information about how to reach every other node in the network. The route information in proactive routing is maintained in the routing tables and is updated as and when the network topology changes. This causes more overhead in the routing table leading to consumption of more bandwidth. There are various existing proactive routing protocols. The areas in which they differ are the number of necessary routing tables and the methods by which changes in the network topology are broadcast. Some of the existing proactive protocols are Destination-Sequenced Distance Vector (DSDV)⁴, Global State Routing (GSR)⁵, Fish-eye State Routing (FSR)⁶.

2.2 On Demand Routing Protocols: A different approach from Table-driven routing is On-demand routing. In this approach, a routing path is discovered only when the need arises.

These are called reactive since it is not necessary to maintain routing information at the nodes if there is no communication. When needed, a route discovery operation in turn invokes a route-determination procedure. The discovery procedure terminates either when a route has been found or no route available after examination of all the route permutations. The primary advantage of reactive routing is that the wireless medium is not subject to the routing overhead for the routes that may never be used. Although reactive protocols do not have the fixed overhead (required in maintaining continuous updated routing tables), they may have significant route discovery delay. Some of the existing reactive protocols are Ad hoc On-Demand Distance Vector (AODV)⁷, Dynamic Source Routing (DSR)⁸, Signal stability based adaptive Routing (SSR)⁹.

2.3 Hybrid Routing Protocols: This protocol combines the best features of the above two protocols, Proactive and Reactive protocols. Nodes within a certain distance from the node concerned, or with in a particular geographical region, are said to be with in the routing zone of the given node. For routing within the zone, a table driven approach is used. For nodes that are beyond the zone, a demand driven approach is used. Most commonly used Hybrid routing protocol is Zonal routing protocol (ZRP).

ROUTING PROTOCOLS

This section describes some of the important routing protocols:

3.1 Destination-Sequence Distance Vector (DSDV) routing protocol: The DSDV protocol¹⁰ described in is a table-driven protocol based on the classical Bellman-Ford algorithm. Each node in the network maintains a routing table that contains a list of all the possible destinations within the network. Each entry in the table contains the destination address, the shortest metric to that destination in terms of hop count, the next hop address and a sequence number generated by the destination node. The route with the greater sequence numbers is preferred. Sequence numbers are used to distinguish stale routes from fresh ones, thereby avoiding the routing loops. Routing table updates are periodically transmitted throughout the network in order to maintain updated information in the table and its consistency. The route updates can be either time-driven or event-driven. Every node periodically transmits routing information to its immediate neighbors. Instead of transmitting the entire routing table, a node can also propagate its changed routing table since the last update. To reduce the large amount of network traffic that such updates can create, route updates can employ two possible types of packets. The first is known as a *full dump*. This type of packet carries complete routing information and can require multiple network protocol data units (NPDU's). During periods of infrequent movement, these packets are transmitted occasionally. Smaller *incremental packets* are used to transmit only that information which has changed since the last full dump.

3.2 Dynamic Source Routing (DSR): DSR¹¹, a reactive unicast protocol is based on source routing algorithm. In source routing, each data packet contains complete routing information to reach its destination. There are two major phases in DSR: *route discovery* and *route maintenance*. When a source node wants to send a packet, it first searches for an entry in its route cache. If the route is available, the source node includes the routing information inside the data packet before sending it. Otherwise, the source node initiates a route discovery operation by broadcasting route request (RREQ) packets. Each RREQ packet is uniquely

identified by the source address and the request id (a unique number). On receipt of the RREQ packet, an intermediary node checks its route cache. If the node doesn't have routing information for the requested destination, it appends its own address to the route record field of the route request packet. Then, the request packet is forwarded to its neighbors. A node processes route request packets only if it has not seen the packet before and its address is not presented in the route record field. If the route request packet reaches the destination or an intermediate node has routing information to the destination, a route reply packet is generated. When the route reply packet is generated by the destination, it comprises addresses of nodes that have been traversed by the route request packet. Otherwise, the route reply packet comprises the addresses of nodes the route request packet has traversed concatenated with the route in the intermediate node's route cache.

3.3 Ad-Hoc On-Demand Distance Vector (AODV) Routing protocol: As a reactive protocol, AODV¹² only needs to maintain the routing information about the active paths. Every node keeps a next-hop routing table, which includes only those destinations to which it currently has a route. A route entry in the routing table expires if it has not been used for a pre-specified expiration time. Moreover, AODV adapts the destination sequence number technique used by DSDV. In AODV, when a source node wants to send packets to the destination, it initiates a route discovery operation if no route is available. In the route discovery operation, the source broadcasts route request (RREQ) packets. A RREQ includes addresses of the source and the destination, the broadcast ID, which is used as its identifier, the last seen sequence number of the destination as well as the source node's sequence number. Sequence numbers ensure loop-free and up-to-date routes. In AODV, each node maintains a cache to keep track of RREQs it has received. The cache also stores the path back to each RREQ originator. When the destination or a node that has a route to the destination receives the RREQ, it checks the destination sequence numbers it currently knows and the one specified in the RREQ. In response to RREQ, a route reply (RREP) packet is created and forwarded back to the source only if the destination sequence number is equal to or greater than the one specified in RREQ. This in turn guarantees the freshness of the routing information. Upon receiving the RREP packet, each intermediate node along the route updates its next-hop table entries with respect to the destination node. The redundant RREP packets or RREP packets with lower destination sequence number will be dropped.

3.4 Zone Routing Protocol (ZRP): The Zone Routing Protocol (ZRP)¹³ was introduced in 1997 by Haas and Pearlman. It is either a proactive or reactive protocol. It is a hybrid routing protocol. It combines the advantages from proactive and reactive routing. It takes the advantage of pro-active discovery within a node's local neighborhood (Intra-zone Routing Protocol (IARP)), and using a reactive protocol for communication between these neighborhoods (Inter-zone Routing Protocol (IERP)). The Broadcast Resolution Protocol (BRP) is responsible for the forwarding of a route request. ZRP divides its network in different zones. That's the nodes local neighborhood. Each node may be within multiple overlapping zones, and each zone may be of a different size. The size of a zone is not determined by geographical measurement. It is given by a radius of length, where the number of hops is the perimeter of the zone.

The following table briefly compares these routing protocols:

	Table-driven	On-demand
Availability of Routing Information	Always available (in routing table)	Available when needed
Route Updates	Periodic	When requested
Routing Structure	Both flat and hierarchical	Mostly flat
Storage Requirements	High	Usually lower than proactive
Routing Overhead	Proportional to the size of network	Proportional to the number of communicating nodes
Latency	Small	Most applications suffer a long delay

CONCLUSION

This article described the classification of several routing schemes according to the routing strategy. We discussed some important characteristics of the two routing strategies: table-drive and on-demand. In this paper, an effort has been made to concentrate on the comparative study of various routing protocols methodology. Moreover, a single routing protocol can't perform best in all situations. So, the choice of routing protocol should be done carefully according to the requirements of the specific application. The focus of the study in our future research work is to propose an extension of the existing conventional routing protocols which will be better in terms of security, throughput, efficient utilization of limited resources and quality of service.

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MANAGING CHANGE IN PRIVATE AND PUBLIC SECTOR ORGANIZATION IN INDIA

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ABSTRACT

The present article deals with change management in Public & Private sector organization in India, Change is essential for the existence and development of the organization. But Private & Public sector organization are still facing problems i.e. shortage of resources, heavy change cost, burden of training, fear of heavy load etc for implementing change in the organization.

Key Words: Change Management, Change Management Process, Resistance, Factors.

Change is the law of the world. Birth, Childhood, youth, old age, joys & sorrows, Change of seasons are all the hard realities of life. In other words, everything is subject to change in this world. We generally also observe that there are many changes in the life of a business. These changes include the development of new methods of production, change in govt. policies, the period of deflation & inflation, the promotion & transfer of employees, entry of competitors in the market, decline in sales, decline in profits etc. These changes do affect the employees working in the organization.

It is important to compromise with these changes in order to safeguard the existence of both the employees and the organization. Change is necessary for the survival and growth of a business unit. But human nature does not accept any change without resistance. There can be many reasons for this expression of opposition. They may include the fear of losing his job, his annoyance for not being consulted in this context; the suggestion of installing a idea may have been given by someone he does not like etc. Mayo said “Man has always feared the unknown & a change represent the unknown” (Dr. R.K. Singla, 2011-2012).

Change management is the process, tools & techniques to manage the people side of change to achieve, the required business outcome (Time Gresey, Prosci).

Change management is an approach to transitioning individuals, teams and organizations to a desired future state.

MC Kinsey (1982) First Published a change management model in the journal human resource management.

Linda Ackerman Anderson (1990) states in Beyond Change Management that top leaders growing dissatisfied with the failure of creating and implementing changes in a top-down fashion, created the role of the change leader to take responsibility for human side of the change.

Christina (2010) Dean managing director of uniforte Pvt. Ltd, established change Management as a formal vocation in Australia by writing the Australian National Competency standards in organizational and community change Management, which led to the developed of the first Australian diploma of organizational change management, and which is an internationally recognized qualification.

APPROACH

Organizational change is a structured approach in an organization for ensuring that Changes are smoothly and successfully implemented to achieve lasting benefits. In the modern business environment, organizations face rapid change like never before. Globalization and the constant innovation of technology result in a constantly evolving business environment.

With the business environment experiencing so much change, organizations must then learn to become comfortable with change as well. Therefore the ability to manage and adapt the organizational change is an essential ability required in the workplace today.

And, organizational change directly affects all departments from the entry level employee to senior management. The entire company must learn how to handle changes to the organization.

PHASES OF CHANGE MANAGEMENT

There are 3 phases of change management in the organizations.

Phase 1- Preparing for change.

- Define your change management strategy.
- Prepare your change management team.
- Develop your sponsorship model

Phase 2- Managing Change.

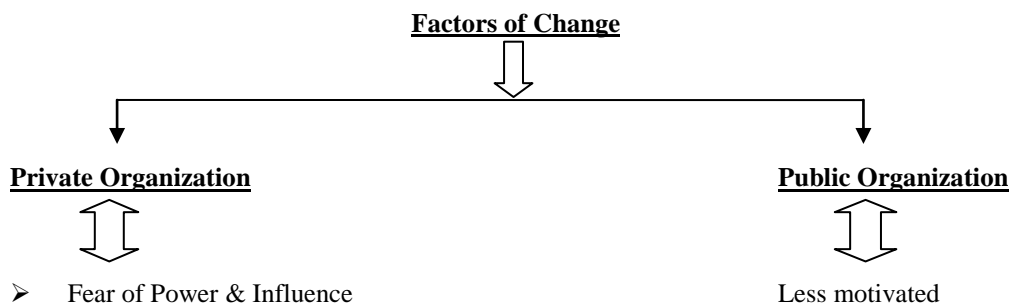
- Develop change management plans.
- Take action and implement plans.

Phase 3- Reinforcing Change.

- Collect & analyze feedback.
- Diagnose gaps and manage resistance.
- Implement corrective actions and celebrate successes.

FACTORS OF CHANGE

Every business unit takes birth and flourishes in a continuously changing environment. Therefore, it is important to introduce change in the organization Nobody accept the change easily. Resistance is another aspect of changes. Change is hard for employees in both private and public sector organization. There are many factors that responsible for change, which are highlighted with diagram:



- | | |
|------------------------------|----------------------------------|
| ➤ Fear of shortage recourses | Less Pressure of external Market |
| ➤ Heavy Change cost | Complex process |
| ➤ Fear of heavy load | Burden of training |
| ➤ No participation in change | One-sided benefit |

A- PRIVATE SECTOR ORGANIZATION

- **Fear of Power & influence-** The high-level managers oppose that change which will hurt their power and influence. For eg. With the extension of the company there is a change that results in the decentralization of power. But, by doing so there is decrease in the power & influence of the top-level managers.
- **Fear of shortage of resources** – If the resources of a company are limited and it is not easy to implement the change the top level managers oppose such a change
- **Heavy Change cost** – Sometimes, there are some change which may involve the change of old fixed assets and manpower (employees) such a change involves huge cost. Some private organization cannot bear it. Consequently, they oppose the change.
- **Fear of heavy Load-** It is quite possible that load of the employees may increase because of technical changes while their remuneration /salary may remain at the previous level. The employees will oppose the change in such situation.
- **No participation in change_-** Some employee of private sector organization get annoyed for the reason that they were not associated with the decision of introducing change they oppose the change for this reason

B- PUBLIC SECTOR ORGANIZATION

- **Less motivated_**– Employees in the Private sector have not been motivated by a fear of having to outperform peers to keep their jobs.
- **Less Pressure of external market** – Govt. organization often do not feel the same external market pressure to change quick that is to be faced by the private organization. That why, employees may not be used to the enormous change.
- **Complex Process** – Business processes, systems, people and organizational structures can be more complex than other private sector organization.
- **Burden of Training-** Because of technical changes the employees need training. However, it has often been observed that the employees shirk attending training programmes such employees oppose the change.
- **One sided benefit** – Sometimes employees feel that the change will be beneficial only to the organization and not to the employees. In such a situation, they opposition the change.

Now the question arises how to overcome the resistance of change or opposition. We cannot change the human nature under any pressure. The management should realize that it is natural for man to oppose. Therefore effort should be made to reduce the opposition.

HOW TO MANAGE THE CHANGE IN PUBLIC & PRIVATE SECTOR ORGANIZATION

- **Arrangement of Resources** – The management should think of the change only after making arrangement for sufficient resources. So before implementing the change managers must firstly arrange the resources.
- **Slow introduction** – The change should be gradually introduced/ implemented in various stages. Otherwise employees cannot understand what and ‘why’ of the Change being implemented. So firstly employees get mentally prepared for the change.
- **Management of Cost of Change** – The management should ensure that the loss likely to be suffered because of the change in fixed assets is compensated by the implementing the program of change. Similarly the manpower should be made efficiently by educating and training the employees. In this way organization can save the trouble of spending more on the new employees.
- Change is based on the communication of information and the proffering of incentives. And people are rational and will follow their self interest once it is revealed to them.
- Change is based on the exercise of authority & imposition of sanctions. Basically, people are compliant and will generally do what they are told or can be made to do.
- Change is based on building a new organization & gradually transferring people from the old one to the new one. People oppose loss disruption but they adapt readily to new circumstances.
- A clear sense of mission or purpose is essential for the change.
- Formation of change management by all department employees.

RECOMMENDATION

Change is vital for the growth survival of both the organization. While introducing change in the organization some points must be kept in mind.-

- Change must be introduced gradually in various stages not in once.
- How to introduce the change in the organization must be planned in advance.
- If change required resources, then resources must be arranged first.
- If training is required for the change Proper arrangement of training program must be made.
- Satisfy the employees that change is not only good for organization but also for the employees.
- Communication about change including public meetings various other forms of two way communication must be done.
- Leadership is the key component of successful change Leaders are in a position to bring parson and conviction for change & increase organizational performance through strategic thought building partnership facilitating change in organization culture.

Remember, the task of change management is to bring order to a dirty situation, not pretend that it's, already well organized disciplined.

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JUDICIAL ACTIVISM IN INDIA: THE EMERGING TRENDS

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ABSTRACT

India is not only democracy where judges have been coming to play an unprecedented governing role. The weakness of the political process provides fertile soil for judicial activism, and judges keen to compensate for their failure to defend democratic principles laid down by the Indian Constitution. In many instances, the executive has almost invited the judiciary to play a leading and active role. However, in term of its origin, it is a new concept, but the traces of judicial activism can be found in the writing Montesquieu, a French scholar, who wrote his famous book, 'The Spirit of the Laws' in 1748. Usually one ascribes it to the origin of the doctrine of judicial review to Marbury vs. Madison case in the U.S. But, if one takes it in Indian context, the concept was realized way back in 1893 and further, from 1950 to 1980, judiciary in India assumed the role of protector of fundamental rights-sentinel of the people's rights. After the end of the emergency (1975), The Supreme Court and also some of the High-Courts began to show signs of judicial activism and people reposed faith in judicial system. Further, the PIL in 1986 by Justice P.N. Bhagavati is known as the milestone in the history of Judicial Activism and recent changes may be seen in the phenomena of Judicial Activism. Today, the judiciary seems more active and vibrant regarding the cases of human rights and environment pollution. Recently, on December 31, 2012 UPA Government has announced that most of the pending case will be solved and judicial system will be made more strong and active.

Key Words: Separation of Powers, Fundamental Rights, Judicial review, PIL, Judicial Activism.

Judicial activism is an essential mechanism in all federal democratic states. When two organs of government – legislature and executive – fail to discharge their respective functions, government goes on the verge of collapse which leads to erosion of confidence in Constitution and democracy among citizens. At this crucial juncture judiciary steps into their areas. There are many cases in India when judiciary became active. The basic structure doctrine is essential part of judicial activism. It allows legitimate changes but prevents the essence of constitutionalism. Public Interest Litigation (PIL) is also a manifestation of judicial activism. It has added a new dimension in public affairs. The year 2010 has been memorable one for Supreme Court and Chief Justice S.H. Kapadia has asserted its supremacy in protecting

human rights. It has been probing meticulously into 2G Spectrum case of Central Vigilance Commission (CVC) chief, Neera Radia's Phone taps and Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) implementation etc. Though this activism is perceived as judicial intervention by two other organs but being the custodian of public rights, Constitution and democracy judiciary may bring out the truth.¹

Judicial activism is a powerful weapon which the judges have to wield to sub serves the ends of justice by making the law responsive to the felt necessities of the changing times. The judges have been given a high responsibility to evolve law in consonance with the changing needs and aspirations of the society and to serve the cause of social justice. Judicial activism is founding stone of this approach. Recognizing this Justice Bhagavati observed: "Judicial activism is now a central feature of every political system that vests adjudicatory power in a free and independent judiciary".²

Black's Law Dictionary defines judicial activism as a "philosophy of judicial decision-making whereby judges allow their personal views about public policy, among other factors, to guide their decisions." Judicial activism means active role played by the judiciary in promoting justice. Judicial Activism to define broadly is the assumption of an active role on the part of the judiciary. Ronald Dworkin, for example, rejects a "strict interpretation" of the constitutional text because it limits constitutional rights "to those recognized by a limited group of people at a fixed date of history."³

According to Prof. Upendra Baxi, Judicial Activism is an inscriptive term. It means different things to different people, while some may exalt the term by describing it as judicial creativity, dynamism of the judges, bringing a revolution in the field of human rights and social welfare through enforcement of public duties etc., others have criticized the term by describing it as judicial extremism, judicial terrorism, transgression into the domains of the other organs of the State negating the constitutional spirit etc.⁴

Judicial Activism implies going beyond the normal constraints applied to jurists and the Constitution, which gives jurists the right to strike down any legislation or rule against the precedent if it goes against the Constitution. Thus, ruling against majority opinion or judicial precedent is not necessarily judicial activism unless it is active. In the words of justice J.S. Verma, Judicial Activism must necessarily mean "the active process of implementation of the rule of law, essential for the preservation of a functional democracy".⁵

India has a recent history of judicial activism, originating after the emergency in India which saw attempts by the Government to control the judiciary. The Public Interest Litigation was an instrument devised by the courts to reach out directly to the public, and take cognizance though the litigant may not be the victim. "suomotu" cognizance allows the courts to take up such cases on its own. The trend has been supported as well criticized. All such carrier the forces of the Constitution of India Article 39A although before and during the Emergency the judiciary desisted from "wide and elastic" interpretations, termed Austinian, because Directive Principles of State Policy are non-justiciable. This despite the constitutional provisions for judicial review and B R Ambedkar arguing in the Constituent Assembly Debates that "judicial review, particularly writ jurisdiction, could provide quick relief against abridgment of Fundamental Rights and ought to be at the heart of the Constitution."⁶

The weakness of the political process provides fertile soil for judicial activism, and judges keen to compensate for their failure to defend democratic principles during the 1975-77

emergency have avidly taken up the task of preserving the republic. In many instances, the executive has almost invited the judiciary to play a leading role. State governments often seek judicial dispensation as a source of political cover when unpopular decisions have to be made. But such power as the Indian courts have acquired mostly confirms the dictum that power flows to those who choose to exercise it. In decision after decision, be it the authority to review constitutional amendments or the mode of appointing judges, the Supreme Court has created its own powers.⁷

Judicial Activism in India is an examination of judicial reviews. It traces the evolution of the Supreme Court of India from a passive, positivist court into an activist one, articulating counter-majoritarian checks on democracy. Judicial activism has not been a spontaneous development. It is the result of a situation which necessitated it. In 1986, the then Chief Justice of India, Justice P.N. Bhagavati converted a letter written to him on a post card by an aggressive citizen into public interest litigation. That was the beginning of judicial activism. The court's role in sensitizing the central intelligence agencies to discharge their constitutional obligation in the 'Hawala case' in which top leaders both in the Government and in the opposition were involved was pivotal. Its various judgments have attracted both praise and criticism ranging from the need to have a uniform Civil Code, pollution control, preservation of historical monuments, cleaning and keeping the metropolis more hygienic, directing the eviction of unauthorized occupation of government building, trial of rape victims and award of compensation to them, punishing senior civil servants for contempt and many others. Following the examples set by the Supreme Court, the High Court also followed the suit. Some welcomed the infusion of new blood in judicial activity hailing it as a check on the misuse of power by the executive; others expressed apprehension about the executive and activist role of the judiciary.⁸

It was only in the 80s that judiciary started taking up public litigation cases seriously. The first major case of judicial activism was that of the Bihar under trials. Again in 1980, two professors of law wrote a letter to Editor, *Indian Express* describing barbaric conditions of detention in the Agra Protective Home, the basis for a writ petition under Article 21. This was followed by a similar petition for Delhi Women's Home by a third year law student in Delhi Law Faculty and a social worker. Then three journalists after exposing a thriving market, in which women were brought and sold as cattle, filed a writ petition demanding prohibition of this practice and immediate relief for their victims through programmes of compensation and rehabilitation.⁹

The Supreme Court began to take the cognizance of custody deaths, bride burning and rape in police stations, scams etc. It ordered the police not to handcuff a man arrested purely on suspicion. It ordered that no woman can be taken to a police station after dusk. High Court judges began to visit prisons to check the living conditions of prisoners. In about a single month of 1993, the Supreme Court delivered judgments protecting the rights of innocents held in *Hazaratbal* mosque in Srinagar, defining the constitutional powers of the Chief Election Commissioner, threatening multi-crore rupees industries with closure if they continued to pollute the Ganga and endanger the TajMahal and brought all government and semi-government bodies under the purview of the Consumer- Protection Act.¹⁰

The issue of reservation policy came into focus with the passing of the Constitution 93rd Amendment Act, 2005 and enactment of the Central Educational Institutions Act of 2006

introducing reservation of seats for the Other Backward Classes socially and educationally backward classes of citizens to the extent of 27%. The constitutional validity of 93rd amendment was challenged in the Supreme Court. This matter came up in *Ashok Kumar Thakur v. Union of India* the Supreme Court, thus excluded creamy layer that was impliedly included both by virtue of 93rd Constitutional amendment and the Act 5 of 2007 passed there under.¹¹

Attempts to petition the Supreme Court recently have demonstrated this trend towards dialogue and transparency. Following the Mumbai terror attacks of November 2008, a former Attorney General of India filed a petition before the Supreme Court seeking to better equip the Indian police. The public interest petition in the context of the attacks on Indian students in Australia tells a similar tale. However, a court which issues unenforceable (one should say enforceable with some difficulty) opinions, toys with the dangerous possibility of delegitimizing its own existence. It also begs the question of institutional efficiency: of whether such functions can be better performed by another institution which does not have the Supreme Court's case load but one which matches its visibility – if such an institution were ever capable of being devised. However, whispers of corruption in the judiciary, and the act of withholding information regarding judge's assets do not make the case for judicial activism any stronger.¹²

The year 2010 was a memorable one for the Supreme Court and Chief Justice S.H. Kapadia as he asserted its supremacy, particularly in protecting human rights and in exposing corruption at high level by ordering a thorough probe into the 2G spectrum scam. The Supreme Court has taken the charge of 2G spectrum case being conducted by Central Bureau of Investigation. The Supreme Court asked the CBI to file first information report and investigate the grant of license from 2001 to 2006-07 and loss caused to the exchequer and gain made by the licenses and service providers. The Court asked Income Tax authorities to analyse the transcripts made from corporate lobbyist Neera Radia's Phone Taps and hand over these to the CBI to facilitate further investigation. The Supreme Court also expressed concern over lacunae in implementation of the Mahatma Gandhi National Rural Employment Guarantee Act.¹³

In the 2G Licenses case, the Court held that all public resources and assets are a matter of public trust and they can only be disposed of in a transparent manner by a public auction to the highest bidder. This has led to the President making a Reference to the Court for the Court's legal advice under Article 143 of the Constitution. In the same case, the Court set aside the expert opinion of the Telecom Regulatory Authority of India (TRAI) to sell 2G spectrum without auction to create greater teledensity in India. The Court has for all practical purposes disregarded the separation of powers under the Constitution, and assumed a general supervisory function over other branches of governments. The temptation to rush to the Supreme Court and 21 High Courts for any grievance against a public authority has also deflected the primary responsibility of citizens themselves in a representative self-government of making legislators and the executive responsible for their actions.¹⁴

Therefore, we hope that judicial activism will serve as a saviour for all, executive, legislature and especially poor masses. There is no doubt that judicial activism is to be considered as a vanguard of Indian Parliamentary democracy. It has touched the heart of common people and tried its best to solve their problems related to fundamental rights, pollution and environment safety measures, food security and many others.

To conclude, we can say that judicial activism is a powerful weapon in the hands of judges. This has empowered the judiciary to play an active role to protect the human rights and the constitutional framework of the Indian democracy. PIL are also part and parcel of judicial activism. The Supreme Court has given a due weightage and preference to these litigations. The courts have started the 'LokAdalats' to solve the pending cases in different courts of the country. Therefore, PIL, popularly known by its acronym, is unexceptionable judicial activism. These have set up a sense of judicial accountability and transparency in the judicial system of India. Now the judiciary has been performing very well. Recently, the landscape of Supreme Court ruling offers some interesting insights into the metamorphosis of judicial activism in India. Most strikingly, the Supreme Court has issued a notice to the Union Government seeking an explanation of the steps taken by it to ameliorate the plight of the poor people dying with hunger, human rights violation in the prisons, increasing political corruption, scams and some of other violations of the constitutional remedies given to the citizens. In this perspective, the UPA Government has announced that all the pending cases will be solved very soon and on priority basis by establishing fast track courts and LokAdalats. This may be called the impact of judicial activism on the legislature and executive in India.

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TRADITION AND INDIVIDUAL TALENT: AN UNOFFICIAL MANIFESTO OF ELIOT'S CRITICISM

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ABSTRACT

The essay "Tradition and Individual Talent" was first published in 1919 in 'The Times Literary Supplement' as a critical article. It is perhaps the most famous of Eliot's essays, which is regarded as an unofficial manifesto to his critical creed, as it contains all those critical principles from which he derived his literary theory. This essay is a framework for the numerous critical essays which subsequently fueled from his pen. It is a seminal essay containing the germs of his future critical work.

Key Words: Impersonality, Fallaciousness, Self-Surrender, Prejudist, Plutarch.

CRITICS ON THIS ESSAY

Though the critics like F.R. Leavis have condemned this essay for "its ambiguities, its fallaciousness, and the aplomb of its specious cogency", F.W. Bateson regards this essay as "a classic of our criticism."

Bateson recommends that the essay should be seen in its original text than only its true nature and worth can be known.

THEORY OF TRADITION

In this essay Eliot gives his theory of tradition and the poet's and the critics relation to the literary tradition. He feels very sad over the use of the word 'tradition' in a very 'derogatory sense' by the English people. It is oftenly used as a word of censure rather than praise. Eliot doesn't confirm to such a misinterpretation of the word. He says that tradition is very much relevant and central to criticism as well as poetry. Every nation and race has its own critical bend of mind. Generally, the French are supposed to be more critical mind than the English. Eliot feels very offended over such a stupid notion. He feels that the English should learn to criticize their own lack of critical faculty instead of pluming themselves of their spontaneity. They should not praise a poet for wrong reason. A work of art should be t in accordance to the tradition. The best part of a poet's work is that which has assimilated tradition.

TRADITION AND THE HISTORICAL SENSE

Assimilation of tradition is not an easy job. Tradition is not an inert academic canon and it does not mean adherence blindly to the ways of previous generations. It should not be misunderstood as a slavish imitation or passive repetition of what others have done already because "novelty is better than repetition." For Eliot, tradition is a matter of wider significance that can't be inherited and has to be achieved by great labor. It involves knowledge of past writers and scholarship. Thus, having historical sense is utmost for a writer. Historical sense involves a perception "not only of the pastness of past but also of its presence". A poet with the historical sense would feel that the "whole of literature of Europe from Homer and within it, the whole of the literature of his own country has a simultaneous existence and compose a

simultaneous order.” It is a sense of the timeless as well as of the temporal together, and this what makes a writer traditional. At the same time it makes a writer conscious of his place in time, his ‘contemporaneity.’ Thus the past is not to be seen in isolation. It is related to the present and continues in and through it.”

TRADITION IS NOT STATIC

Tradition evolves continually thus it is not static. It is a dynamic one and is evolving all the time. It consists of both the past and the present. There is a mutual interdependence between the past and the present. Past directs the present and present alters the past. The writer in present looks for the guidance of the past in literary tradition. But when a new work of art is created, it inevitably modifies the tradition. The new work causes a re-adjustment in values and relationships of the already existing works.

JUDGMENT IN THE LIGHT OF TRADITION

Eliot emphasizes further the value of tradition believing firmly that no writer or poet can have value in isolation. He has to conform to the tradition. He has to be compared and contrasted with the earlier writers and placed among them. It is only through this way that is in the light of tradition that a true worth of writer can be judged.

RELATION OF THE PAST AND THE PRESENT

A serious study of Eliot’s metaphor of tradition makes it explicit that the relationship between the past and the present or, in other words, between the tradition and contemporaneity is the relationship between the whole and the parts. Eliot implies the unity of the whole and the part as a living organism. The whole, that is tradition, is the organic whole in which each part, that is the individual, is doubly related to the whole as well as to other parts in the whole.

The only difference between the past and the present is that present has knowledge of past that the past itself has. The past is reinterpreted in terms of present. The present enlivens the past. “The dead writers are remote from us because we know much more than they did.”

ART NEVER IMPROVES OR LOSES ITS SIGNIFICANCE

Eliot further says that the poet “must be aware that art never improves or loses its significance, but the material of art is never the same.” It is a development which, however ensures that great writers like Shakespeare, Homer are not outdated. None of the artists, who have appeared in the course of their development, lose their significance. There is development or we can say refinement as Eliot has called it.

RELATION OF THE POET TO PAST

To Eliot, a poet’s relation to the past should be relational and unbiased. A poet must be very conscious of the main current in tradition which doesn’t necessarily flow through the most distinguished reputations. He should have a critical faculty to discriminate the main current from the irrelevant. He should be critically enlightened enough that he didn’t take the past in lump as a whole nor does he form a prejudiced view for a few poets or a particular period.

HOW TO ABSORB THE PAST

The poet has to absorb the past so as to be able to express the present. But what the question is that how is the poet to absorb the past? Eliot is conscious that the theory of tradition would be criticized on the basis that it requires too much of erudition. There have been poets who have not been learned but great, all the same. It would also be said that too much of learning would

deaden sensibility. But Eliot does not mean mere bookish knowledge or a superficial knowledge gained with the intension of impressing people for publicity. Knowledge, true knowledge, should go beyond this. The capacity for absorbing knowledge differs from one person to another. Some are able to absorb it without much difficulty; other have to work hard for it. Shakespeare was able to get more knowledge of History from Plutarch than many can from the British Museum. A poet must develop a consciousness of the past and should continue to develop this consciousness throughout his career.

ARTIST'S SELF-SURRENDER

A poet's relationship with the past involves a self – surrender to something which is greater than himself. He has to surrender himself to literary tradition. He has to depersonalize his emotions than only a worthy work can be produced.

CONCLUSION

The essay "Tradition and the Individual Talent" has been rightly termed as the manifesto of Eliot's principles of criticism as it reflects Eliot's classification and his theory of Impersonality of Poetry.

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FEMALE PROTAGONISTS IN VIRGINIA WOOLF'S NOVELS: A STUDY OF MRS. DALLOWAY AND TO THE LIGHTHOUSE

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ABSTRACT

All of Virginia Woolf's major female characters are her spokespersons and representative of her inner fire and power. Virginia Woolf's female characters contributed something essential to her artistic development. It enriched her fiction with a social and psychological metaphor. Virginia Woolf's female protagonists grew out of a desire for wholeness and harmony. She had inherited a fine artistic delicacy and sensitivity from her mother. Her main women characters Mrs Dalloway, Isa Liver, Mrs Ramsay, Rachel Vinrace, and Sara Paragiter have their original in Virginia Woolf. She deals basically with the conscious, sub conscious minds of her characters' sense, sympathy, honesty, strength of feelings. She is concerned throughout with the role of women in society, particularly the denial of a rightful place to women in the traditional patriarchal culture. Mrs Dalloway and Mrs Ramsay are just pictures of frustration even in protected and comfortable environment because they are restricted to the traditional sphere of activity just being housewives and with no other enlarging interests. Virginia Woolf has not only liberated her female protagonists from the traditional association, but also gave them the liberation of human being from the contemporary mechanical culture.

Key Words: Stream of Consciousness, Female, Emotions, Existence.

Virginia Woolf was born Adeline Virginia Stephen, on 25th Jan 1882, the third child of Julia and Leslie Stephen, at Hyde Park Gate in London. She was English author, feminist, essayist, publisher and critic. During the interwar period, Woolf was a significant figure in London literary society and a member of Bloomsbury group. From 'The Voyage Out'(1915) to 'Between the Acts'(1941), it has been a long journey indeed and during this period she has written nine novels in addition to a book of stories, four books of biographical nature, several volumes of literary criticism and an autobiograpy—'A Writer's Diary'.

The preoccupation of Virginia with her family is reflected in most of her characters but it is wrong to suggest that her novels are pure biographies. She was just resenting a fictional version of her personal experiences as almost every novelist does yet we find in her:

‘An attempt to come to terms with reality-A reality as she has known it in her own life. It would not be wrong to say that each of her novels, in its own way, is the author’s voyage to discover and understand her multi-levelled relationship with the reality of life.’¹

Her major women characters especially Mrs Dalloway, Rachel, Vinrace, Sara Pargiter and Mrs Ramsay have their genesis in Woolf’s own understanding of the self and others in the family and outside. She has created women characters who appear to be just human beings and ‘not merely as wives and mothers of Harlots and courtesians.’²

Her vision of life and shape of her novels also got influenced by the circle of her literary friends – Bloomsbury group. This group encourages every artist to create his own method of expression in his medium. It was this atmosphere which gives Woolf the impetus of free thinking. Later on she asserted “I write what I like writing. I am to write what I like: and they are to say what they like.”³

Mrs. Dalloway the first major novel of Woolf presents before us the portrait of Mrs. Clarissa Dalloway, the aristocratic protagonist of the novel. This novel originally published in 1925 is a novel riddled with themes. Woolf has much to say about society and the post war change but a steady underlined theme in the novel is feminism, the role of the time and its seemingly insignificance.

Mrs Clarissa Dalloway is the centre female protagonist of the novel ‘Mrs Dalloway’. She is a round character and immortal in English literature. Virginia Woolf ,through ‘Stream of Consciousness’ technique and interior monologue peeped deep into her innate character and gives complete personality internally as well as externally. Her character is portrayed through her consciousness and through consciousness of others especially from the consciousness of Peter Walsh and Sally Saton. In fact, her life and personality is the basic theme of the novel. Through her, Virginia Woolf probes the theme of time, death and personality between the extremes of isolation and domination, with love as well as keeping the spirit inviolate. Symbolically, she represents the upper middle class civilization with all its glitter and hollowness or death of soul. All character and events psychological and alien are connected with her.

‘Mrs Dalloway’ represents Woolf’s fullest self portrait as an artist; it contemplates the relationship between her own madness and creativity. In presenting a society woman as at least partially analogous to an artist, she also suggests a critical view of various kinds of masculine creativity—law making, soul curing, empire building. The richness of the novel emerges from two dynamic juxtaposition: that of Mrs Dalloway and the Prime Minister and that of Mrs Dalloway and Septimus Warren Smith, the former contrasting characteristic masculine power with one version of female power and the later suggesting the much less clear cut contrast between a kind of divine intoxication which is the basis of all creativity and insanity pure and simple.

In *Mrs Dalloway* the external event of buying flowers for the party provides an occasion to the novelist to illuminate Mrs. Dalloway’s mind by representing her internal consciousness and that of other characters. In this way there is an intimate linking up of external situations with the stream of internal consciousness.

The centre of Mrs. Dalloway is in Mrs. Dalloway's mind and that of Septimus Warren Smith. Clarissa and Septimus seem to be two facets of the same personality. Septimus's doctor brings the information to Clarissa's party that Septimus has committed suicide. The incident in a big city, remote from Clarissa, plunges her into a deep fantasy and she would identify herself entirely with the unknown dead man. Virginia Woolf shows how Clarissa's mind runs parallel with the mind of Septimus and the interest lies in this parallelism.

The Big Ben intrudes into Mrs. Dalloway's inner consciousness. Peter Walsh secretly asks her as she comes tinkling rustling across the room thinking how she had the power "to make the moon, which he detested, rise at Burton on the terrace in the summer sky."⁴

Clarissa's voice rings to him rhythmically in time with the flow of the sound of Big Ben striking the half hour as "the leaden circles dissolved in the air."⁵ The intrusion of Big Ben when Clarissa was on the point of expressing her emotion to her former lover who has gone wistfully into his reminiscences of her rejection is one of the most intense moments. A.A. Mendilow has correctly observed:

The incorporation of past into the present demands the jettisoning of the earlier technique which emphasized sequence and causality. Earlier novelists surveyed the worlds they created from Olympian heights: Omniscient and Omnipresent, they saw everything they made as it was, everybody as he was. The modern novelists have abnegated these self imposed powers to enter the character's mind and see life filtered through his perception.⁶

Clarissa Dalloway is a hostess with a flair for giving parties, and a natural feeling for society and its conventions. She has a magnetism that draws people to her, but she is conspicuously unsuccessfully as a mother. Clarissa herself discovers her own identity and becomes whole. The only life that seems possible for Clarissa is the one amidst the ebb and flow of London life and she seems to seek a strange consolation from the world of objects for her inner sense of emptiness. Josephine Schaefer points out how Clarissa is shown as "turning to the flowers in an attempt to drown herself in deprecatory thoughts."⁷ She also wants herself to be a part of everything that she sees and tells Peter that she "felt herself" everywhere, not here, here, here but everywhere."⁸ Clarissa is presented to us amidst the warmth of a life made up of her own memories, moments and imagination.

Clarissa is a complete figure, for the novel suggests that "her creative engagement with life- especially her ability to bring people together- somehow depends upon her core of isolation." Mrs Dalloway is principally a celebration – a celebration of life and the creative imagination.

To the Lighthouse is considered among the greatest literary achievements of the twentieth century. The novel works through the stream of consciousness technique and imagery to create an atmospheric and impressionistic record of the character's movement by moment experiences, tracing the conflict between male and female principles and making a statement about time, death and artistic transcendence. In this, her most autobiographical novel, Virginia Woolf captures the intensity of childhood longing and delight, and the shifting complexity of adult relationships.

In *To the Lighthouse* Virginia Woolf presents the wholeness and completeness of the portrait of Mrs Ramsay. She stands in sharp contrast to the one sidedness of the other character.

Herbert Mardner writes in his 'Feminism and Art' "Mrs Ramsay as wife, mother, and hostess is the androgynous artist in life, creating with the whole of her being." There are, in effect, two Mrs Ramsay: the living woman who, in spite of the tremendous force of her personality, shares the weakness of other mortals and the perfect symbolic figure toward a liberating ideal.

Mrs Ramsay is the center of the family just as she is the centre of the novel. Always catering her husband and their friends, she is the seemingly limitless source of energy and life from which all the other characters draw their sustenance. She helps hold together Mr. Ramsay's precarious ego with the same deftness she uses to protect James' feelings from the insensitive assaults of his father. Feeling at times that she is "nothing but a sponge sopped full of human emotions."⁹ Mrs Ramsay manages to put these emotions at the service of those around her. Despite Woolf's feminist interest, Mrs Ramsay embodies all the conventional material virtues. She is intuitive, compassionate, non intellectual, protective. Mrs Ramsay has an acute awareness of the double nature of repetition.

...The monotonous fall of the waves on the beach which for the most part beat a measured and soothing tattoo to her thoughts and seemed consolingly to repeat over and over again as she sat with the children the words of some old cradle song, murmured by nature. 'I am guarding you-I am your support ;but at other times suddenly and unexpectedly ,especially when her mind raised itself slightly from the task actually in hand ,has no such kindly meaning, but like a ghostly roll of drums remorselessly beat the measure of life, made one think of the destruction of the island and its engulfment in the sea, and warned her whose day had slipped past in one quick doing after another that it was all ephemeral as a rainbow—this sound which had been obscured and concealed under the other sounds suddenly thundered hollow in her ears and made her look up with an impulse of terror..¹⁰

In trying to counter the enormous beauty of Mrs Ramsay, in trying to reveal the dangers inherent in that marvellous feminist, one must be careful not to seem wholly to condemn her. The genuine wonder of her beauty reveals the miracle of Woolf's art .As the mother of young children, at certain moments, Mrs Ramsay is perfection of a moment, not the accumulated understanding of a lifetime. Her knowledge is all instinctive. Virginia Woolf presents Mrs Ramsay as a visionary character who seems to provide infinite order and unity, Glenn Penderson rightly sees her as," the negative force which usurps the lighthouse and thus prevents the integration of the family while she lives."¹¹

For all her sense of the infinite expanse of life; for all her realization that men are not bounded by the limits of factual truth to which her husband is so loyal, Mrs Ramsay is not unaware of a menacing undercurrent that continually threatens the vision. She does not deny the desolation that Mrs Ramsay defines as existence but only determines not to let this side of life swallow up the more important unity that can be found order in seeming chaos, hope in despair .Mrs Ramsay, even in her absorption into the beam from the lighthouse cannot set aside her own responsibilities in maintaining the vision that lighthouse represents:

Often she found herself sitting and looking, with her work in her hands until she became the thing she looked at-that light, for example .And it would lie up on it some little phrases or other which had been lying in her mind like that –"children don't forget ..Children don't forget"-which she would repeat and begin adding to it, it will end, it will end, she said. It will

come, when suddenly she added, we are in the hands of the Lord. **But** instantly she was annoyed with herself for saying that.¹²

In 'To The Lighthouse' Mrs Ramsay, alive or dead, and concentrates all thoughts, all feelings all action into herself. Her light reveals them. The long steady stroke illumines the island. She is the lighthouse, in some subtle way. The action, which is in the first half of the book passes through her, is in the second part, illuminated by her. Virginia Woolf has added a mystical element to the significance of the lighthouse as a cultural symbol."The Lighthouse stands for Mrs Ramsay herself."¹³

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CRITICAL SUCCESS FACTORS LEADING TO ADOPTION OF ELECTRONIC COMMERCE

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ABSTRACT

E-commerce revolution has created more opportunities for businesses and individuals to explore new ways of life and enable users to buy and make payments for products and services using the Internet platform. This study examines the critical factors that influence consumers' intentions to repurchase products and services online and in building capabilities to create and maintain competitive positions in the online marketplace for business organisations.

Keywords: Critical success factors, e-commerce.

Electronic commerce is an emergent research discipline with a history of less than 20 years. The exploding growth of electronic commerce activities in the last decade has attracted significant attention from traditional business houses in different fields. Today, enormous business activities are conducted online. People go online to sell and buy both goods and services, and many transactions cannot be completed without Internet technology. Critical Success Factors (CSFs) are viewed as those activities and constituents that must be addressed in order to ensure successful competitive performance for the individual, department, or organisation. These factors should be measurable, controllable, and few in number (Masrom et al., 2008).

REVIEW OF LITERATURE

Lai (1998) examined the adoption and execution of e-store strategies by Taiwanese companies, identified the following eight issues that affect a firm's decision to create/not create electronic stores: senior management adaptability and professional awareness of electronic markets, the extent of computerization in the company, supply chain customer requirements, financial cost of adoption, cost of management and maintenance, the quality of data transmission and network security, the extent of collaboration between network suppliers and customers, and the support provided by network suppliers to customers.

Hadjimonolis (1999) conducted a study of e-commerce adoption by small businesses in Cyprus, classified e-commerce barriers into two generic types: internal and external. External barriers could be further categorised into supply barriers (difficulties obtaining finance and technical information), demand barriers (e-commerce not fitting with the products/services or not fitting with the way clients did business) and environmental barriers (security concerns). Internal barriers were further subdivided into resource barriers (lack of management and technical expertise) and system barriers (e-commerce not fitting with the current business practices).

Thong (1999) found the size of the enterprise as influential variable in the adoption decision. Competition also influences the adoption of new technologies or e-commerce to a very little

extent in small enterprises. They are less apt to adopt e-commerce because they often lack resources, lack of professional expertise and greater sensitivity to external forces as operating in a strongly competitive environment.

Liu and Arnett (2000) identified four critical factors to success in e-commerce were: information and service quality, system use, playfulness, and system design quality of web site. The authors recommended that business organizations and web developers should actively seek ways to improve information and service quality provided through web sites, by motivating customers to participate, promoting customer excitement and concentration, and including charming features to attract customers and to help them enjoy the visit.

Palvia and vemuri (2002) found obstacles and critical success factors for global e-commerce. Obstacles include lack of trust between transacting parties, lack of access to computer and internet and limited electronic payment capability. Major critical success factors were lack of personal touch in using e-commerce sites as business, localizing the web sites to fit local customer requirements including recognizing culture, local regulations, pricing constraints and language.

Trueman and Ahmed (2002) identified five factors after reviewed the existing literature that influence the success of global business to business e-commerce marketing. These were marketing strategies related factors, web sites related factors, globalization factors, factors to internet issues and to external issues.

Jeffcoate, J. and Chappel, C. (2002) identified eleven critical success factors for e-commerce activity: Content, Convenience, Control, Interaction, Community, Price Sensitivity, Brand image, Commitment and support from top management, Partnership, Process improvement and Integration.

Jensen, M. and Skovgaard, J. (2002) identified several critical success factors for e-marketplaces. The major issue is to build liquidity or the extent to which the number of buyers and sellers is high enough to create ongoing online trading and attract new buyers and sellers to trade on an e-marketplace. Other factors were: creating values in supply chains, creating efficient functionality of web site or services, choosing right target markets and establishing trade rules and regulations in e-marketplaces.

Cloete, E and Fintz, J. (2002) conducted a study to know the adoption factors of e-commerce by small and medium enterprises in South Africa, found that adoption is heavily influenced by factors within the organisation itself such as lack of access to computers, lack of suitable software/hardware components, affordable telecommunications, low e-commerce use by supply chain partners, concerns with security and legal issues, low knowledge level of both management and employees, and unclear benefits from e-commerce.

Gottschalk and Abrahamsen (2002) reported the causes of adoption and rejection of e-commerce and found the top three reasons for firms not joining e-marketplaces were that e-marketplaces were not relevant for their businesses, their customers were not ready, and that integrating e-marketplaces with existing systems was too difficult. Conversely, the top four reasons for firms joining e-marketplaces were reducing transaction costs, negotiating better agreements, better utilizing frame agreements, and accessing more suppliers.

Kula and Tatoglu (2003) found “intensity of export” as vital factor for adoption of e-commerce. The more the activities of export of the company are developed and diversified,

the more it tends to adopt a site more easily and more quickly. The authors revealed that the resources allocated to the development of the activities of export and the experience of the company internationally, influence the level of adoption of the e-commerce.

Phan (2003) identified the critical success factors of e-commerce include strategic partnerships, quality of internet connections, worldwide support and customer training, unfair market avoidance, security protections, solid e-business architecture, customer needs and personalized web content.

Amoroso, D. and Adelakun, O (2004) studied the critical success factors for small business to business e-commerce companies in both developed and developing countries. The authors categorized five factors: People, Technical Infrastructure, Client Interface, Business Infrastructure and regulatory environment. The authors found many factors under all these groups such as workers knowledge and technical skills, language skills, trust between client and provider, knowledge and communication skills of business provider, client contact methods and intellectual Property Protection.

Kaefter and Elliot Bendoly (2004) investigated the impact of two organizational constraints, technological compatibility and operational capacity, on the success of business-to-business e-commerce. The study focused specifically on the transactional efficiencies gained through the use of e-commerce and found four transactional efficiency sub-dimensions observed such as communication, system development, personnel and capital.

Eid and Trueman (2004) identified 33 critical factors through a sample of 123 companies that affect the successful implementation of business to business internet marketing. These factors were classified into five categories: marketing strategy, web site, global competitiveness, internal, and external.

White and Daniel (2004) found that the adoption of e-marketplaces has led to a deepening of buyer-supplier relationships. They identified the reasons motivating the sellers to use e-marketplaces included providing a single point of contact and communication with numerous customers to reduce order-processing costs. The buyer's motivations to use e-marketplaces are: reducing the cost and time required for purchase, ease of comparison of products from a range of suppliers and access to many suppliers with a single point of contact.

Bergeron F. and Blili S. (2005) found that technological characteristics, the perceived advantage relative of a web site such as international public, presence 24 hours a day and 7 days a week, interactivity and perceived compatibility as coherence with the managers aspirations are significant elements capable of influencing the adoption.

Li and Li (2005) investigated the critical success factors for operating business to business e-marketplaces from different perspectives. Based on their in-depth literature analysis, Functional factors (e.g. transparency of trading information), Strategic factors (e.g. development of customer relationships) and Technical factors (e.g. security matter) were identified as the foundation for successful business to business e-commerce.

Filiatrault, P and Huy, L (2006) conducted a study to understand the impact of various internal and external factors on the adoption of e-commerce in small and medium enterprises in Vietnam. The results of the analysis clearly showed that users differ significantly from prospectors with respect to a number of variables such as size, strategic orientation and resources enterprise, employee's knowledge of ecommerce, attitudes of managers towards

innovation and their knowledge of new technologies and e-commerce, intensity of competition, support of government and national infrastructure, perceived relative advantages, complexity and compatibility of Innovation.

Chong (2006) investigated the factors affecting e-commerce by conducting a survey of small businesses in Australia and found seven factors: Perceived relative advantage, Trial ability, Observability, Variety of Information Sources, Communication amount, Competitive Pressure and Non Trading Institutional Influence etc. The author suggested that it is imperative for small businesses to possess an enduring perception of EC as being advantageous over preceding legacy system and its implementation can give them an advantage over their competitors.

Yu (2007) examined the factors that contribute to firm decision to participate in an e-marketplace namely pre-adoption, in-adoption, and post-adoption. He identified three causes pre-adoption stage namely “firm characteristics”, “competitiveness of the business environment”, and “promotion from top management” that drive a company to adopt e-marketplaces. At the second stage, “competitiveness of the business environment” and “promotion from top management” is two influencing factors. Third, at the post-adoption stage, only “competitiveness of the business environment” significantly influences e-marketplace-adopting firm intention to continue using the e-marketplace.

Angeles and Nath (2007) conducted a study to find out the success factors that have direct impact on business to business e-procurement practices. They successfully identified three success factors: Supplier and contract management; End-user behaviour and e-procurement business processes; and Information and e-procurement infrastructure. The authors suggested that e-procurement is a very important initiative with significant cost savings potential for firms.

Laosethakul and Boulton (2007) conducted a study in Thailand and identified nine critical success factors for e-commerce, which were convenience of the website, quality of internet connections, Information technology capability, large product selection, online security and privacy, brand name recognition and reputation, customer support and relationship, delivery and industry key success factors.

Bellaaj, M, Bernard, P, Pecquet, P and Plaisent, M (2008) found that external pressures exerted by competitors, customers, business partners, the media and the larger public itself force the firms to adopt technological innovations. These parties can put forth direct or indirect pressures on small and medium enterprises to adopt e-commerce.

Kurnia, Alzougool, Ali and Alhashmi (2009) identified various e-readiness factors affecting-commerce adoption by small and medium enterprises in developing countries at three different levels namely organization, industry and national. The findings demonstrated that perceived benefits, perceived organization resources and governance, perceived supporting services and perceived environmental pressure have different influences on the adoption of different e-commerce technologies. The authors suggested that small and medium enterprises need ongoing support from the government and industry with human, financial, technological resources that facilitate the adoption of these technologies and supporting them with professional experience.

Kapurubandara (2009) found that the main contributing factors to non-adoption included lack of awareness and education, market size, lack of a suitable e-commerce infrastructure, as well as telecommunications infrastructure and financial infrastructure, the legal system, the government's role, pricing structures, and social and psychological factors.

Olatokun and Kebonye (2010) revealed that staff lacking in ICT skills and security challenges was the most significant internal barrier to the adoption of e-commerce technology within a company. Lack of time to investigate appropriate technologies (owner/manager characteristics), lack of financial resources (cost or return on investment), and lack of awareness of suitable technology was the main causes and there was a lack of security equipment to deal with the theft of credit card information.

Chong, Shafaghi and Tan (2011) identified nine factors that have direct impact on the success of business to business e-commerce for small and medium-sized enterprises operating in the Chinese marketplace by conducting online survey from the persons participated in business to business electronic marketplace. The authors found some factors: successful customer relationships, supply chain facilities, global competition, information system/information technology infrastructure and performances, information visibility, top management support and commitment, government encouragement and commitment, security and trust, and cultural consideration.

Eid (2011) examined the determinants of the B2C e-commerce customer satisfaction, trust and loyalty in Saudi Arabia. He identified that the user interface quality, service information quality, security risk perception, and privacy perception were major key factors. The study investigated that the level of security risk and privacy as perceived by e-commerce customers were important issues for customer trust. Saudi online consumers perceive those e-commerce websites as trustworthy if they provide greater level of integrity, reliability and/or credibility in their user interface. This subsequently reduces consumers' concerns of privacy and helps to build online trust toward e-commerce websites.

CONCLUSIONS

After analysing the different factors according to researchers, we can conclude that Business firms should recognise the importance of managing consumer expectations and being able to provide reliable systems that enable enjoyable online purchase experiences. Consumers will be happy to repurchase products and services from an online store that offers a reliable store front that is full of trust and free from constraints that could frustrate potential users. Firms would need to invest resources in human development, company infrastructure and providing very attractive store fronts. In addition, relevant government agencies must recognise the need of e-commerce and provide Internet infrastructure and motivate healthy competition among Internet Service Providers. With greater competition, consumers would have more potential options at reasonable rates and with greater quality access. This will enhance experiences in online transactions and possibly reduce frustrations among users.

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RULE OF LAW AND EQUALITY BEFORE LAW UNDER INDIAN CONSTITUTION

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ABSTRACT

Although, complete absence of Discretionary Powers, or absence of Inequality are not possible in this administrative age, yet the concept of Rule of Law has been developed and is prevalent in common law countries such as India. The Rule of Law has provided a sort of touchstone to Judge and test the Administrative Law Prevailing in the country at a given time. Rule of Law, traditionally denotes the absence of arbitrary powers, and hence one can Denounce the increase of Arbitrary or Discretionary powers of the Administration and advocate controlling it through Procedures and other means. Rule of Law for that matter is also associated with Supremacy of Courts. Therefore, in the ultimate analysis, courts should have the power to control the Administrative Arbitrary action and any overt diminution of that power is to be criticized. The principle implicit in the Rule of Law that the executive must act under the law and not by its own fiat is still a cardinal principle of the common law system, which is being followed by India. In the common law system the executive is regarded as not having any inherent powers of its own, but all its powers flow and emanate from the law. It is one of the vital principles playing an important role in Democratic countries like India. There is a thin line between judicial review and judicial activism.

Key words: Rule of Law, Equality and Indian Constitution, Arbitrary Actions.

RULE OF LAW SERVES AS THE BASIS OF JUDICIAL REVIEW OF ADMINISTRATIVE ACTION

The Judiciary sees to it that the executive keeps itself within the limits of law and does not overstep the same. Thus, Judicial Activism is kept into check. However there are instances in India where Judiciary has tried to infringe upon the territory of the executive and the legislature. A recent example of this would be the present reservation scenario for the other backward classes. As mentioned before Dicey's theory of Rule of Law has been adopted and incorporated in the Indian Constitution. The three arms Judiciary, Legislature and Executive work in accordance with each other. The Public can approach the High Court as well as the Supreme Court in case of violation of their fundamental rights. If the power with the executive or the legislature is abused in any sorts, its mala-fide action can be quashed by the ordinary courts of law. This can be said so since it becomes an opposition to the due process of law. Rule of Law also implies a certain procedure of law to be followed. Anything out of the purview of the relevant law can be termed as ultra- vires. No person shall be deprived of his life or personal liberties except according to procedure established by law or of his property save by authority of law. The government officials and the government itself is not above the law. In India the concept is that of Equality before the Law and Equal Protection of Laws.

Any legal wrong committed by any person would be punished in a similar pattern. The law adjudicated in the ordinary courts of law applies to all the people with equal force and binding. In public service also the Doctrine of Equality is accepted. The suits for Breach of contract etc. against the state government officials, public servants can be filed in the ordinary courts of law by the public.

The rule of law, the enemy alike of dictatorship and anarchy, the friend by whose good offices authority and liberty can alone be reconciled.

-Lord Hailsham

In the most basic sense, the rule of law means that all power in a community should be subject to general rule and both government and governed should keep to these rules. The rule of law has been widely proclaimed as a pillar of constitutional thought. Following Aristotle and many times endorsed, the Massachusetts Constitution (1781) refers to 'a government of laws not men'. However, since laws are made by 'men' and can have any content, it is difficult to understand what this means. Are laws made by an evil tyrant requiring all dissenters to be executed and applied without comparison better than a regime that gives absolute discretion to a dictator who might or might not be benevolent? If, on the other hand, the rule of law means the rule of 'good' or 'fair' or 'democratic' laws, the concept seems to have little meaning. For example, the rule of law is asserted without definition in section 1 of the constitution reforms Act, 2005.

To its supporters, the formalism of the rule of law is a valuable achievement of the human mind as an upholder of equality and dignity: a defence not only against tyrants but also against well-meaning busybodies formalism also supports human dignity by requiring courts and public officials to justify their decisions. For example, in *Taylor v Chief Constable of the Thames Valley police* (2004), the court of appeal stressed the fundamental principle that a policeman must give clear reasons for arresting someone, *sedley LJ* (58) basing this on the value of human dignity. The rule of law is claimed to be a necessary foundation of democracy. For example, by ensuring that officials keep within the powers given to them by the people, the rule of law is both the servant and policeman of democracy. It can also protect values on which democracy depends such as freedom of speech. However, this can equally be said of any form of and historically the idea of the rule of law long predated democracy. In other sense the rule of law seems to be at odds with democracy in that it usually depends on decision being made by elite of unelected judges.

Utilitarian such as Bentham argue that the rule of law encourages the rich and powerful to harass people who cannot fight back. If the rule of law were comprehensively applied, then not only would lawyers, a specialized and unelected elite, be in a position to impose their own preference upon the rest of us but the values of society would be frozen. Bentham was unhappy with what he called 'judges and co'. he thought it particularly strange that courts should be bound by precedent since to him this merely reproduces errors. he also thought the common law, which he called 'dog law', was unjust in that we may be ignorant of the wrongs until the case is decided. He thought that laws should be no more than guidelines, and in the end should give way to his master principle of the greatest happiness of the greatest number.

The rule of law has a price. It has been associated with pedantic adherence to linguistic niceties, supporting the dominant group in society at the expense of desirable social or economic outcomes, allowing officials to hide behind rules to avoid personal responsibility,

and lacking humanity by overlooking qualities such as sympathy and mercy nor does the rule of law easily cater for the diversity of beliefs and values in a modern democracy where people with many different ethics, religious and social interest live together, each of whom might regard the law differently. In particular, the liberal idea of the rule of law has been attacked on the ground that, by focusing on individual rights, it sets up conflict and discourages us from cooperating with each other. Democratically inclined judges can of course protect values such as freedom of the press and fair voting rights. However, the rule of law as such would be equally satisfied by a law that restricted these freedoms. We must therefore be careful to distinguish the rule of law as such from what we might consider to be ‘good’ law.

The main versions of the Rule of law in the context of the UK are now given. A broad distinction can be made between the rule of Law as government by Law (version 1 and 2) and the rule of Law as government under Law (version 3):

1. **The core rule of law** (often called the ‘thin’ rule of law): This has been outlined above. It means government by law in the form of general rules as opposed to the discretion of the ruler. It also implies ‘equality’ in the sense that everyone who falls within a given rule must be treated the same in accordance with it. Unlike the other version of the rule of law, the core rule of law is absolute and should not be compromised. On the other hand, all it requires is that there be rules. It does not specify their content. The rule of law is therefore consistent with hideously repressive regimes.
2. **The amplified rule of law** (‘thick’ rule of law): this claims that certain ideas relating to fairness and justice are inherent in the notion of law as guiding conduct and that these at least moderate bad laws. It is not claimed that these are absolute values which cannot be overridden by other factors. It is primarily procedural.
3. **The ‘extended’ rule of law:** this is the most ambitious version and introduces *substantive* values. It claims that law encapsulates the overarching values of the community – in our case assumed to be liberal values – in the care of impartial judges (see Allan, 2001). It claims also to link with republican ideas of equal citizenship. In as much as this version of the rule of law relies upon vague and contestable concepts, it conflicts with the core rule of law.

RULE OF LAW AND DICEY’S VERSION

Dicey proposed a similar version of the rule of law to that of Hayek. Although dating from 1875, this has been of great influence among English lawyers. However although containing valuable ideas, it has limited application to contemporary circumstances. Dicey formulated a threefold version of the rule of law as follows.

1. The absolute supremacy or predominance of ‘regular’ law

No man is punishable or can be lawfully made to suffer in body or goods except for a distinct breach of law established in the ordinary legal manner before the ordinary courts.

This means firstly that no official can interfere with individual rights without the backing of a specific law. For example, in *R v Somerset county council ex parte Fewings*, that the principles that govern the application of the rule of law to public bodies and private persons are ‘wholly different’ in the sense that:

The freedom of the private citizen are not conditional upon some distinct and affirmative justification for which he must burrow in the law books...but for public bodies the rule is

opposite and so of another character altogether. It is that any action to be taken must be justified by positive law.

Dicey also believed laws should not give officials wide discretionary powers. For example, in *Rantzen v Mirror Group Newspapers* (1994), the court of appeal condemned the wide discretion given to juries to fix the amount damages in libel cases as violating the rule of law.

2. Equality before the law

Dicey was not concerned with equality in a general sense. He was concerned with limiting the power of officials in favour of individual legal rights. According to Dicey, this is best achieved if everyone is subject to the same law administered by ordinary courts. He did not mean that no official has special powers. This would have been obviously untrue. Dicey had two specific ideas in mind. Firstly, he meant only that officials as such enjoy no special protection, so that if an official abuses his power, he is personally liable to anyone whose property rights or personal freedom he violates just as if he were a private citizen. For example, officials and private persons alike are liable if they use excessive force in defending other against criminal acts and in *M v Home office* it was held that a minister cannot refuse to comply with a court order on the basis that he is a servant of the crown. There are exceptions. Judges are immune from personal liability in respect of their actions in court, and the crown has certain immunities. In many cases foreign governments and heads of state are immune from the jurisdiction of the UK courts at least in civil actions.

Secondly, Dicey meant that dispute between government and citizen are settled in the ordinary courts according to the ordinary law rather than in a special governmental court. In this respect Dicey compared English Law favorably with French law, where there is a special system of law dealing with the powers of government (*Droit administrative* enforced by the *conseil d'Etat*).

SUBMISSION

This derives from the common law tradition. Dicey believed that the UK constitution, not being imposed from above as a written constitution, was the result of decisions by the courts in particular cases, and was therefore embedded in the very fabric of the law and backed by Practical remedies. According to Dicey this strengthens the constitution since a written constitution can more easily be overturned. Moreover; because the common law developed primarily through the medium of private disputes, it biases the against governmental interests by treating private lam with US individual rights, as the basic perspective. Perhaps Dicey's version of the rule of law shows mainly that he trusted judges and feared democracy. On the other hand, in *R v IRC ex parte Rossmminister Ltd* (1980), Parliament gave a general power to tax officials to enter and search private premises which the courts upheld, rejecting *Entick v Carrington* as irrelevant anti-quarianism. This illustrates the tension between common law and parliamentary supremacy which Dicey never succeeded in reconciling.

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DANGERS EMERGING FROM CONVENTIONAL WAR UNDER NUCLEAR SHADOW

India-Pakistan Scenario

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ABSTRACT

India and Pakistan, the two countries of South Asia, have been involved in constant conflict since their independence. This confrontation became especially dangerous after 1998, when both the countries conducted a series of nuclear tests and showed the world their ability to build nuclear weapons. They have fought three full-scale wars in 1948, 1965 and 1971, and one limited war at Kargil in 1999. The occurrence of border skirmishes and terrorist attacks are also very common in their bilateral relations. As long as the relations between the two remain hostile, and suspicion exists, prevention of conventional conflict is a difficult task. This conventional conflict, at any level---full scale or limited, carry the potential for escalation from one level to another and then ultimately to the prospects of nuclear exchange. And the terrorist activities have more potential in this direction. This paper attempts to enquire into the circumstances during the conventional war between India and Pakistan which may lead to inadvertent escalation or compel the leaders to think seriously about the use of nuclear option. The paper analyses all the three scenarios of conventional war-----all-out, limited and cold start.

Key Words: Conventional War, Nuclear Shadow, Terrorism, Proxy War.

India and Pakistan are trapped in an antagonism that has changed very little since their independence in 1947. What makes their relationship unique among inter-state rivalries is that the terms of their disputes and the accompanying images remain largely fixed. Perceptions that are steeped in history and the emotional trauma of partition often matter far more than any objective reality that involves valid estimates of real and present danger. Perceptions often become self-fulfilling. Opinions in Pakistan widely hold that India is intent upon undermining and humiliating Pakistan, and would, if it could, reabsorb all of the sub-continent's Muslims. Indians feel that Pakistan is fanatical in its determination to repay India for past defeats, including the loss of East Pakistan, and would like to seize Kashmir in a proxy war. Authorities in New Delhi also view Pakistan as responsible for making efforts to set Islamic World against India, in order to create a hostile political, military and economic bloc. In turn, Pakistan points to what it sees as evidence of India's hegemonic ambitions and expansionism at the expense of all its smaller neighbours. The failure of India and Pakistan to create confidence building measures (CBMs) and a normalization of relations reflect prevailing high degree of mistrust and reveal the existence of suspicions between them. Thus, both the countries are locked into an increasingly expensive political and military competition that ignores the opportunity of utilizing the scarce resources for welfare purposes.

The perpetual cold war between India and Pakistan has turned into full-scale hot wars in 1948,

1965 and 1971. Besides these full-scale wars, they have indulged once in a limited confrontation at *Kargil* in 1999. During all the three full-scale wars neither India nor Pakistan was having any missile or nuclear capability, but now the situation is not only different, but also dangerous. Both are now nuclear weapon states after the successful nuclear tests of 1998. These tests have led to a new strategic situation that is bound to have long-lasting implications for both the countries of South Asia in particular and for the international community in general¹. Unlike in the past, any future war between the two countries, no matter howsoever limited it might be, will have the potential to escalate into a full-scale nuclear war in the light of the changed strategic environment². In any future crisis between India and Pakistan, factors like incorrect reading of the adversary's intentions, inaccurate assessment of political objectives, poor intelligence about combat strengths, unexpected conventional attack by either side, and nuclear accidents are likely to play role as major sources of conflict escalation. Moreover, since 2001 both the countries have accelerated their missile programmes, which is likely to have grave implications not only at the regional level but also at global level³.

Though the "bolt out of the blue" nuclear attack seems implausible between India and Pakistan but there are three levels of conventional conflict that recent events make entirely plausible which could sow the seeds of nuclear escalation (i) an all out conventional war (ii) limited conventional war for circumscribed purposes and (iii) unconventional or low intensity war employing guerilla warfare through clandestine methods⁴. An unconventional or low intensity conflict may escalate into a limited conventional conflict, as did Kargil through India's response in 1999, and a war that opens as a circumscribed conventional operation may escalate to one that broadens into a major conventional war--the potential manifested in India's "*Prakram*" mobilization in 2002, and in Pakistan's counter mobilization.

ALL-OUT CONVENTIONAL WAR

As long as the Indo-Pak relations remain hostile and mutual suspicion exists, war may reoccur, and the terrorist activities have more potential in this direction. This war, at any level, carry the potential for escalation from one level to another and then ultimately to the grim prospects of nuclear exchange. Pakistan, despite its overall size, is strategically vulnerable to a fully mobilized Indian conventional invasion mounted simultaneously in separate corridors along its north-south axis, and also vulnerable to naval action that could embargo traffic into and out of its port⁵. Pakistan's geographically confined main lines of communication between the main port of Karachi in Sindh province to the South and the Punjab heartland in the north could be severed by a large scale, air supported armored incursion. The vulnerability is further accentuated by the proximity of Pakistan's key urban centers in Punjab, particularly Lahore, just few kilometers from the border and potential subject to long range artillery from Indian soil. On the other side, Southern Punjab and Sindh of Pakistan are just fifty to sixty miles from Rajasthan border mainly a desert terrain. Traversing this with armored columns given close air support, Indian forces could sever Pakistan's North-South main railway and road links between Rahimyar Khan and Sukkur. Such operations have been the part of Indian military force planning, doctrine and exercises since the tenure of General K. Sunderji in mid 1980s. This major conventional war scenario of cutting Pakistan in two could be amplified by an Indian naval blockade of Karachi and Gwadar. Such action was hinted at by Indian naval preparations and movements in the Kargil war in 1999, and on a larger scale during the full military mobilization of 2001-02⁶. A major conventional war, unfolded on these lines, will put

an intense international pressure on India to stand down and withdraw its forces behind the international border. This international pressure may work, but it might fail. If India were to set aside international pressure and continues its operation to achieve quick results, which may cause a Pakistani loss of territory, its military defeat or political submission, which will be the crossing of “red-lines” in Pakistani perception, then its leadership almost certainly would deploy combat ready nuclear forces and seriously consider how to apply its nuclear option. Though, Pakistan never declared its nuclear doctrine officially and authoritatively but some responsible persons in Pakistan have declared informally and unofficially some ‘red-lines.’ According to Pakistani General, Khalid Kidwai, Pakistan would resort to nuclear weapons’ use in the event if (i) India attacks Pakistan and conquers a large part of its territory (ii) India destroys a large part either of its land or air force (iii) India proceeds to the economic strangling of Pakistan and (iv) India pushes Pakistan into political destabilization or creates a large scale international subversion⁷. Another Pakistani authority, Tariq Mahmud Ashraf, a retired Pakistani Air Force officer defined Pakistan’s ‘red-lines’ as under: - (i) Penetration of Indian forces beyond a certain defined line or crossing of a river. (ii) Imminent capture of an important Pakistani city like Lahore or Sialkot. (iii) Destruction of Pakistan’s conventional armed forces or other assets beyond an unacceptable level. (iv) Attack on any of Pakistan’s strategic targets such as dams or nuclear installations like *Tarbela, Mangla, Kathua, Chashma* etc. (v) Imposition of blocked on Pakistan to an extent that it strangulates the continued transportation of vital supplies and adversely affects the war waging stamina of the country. (vi) Indian crossing of the line of control (LOC) to a level that it threatens Pakistan’s control over Azad Kashmir⁸. Though, these red lines have never been officially declared but reflect obvious Pakistani sensitivities.

Similarly, if India deploys its nuclear weapons in response then Pakistan’s reaction could be very stark. It could either seek help from abroad, if possible, or fire a nuclear weapon in an uninhabited area as warning shot or devise a tactical nuclear attack on Indian conventional military to break its momentum. Once any nuclear strike is carried out, then it will be almost impossible to halt the conflict without further nuclear attack. Even high profile terrorist action would create much more intense pressure on decision makers if it is to occur when the opposing armed forces are already mobilized and ready for conventional war. There would be a temptation to assume that terrorist act was a covert extension of the other side’s military campaign, even though this act could be quite independent and different.

It is also possible that during the conventional warfare both Indian and Pakistani military planners would feel compelled to take precautions against the other side escalating to the nuclear level. But even after that, Pakistan will be apprehensive of an Indian conventional pre-emptive campaign to destroy nuclear assets before they could be used. Similarly, India would be worried about Pakistani leaders contemplating a nuclear decapitation attack. And if either side becomes convinced that its opponent is preparing a nuclear decapitation attack, howsoever remote it may be, both sides might feel compelled to strike first.

It is not necessary that future Indian pre-emptive or disarming strike will only be nuclear. A conventional disarming strike based on initial surprise, and then on an extended air campaign against those Pakistani strategic nuclear assets that may be stored in fixed sites is at least theoretically conceivable. Such a campaign probably could not quickly find and target mobile nuclear missiles already dispersed in the field or even camouflaged nuclear capable aircraft at

dispersed air- strips. But such a campaign might be aimed at destroying strategic nuclear weapon components in storage sites, if all those sites are known or identified early in the course of operations. The objective would be to prevent nuclear weapon assembly and mating with strategic delivery systems. Indian conventional air strikes against air bases and other high value military facilities in Pakistan are part of its military planning and could be unleashed as punitive measures to a severe provocation, as prelude to a punitive invasion on the ground, or as further retaliation for a Pakistani conventional response to an Indian punitive attack. Pakistan's efforts in recent years to augment its anti-aircraft defences could make a difference, but it is not clear they could blunt a determined offensive air campaign. Air defense systems would also be early targets for suppression in an air campaign. This scenario is not only theoretically conceivable but also conforms to India's military air mission during a full-scale conventional war. How successful India would be in this, faces a number of imponderables. Pakistan's nuclear storage facilities presumably are below ground and well camouflaged, and probably concentrated in Northern Punjab amidst ground forces that could be mobilized quickly to counter commando raids. In addition, Indian intelligence means might be successful over time in identifying critical sites that have distinctive signatures associated with nuclear weapons. For Pakistan to be sure it can defeat this Indian objective, it presumably had emergency dispersal procedures for dedicated aircraft and missile delivery systems, and may be prepared, even under attack, to keep moving nuclear weapon assets and delivery systems out of harmful way. But movement of these systems under such duress could shorten their fuse. If these Pakistani efforts of dispersal and concealment of aircraft and mobile missile systems were only partially successful and significant attrition of these strategic assets occurred, it could lead Pakistan to "use it or lose it" mentality, and Pakistani leadership would almost certainly consider threatening to use surviving strategic assets for retaliation before all were lost. Even if India contemplates conventional pre-emptive attacks on air bases and other ground based military facilities, Pakistani strategic nuclear assets are likely to come under attack as well. For its part Pakistan could launch long- range air attacks on Indian airfields or logistical infrastructure similar to the events during 1965 and 1971 wars, or even use ballistic missiles. Its aircrafts and longer- range ballistic missiles have sufficient range to hit many targets in India's Western region where India may have strategic forces stationed. Such air attacks could be in the form of pre-emptive attacks or interdiction to limit the support for Indian ground forces.

LIMITED WAR SCENARIO

If a scenario of limited war is considered, the chances of nuclear escalation would be much less than from a major or all-out conventional conflict mentioned above. But there is hardly a chance that limited conventional war may not convert into a major and all-out conventional war. Rather later probability is stronger. After the *Kagil* crises of 1999, India announced the doctrine of "limited war" to avoid the dangers of nuclear escalation during the all-out conventional war. The doctrine was presented by the then Indian Defense Minister in a seminar on January 24, 2000⁹. This doctrine of limited war under the nuclear umbrella was to be waged in the strategic space between Low Intensity Conflict (LIC) and full-scale conventional war. In response, Pakistan also announced the creation of a nuclear command apparatus on February 2, 2000, and delineated the roles and responsibilities of all organs of the state. But it avoided making any formal comment on doctrinal use aspects, perhaps deliberately to deter against aggression, conventional or nuclear¹⁰. Periodically, however,

Pakistani officials have declared informally the parameters and factors that would be considered by the employment committee of the national command authority.

Theoretically, a war can be limited through various measures adopted by concerned parties or adversaries. First, limits can be set on political and military objectives, which will certainly limit the war up to a significant extent. Second, geographical limits on the war zone can limit the war on specific areas. Third, some restrictions can be placed on the type of weapons to be used during the warfare. Such a limit would reassure the adversary about controlling possible escalation. Fourth, a time limit can be placed on the war by stating that military operations can be called off when the adversary complies with certain demands.

In case of South Asia, it is worth noting that past wars between India and Pakistan have exhibited none of these limits, with one exception. And the exception was India's terminating of 1971 war immediately after Pakistan's forces laid down arms in Bangladesh. In previous wars, India has reserved and exercised the right to take the battle into Pakistani territory in response to an attack on Jammu and Kashmir¹¹. All available resources, including the navy, were employed in previous Indo-Pak wars, and all weapon systems available were utilized. Neither country imposed a time ceiling on the war. Neither side threatened civilian populations during the wars. A significant factor in these conflicts, however, was that neither side posed an existential threat to the survival of the other. But now the overt acquisition of nuclear weapons by both the countries has altered the context of military conflicts between them. It has substantially raised the threat of a nuclear conflict if another war is fought, whether full-scale or limited, between the two countries.

The Indian analyst Major General Ashok Krishna explained four basic options of limited war for India: first option is to attack across the international boundary or line of control (LOC), but to keep the objective limited. The second option is to attack the selected points along the LOC, presenting Pakistan with the option of escalating by responding with a riposte. The third option is to capture and hold a critical area along the LOC. The final option is to carry out the surgical strikes across the border and then return.¹² In fact, the main focus of limited war option, at the time of its inception in 1999, was along the LOC region of *Kashmir*, with effects of the *Kargil* war fresh in mind. The main thrust was on the feasibility of using limited military strikes to interdict infiltration from Pakistan, and to attempt to destroy or shut down so called terrorist training camps believed to be located around Mujaffarabad in the western and most heavily populated part of Pakistan-held Kashmir, adjoining Punjab province. The operational concept for such strikes apparently involved combined fighter aircraft, ground attack sorties and helicopter-borne special force operations intruding across the LOC without warning¹³. These strikes might be accompanied by artillery barrages immediately across the LOC, ostensibly attacking infiltration routes but also tying down opposition infantry forces locally. The primary objective of these strikes may be political to draw world attention to the problem of terrorist infiltration into India and to force Pakistan to clamp down *jihadi* organizations. But Pakistan may retaliate with some form of artillery and air strikes at least on Indian military posts near the LOC, and perhaps with fighter air craft sorties against Indian security forces staging areas deeper in *Kashmir*, to satisfy its own public that it has means and the will to retaliate against India. And this retaliatory action of Pakistan, which is quite natural, may lead the limited war to all-out war.

In fact, the concept of Indian surprise air attacks on terrorist training camps in *Azad Kashmir* assumed a far higher sensitivity after certain serious incidents like operation *Prakram*, September 11 and particularly the incidents of 13 December 2001 and Mumbai attacks. If India conducts surprise air attacks on localities near Mujaffarabad, while working on its limited war concept, it would bring Indian aircrafts or copters only minutes away from such sensitive defence related facilities in Pakistan as the Kathua uranium enrichment plant or nearby nuclear storage facilities. Pakistan may perceive it in the sense that these Indian attacks directed ostensibly against terrorist targets might cover expended strategic attacks on Pakistan's nuclear assets. So there is a high risk of escalation in limited war doctrine as it did not regard inadvertence to be of any significance. In 2001-02, India was prepared to take the risk of coercing and even attacking Pakistan despite full knowledge of Pakistan's nuclear capability. A section of the Indian leadership was convinced that Pakistan will have a hard time operationalizing its nuclear first use doctrine in a limited conventional war. They believe, however, that the same is not true about conventional force retaliation. According to this logic, Pakistan would find its nuclear deterrence useless in this limited war scenario. However, Indian confidence regarding the possibility of escalation control, the predictable outcome of a war, and the faith of Indian leaders in the safety of nuclear weapons on full or near full alert status raises the question of whether India fully realizes the possible repercussions of its mobilization. It seems clear that the international political climate worked against any escalation or war in South Asia. Reciprocal conventional force deployment by Pakistan led to a standoff that made it strategically difficult to fight a limited war, unless the war was expended, and that was not feasible.¹⁴

The doctrine of limited war is ambiguous and uncertain in South Asia because it leaves many questions unanswered¹⁵. For example, how would the political and military leadership in India and Pakistan plan and conduct limited war against each other? Can they ultimately limit political and operational objectives? The answers to these questions remain uncertain; as one side's limited political and military objectives could be viewed as unlimited and unacceptable by the other. If a nuclear first strike from Pakistan is to be avoided after a limited war is started, how will Indian political and military salencies be conveyed? If Pakistan wishes to avoid escalating a limited conflict with a nuclear strike how would it cope with an outcome which is militarily or politically unfavourable? Indicating the geographical limits of war would detract greatly from operational needs, while identifying political limits will allow the adversary to better plan its response. Under these circumstances, how victory would be quantified in political and military terms? In *kargil* war, which was on much smaller scale than a limited war, India was able to define its geographic salience by announcing that its forces would not cross the LOC in Jammu and Kashmir. That immediately placed serious limits on operational plans and forced a high casualty rate on the Indian army. A number of former senior military officers started criticizing publicly the government's self-imposed limitations at the cost of military casualties. This criticism placed the government under pressure and it started moving its major combat forces to operational locations, as preparations for widening the conflict, if necessary. That in turn placed the Pakistani military leadership under pressure and forced it to think about the nuclear weapons option. Though, the *kargil* conflict ended but it left a burning question behind it that future wars between India and Pakistan, whether limited or full scale have a potential threat of nuclear exchange. So at the moment, both official pronouncements and published doctrine fail to clarify how the two sides

will limit a future conventional war. There is also no perceptible change from past patterns in Indian and Pakistani approaches of fighting a conventional war. The way the two countries fought previous wars throws some light on how they could escalate to the nuclear threshold¹⁶.

Although, nuclear forces are not kept on an alert status during peace-time as compared to those of cold war period, but in an unfolding crisis, as it is clear from above discussion, the imminent possibility of conventional war could compel India and Pakistan to keep nuclear weapons in as close to a “ready state” as possible without being visible. The state of preparation of weapons thus would be directly proportional to the state of tension and crisis. To avoid being caught unprepared, in the event that a conventional war begins to go badly, both sides are likely to begin their nuclear forces to alert state at virtually the same time that they assemble their conventional forces. From this point on, the danger of inadvertence would become very real. In this situation, Indian declaration of no first use would become practically irrelevant.

The Indian declaration of “no first use” of nuclear weapons becomes irrelevant even in certain likely scenarios as observed by Indian defense analyst Jyotirmoy Banerjee¹⁷. Scenario one, suppose India is losing heavily in a conventional war with either Pakistan or china or both. Can India stop itself from using battlefield nuclear weapons? Scenario two, if India uses the doctrine of “launches-on-warning”, it will be highly relevant in the event that Indian radars detect incoming hostile missiles or bombers or both. What will India do? Will it wait till they devastated it or let fly its second-strike forces at once? If India waits in order to stick its pledge of “no-first-use”, it may suffer an unacceptable damage even to its second-strike capability. If, on the other hand, India launches on warning, this will be cutting its pledge too thin. There will remain not even seconds to properly asses the threat under “launch-on warning”. India’s hair trigger reaction will undergo the risk of an enormously avoidable spasmodic nuclear war, in case the warning on incoming hostile missiles turns out to be false. Radar and other sensors are, after all machines. Like all machines, they can go, and have gone wrong¹⁸. Scenario three, if India receives information that the enemy is about to launch, then India launches its own strike to pre-empt the enemy’s first strike. This doctrine of pre-emption is also dangerous. While under normal political circumstances this scenario may seem a bit far-fetched especially given India’s “no-first-use”, but under crisis conditions fact has a tendency to overtake fiction. Again massive time constraints upon assessing a threat and pondering will dominate. In this way, all the three scenarios make the Indian “no-first-use” doctrine irrelevant and raise the issue of nuclear dangers in the sub-continent.

COLD START DOCTRINE

After the doctrine of “limited war” a new concept characterized as “cold start operation” is also emerging in India since its withdrawal from operation *Prakram* in 2002 without launching even limited strikes¹⁹. The concept trades on the value of having mobilized operational forces always ready to conduct limited punitive strikes against Pakistan under the threshold of Pakistan’s red lines. The cold start strategy calls for a rapid deployment of integrated battle groups comprising of army, air force and, if needed, navy to conduct high intensity operations. The objective is to reach across, or circle around, Pakistan’s concentrated defensive positions and firepower on selected targets deeper into the Pakistan territory, and to do so quickly. After achieving their initial objectives, the intruding forces would secure, hold and facilitate reinforcement of a band of occupied territory, or withdraw before the main

conventional ground forces could move to engage. So a rapid deployment and quick securing of limited objectives can be used to achieve limited political objectives before international interference kicks in or before the conflict spirals out of hand into a nuclear exchange. The proponent of this doctrine, perhaps, hopes that this new operational level doctrine will have the strategic outcome of deterring Pakistan from pursuing its proxy war agenda. Although there has been no official response on this cold start type of strategy from Pakistani side, but it is certain that Pakistan will not ignore India's decision to achieve limited war objectives through this new strategy. There is every reason to expect that Pakistan will make its own innovation in response to cold start. As India enhances its ability to achieve a quick military decision against its neighbour in a future conflict, Pakistan will come under increasing pressure to rely on its nuclear arsenal for self defence. An operational cold start capability could lead Pakistan to lower its nuclear redlines, put its nuclear weapons on a higher state of readiness, develop tactical nuclear weapons, or undertake some equally destabilizing course of action. Waging limited war through this cold start doctrine can pose a number of challenges to political leaders attempting to achieve their aims through the use of force. In fact, these challenges create the dilemma while using this doctrine in practice.

Moreover, at present, it is not necessarily clear where a cold start type limited military operation would be directed: against *jihadi* training camps in *Kashmir* or their support bases in *Punjab* and *Sindh*? In pursuit of militants crossing the Line of Control? Against vulnerable parts of Pakistan as part of a response to a terrorist attack within India? There appears to be an assumption behind the cold start doctrine that punishment inflicted by limited conventional strikes can persuade Pakistan to halt its support for *Kashmiri* militants. Yet whether this level of punishment can be inflicted without crossing Pakistan's nuclear threshold remains uncertain. The gap between civilian political leadership and military personnel may also raise confusion regarding the execution of the plan. Civilian political leaders may design a tightly integrated strategy with clearly defined objectives, but they must devolve responsibility to the military to execute their strategy. Confusion, opportunity and local initiative may prompt military officers to act in ways that exceed or even run contrary to the broader political goals established by the state's policy makers. The particular geography of South Asia also poses a challenge to implementation of cold start type limited war. Given Pakistan's lack of strategic depth, even small incursions employing the cold start doctrine's bite-and-hold strategy could pressure Pakistan to escalate the conflict. The effects of the security dilemma and the relative incentives to overreact to an opponent's actions are easily magnified in this relatively compact geographic space. Hence, all these factors combine to make the notion of a cold start in South Asia a risky proposition.

CONCLUSION

Despite the hope of proliferation optimists, the growing nuclear arsenal of India and Pakistan has raised the risk of nuclear exchange. The conventional war fighting is the most dangerous proposition in this regard. The nuclear capabilities of India and Pakistan have increased the stakes of letting conventional hostilities run out of control. Nuclear weapons have not, so far, deterred either side from risk-taking with sub-conventional war, threats of conventional war, and military brinkmanship. The prevailing India-Pakistan hostilities and suspicion are sufficient reasons for the beginning of conventional war. As long as such possibilities exist the chances of nuclear exchange cannot be ruled out. This conventional war, at any level---all-out

or limited, carry the potential for escalation from one level to another and then ultimately to the use of nuclear weapons. And the terrorist activities have more potential in this direction. Though, certain other doctrines like 'limited war' and 'cold start' have also been invented to fight war under nuclear shadow by India but with risk of nuclear escalation. Inadequate warning capabilities, lack of efficient command and control arrangements, exclusive military control over nuclear weapons in Pakistan, and strained relations between the two are combined to raise the risk of inadvertent or unintended nuclear exchange during a conventional war fighting.

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**TRANSFORMATION OF READING WITH THE EMERGENCE OF INFORMATION
AND COMMUNICATION TECHNOLOGY (ICT)**

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ABSTRACT

Information Communication and Technology (ICT) is universal accepted and excellent tool for human kind, undoubtedly it served each and every aspect of society. ICT has provided new attributes to reading and reading habits. In the present scenario reading habits are diversifying with a very rapid pace. Traditional or leisure reading is demising with the shifting of time. ICT furnished new fashion of reading, any reader is just a click away to access the desired amount of information. Reading shows the personality of an individual and it helps them to develop the proper thinking methods and creating new ideas. Digital boards and multimedia technology has become new modern teaching methods.

Key Words: Reading, Reading Habits, Internet, ICT.

Reading is a basic and very regular practice of human nature from childhood to old age. Since early time society indulge in reading habit and time to time updating his knowledge by this perception, because reading and knowledge have direct relation. Every knowledgeable and extraordinary person in each area credits to his reading skills. Generally concrete knowledge comes after thorough reading of detailed literature. Since the emergence of Internet and ICT reading becomes easy and accessible. Anybody can access anything from anywhere by just clicking their finger on the mouse within minutes, provided Internet connectivity. Internet facilitates too much that anything which required, generally available within short time on Internet. But over dependency of current generation on Internet is its major shortfall. Today most of the readers adopt shortcuts for required literature. If someone needs any type of information or data, Google remains first choice in such cases. Library, books, reference tools are the subject of past, reference sections of the university libraries lying deserted, waited for users. No doubt books are still in use but the majority of clients are students and text books are the preferred stuff. It is so because curriculum is restricted to the some prescribed books and all editions are not available in the form of e-books. Students turn to the Internet first, when faced with a question or an assignment for class (Bowman, 2002). It is observed that either such readers which do not have any option are tagged with printed books or who are deep lovers of books and prefer leisure reading. It is unanimously acknowledged that Internet is the wonderful achievement of the ICT and survival of coming generations seems tough without it. Young generation who have more experience with computers and grow up with this technology will reveal different attitude towards reading in digital environment (Ramirez, 2003).

WHAT IS READING

Reading is simple to read any entity it may be a face, a book, a paper having some notes or any document with some written text or picture. Reading is the process of constructing meaning from written texts. It is a complex skill requiring the coordination of a number of

interrelated sources of information (Anderson et al., 1985). Reading is the process of constructing meaning through the dynamic interaction among: (1) the reader's existing knowledge; (2) the information suggested by the text being read; and (3) the context of the reading situation (Wixson et al, 1987). Otherwise reading is a phenomenon which is performed by every individual, every time. All the human being remains in the process of reading their thought. It is not necessary to read physically some object rather it is a continuous occurrence of an event.

TYPES OF READING

Broadly reading may be categorized in two types

1. Purpose Based Reading

In the purpose based reading reader must need to read to achieve its target. Students read for examination, researchers read for their research, scientists read to perform experiments and so. Purpose based reading again may be categorized on the basis of requirement of the individual. If reader is busy in some serious project, a comprehensive and multiple reading is needed at this stage. In case of ready reference only reference tool is sufficient to consult.

2. Leisure Reading

Leisure Reading is basically purposeless reading, it is the part of reading which is performed for entertainment or time pass or anything to readable. Hughes-Hassell and Rodge (2007) defined leisure reading as: “the reading students choose to do on their own, as opposed to reading that is assigned to them. Also referred to as voluntary reading, spare time reading, recreational reading, independent reading, reading outside of school, and self-selected reading, leisure reading involves personal choice, choosing what one wants to read, and reading widely from a variety of sources—not just books.”

ON THE BASIS OF FORMAT READING MAY BE AGAIN DIVIDED IN TWO TYPES

1. Traditional Reading or Printed Reading
2. Modern Reading or Online Reading

TRADITIONAL READING OR PRINTED READING

Reading through the traditional means of literature i.e. printed books, printed newspaper, manuscript or other type of conventional documents is called traditional reading or printed reading, since early time only traditional reading was very much in practice due to limited resources. But after the emergence of Internet and cloud computing means of reading has drastically changed, it does not mean people fully depend on internet for their reading requirements.

MODERN READING OR ONLINE READING

Now with the boom of Internet in the 21st century people often read electronic books, e-journals, electronic database, online articles and research papers etc. Everyone can access online documents on their PCs or laptops from the various locations without physical hard work, search the required material. Online reading is very much feasible, if it is for leisure because big amount of leisure literature is freely available on internet, thousands of search engines and websites are dedicated to free literature, not only text but images, video clippings and you tubes etc. may be accessed without spending a Paine. Tabs and kindles are the best

tools for leisure reading, because these are portable and easy to carry anywhere. Online reading may be performed in the form of digital or virtual, means subscription of contents directly through the web or cloud, the other way of online reading is through the material already stored in the form of CDs, Pen-Drive, Hard-Disc etc. with the help of computer, laptop and overhead projectors etc.

BENEFITS AND PLEASURE OF READING

Reading itself is a great remedy which provides relaxation to reader. If any stressed person reads the material related to recreation, harmony, brotherhood, yoga, meditation and spiritualism etc., it definitely leads to calm and peacefulness. Reading is knowledge, reading is talent. For achieving any goal or become a great scholar the only key is to be a dedicated and patient reader. A good reader always has a good vocabulary and can deliver in more influencing and impressive way. Lover of books and reading remains thoughtful and a person of deep belongingness. With the help of reading habit, solution of big problems may be revealed very easily. Process of thought works on the principal of reading, to be a famous person i.e. politician, thinker, academician, bureaucrat, revolutionary, author or litterateur good reader must be therein. Entertainment also comes through reading and it further depends on the interest of the individual one person get taste in comedy and other in research.

EFFECTS OF ICT IN THE ASSESSMENT OF READING

Information communication and technology (ICT) plays a prominent role in each and every aspect of society and human life. Needle to airplane all are outcomes of technology and dependency on ICT has enhanced in such a manner that every field of human kind is overwhelmed by it. Any type of literature whether it is book, journal, article, research paper or newspaper etc. is available in the form of softcopy, means it may be stored in any storage device i.e. pen drive, CDs, PC, laptop and consulted later as per convenience and requirement. Today there is no barrier of time and distance, a mobile library is every moment may be retained.

ROLE OF INTERNET IN THE MODERN ERA

Having internet connectivity means access of a moving encyclopedia. Any type of information any time at any place is the nature of Internet. If we look 20 year back, all this seems even the out of imagination. But Internet drastically changed the way of thinking, living and even behaving. Today everything is on Internet whether to reserve a ticket of air, rail or ship or to book a hotel anywhere in the world. Even in the daily household routine exercise Internet works i.e. booking of LPG. As per the Internet World Stats 2,405,518,376 population of the world use Internet service which is 34.3% of the whole population of the world (www.internetworldstats.com). It has been clearly demonstrated that the internet has become a focal point for almost every human activity and interest (Haythornthwaite and Wellman, 2002). Internet also save time and money, today people prefer to read e-news instead of newspaper, it is direct saving of paper as well as trees. The Internet permits for instant broadcasting of information through the single click of any link (Warschauer, 2006). Moreover, Internet access has become common in schools. In 2005, approximately 95% of K-12 classrooms in the United States had Internet access (Parsad and Jones, 2005). Additionally, 80% of kindergartners make use of computers and more than 50% of children younger than 9 years old use the Internet (Goldberg, Russell, & Cook, 2003). However, the average of U.S. students' use of computers in school was 12 minutes per week (Wells and Lewis, 2006). The

concept of deep web and web 2.0 is the advance version of Internet, its various services i.e. blog, twitter, service groups, facebook, linkedin, flickr, myspace etc. are more in practice these days. People share information of their interest through different modes of online information exchange, so that use of traditional literature is decreasing day by date.

Easy availability of the readymade relevant information on Internet has diminished the reading habits of society. Now people are adopting short cut method of copy and paste of material for the short success and falling into plagiarism cases. Although printed book reading provide a thorough loom and comfort.

ROLE OF LIBRARIES IN THE INTERNET ERA

Librarians are the specialized and experts to provide the services to their end users, they are responsible for the various activities of libraries and information centres including selection, rendering and delivery of various resources and services, to identify the need of the end users and fulfill on time. With the modern technologies, most of the libraries have been automated and fully or partially digitized. Former libraries were treated as a stockpile. But with the emergence of internet modern libraries are now working as an Information centre. Earlier librarians worked as a Book Keeper which is today known as Information Scientists. Presently libraries offer various advanced services i.e. Web-OPAC or online catalogue, online reservation of books, unmanned circulation through RFID, online indenting of desired document, e-resources (e-journals and e-books), digital library, MARC, Bar-coding facility and other Multimedia facilities. On the demand of the user through the inter library loan libraries provide such type of material which is not available with library. A number of other useful service i.e. Current Awareness Services (CAS), Selective Dissemination of Information (SDI), Selected Contents List, Online Reference Desk, News Bulletin, Indexing and Abstracting Services, Bibliographic Services and other information services etc. are also provided by the libraries.

Crawford and Gorman (1995) have defined the role of the librarian today:

To acquire, give access to, and safeguard carriers of knowledge and information in all forms and to provide instruction and assistance in the use of the collections to which their users have access... [libraries] are about the preservation, dissemination, and use of recorded knowledge in whatever form it may come.

Another way of looking at the effects of the Internet on books is that librarians find the Internet to be a blessing. The net today is challenging librarians with the new problems of access, preservation, serious demands on budgets and also engaging information professionals with legal problems and controversies (<http://ixwa.hubpages.com>). As the searching books options become very easiest with the Web-OPAC facility, approximately 75-80% libraries have been covered by Internet and ICT tools. Though most of the crowd depends on Internet for their information and literature needs still libraries are acquiring books, it shows that library has its own place in the education system which cannot be omitted. Other side library visit by the readers has reduced comparatively than the early time due to Internet and cloud based services.

CONCLUSION

It is the core fact that Internet and ICT has changed the reading habits drastically. No doubt Internet is blessing for society, facilitates ordinary to special in one and other way. Efficiency

has multiply many times if any task performed with the help of computer and Internet. Internet is ocean and may be explored as much as desired. Though reading enjoys when it performs with a relaxed mind and a leisure reading provides comfort. But if look other side of the coin, online reading through Internet delivers the ease of multi faceted reading. A person can consult many sites at the same time, which is very beneficial in comparative and evaluative studies. Due to information explosion it is not possible to consult the whole literature manually, but with the help Internet anybody may go through the maximum literature in a very short time. ICT rewarded a number of presents to the scholar community. Only with the availability of Internet any type of presentation may be designed at any time. Earlier in traditional style, ideas were not presented in much influencing way but with the help of audio visual support or online presentation ideas or data may be presented in effective and improved manner with more clarity. Before introducing ICT only reading and listening were the most affordable means of communication but ICT has extended it up to the multi dimensional. Computer plays major role in education, even computer is compulsory from the primary standard schooling. Villages are been provided broad band Internet connectivity, rural community is well aware with Internet and its utility. Mobile phones have been revolutionized the world, the community which is within the reach of mobile phones is more advance. ICT and Internet has attained an immortal place in human life and life without it seems unfeasible. Merit and demerit always lay with any occurrence, it is also in the case of ICT. No doubt people are becoming lazy, reading habits are diversifying, plagiarism is a big threat, but still Internet is a wonder and it merged with each act of human kind.

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NUTRIENT VARIATIONS IN FIVE IMPORTANT SHRUBS OF MOIST TEMPERATE FOREST OF MUSSOORIE

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ABSTRACT

Mussoorie range on the north-west of Doon Valley is the outermost range of the Himalayas. This range supports the Himalayan moist temperate forest (one of 14 types of Indian forest as classified by Champion and Seth, 1968). Comprising of evergreen trees with oak in association with other broad leaved tree species of the temperate zone such as Acer, Rhododendron, Machillus species forming a miscellaneous community Berberis sp., Coriaria nepalensis etc. are common shrubs. Ferns and epiphytic pteridophyte are abundant. Nutrient elements are often not limited and yet they play a major role in the physiological activities of plants. The functioning of most forest ecosystem particulars with regard to primary production is generally influenced by the availability of nutrients which in turn depends on the pattern and rate of their cycling. These nutrients recycle again and again from organic and inorganic compound from one trophic level to other trophic level and plant to animal, animal to soil. Nitrogen, oxygen and water are constantly required in life. These organic requirements are fulfilled through a cycle gaseous phase and have self regulating feedback mechanisms that make them relatively perfect. Whereas the elements with sedimentary cycles (i.e. P, K, Ca, Mg) show a continuous loss from biological system in response to erosion with ultimate deposition in sea. Therefore these sedimentary cycles are less perfect and more easily disrupted by man than Carbon and 'N' cycle (Odum, 1963). However these element are not less important to life (Bormann and Likens, 1967). Although a number of studies have been done on the forest of Western Himalaya (Kenoyer, 1921, Osmaston, 1922, Dudgeon and Kenoyer, 1925, Saxena et al. 1979, Tiwari and Singh 1982, Pandey, 1988) and on floristic and vegetational composition (Puri, 1957, Saxena and Srivastava, 1973, Joshi et al. 1985) still there is no information about the nutrient dynamics of shrub vegetation from the forest of Mussoorie. Therefore, present work is an attempt to estimate the nutrient variations of five important shrub species at Barlowganj (Mussoorie), Uttarakhand, India.

Key Words: Nutrient, Forests, Geographical Position, Soil, Climate.

MATERIAL AND METHODS

- 1. Geographical Position & Main Features of Study Site:** Mussoorie lies 30° 27' N latitude and 78° 15' E longitude. It is situated on outermost ranges of Himalayas, at an altitude of 2000 to 23000 meter immediately N-W to Dehradun and maintain approximately E-W direction but comprises a series of ridges or escarpments running approximately N-W to S-W which is similar to Shiwaliks. The strata of both the chains agree generally in being inclined towards N at an angle of 30° more or less, except where these are faults. The study site Barlowganj, having an approximate area of 3 km. is situated on the southern aspect of Mussoorie Hills. The study site is dominated by oak trees in upper stratum but in shrub strata the dominant shrubs like *Eupatorium odoratum*, *Smilax aspera*, *Coriaria nepalensis*, *Daphne cannabina* and *Berberis asiatica* are dominant.
- 2. Soil:** The soil varies considerably with differences in geological formation and vegetation, being deep and loamy in densely stocked areas, where it is enriched with humus deposits.
- 3. Climate:** The area above 1500 m has mainly temperate climate, without extremes of heat or cold. The climate is rigorous and dry. There are four well defined seasons. (a) **The Cold Season :** From mid October to March. (b) **The Hot Season :** Extends from April to June. Hottest months are May and June. Maximum temperature reaching upto 30° C. (c) **The Rainy Season :** Usually from late June to end of September. Marked by heavy rains, high humidity with very slight variation in temperature. (d) **Short dry period :** With scanty rain and low temperature.

Samples of different shrubs component from study sites are collected. The shrubs (shoot & root) were brought to the laboratory and oven dried at 80°C for 48 hours. The oven dried samples were mill ground and stored for the analysis of nutrients. Samples were collected during different season viz. Summer, Rainy and Winter. The powdered samples were weighed and ashed in a muffle furnace at 500°C and HCl extract was prepared for the estimation of nutrients. Chemical analysis of samples (Shoot and Root) was done following standard methods (Piper 1944, Allen, 1974).

The total nitrogen was determined by micro-Kjeldahl method (Peach & Tracy, 1958, Misra, 1968, Loomis and Shull, 1937). Phosphorous was determined by Phosphomolybdic blue colorimetric method suggested by Jackson, 1958, Misra, 1968. Magnesium was determined in an atomic absorption spectrophotometer (Pye Unicon 3200). Potassium and Calcium were estimated using a systronics flame photometer (Vogel, 1961), using 2 ml of conc. HNO₃ and 15 ml of HClO₄ (60%) and heating the 2 mgs. of plant material on clay photometer.

Table 1: Nutrient contents % of shrub vegetation in a moist temperate forest at Barlowganj (Mussoorie) in summer season.

Sr. No.	Plant Species	Components	N	P	K	Ca	Mg
1.	<i>Eupatorium odoratum</i>	Shoot	0.18	0.03	0.09	0.33	0.06
		Root	0.47	0.06	0.32	0.17	0.27
2.	<i>Smilax aspera</i>	Shoot	0.18	0.04	0.08	0.30	0.04
		Root	0.41	0.05	0.34	1.11	0.25

3.	<i>Coriaria nepalensis</i>	Shoot	0.17	0.04	0.09	0.32	0.06
		Root	0.38	0.05	0.34	1.21	0.26
4.	<i>Daphne cannabina</i>	Shoot	0.13	0.003	0.10	0.33	0.05
		Root	0.39	0.06	0.36	1.13	0.24
5.	<i>Berberis asiatica</i>	Shoot	0.23	0.03	0.10	0.32	0.06
		Root	0.46	0.05	0.38	1.20	0.26

Table 2: Nutrient contents % of shrub vegetation in a moist temperate forest at Barlowganj (Mussoorie) in rainy season.

Sr. No.	Plant Species	Components	N	P	K	Ca	Mg
1.	<i>Eupatorium odoratum</i>	Shoot	0.21	0.05	0.10	0.39	0.08
		Root	0.48	0.06	0.36	1.28	0.26
2.	<i>Smilax aspera</i>	Shoot	0.20	0.04	0.11	0.30	0.06
		Root	0.48	0.08	0.36	1.21	0.26
3.	<i>Coriaria nepalensis</i>	Shoot	0.18	0.03	0.10	0.35	0.06
		Root	0.47	0.09	0.39	1.27	0.25
4.	<i>Daphne cannabina</i>	Shoot	0.19	0.04	0.09	0.33	0.07
		Root	0.43	0.05	0.33	1.28	0.25
5.	<i>Berberis asiatica</i>	Shoot	0.20	0.03	0.13	0.38	0.05
		Root	0.45	0.05	0.34	1.26	0.28

Table 3 : Nutrient contents % of shrub vegetation in a moist temperate forest at Barlowganj (Mussoorie) in winter season.

Sr. No.	Plant Species	Components	N	P	K	Ca	Mg
1.	<i>Eupatorium odoratum</i>	Shoot	0.11	0.02	0.09	0.30	0.05
		Root	0.39	0.06	0.31	0.13	0.21
2.	<i>Smilax aspera</i>	Shoot	0.13	0.03	0.08	0.28	0.05
		Root	0.32	0.05	0.30	1.11	0.26
3.	<i>Coriaria nepalensis</i>	Shoot	0.19	0.04	0.07	0.30	0.06
		Root	0.51	0.05	0.33	1.17	0.27
4.	<i>Daphne cannabina</i>	Shoot	0.12	0.03	0.09	0.31	0.05
		Root	0.40	0.06	0.34	1.17	0.28
5.	<i>Berberis asiatica</i>	Shoot	0.11	0.05	0.08	0.29	0.04
		Root	0.37	0.07	0.35	0.18	0.21

RESULTS & DISCUSSION

Table 1 presents nutrient concentration of the five shrubs during summer season. Among the shoot component of various shrubs, *Berberis asiatica* showed maximum nitrogen percentage (0.23%) whereas minimum (0.13%) was recorded in *Daphne cannabina*. In root the percentage varied between 0.38 – 0.47. Phosphorus varied between 0.03 – 0.05% in shoot and 0.05 – 0.06% in root of various shrub species during summer season. Potassium was much low in shoot (0.08 – 0.10%) and high in root (0.32 – 0.38%). Calcium content was high in both root and shoot components of various species. Maximum percentage of Calcium (1.21%)

was recorded in the roots of *Coriaria nepalensis* and minimum 0.17 in the roots of *Euphorium odoratum*. Magnesium content was high in roots (0.24 – 0.27%) and low in shoot (0.04 to 0.05 %). Calcium and nitrogen together contributed 58% of total nutrients in *Eupatorium odoratum*. Percentage contribution of Nitrogen in *Smilax aspera*, *Coriaria nepalensis*, *Daphne cannabina*, *Berberis asiatics* was 21.07%, 18.83%, 18.43 % and 22.33 respectively.

In rainy season, *Eupatorium odoratum* recorded maximum nitrogen (0.21%) in shoot and 0.48% in root (Table 2). Minimum percentage of nitrogen (0.18% and 0.43%) shoot and root was recorded in *Coriaria nepalensis* and *Daphne cannabina* respectively. Phosphorus content ranged between 0.03% - 0.05% in shoot and 0.05% - 0.09% in root. Potassium percentage was maximum (0.13%) in *Berberis asiatica* shoot whereas root of *Coriaria nepalensis* recorded maximum (0.39%) and minimum (0.33%) in *Daphne cannabina*. Calcium percentage remained high in root and shoot components of the five shrub species. Maximum (1.28%) in root and (0.39%) in shoot occurred in *Daphne cannabina* and *Eupatorium odoratum* respectively. Magnesium content varied between 0.05% - 0.08% in shoot and 0.25% - 0.28% in root.

Table 3 shows status of five elements in five shrubs – during winter season. Nitrogen percentage ranged between 0.11 - 0.19 in shoot component and 0.32 – 0.51 in root component. Maximum nitrogen (0.19%) in shoot and (0.51%) in root, both recorded in *Coriaria nepalensis*. Phosphorus percentage was as low as 0.02% in *Eupatorium odoratum* shoot and as high as 0.07% in root of *Berberis asiatica*. Potassium percentage ranged between 0.07% - 0.09% in shoot component and 0.30% - 0.35% in root component. Calcium percentage was maximum (0.31%), in shoot of *Daphne cannabina* and (1.17%) in roots of both *Coriaria nepalensis* and *Daphne cannabina*. Minimum percentage of calcium both in root (1.11%) in shoot 0.28% occurred in *Smilax aspera*. Magnesium content ranged between 0.04% in shoot of *Berberis asiatica* to 0.28% in root of *Daphne cannabina*.

Nitrogen, oxygen and water are constantly required in life. These requirements are fulfilled through a cyclic gaseous phase and have self regulating feed back mechanism that make them relatively perfect (Odum, 1963). Whereas the elements with sedimentary cycles (i.e., phosphorus, potassium, calcium and magnesium) show a continuous loss from a biological system in response to erosion with ultimate deposition in sea. Therefore, these sedimentary cycles are less perfect and more easily disrupted by man than carbon and nitrogen cycle. However, these elements are not less important to life (Boremann and Likens, 1967). Nitrogen is an important element. It is the part of protein molecule, purines, pyrimidines, porphyrins and co-enzymes. The deficiency of nitrogen causes chlorosis and yellowing (Devlin, 1974).

The deficiency of potassium affects the respiration photosynthesis, chlorophyll development and water content of leaves. Potassium is an essential activator for enzymes involved in synthesis of certain peptide bond (Websler, 1953). In majority of the plant species, nitrogen shows inconsistent trend. In *Smilax aspera*, *Coriaria nepalensis* and *Berberis asiatica*, nitrogen shows the increasing percentage from summer to rainy season. Potassium, calcium, phosphorus and magnesium were the other elements, which show a considerable variation in various seasons. These variations can be attributed to relative requirements of individual element in the metabolic process and to availability of the nutrients in the ecosystem. (Billore and Mall, 1975, Srivastava et al., 1988).

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TRANSPARENT CONDUCTING THIN FILM TECHNOLOGY

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ABSTRACT

The technology of the transparent conductive films has its old genesis in its practical form. However the first transparent conducting oxide (TCO) was reported in 1907 by Baedeker. Over last decade the applications of transparent conductive films have sky rocketed. They are used in most of products around us. Some of these products include display electrodes for today's paper thin LCD; plasma and organic electroluminescence (EL) televisions as well as touch screen monitors on ATMs, ticket vending machines installed at train stations, car navigation systems and mobile phones. Transparent Conductive films are also used for electrodes in solar cells, which are poised to sweep the market in future.

Key Words: Thin Film, Transparent Conducting, TOC, ITO.

WHAT IS TRANSPARENT CONDUCTING OXIDE (TCO)

Semiconductors are elements or compounds of elements that occur close to the metal/insulator boundary across the periodic table (figure 1). A quick look at figure 1 shows that there are many possible semiconductor materials.

Figure 1. Periodic table showing metals and insulators

1 H																								2 He
3 Li	4 Be											5 B	6 C	7 N	8 O	9 F	10 Ne							
11 Na	12 Mg											13 Al	14 Si	15 P	16 S	17 Cl	18 Ar							
19 K	20 Ca	21 Sc	22 Ti	23 V	24 Cr	25 Mn	26 Fe	27 Co	28 Ni	29 Cu	30 Zn	31 Ga	32 Ge	33 As	34 Se	35 Br	36 Kr							
37 Rb	38 Sr	39 Y	40 Zr	41 Nb	42 Mo	43 Tc	44 Ru	45 Rh	46 Pd	47 Ag	48 Cd	49 In	50 Sn	51 Sb	52 Te	53 I	54 Xe							
55 Cs	56 Ba	71 Lu	72 Hf	73 Ta	74 W	75 Re	76 Os	77 Ir	78 Pt	79 Au	80 Hg	81 Tl	82 Pb	83 Bi	84 Po	85 At	86 Rn							

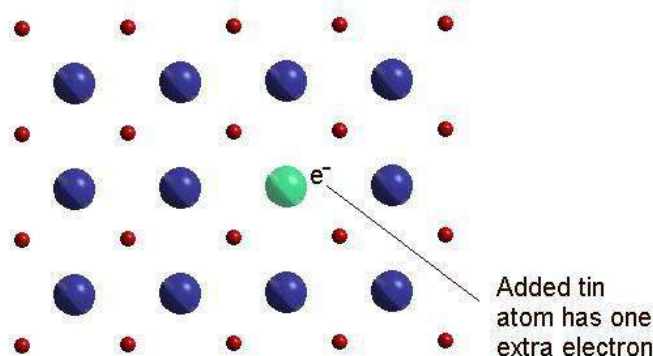
Commonly Si is the semiconductor used in microelectronics. There are also Compound semiconductors, formed from elements across the metal/insulator boundary, materials such as GaAs, or InSb. These materials are not transparent in the visible range. However there are several oxide semiconductors that are transparent in the visible range i.e. oxides of Indium, Tin, or Zinc. Of these Indium Oxide is most often used for industrial applications[1].

INDIUM TIN OXIDE

Indium Oxide, although a semiconductor, is not a conducting material. This is because it lacks any free electrons. Electrons are normally added by doping with a similar element but the

doped element should have one more electron than the basic material. So in the case of Indium Oxide we can add Tin. At low concentration this fits into the Indium Oxide structure and adds the required electrons (figure 2). There is an upper limit to the amount of Tin. Tin not only adds electrons but also reduces the mobility of these electrons. The optimum doping level is about 5-10% of Tin. This Tin doped Indium Oxide is known as Indium Tin Oxide or ITO.

Figure 2: Tin has one more electron than Indium, when Indium oxide is doped with Tin this extra electron becomes free making the Indium Tin Oxide conducting.



The electron density in ITO is not as high as it would be in metals. The result is that ITO is transparent in visible region or insulating at the frequencies of visible light, but becomes conducting in infrared region.

The TCOs most widely used for the display applications are Indium Tin Oxide (ITO) due to its high transparency, low resistivity and high work function. In heterojunction solar cells application, ITO film is frequently used as front contact and ITO film of appropriate thickness is used in antireflection coating. Many parameters of ITO thin layer must be considered in HJ solar cells, such as electrical conductivity, optical transparency and depth of film, to minimize sheet resistance and reduce optical losses. While the ITO market has expanded with the development of products like flat panel display (FPD) televisions. Their penetration rate has not even reached 10% of the global market. The problem is Indium contained in ITO, today's primary transparent conductive film material, is a rare metal facing the risk of depletion and typically found in limited geographical areas like China. There is a concern that indium will be on the strategic resource of every country in the world. As the popularity of FPD televisions, touch screen monitors and solar cells gain greater momentum, ITO alone will not be able to fulfill the demand and these are therefore costly also.

ZINC OXIDE

The need of hour is another material which can fulfill the demand. ZnO has proven to be an interesting alternative for the commonly used indium doped in oxide (ITO). Zinc oxide transparent conducting film has not demonstrated any problem associated with resistivity at high or low temperatures. The resistivity is of desired order at high and low temperatures.

ZnO is a very promising material for semiconductor device applications [2]. It has a direct and wide band gap of 3.4eV in the near-UV spectral region and a large free-excitation binding

energy .So that excitonic emission process can persist at room temperature or above. ZnO crystallizes in the wurtzite structure , the same as GaN, but, in contrast, ZnO is available as large bulk single crystal. Its properties have been studied since the early days of semiconductor electronics, but the use of ZnO as a semiconductor in electronic devices has been hindered by the lack of control over its electrical conductivity. ZnO crystals are almost always n-type[3]. The main defects in the crystal are Zn interstitials (Zn_i) and oxygen vacancies (Vo). These defects in ZnO are easily ionized, and electrons produced by ionized defects contribute to the electrical conductivity. Thus Zn_i and Vo play important roles in the ZnO films electrical conductivity and act as donors in the crystal. Many researches observed that during the deposition process of ZnO films, supply of O_2 affects the microstructural and electrical properties, and therefore demands a careful optimization.

ZnO has proved to be an interesting alternative for the commonly used Indium Tin Oxide (ITO) owing to :

- the lower absorption in UV,
- the higher stability in hydrogen plasmas,
- lower cost and higher availability
- no toxicity[4].

Transparent conducting zinc oxide (ZnO) films have been studied extensively because they exhibit high optical transmission and electrical conduction and have great potential applications in photo-electronic devices such as solar cells and displays. ZnO films are more stable in activated Hydrogen environments than other TCO films such as ITO and Tin Oxide (SnO), ZnO films also have a lower material cost and a lower deposition temperature when compared to ITO films. These advantages are of considerable interest for practical applications such as transparent electrodes, window material in displays, solar cells, and various opto-electronic devices [5] .

In order to reduce the resistivity of ZnO thin films. Al doped ZnO thin film was brought up by scholars of former times. The research of AZO is going on more than twenty years. Al doped ZnO thin films have been considered as suitable anodes because Al doped ZnO thin films are more stable in reducing ambient in comparison with the ITO films, which make them appropriate for potential use as anodes in organic light emitting diodes (OLEDs).

The thin film transistor (TFT) industry is still tightly connected to the silicon technology and it will most likely remain during the next years. However, new research areas have been opened with the appearance of the first semiconductor oxide-based transistors in 1996 .At that time, a little attention was given to the semiconductor material (Sb-doped SnO_2), but in 2003-2004, the “big boom” happened with the presentation of several oxide semiconductor TFTs based on ZnO or ZnO compound materials with remarkable electrical properties, which are comparable to or even better than amorphous silicon (a-Si) TFTs. Once these devices were reported, several ideas appeared concerning their application, with the main driving force related to the next generation of flexible and transparent devices processed at low temperatures, namely for display applications[6].

A review of research works on luminescent materials show that oxide materials with a wide energy band gap demonstrate a high quantum efficiency of luminescence. The luminescent

oxide materials can be in alternative for the traditional luminescent materials such as zinc sulphide (ZnS). In this context, oxide materials can be used as host materials for doping by rare-earth elements. The doped oxide thin films can be applied in electro- and cathodoluminescent displays as emitting medium with highly-effective emission [7].

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RIGHT TO EDUCATION: ISSUES AND CHALLENGES

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ABSTRACT

This article explores the right to education in relation with other fundamental rights. Though it was made a fundamental right in the year 2009 but it was in existence under directive principles of state policy. This article discusses important aspects related to the Right to (free and compulsory) education act, 2009, flaws in the act with the appropriate suggestions. There is a need to channelize the mechanism of right to education more properly to achieve its object.

Key Words: Education, Challenges, Fundamental Rights, Education Policy.

Education has its functionalism in almost all sphere of life. Its signification can never be marginalized. An educated society prepares the present generation for a bright future and enables the individual to galvanize the capacity of collective. More than 2300 years back Chanakya had said “that mother and that father are enemies, who do not give education to their children”. In the recent past Nelson Mandela had proclaimed, “Education is most powerful weapon which you can use to change the world¹. Education is a tool that can play a vital role in improving the socio-economic condition of the nation. It empowers citizens with analytical abilities, leads to better confidence levels and fortifies one with will power and goal setting competencies.

Education involves not only textbook learning but also a growth of values, skills and capacities. This helps individuals to plan for their career as well as play a useful part in building a new society with progressive values. Hence, education results in changing both individual lives as well as that of the entire community for the better development.²

ENACTMENT OF THE ACT

The Constitution (Eighty-sixth Amendment) Act 2002, created a history in field of education as a landmark of right to education in India. It inserted a new Article 21-A that states, “**The State shall provide free and compulsory education to all children of the age of six to fourteen years in such manner as the State may by the law, determine.**”³

The Constitution of India under Directive Principle contained in Art. 45, has made a provision for free and compulsory education for all children up to the age of fourteen years within ten years of promulgation of Constitution. We would not achieve this goal even after fifty years of adoption of the provision but the right to education under Art. 21-A will give required momentum to compulsory education to children up to age of fourteen. The right to education under this article would cover primary as well as secondary education and petitioner can claim

the benefit of Part III as well. After the insertion of Art.21-A, every child up to the age of fourteen has a right to compulsory education and under Art.45 State is under the duty provide this compulsory education to every child up to age of fourteen.

According to Article 45 of the constitution, “**The State shall endeavour to provide, within a period of ten years from the commencement of this Constitution, for free and compulsory education for all children until they complete the age of fourteen years**”. While this duty is irrespective of State’s economic ability, under Art.41 State’s duty of making effective provision for securing right to education is “within the limits of its economic capacity and development”. Since positive rights of life are carved out in case law by gathering the values of Part IV, the above dichotomy necessarily influenced stage-wise differentiation in recognizing right to education as a component of right to life. A new fundamental duties was added in Art.51-A, so that it shall be the duty of every citizen of India “who is a parent or guardian to provide opportunities for education to his child or, as the case may be, ward between the age of six and fourteen years”. The interactions of provisions in Arts.19(1)(g), 26(1), 29(1) and 30(1) vis-à-vis Art.21-A would mean that State has power and duty to ensure right to education under Art.21-A by imposing reasonable obligation upon private educational institutions to realize the objective of compulsory education.

JUDICIARY ON RIGHT TO EDUCATION AND RIGHTS UNDER ARTS.19, 21, 26, 29 AND 30.

Right to education has a relation of mutual assistance with other positive rights of life and with various liberties. The links of educational rights with freedom under Art.19 are also significant. In Santosh Kumar, while ordering that Sanskrit should also be included as one of the optional languages at the level of secondary education, the Supreme Court replied on the aspects of freedom of speech and conversation of culture.

The role of freedom of association in forming educational institutions is given judicial recognition in D.A.V. College and Unnikrishnan. In Unnikrishnan case, the Court ruled that Professional Education Institutions could be established by registered societies only. The role played by educational associations at lower levels of education is also important.

About Art. 26(a) as the basis for educational right, the Supreme Court in *Bramhachari Siddeshwar* ruled that religious denominations could establish institutions for charitable purpose

subject to limitations prescribed under Art. 26(1). The *TMA Pai Foundation*⁴ judgment made significant contribution in this sphere by holding, “The right to establish maintain educational institutions may also be sourced to Art. 26(a), which grants, in positive terms, the right to every religious denomination of any section thereof to establish and maintain institutions for religious and charitable purpose, subject to public order, health and morality. Education is a recognized head of charity. Therefore, religious denominations or sections thereof, which do not fall within the special categories carved out in Art. 29(1) and 30(1), have the right to establish and maintain religious and educational institutions”. This enables the religious denominations of majority religious community also to set up any educational institution.

The rights of any section of every citizen, under Art. 29(1) having distinct language, script or culture of their own to conserve the same entitles them to establish and maintain educational institution for this purpose. The right of religious and linguistic minorities to establish and

administer educational institutions for their choice under Art. 30(1) also provides a basis and opportunity for education⁵.

Some of the outstanding development and application of right to equality in India have been in the domain of educational right. *Brown v. Board of Education* decision on progressive desegregation has expanded the scope of right to education. In India, in addition to general provisions like Art. 14 and 15(1), the principle of non-discrimination in the matter of admission to State funded educational institutions, is laid down in Art. 29(2). Quashing of a Communal GO, which had provided for compartmentalised treatment of caste-based claims in admission to educational institutions, was the starting point set in *Smt. Champakam Dorairajan*. The subsequent insertion of Art. 15(4) for enabling special provision for SEBC, SC and ST were to give a dimension of substantive equality to the disadvantaged sections of the society. In *Ajay Hasia v. Khalid Mujib* right to equality could be claimed in the matter of admission to engineering college run by a registered society with the assistance of state fund. In *Vibhu Kapoor v. Council of I.S.C. Examination*, arbitrary treatment of students by educational institutions could be remedied by invoking Art. 14 and 12⁶.

While the Supreme Court, in its recent judgment in the *Mohini Jain v Karnataka AIR1992 SC 1858* case, may be faulted on both doctrinal and practical grounds for its use of article 21 of the Constitution for articulating the right to education, its indictment of the capitation fee system has not come a day too soon. The Supreme Court has recently declared that right to education was a fundamental right and that the charging of capitation fee was arbitrary, unfair and therefore violation of the fundamental right to equality contained in article 14 of the Constitution. Since the decision of the Supreme Court is the law of the land, the above decision has created a storm in the educational world. The immediate reactions have been hostile to the decision. Usual comments such as that the court has gone too far or that the decision is impractical have already come in. While we share the court's agony over the immoral practice of capitation fee in the new medical and engineering colleges, some wider propositions enunciated therein need careful examination⁷.

But in *Unnikrishnan v State of A.P.* wherein it was held that free education until the child completes 14 years is a fundamental right and after the completion of 14 years, his right to education is circumscribed by the limits of the economic conditions of State and its development. Recently it was held that to improve education, various State Government grant aid to educational institutions and by large teachers of aided private schools deserve to be treated on a par with teachers of Government Institution to the extent possible especially when Art. 21-A makes education a fundamental right.

As we find that in *Mohini Jain Case* and in *Unnikrishnan Case*, the judiciary explained the right to education. The judicial activism in this direction played a vital role. The effects of all activism are in form of the Right of Children to Free and Compulsory Education Act, 2009.⁸

METHODS ADOPTED TO IMPLEMENT RIGHT TO EDUCATION

SarvaShikshaAbhiyan

RashtriyaMadhyamikShikshaAbhiyan

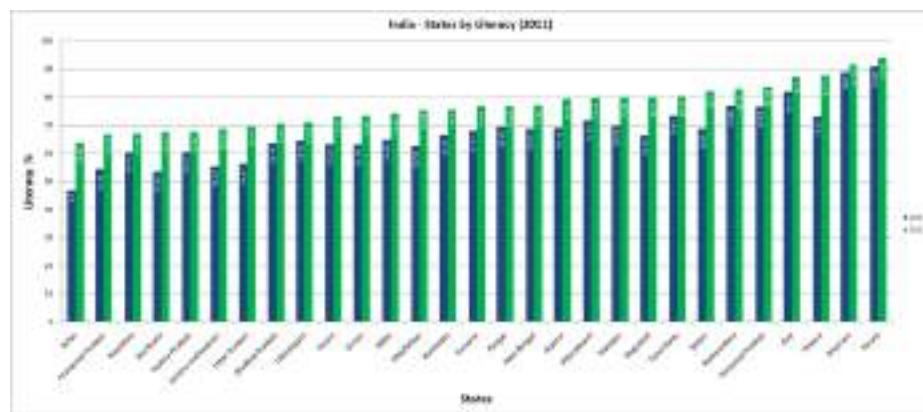
Mid-Day Meal

Kasturba Gandhi Balika Vidyalaya

STATUS REPORT OF RIGHT TO (FREE AND COMPULSORY) EDUCATION ACT, 2010

As per Population Census of India 2011, the **Literacy rate of India** has shown as improvement of almost 9 percent. It has gone up to 74.04% in 2011 from 65.38% in 2001, thus showing an increase of 9 percent in the last 10 years. It consists of male literacy rate 82.14% and female literacy rate is 65.46%. Kerala with 93.9% literacy rate is the top state in India. Lakshadweep and Mizoram are at second and third position with 92.3% and 91.06% literacy rate respectively. Bihar with 63.08% literacy rate is the last in terms of literacy rate in India⁹.

This graph shows the literacy status of 28 states of India with green colour showing the increase in literacy rate in comparison of 1991 census and is based on the survey conducted by census of India 2011 with the NFHS (national family health survey of India¹⁰)



RIGHT TO EDUCATION IN HARYANA

In Haryana the right to education act was adopted and implemented in November 2010. "The government will implement the RTE Act in all state- run schools from November 11, coinciding with the birth anniversary of India first Education Minister MaulanaAbul Kalam Azad.¹¹

It may be just a dot on the map, but it continues to remain on top in the field of primary education. Like 2007-08, the Union territory of Puducherry maintained its number one spot in the Educational Development Index for primary and upper primary schools in the country. Lakshadweep and Kerala were in the second and third positions, respectively, in the EDI for 2008-09. Last year, Kerala was in the second place followed by Lakshadweep.

In 2008-09, Haryana occupies the fourth position. Even if parameters to evaluate EDI have been changed for the 2008-09 survey, Haryana's progress is remarkable -- from seventh to fourth¹².

According to The ASER survey that is carried out each year between September and November. In 2010, 14240 government schools werevisited. In 2011, 14283 government schools were visited. In accordance with this survey.¹³

State	No.of schools visited 2010	No.of schools visited 2011	Pupil-teacher ratio 2010	Pupil teacher ratio 2011	Basic facilities
Haryana	528	389	40.3	41.2	58.5

SHORTCOMINGS IN THE ACT

No failing allowed: Section 16 of the RTE Act states that no child shall be failed in any class or expelled from school till he or she completes elementary education (defined as education imparted from Class 1 to Class 8). Though it is made for good of children but the critical question is – **can a child who is unable to bear the workload of a junior class now deal with the workload of a senior class in addition to taking special classes?** The embarrassment of failing, which under a system of failing a weak student is corrected at the first stage of inadequacy, now carries over into senior classes¹⁴

Section 17(1) of the Act prohibits physical punishment or mental harassment of students. While a ban on physical punishment is laudable, the one on mental harassment is incompletely defined. What, after all, is ‘mental harassment’? It could be anything from a light admonition for not completing homework to vile abuses meant to strip the student of all self-respect. The Act sheds no further light. The problem then becomes one of establishing the commission of mental harassment itself. When rules are incompletely defined, they are subject to **manipulation and misuse.**

No clear escalation mechanism: One of the unseen effects is that in rural areas and impoverished regions, where acts of mental harassment are most often carried out, these acts are not even reported (except in severe cases). This is because the child risks arousing further displeasure of the teacher concerned, and is not assured of action in any case. Section 17(2) of the Act prescribes disciplinary action against any teacher violating the rule. However, in a set up where mental harassment is hard to establish, reporting mechanisms are poor, the social matrix favours teachers, and where administrators are already feeling a crunch of available teachers, strong action against the guilty is unlikely. If at all it is to be more effective, the provision needs to be given more teeth – establish a uniform reporting and escalation mechanism for teacher misconduct and ensure that whistleblowers are not at the receiving end of punitive measures.¹⁵

‘Mental harassment’ not clearly defined: In an urban, metropolitan setting, again the loose definition of mental harassment becomes a problem. Here, students are more empowered, and find it easy to report any behaviour which would constitute ‘mental harassment’ in their opinion. In such schools, errant behaviour from students is encouraged because any admonishment, even if it is meant to serve as a correction, can be (mis)interpreted as mental harassment. This will reduce the effectiveness of teachers to administer suitable admonitory measures to this class of students.

Teacher-Student Ratio: Schools which do not have a certificate of recognition from the local authority or government shall no longer be allowed to function, **under Section 18 of the Right to Education Act.** If such a school is already functioning, the Act prescribes that it be shut down within 3 years if it fails to meet norms. If a new school is set up, it must conform to the norms for a school as laid out in the Schedule of the Act, or be shut down within three years. The norms themselves prescribe minimum teacher-student ratios for different classes, the existence of a permanent building, minimum number of working hours per teacher, and a functioning library, among other things.¹⁵

POSING PROBLEMS FOR STUDENTS AND PARENTS WHO ARE PAYING FEES:

Under Section 13(1), the Government has mandated that no school should collect any capitation fee for granting admission to a child. This move is welcome, and it will ensure that discretionary admissions are not the hegemony of the rich. However, having addressed the symptom, the Government has failed to address the underlying cause. The school therefore sees this as a convenient way of ensuring admission for those wards whose parents can contribute the most to the school financially. The presence of this phenomenon itself indicates the paucity of available education.¹⁶

Fewer Schools: The RTE Act mandates that unrecognized institutions which fail to meet the set criteria will have to close down after a period of about 3 years. However, apart from mandating that the students in these schools will have a right to seek transfer to other schools within the area, the Act does not specify how and on what basis these students will be given admission in other schools. With recognized schools already straining under the burden of having to support free education for all students who approach them (till their capacity), the room for accommodating more students will be scarce. The only alternative is for the state to open as many recognized schools (of approximately similar capacity) as the number of unrecognized schools that it closes down

Section 28 of the RTE Act mandates that no teacher should engage himself or herself in private tuition activity. Through this provision, the Government is trying to address the problem of teachers not teaching properly in schools and then requiring students to attend private tuitions to actually learn the subject material. The intention again is worthy of appreciation – any provision that improves standards of teaching in the classroom and removes perverse incentives for teachers to earn money from their students through unethical means is welcome.¹⁷

A question of performance: Even if private tuitions by teachers are successfully done away with, it still does not address the prevalence of teacher underperformance and absenteeism. One may argue that with an alternative source of revenue (private tuitions) now removed, teachers will be loath to take up government school jobs, as the effective income earned is lower. Some capable teachers, who would otherwise have taught well in school, and also taken private tuitions, will therefore walk away from a government school teacher job, choosing to dedicate themselves completely to private tuitions. On the other hand, some less capable teachers, who were not teaching well in school but were supplementing their income through private tuitions, will elect to stay on. With the failing mechanism also removed, the performance evaluation of these teachers will become even more difficult. Underperformance, therefore, will stay, and teacher absenteeism will only increase (especially to pursue other income opportunities). Section 24 of the Act prescribes punitive measures to be undertaken in case absenteeism and non-performance of duties is observed. While it prescribes the minimum duties to be undertaken by each teacher, no specification is made of what constitutes high performance. It may be argued that mere obligatory completion of assigned duties does not constitute high performance. In the light of this, monitoring performance and enforcing these measures will be difficult pending clear standards of performance.

While the intention of the Government (through the RTE Act) in providing free education to children till the age of 14 years is laudable, there is also a need for measures to ensure that children (especially poor children) do not drop out of school once they lose the benefit of free

education. The way the Act is currently structured, life in school after 14 will seem very difficult to a child – failing, no special classes, Board exams, and school fees suddenly make going to school an unattractive proposition. The number of dropouts at age 14 might therefore increase significantly. To ensure that this does not happen, the Government should ensure that students younger than 14 are at least acquainted with the possibility of failing and the ‘daunting’ aspect of Board exams, and that some financial assistance is available for poor children who wish to study beyond the age of 14 years (for example, scholarships for children from BPL families when they complete Class 12).¹⁸

LATEST DEVELOPMENT: SUPREME COURT JUDGEMENT AND CHALLENGES FOR THE IMPLEMENTATION OF THE RIGHT TO EDUCATION

The Supreme Court ruling delivered on 12 April, 2012 sanctioning the legality of the right to education has also mandated that every private school to ensure 25 percent enrolment from the economic weaker sections of the society. The caveat is that the seats will be subsidized by the government and the target will be reached progressively, in the coming eight years.¹⁹

though this judgement clarifies many ways and is good. But, still it poses a main question with it that **Can we afford the RTE, Act** the rte act which paves the way for free education for all children up to the age of 14 years is expected to cost 2-3 lakh crores for the period 2012-2013. This is nearly five times the government’s total allocation for school education in this year.

From where such a huge money will come. This scheme makes it clear that the government has to pay Rs. 1190 as a monthly subsidy, plus Rs 3000 annually for miscellaneous expenses. This will obviously result in increase in fees of paying students, thereby putting more pressure on the economy class and if the schools do not increase seats in that case the middle class is going to suffer a lot²⁰.

Another issue before the RTE is that the students from the rural areas have to work a lot to come at par with the students in urban schools.

The concept of RTE poses a major challenge for the sub-urban schools. As many of these schools do not have enough resources or space to meet the ambitious infrastructure standards imposed by RTE²¹.

As per the version of Ashok Malik there is one more noticeable point in Supreme Court’s judgement that it makes a clear demarcation between minority run aided schools and other private unaided schools upholding the constitutional right of the former to not admit poor students compulsorily. This will lead to a paradoxical situation where poor or Christian students, the most deserving among the minority surely, will be able to access RTE quotas in schools run by Hindus, but not by their own community

Here the question arises is this that why the minority institutions are kept outside the ambit of judgement, at least they could have given admission to the poor belonging to the minority community.²²

As with just the passing of the judgment by the Supreme Court regarding reserving the 25% seats for the poor students, oppositions at levels is started. A petition in this regard is also filed by the Satyaveer Singh of Rohtak at Punjab and Haryana high court.

CONCLUSION AND SUGGESTIONS

In the context of globalisation, education assumes greater meaning. Greatness of a nation should not be measured by its ranking in global economic order, but by its ability to provide quality education. The last two decade have shown enormous improvement in the literacy seen in the country as reflected by the average literacy figures. Education is perhaps the most vital requirement for inclusive growth, empowering individual and society, opening up opportunities and promoting true public participation in the development process. It is an important factor that fuels both social change and economic growth.

Though, the programmes are implemented in right directions and there are some inconsistency regarding implementation, I want to suggest some idea for better results and strengthening inclusive education.

SUGGESTIONS

Some measures can be adopted for effective implementation of the Right to Education like. **Privatization of Schools should be done, Amendments be made in the existing act, By improving Food quality of MDM's and providing Other infrastructural benefits. Proper training for teaching staff is must and there is need to allow students to fail.** Moreover there is a need to **enforce strictly the ban on private tuitions and referrals. Board exams should be used as a feedback mechanism. The authorities should implement the program in phases, rather than all at once with a safe delivery mechanism for funds.**

Though the state has the primary obligation to provide education for all children but non-governmental organizations and other civil society partners can make a vital contribution to education by mobilizing public demand and expanding participation. So, the government needs to build effective partnerships with all organizations and institutions that have an impact on children's education. These suggestions are merely hypothetical that may bring fruitful result in effective implementation of this act and access to everyone of this fundamental right.

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A REVIEW: OFFLINE SIGNATURE VERIFICATION SYSTEM

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ABSTRACT

As signatures continue to play a pivotal role in financial, commercial and legal transactions, truly secure authentication becomes more and more crucial. Various researches in the field of signature verification has been vigorously pursued for many years and its scope is still being explored. Signature verification is the process which is carried out to determine whether a given signature is genuine or forged one and it can be classified into two categories such as on-line and off-line. This paper represents a brief review on the need for offline signature verification system, various approaches as well as methodology used to implement this system and the major key performance considerations when planning the implementation of a signature verification system.

Key Words: Biometrics, Handwritten Signature Verification (HSV), Forgeries, Global and Local Features, Feature Extraction, Preprocessing.

The Biometrics can be used to verify a person based on feature vectors derived from physiological or behavioral characteristics. Any physiological or behavioral characteristic must possess the following quality measures to serve as a biometric: Uniqueness, Permanence, Acceptability, Collectability and the minimum cost to employ these biometrics. Human Signature is a behavioral biometric trait which is extensively used for personal identification. It is an act of writing one's name. It may contain alphabets, letters and special symbols or characters and therefore, most of the time they can be unreadable. Also, intrapersonal and interpersonal variations make it necessary to analyze the signatures as images which can be considered as a special distribution of pixels representing writing style rather than a collection of alphabets. Every human being has his own writing style and hence their signatures can be used for their identity verification. As compare to passwords and various PIN code security methods, signatures are hard to be forgotten or replicated by others. For that reason, authentication using signature has been extensively used as a secure way to verify personal identity. An automated Signature Verification System verifies that whether the input test signature is authentic signature or forged one. Signature Verification process is natural, intuitive, easy and trustworthy.

A. Applications

Signature verification has been and is being used in many applications ranging from government use and commercial level, to forensic applications.

- Bank cheque processing
- Postal address recognition
- Form processing
- Automated exam assessment
- Creating digital databases

In modern society where fraud is rampant, there is a high need of an efficient automated solutions for Handwritten Signature Verification (HSV) system to complement visual verification for authentication and authorization in legal transactions.

Signature authentication involves mainly two important tasks. First one is Recognition which means finding the identification of the signature owner. The second one is the verification, which means to take a decision about whether the input signature is Genuine or Forgery.

B. Forgery

Forgery is mainly used to make false or duplicate sign of other individual to get unauthorized access by using some techniques.

1. Types of Forgery:

- a) Hit-or-miss Forgery:* It is a very simple type of forgery and can be uncovered easily. In this, the forger has no knowledge of original signature and creates a signature in his own style. It is also known as Random Forgery.
- b) Well-versed Forgery:* In this type of forgery, the forger may be a master in imitating the original signature and may also have the knowledge about original signature that how it looks like. It is also known as Skilled Forgery.
- c) Amateur Forgery:* In amateur forgery, the forger keeps an eye on the original signature and then tries to create a similar sign. Here, the forger is not an expert in forgery. It is also known as Simple Forgery.

C. Types of Signature Verification System

Signature verification can be classified into two types as per the available data in the input:

Offline (or Static) Signature Verification: The 2-D image of a signature is taken as an input data using optical scanner and is useful in automatic verification of signatures found on past documents. The features thus extracted, such as shape, size etc. are called Static Features.

Online(or Dynamic) Signature Verification: Signatures are captured by data acquisition devices such as pressure-sensitive tablets and webcams that extract Dynamic Features like pressure, velocity, speed of writing etc. for verification purpose. These dynamic features are specific to each individual and are sufficiently stable and repetitive.

Differences between these two systems are:

- Off-line systems don't require complex apparatus such as a scanner or a camera, but they need refined pre-processing and feature extraction techniques.

- Online systems generally present a better performance than the offline ones, but they need the presence of the author during acquisition of reference data and verification process.
- Off-line systems are difficult to design as many desirable characteristics such as the order of the strokes, velocity and stable dynamic information are not available.

D. Performance Evaluation

In evaluating the performance of a signature verification system, there are four important error rates:

- True Rejection Rate (TRR)
- True Acceptance Rate (TAR)
- False Rejection Rate (FRR)
- False Acceptance Rate (FAR)

As FRR and FAR are inversely related errors and are also known as type I and type II errors respectively, the Equal Error Rate (EER), where FAR equals FRR is often reported. The EER is also called the type III error.

The non-repetitive nature of variation of the signatures, due to age, illness, geographic location and perhaps to some extent the emotional state of the person, accentuates the problem. All these factors together may cause intra-personal variation.

So, a robust system has to be designed which will not be influenced by these factors and will also be able to detect various types of forgeries i.e. the system should never be too sensitive nor too coarse.

II. LITERATURE SURVEY

Justino [3] used a discrete observation HMM to detect random, casual, and skilled forgeries. A grid segmentation scheme was used to extract three features: a pixel density feature, a pixel distribution feature (extended-shadow-code), and an axial slant feature. Two data sets are used. After optimization first data set was used to detect random, casual, and skilled forgeries in a second data set. The second data set contains the signatures of 60 writers with 40 training signatures, 10 genuine test signatures, 10 casual forgeries, and 10 skilled forgeries per writer. An FRR of 2.83% and an FAR of 1.44%, 2.50%, and 22.67% are reported for random, casual, and skilled forgeries respectively.

Pallavi Patil [5] used the global features for signature verification and created a database consist of 300 signature samples collected from 20 individuals out of which 200 are used for training, and 100 are used for testing. For training, feature vector corresponding to 200 signatures are calculated and stored in the database. In testing phase, when the test signature is entered, the feature vector corresponding to test signature is calculated which is then compared with the feature vector of each of the 200 signatures. For comparison Euclidean distance model is used which calculates the Euclidean distance between feature vector of test signature and feature vector of the database. The system gives satisfactory result of recognition rate around 89%.

Pradeep kumar [6] presented a method of handwritten signature verification using neural network approach. The method uses features extracted from preprocessed signature images.

The extracted features are used to train a neural network using error back propagation training algorithm. The network could classify all genuine and forged signatures correctly. When the network was presented with signature samples from database different than the ones used in training phase, out of 300 such signatures (150 genuine and 150 forged) it could recognize 248 signatures correctly. Hence, the correct classification rate of the system is 82.66% .This recognition system exhibited 100% success rate by identifying correctly all the signatures that it was trained for. However, it exhibited poor performance when it was presented with signatures that it was not trained for earlier.

Charu Jain [9] used new approach in which the individual Gaussian components are shown to represent some global features such as skewness, height, area etc. that characterize various aspects of a signature, and are effective for modeling its specificity. For training, Gaussian Mixture Model (GMM) technique is used to build a reference model for each signature sample of a particular user. The verification phase has three steps- The first step involves computation of GMM-based log likelihood probability match score, second step performs the mapping of this score into soft boundary ranges of acceptance or rejection through the use of z-score analysis and normalization function, In third step threshold is used to arrive at the final decision of accepting or rejecting a given signature sample. The focus of this work is on faster detection of authenticated signature as no vector analysis is done in GMM. The FAR (False Acceptance Rate) and FRR (False Rejection Rate) for the genuine samples is 0.15 and 0.19 respectively. The system has been tested for its accuracy and effectiveness on data from 25 users with 10 specimens of each making up a total of 250 signatures.

III. SYSTEM OVERVIEW

Signature verification system verifies that whether the given signature of a person is authentic or forged. To perform verification or identification of a test signature, several steps must be performed. The overall process is outlined below:

We have divided the problem into a number of phases:

- Input signature
- Pre-processing
- Feature extraction
- Training
- Testing

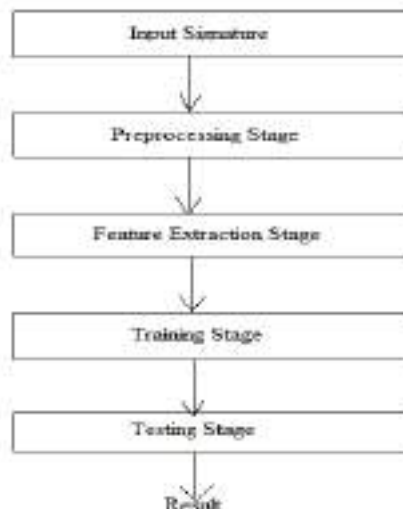


Fig. 1 Block Diagram of the Proposed System

A. Input Signature

The signatures to be processed by the system should be in the digital image format. The data for the offline signature verification system acquire from various ways like by optical pad, scanner etc. The signature samples are scanned and then scanned images are stored digitally. After which the scanned signature is immediately sent to the preprocessing stage, which make it suitable for feature extraction phase. The features thus extracted are stored in the database for further matching or verification.

B. Pre-processing

The pre-processing step is applied in both, the training and testing phase. It is used to improve the quality of the image. Signatures are basically scanned in gray scale image. Pre-processing stage makes the signature standard and suitable for the next step i.e feature extraction. The pre-processing stage includes:

1. *Converting image to binary:* A gray scale signature image is converted to binary to make feature extraction simpler.
2. *Noise Removal:* It removes the noise from the input image i.e. spurious pixels that are not the part of the signature and are attached during scanning time.
3. *Image resizing:* The signatures obtained from the signatory are in different sizes, so, to bring them to a standard size, resizing is performed, which will bring the signatures to the standard size of 256*256.
4. *Bounding Box:* In the signature image, a rectangle is constructed which encompasses the signature. This reduces the area of the signature to be used for further processing and saves time for feature extraction.

5. *Thinning*: It makes the extracted features invariant to the image characteristics like quality of pen and paper. Thinning means reducing binary objects or shapes to strokes that are single pixel wide.

C. Feature Extraction

There should be some measurement on which we can compare two signatures. In this step, features of image are extracted which can be used as comparison measurements to differentiate signatures. Features are basically the characteristics of an image that can be measured using some algorithm. The more the features matched, the more the signature is considered to be authentic.

1. *Types of Features*: Basically, two types of features can be extracted from the image:

- a) Global features
- b) Local features

Global features are extracted from the whole signature image, while local features are extracted from a portion or a limited area of the signature image called as signature grids. Moreover, each grid can be used to extract the same ranges of global features.

Characteristics of global Features are:

- Require less computation and can be extracted easily.
 - More tolerant to variation and noise as compared to local features.
 - Global features only deliver limited information but the local features provide rich descriptions of writing shapes and are powerful for discriminating signers.
2. *Popular global features*: There are large number of global features, some of them are:
 - a) *Height*: It is the distance between two points in the vertical projection and must contain more than 3 pixels of the binary image.
 - b) *Width*: It is the distance between two points in the horizontal projection and must contain more than 3 pixels of the image.
 - c) *Maximum horizontal and vertical histogram*: Horizontal histogram is calculated by going through each row of the signature image and counting number of black pixels. A row with maximum number of black pixels is recorded as maximum horizontal histogram. Similarly, a vertical histogram is calculated by going through each column of the signature image and finding a column with maximum number of black pixels.
 - d) *Normalized area of signature*: It is the ratio of area of signature image to the area of signature enclosed in bounding box. Area of a signature is the number of pixels comprising it.

Normalized Area=Signature Area/(Area enclosed in a bounding box).

- e) *Aspect Ratio*: This is calculated because width or height of person's signature may vary but their ratio remains approximately equal.

Aspect Ratio=Width of signature in a bounding box/Height of signature in a bounding box.

- f) *Area of black pixels*: Area of black pixels is obtained by counting the number of black pixels in the binary, thinned and HPR signature images, separately.
- g) *Centroid*: The centroid calculates the center of the signature.

After obtaining these global features, we combine these features sets into a feature vector which is then normalized. After normalizing a feature vector it is fed to the trained system where the classifier uses it for generating matching scores and classify a signature as a genuine or forged.

D. Training and Testing

The last phase consists of two parts, training and testing respectively.

1. *Training:* In this stage, the signature database is created by collecting signatures from the individuals. This collection involves both forgeries and original signatures. From these signatures, feature vectors are generated which acts as a template for the verification stage.
2. *Testing:* Testing can be done in two different ways as described below:
 - a) *Verification:* In this, the system authenticates the individuals by comparing their signatures with the features stored in the database as templates and gives the decision about whether the signature is genuine or forgery.
 - b) *Recognition:* It is the process of finding the identification of the signature owner. In this, we present the scanned signature image to the system and the system will provide us the identity of the owner of that signature by matching it with the database.

IV. PERFORMANCE ISSUES

Signature verification systems are becoming more and more complex day by day. Thus, to achieve practical success, various performance issues need to be addressed. Some of them are described below:

A. Management of input data

The handwritten original signatures of the user are scanned and stored on disk. There are two options for managing the size of database: First, is to store scanned image in database itself and Second, is to store path of the scanned images in the database along with some identification number for reference. The image size and format should be similar for every input image. In most of the observed systems the acquisition phase is usually not a part of the system diagrams or description though it is necessary to mention how database of images is to be maintained. There are several other important factors like resolution, color depth or information on image size and format but these are rarely mentioned in the most papers. Various problems are also associated with scanning e.g. we might get less critical information due to some technical problem.

B. Preprocessing

Some of the preprocessing steps used for making standard input for feature extraction phase, like noise filtering, rotation normalization, position normalization may induce minimal information loss, while others, like binarization, morphological closing or size normalization can cause the loss of valuable information.

C. Feature Extraction

Most of the existing statistical and distance based classifiers deals with geometric and structural features of the signatures and they do not consider scale, rotation, transformation and affine variation. However, the signatures of one person can vary considerably due to

different task domains and operational conditions. So, an alternative approach is needed which can more easily be optimized w.r.t. a particular set of individual signatures.

D. Appropriate Evaluation of System

Due to lack of availability of a generally accessible, large scale and objective database of sample signatures, a problem in the evaluation of automatic signature verification systems may occur. Reported trials are generally based on small numbers of samples, or are conducted essentially under laboratory conditions, often with questionable validity. Hence, there should be appropriate system evaluation.

E. Maintainability and Compatibility

The system should be easy to be maintained. Any changes in hardware and software should be acceptable by signature verification system. The system must be compatible with all the operating systems and the underlying database.

F. Results

The effectiveness of a system is most commonly described with its “false rejection rate” (FRR, Type I error), its “false acceptance rate” (FAR, Type II error or false match rate), and the “equal error rate.” (EER). Authors sometimes refer to the “average error rate” (AER), which has no clear meaning. In some cases it is used as a synonym for EER, in other cases it is simply calculated as an average of FAR and FRR (which can be a good approximation for EER). There are also papers, where AER is used to describe really the average of some error measures.

G. Threshold Selection

The choice of threshold defines the limits of acceptability required for a sample to be considered genuine and will be very important in establishing the nature of the trade-off which can be achieved between the practical requirement to keep the no. of false rejections encountered as low as possible while simultaneously maintaining as high a degree of robustness as possible in relation to attempted forgery compromise. Thus, the threshold value should be chosen appropriately.

V. CONCLUSION

This paper presented an overview and various techniques used for Offline Signature Verification System that effectively serve to distinguish signatures of different persons. The methodology used to verify signatures and major key issues related to the performance of the system due to its complexity are also highlighted in this paper.

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INDIA-SINGAPORE RELATIONS SINCE 1990s

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ABSTRACT

Relations between India and Singapore became warmer in early 1990s. India's 'look East policy' coincided with Singapore's desire to balance its engagement with China, by helping to bring India into Southeast Asia closer. Singapore now is the second largest source of FDI into India. On the education front, greater interaction between students is being facilitated by the Asian Business Fellowship for India. The ethnic Indians constitute about 9.2 % of the total population of 5.1 million, including permanent residents. Tamil is one of the four official languages of Singapore. On economic front the two countries will work towards doubling the annual bilateral trade by 2015.

Kew Words: Look East Policy, Cold War, Trade, FDI, USSR

With the end of the Cold War and the subsequent collapse of the USSR in 1991, bilateral ties between India and Singapore became warmer in early 1990s. India's 'look East policy' coincided with Singapore's desire to balance its engagement with China, by helping to bring India into Southeast Asia. In 1994, Singapore's PM Goh Chok Tong launched the aptly named "India Fever" and his visit to India in 1994 as the chief guest of our Republic Day celebrations marked the beginning of this ongoing era of warmer relations. A reciprocal visit by PM Shri Narasimha Rao took place in September 1994. Memorandum of Understanding on Foreign Office Consultations was signed in 1994 and there have been regular foreign office consultations since 1999. Singapore helped India to upgrade its partial dialogue with ASEAN into a full dialogue in 1995, to join the ASEAN Regional Forum in 1996, and later to join in the ASEAN plus 3 processes. Singapore has always been an ardent advocate of India's greater geo-strategic presence in the ASEAN region and supporter of India's permanent membership of the UN Security Council. India also fully appreciates Singapore's help in such matters, as PM Vajpayee himself stated in his speech during his visit to Singapore in April 2002. During same visit a Joint Study Group to discuss Comprehensive Economic Cooperation Agreement was set up. Singapore President S. R. Nathan visited India in January 2003. His visit culminated into signing of Defence cooperation agreement and a MoU concerning a Third country training program. Goh Chok Tong was awarded the Jawahar Lal Nehru Award for International Understanding in 2004. Based on the recommendations of India-Singapore Joint Study Group, which was set up in 2002, the Comprehensive Economic Cooperation Agreement was signed in June 2005 during the visit of PM Lee Hsien Loong to India. CECA came into force in June 2005 after 13 rounds of negotiations spanning two years (May 2003-June 2005). The CECA prescribes immediate tariff elimination for 506 goods under the Early Harvest Programme (EHP) and phased tariff elimination for more than 4500 items between 2005 and 2009. An India-Singapore Parliamentary Forum was set up in June 2005 under the Federation of Indian Chambers of Commerce and Industry (FICCI). Singapore-India

Partnership Foundation has also been set up with the support from the Confederation of Indian Industry (CII) and the Singapore Business Federation to promote commercial and economic exchanges. The Prime Minister of India, Dr. Manmohan Singh, visited Singapore in November 2007 to attend 6th India-ASEAN Summit and East Asia Summit. In his speech on the occasion Prime Minister thanked warm welcome, the friendly atmosphere and generous hospitality. He said that he is very happy to be here in Singapore, a country that epitomizes the qualities of courage, strength and excellence. “India Show” was organized in Singapore on January 14-16, 2011. ‘India Show’ is an initiative of the Ministry of Commerce & Industry, Government of India to promote “Brand India” and the Indian industry in potential markets for Indian products, technologies and services. More than 90 companies have participated in the Show notable among them being Tata Group, ISRO, EXIM Bank, Amul, TVS Logistics, Sula Vineyards, Usha International, Emaar-MGF Land, Mahindra World City and Tea Board. Tata Nano car has been exhibited in Singapore for the first time. The India Show” from 14-16 January 2011 is being organized jointly by the Ministry of Commerce and Industry and Confederation of Indian Industry. Prior to the inauguration, Shri Sharma met Mr. Lim Hng Kiang, Minister for Trade & Industry, Singapore to discuss bilateral issues including India-Singapore CECA. Both sides are currently undertaking a Review of CECA which is likely to be concluded in 2011. Shri Sharma held a luncheon meeting with Mr. George Yeo, Foreign Affairs Minister of Singapore and discussed a varied range of matters. They particularly deliberated upon the future regional integration initiatives with ASEAN such as the ASEAN+6 architecture which envisage Comprehensive Economic Partnership in East Asia (CEPEA). Noting that Singapore now is the second largest source of FDI into India, Shri Sharma recounted the enormous opportunities the Indian infrastructure sector provides for Singaporean funds and encouraged Singapore to invest in India especially in the iconic Mumbai Delhi Industrial Corridor (DMIC) A look at the agreement signed between India and Singapore reveal progress in their bilateral relations.

Bilateral Agreements signed between India and Singapore:

Bilateral Air Service Agreement	1968
MOU on Foreign Office Consultations	1994
Double Taxation Avoidance Agreement (DATT)	1994
Executive Programme on Cooperation in the Arts, Heritage, Archives and the Library Memorandum of Understanding on Telecommunications	2000
Defence Cooperation Agreement	2002
Memorandum of Understanding Concerning a Third Country Training Programme	2003
Comprehensive Economic Cooperation Agreement	2005
• Free Trade Agreement, in goods and services, and investment;	
• A bilateral agreement on investment promotion, protection, and cooperation;	
• An improved Double Taxation Avoidance Agreement;	

- A more liberal Air Services Agreement, and Open Skies for Charter Flights; and
- A work programme of cooperation in a number of areas including health care, education, media, tourism, and the creation of an India-Singapore Fund, with a target of US\$1 billion.

Protocol amending agreement on avoidance of double taxation and prevention of fiscal evasion 2005

Agreement on Mutual Legal Assistance in Criminal Matters 2005

Memorandum of Understanding for Army-to-Army Exercises 2005

On the education front, greater interaction between students is being facilitated by the Asian Business Fellowship for India. The Fellowship sponsors Singaporeans for market immersion programmes such as internships in Indian companies as well as full-time postgraduate and executive programmes at top Indian institutions, such as the Indian Institutes of Management (IIM).

IIM Bangalore has started to offer management education in Singapore, operating out of Bhavan's Indian International School. The National University of Singapore and the Indian Institute of Technology Bombay (IITB) signed an MOU on 29 March 2005 to establish a joint graduate engineering degree programme for training human resource relevant to a number of industrial sectors in both countries. Singapore is playing the role of a catalyst and facilitator in setting up an Asian consortium for the revival of Nalanda, the ancient Buddhist seat of learning into a Centre for Buddhist and Secular Learning.

The ethnic Indians constitute about 9.2 % of the total population of 5.1 million, including permanent residents. Tamil is one of the four official languages of Singapore. The growth of the community has also led to the establishment of educational institutions including the Global Indian International School, Delhi Public School, National Public School, Yuvah Bharati International School, DAV School and S.P. Jain Centre of Management. Given the large and diverse Indian community in Singapore, cultural activities receive considerable support from the Singapore Government and community organizations. A number of cultural societies (i.e., Temple of Fine Arts, Singapore Indian Fine Arts Society, Nrityalaya, Kalamandir), promote Indian classical dance and arts. The local ethos is supportive of its constituent communities expressing their cultural creativity and Deepawali is regarded as the premier Indian cultural celebration, on par with Chinese New Year and the Malay Hari Raya. Showcasing Indian culture and cuisine, an 'India Evening' was hosted in "Indian Show" in Singapore from January 14-16, 2011. The Evening included a performance conceived and choreographed by world renowned Indian artist, Ms Shovana Narayan. On this occasion, Indian and foreign dignitaries and guests had the opportunity to taste an exquisite selection of Indian wines and special Indian cuisine prepared by Chefs flown from the Taj Group in India.

Defence relations between Singapore and India, including visits by defence officials and training at each others' defence academies, have been going on for a long time. However, intense bilateral defence cooperation has developed only after 1993. The evolution of the relationship consists of two phases. The first phase from 1993 to 2003 had two main dimensions. First, security cooperation mainly involved exchanges between the Republic of Singapore navy [RSN] and the Indian navy [IN]. This included the *Lion King* series of naval

exercises, which started in 1993. Since 1999, the exercise has been renamed Exercise SIMBEX (Singapore-India Maritime Bilateral Exercise). Over the years, however, the exercise has increased in duration and complexity. The 1998 exercises lasted twelve days and involved RSN anti-submarine patrol vessels for the first time. These exercises, enabled the RSN to expand its access to Indian naval facilities, from Port Blair in the Andaman Islands in 1993 to India's southern naval command headquarters at Cochin, the only foreign country to do so. Singapore was also allowed access to India's missile range at Chandipur, Orissa, for testing its missiles. Naval cooperation was further boosted during the American invasion of Iraq. From April to September 2002, Singapore granted Indian patrol craft access to Sembawang port for escorting 24 American merchant ships through the Strait of Malacca. The first phase of defence cooperation also included high-profile visits between the two countries. The RSN chief Richard Lim was the first foreign military leader to visit New Delhi's after the 1998 nuclear tests. The Indian defence minister George Fernandes and the Indian chief of army staff Nirmal Chander Vij also visited Singapore in 2002 and 2003 respectively. Though limited in scope, these interactions were instrumental in building confidence and enhancing trust between the two states, which had been harmed during the Cold War. The interactions laid the foundation for the development of the close defence ties during the second phase. The second phase of Singapore-India defence relations was inaugurated in October 2003 when the defence ministers of the two countries, Teo Chee Hean and George Fernandes, signed a Defence Cooperation Agreement (DCA), establishing the exchange of intelligence and of a Defence Policy Dialogue (DPD) between the defence ministries. The DPD provided a forum to oversee and drive the bilateral defence relationship. This phase of bilateral relations was also characterised by two key elements. First, was the deepening of existing naval ties. In contrast to previous years when exercises were held in Indian waters, SIMBEX 2005 had RSN and IN forces training in the South China Sea for the first time. Standard Operating Procedures was signed during SIMBEX 2006 "to be used as a guide for all future exercises between the two navies." During SIMBEX 07, held from 23 to 28 March 2007 in the South China Sea, the RSN deployed two missile corvettes, a missile gunboat, an anti-submarine patrol vessel and a submarine. The IN was supported by two destroyers and a corvette. Defence relations between Singapore and India since 2003 have broadened in scope to include regular dialogue and exercises involving their armies and air forces. On 22 March 2004, the inaugural Singapore-India DPD between the two defence secretaries provided "a regular forum to discuss defence cooperation and regional defence and security issues." This was followed by the signing of the Treaty on Mutual Legal Assistance in June 2005, in which each state pledged to curb funding for terrorist organisations. During the fourth DPD in October 2007, Singapore and India signed a long-term, joint training and exercises agreement for the two air forces. This arrangement will allow the RSAF to keep some of its military equipment in India on a permanent basis. This was because "Singapore simply does not have the space for its armed forces to engage in large-scale exercises. Though its armed forces have been coming here for exercises under a 2003 defence cooperation pact, this will be the first time such a detailed long-term agreement has been signed". As per this agreement, the RSAF will be permitted to train at the Indian Air Force base at Kalaikunda, West Bengal "at notified times". For the RSAF, the Kalaikunda Air Force Base was ideal as it has ground firing and aerial combat range, facilities for electronic warfare training and is also where the IAF conducts its '*Lakshya*' aerial combat training for unmanned aerial vehicles. The SINDE

series of exercises between the Singapore and Indian air forces were held for the first time at Gwalior Air Force Station, in 2004 and at the Kalaikunda air force station in eastern India in 2006. The Singapore army also started training with its Indian counterparts in 2005, after Singapore army chief, Desmond Kwek, signed an MOU with Alok Prasad the Indian high commissioner to Singapore. The ‘Pouncing Tiger’ series of armour exercises were held at the Babina field firing range while the ‘Agni Warrior’ artillery exercises were conducted at the Deolali Firing Range. From October 15 to November 6, 2007, the fourth joint artillery exercise was conducted to “understand each other’s doctrine and tactics as well as enhance mutual understanding and interoperability”. The exercise was observed by Singapore’s defence minister, Teo Chee Hean, who was on his third visit to India following his earlier visits in October 2003 and 2005. This expansion of defence exchanges between the two countries not only indicates the likelihood of the SAF gaining access to Indian training grounds on a more permanent basis, but could also lead to closer security cooperation in the long term.

On economic front Singapore performed its best increasing its annual exports to India from US\$ 756 million in 1985-91 to India to US\$ 1699 million in 1992-98. India’s bilateral trade with Singapore went up from US\$ 2.2 billion in 2001 to US\$ 8.7 billion in 2006, registering almost 400 per cent growth in the five-year period, while India’s exports to Singapore rose from US\$ 972 million in 2001 to US\$ 5.42 billion in 2006. India’s bilateral trade with Singapore comprised in 2005, almost 38 per cent of its total trade with the ASEAN region and roughly 3.4 per cent of its world trade. Bilateral trade between Singapore and India grew by 31 per cent in 2006-07 to US\$ 11.49 billion from US\$ 9 billion in 2005-06. With booming trade between the two countries, Indian firms have started looking at the Singapore Stock Exchange for fund raising and listing. The SGX became a shareholder in the Bombay Stock Exchange in March 2007. In 2007-08 India-Singapore trade was US\$ 15.5 billion registering a growth of 34%. The total bilateral trade during 2008-09 was US\$ 16.1 billion, an increase of 3.86 per cent over US\$ 15.5 billion in 2007-08, according to data released by the Ministry of Commerce and Industry. However in 2009-10 total bilateral trade between India and Singapore was US \$ 14.04 billion with a negative growth rate of -12.75% according to data released by Ministry of Commerce and Industry as evident from Table 1

Table - 1
India- Singapore Bilateral Trade

Value US \$ Million

YEAR	2005-06	2006-07	2007-08	2008-09	2009-10
EXPORT	5,425.29	6,053.84	7,379.20	8,444.93	7,592.17
% growth		11.59	21.89	14.44	-10.10
IMPORT	3,353.77	5,484.32	8,122.63	7,654.86	6,454.57
%growth		63.53	48.11	-5.76	-15.68
TOTAL TRADE	8,779.06	11,538.15	15,501.83	16,099.79	14,046.74
%growth		31.43	34.35	3.86	-12.75

Source: Ministry of Commerce, Government of India

Table - 2
Top 10 Items of Exports from India to Singapore:

Value in US\$ million			
Sr. No.	Commodity	2008-09	2009-10
1.	Mineral fuels, Mineral Oils	3,762.72	2,840.88
2.	Organic Chemicals	153.22	163.05
3.	Natural or Colored Pearls	562.24	597.36
4.	Metals (like Iron & Steel, Copper, Nickel, Aluminium	507.01	305.4
5.	Nuclear Reactors and Boilers	470.03	466.72
6.	Electrical Machines and Equipment	508.43	385.22
7.	Vehicles parts thereof	104.58	92.5
8.	Aircraft, Spacecraft and parts thereof.	199.41	139.35
9.	Ships, boats and floating structures.	1,182.63	985.22
10.	Optical & Photographic Equipment & Medical or Surgical instruments	110.3	97.25

Source: Ministry of Commerce, Government of India

Table - 3
Top 10 Items of Imports by India from Singapore:

Value in US\$ million			
Sr. No.	Commodity	2008-09	2009-10
1.	Mineral fuels, Mineral oils and products.	2,175.03	1,495.14
2.	Organic Chemicals	671.14	681.6
3.	Plastic and Articles thereof.	213.35	243.18
4.	Natural or Cultures Pearls and precious or semiprecious Stones	102.03	106.86
5.	Iron and Steel.	89.31	71.22
6.	Nuclear Reactors, Boilers, Machinery and Mechanical Appliances and parts thereof.	1,176.24	1,109.51
7.	Electrical Machinery and Equipment and parts thereof.	1,398.46	1,152.85
8.	Aircraft, Spacecraft and parts thereof.	153.41	72.47
9.	Ships, boats and floating structures	750.51	760.73
10.	Optical, Photographic instruments, medical or surgical instruments	292.74	263.13

Source: Ministry of Commerce, Government of India

According to a press release issued by the Ministry of Commerce and Industry, in May 2010, Mr. Anand Sharma, the Union Minister of Commerce and Mr. Lim Hng Kiang, Minister for Trade and Industry, Singapore, agreed on a bilateral economic roadmap to take the India-Singapore Comprehensive Economic Cooperation Agreement (CECA) forward in the coming five years. As per the roadmap the two countries will work towards doubling the annual bilateral trade by 2015. Moreover, they will promote greater business and investment flows by identifying ways in which Indian businesses can leverage on Singapore as a business hub in the Asia Pacific to support their international expansion.

India-Singapore Bilateral Economic Roadmap includes:

- Increase two-way flow of tourists, businessmen and professionals
- Expedite conclusion of mutual recognition agreements (MRAs) for dentistry, medical, nursing, architecture, accountancy and company secretary professionals on priority
- Explore expansion of the provisions of CECA to liberalise and facilitate movement of Indian professionals to Singapore.
- Develop closer co-operation in tourism

Moreover, according to Standard Chartered Bank, the business between India and Singapore is set to double in the next five years. The number of Singapore-based companies setting up operations in India, 350 at present, is expected to double in the next five years. Similarly, India-based business community in Singapore is likely to increase to 5,500 companies from the present 4,000 in the next two and a half years

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CAUSES OF POLITICAL VIOLENCE AND ITS PEACEFUL ALTERNATIVES

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ABSTRACT

Violence is fast emerging as a global phenomenon, Viewed in broad spectrum, violence encompasses anything that disrupts peaceful existence of any living being of universe. Existence of a society in complete absence of violence in absolute terms is theoretically beyond imagination. Political violence in the most of the modern societies is the result of conflicts and tensions, which develop in them due to different reasons. Normally political violence is directed against the state, because the state is considered as the chief source of injustice and repression violence is purposeful political action to register protests of certain sections of society, against wrong policies of the government. The form of this article is on the genesis, causes and manifestations of violence such as terrorism, insurgency, naxal, violence and criminal-politician nexus. If they are not addressed properly they may lead to total annihilation. What is required is a peaceful paradigm, non-violent alternatives to resolve conflict from all will benefit.

Key Words: Political Violence, Inequality, Criminalization, Ethical Value, Peace, Terrorism.

Political violence in most of the modern societies develops due to different reasons. People follow violent methods because the state has failed to secure regular obedience from them. Political violence finds manifestation in ongoing wars, violent agitations, recurring incidents of terrorism, hijacking of aeroplanes, bombblasts, killing of innocent humans and wrecking building etc. Political violence occurs within national boundaries and in certain cases it can transcend the national barriers assume regional character thereby having international implication as well. Increasing use of agitational method in multiple forms such as:- gheraos, dharna, fasts, strike, lock-outs, bandhs, self-immolation, relay strikes and demonstration etc have emerged as one of the curious phenomena of post Gandhian politics in India Destruction of public property, right from torching vehicles to burning of buildings is a mindless act of nobody's benefit. But no violence is deemed complete without them. Most of these acts are politically motivated and in order to achieve those objectives, they resort to violence as a pressure tactic. H.D. Graham and T.R. Gurr "Violence as behaviour designed to inflict physical injury to people or damage to property."²

Root cause of the violence is also examined in various theories such as, Biological, theory, psychological theory, Marxian theory, structural theory and conflict theory. Dollard asserted that violence results inclusively from frustration. Panes Board is in his 'Electric model of violence' believed that violence occurred due to gap between human needs and its gratification.³ Sigmund Freud equated it with frustration of a basic libidinal impulse. Eric From termed violence as "Nacrophilia" or 'love of death'.⁴ Gandhi holds that "Violence

dehumanizes those who depend on it. The violent believes, the world is at war with him and he has to live in perpetual fear of the world.⁵

In 19th Century, Marx, Simmel and Weber analyzed elements of inequality, resulting in violence, power and domination which create conflict resulting in violence. When a system facilitates discrimination, deprivation and exploitation in terms of unequal access to resource opportunities and livelihood against decent living condition, It is violence inherent in structure. Political violence against the state is essentially an expression of denial of the legitimacy of the state either, in itself or in its working.

The most serious danger to democratic functioning in India, in the present context of sporadic activity of localized agitations engineered by the politics of violence is the perpetuation of political parties. There is a growing feeling of suspicion and distrust against persons in power who are thought to be unresponsive with corruption, nepotism, bribery, inefficiency and in competence. This mass discontent has been thoroughly exploited and politicized by the political parties.⁶

Inequalities in society, rise of rich peasantry, rising prices, food shortages, industrial stagnation, massive unemployment etc. provoked wider spread protests and agitations. Evidence of this disquiet was manifest in peasant movements against oppression by landlords, naxalbari uprising in west Bengal, Andhra Pradesh, Tamil Nadu, Kerala and Bihar, insurgency in North-East. All these movements were checked through the deployment of the coercive apparatus of the state. The Major cause of the crisis was a change in the nature of the state from being an instrument of 'liberation of the masses' to a source of oppression that resulted in the erosion of the institution of state.

Another cause of political violence in India is the process of criminalization in everyday life. Emergence and consequential rapid proliferation of 'Mafia culture' has played a pivotal role in spreading the cut of violence. There are contractor mafia, land mafia, cooperative mafia and even education mafia,⁷ particular in Bihar and Uttar Pradesh where they have established power full basis and the local police are hand in glove with them. Criminalization of politics takes place when the political elite resort to criminal and illegal ways, overtly or covertly to realize political objectives. The electoral process is fast becoming dependent on illegal means.

Criminalization of politicians has perpetually resulted in politicization of criminals. Politicians make use if criminals during elections for intimidating some segments of voters, booth capturing and other purposes. Because of their proximity to the politicians, the criminals also get an opportunity to taste the fruits of politics and in the process they tend to become politicians. The criminals contest elections to parliament, state assemblies and corporations. The legislature with criminal records has become a commodity for sale and purchase. The capitulation of politicians to mafia and gangsters, especially during pre-pole periods, is an example of the impact of muscle power in politics. There have been instances of flexing of muscles by elected representatives within the precincts of the legislatures and their irritable behaviour in the recent past has deteriorated the atmosphere further.⁸

Another cause of political violence is the devaluation of ethical values in personal and social life which has tarnished the image of Indian polity. The very quest of materialistic and elegant life style paved the way for expanding function of State and curtailing freedom of the individual and deforming the process of proper self development of man who simply became an externalized creature.⁹ The post-1990s period witnessed the emergence of career

politicians. Looking politics as a mere profession. There is a gap between popular expectations and the performance of parties. Parties are unable to reform themselves. They are insensitive and unresponsive. In this moment of crisis, there is an alternative model which can minimize political violence.

There exist different forms of political violence, which people use to show their resentment and dissatisfaction against the government. For the past four decades India has witnessed the ugly form of political violence such as: terrorism, insurgency and naxal violence.

Certainly, these are some indigence terrorist organizations, which have been functioning in India but the majority of terrorist activities carried out on the Indian Soil are either planned or supported by hostile neighbours. If Pakistan have been supporting terrorism in Punjab and Jammu & Kashmir, China and Bangladesh have been doing so in the north eastern India. Assassination of Mahatma Gandhi, Mrs. Indra Gandhi, Rajiv Gandhi, hijacking of the Indian plane to Afghanistan, attack on Taj Hotel Mumbai are some of the terrorist actions which attest to the fact that terrorism has become a menace¹⁰ According to Indian Home Ministry's annual Reports for 1990s, in the year 1990 a total of 4158 terrorist violence related incidents occurred in Jammu and Kashmir in which 461 civilians and 155 security personal were killed and the number of terrorists killed was 550.

After terrorism, it is the rampant spurt in naxal violence that poses a serious threat to India's security. Andhra Pradesh, Bihar, Maharashtra, Orissa, Madhya Pradesh, Chhattisgarh, Jharkhand, West Bengal and Uttar Pradesh are the victim states affected with nexalite violence. The communist party, Marxist-Leninist-peoples war Group (CPML-PW) and the Maoist Communist centre of India (MCCI) have spearheaded the naxal violence in the country, according to country wide violence and the resultant deaths. Both these groups have been trying to increase their influence and operations in some parts of Tamil Nadu, Karnataka and Kerala and also in some new areas and in some of the already affected states. According to Government of India, there were 1597 naxal violent incidents claiming a death toll of 515 in 2003 where as in 2004, the number of naxal violent incidents reached to 1533 having a death till of 566. Between January and March 2005, there were 195 violent incidents in which 48 persons lost their lives.¹¹

All terrorist acts are crimes and usually directed against the civilian targets. The motives of most terrorists are political and terrorist actions are generally carried out in the way that will achieve maximum publicity. The best solution of problem of political violence is non-violent method.

As it is evident from the causes of political violence, dissatisfaction and relative deprivation of the people are the major cause of political violence. The more intense the deprivation the greater is the degree of violence. Firstly there is discontent among the people, and then there is politicization of discontent and finally actualization in violent action. Since people have to resist the authority. Resistance is a natural behaviour of any creature against any undesirable abnormal situation. It could be violent or peaceful. The state's repressive forces, often suppress violent resistance. For Gandhi peaceful resistance is one of the most powerful contribution to humanity to fight against injustice, exploitation and violence. Every human should owe it, as a duty to refuse to do anything, out of fear and therefore, when anyone holds out threat in order to force him to do something wrong, he has a right to resist.¹² While advising the people not to merely run after rights, he said. "He who runs after right does not

secure them...His rights is illusory. When you do your duty the rights will drop in your lap.¹³ Gandhi's emphasis on correlations of rights and duties and his statement that duties have precedence over rights can be interpreted in a variety of ways.

Another alternative is that religion as a 'Personal matter' Gandhi had stated "The state would look after your secular welfare, health, communications, foreign affairs, currency and so on, but not your or my religion. That is everybody's personal concern."¹⁴ Religious freedom and protection for minorities remained uppermost in Gandhi's mind.

As an alternate of political violence, active participation in politics is necessary for a citizen to escape politics from criminal. The politics being the central ground of action in the modern age, one could render service to other human beings by playing one's role in politics. As Gandhi stated: "I could not be leading a religious life unless a religious life unless I identified myself the whole of mankind and that I could not do unless I took part in politics."¹⁵ He felt compelled to come into politics because "I found that I could not do even social work without touching politics."¹⁶

Violence was contrary to Gandhi's creed and he would be prepared to suspend any action that led to an upsurge of mass violence. He did in 1922 call off the non-cooperation movement when it took an ugly turn in chaura-chauri and when he saw such a danger. He did again in 1931-32 call off his civil disobedience.

Thus Gandhi practiced non-violence methods in his lifetime and he wanted that Indians must revolutionize the world outlook upon peace. The world community has also recognized the importance of the peaceful method and culture of peace. United Nations has already declared (2000-10) as the 'International decade for Culture of peace and non-violence for the children of the world' and October 2 will be observed as 'Day of non-Violence.' This powerful but difficult method to practice is being increasingly considered as the only alternative method for creating a human and peaceful society.

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SAUSSURE AND STRUCTURAL LINGUISTICS

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ABSTRACT

Ferdinand de Saussure is the originator of the 20th century reappearance of structuralism, specifically in his lectures later in 1916 published as a book by his students, Course in General Linguistics, where he focused not on the use of language (parole, or talk), but rather on the underlying system of language (langue) and called his theory semiotics. This approach focused on examining how the elements of language related to each other in the present, that is, 'synchronically' rather than 'diachronically'. Further, he argued that linguistic signs were composed of two parts, a signifier (the sound pattern of a word, either in mental projection - as when we silently recite lines from a poem to ourselves - or in actual, physical realization as part of a speech act) and a signified (the concept or meaning of the word). The present paper discusses the contribution of Saussure and search for the significance of his pioneer work.

Key Words: Structural Linguistics, Structuralism, Semiotics, Sign System.

Saussure's Course influenced many linguists in the period between WWI and WWII. In America, for instance, Leonard Bloomfield developed his own version of structural linguistics, as did Louis Hjelmslev in Scandinavia. In France Antoine Meillet and Émile Benveniste would continue Saussure's program. Most importantly, however, members of the Prague School of linguistics such as Roman Jakobson and Nikolai Trubetzkoy conducted research that would be greatly influential.

The clearest and most important example of Prague School structuralism lies in phonemics. Rather than simply compile a list of which sounds occur in a language, the Prague School sought to examine how they were related. They determined that the inventory of sounds in a language could be analyzed in terms of a series of contrasts. Thus in English the words 'pat' and 'bat' are different because the /p/ and /b/ sounds contrast. The difference between them is that the vocal chords vibrate while saying a /b/ while they do not when saying a /p/. Thus in English there is a contrast between voiced and non-voiced consonants. Analyzing sounds in terms of contrastive features also opens up comparative scope - it makes clear, for instance, that the difficulty Japanese speakers have differentiating between /r/ and /l/ in English is due to the fact that these two sounds are not contrastive in Japanese. While this approach is now standard in linguistics, it was revolutionary at the time. Phonology would become the paradigmatic basis for structuralism in a number of different forms.

Saussure's Structural Linguistics

The French linguist Ferdinand de Saussure studied language from a formal and theoretical point of view, i.e. as a system of signs which could be described synchronically (as a static set of relationships independent of any changes that take place over time) rather than diachronically (as a dynamic system which changes over time).

According to Saussure, the basic unit of language is a sign. A sign is composed of signifier (a sound-image, or its graphic equivalent) and a signified (the concept or meaning). So, for example, a word composed of the letters p-e-a-r functions as a signifier by producing in the mind of English-speakers the concept (signified) of a certain kind of rosaceous fruit that grows on trees, viz., a pear.

According to Saussure, the relation between a signifier and a signified is arbitrary in at least two ways. First, there is no absolute reason why these particular graphic marks (p-e-a-r) should signify the concept pear. There is no natural connection or resemblance between the signifier and the signified (as there would be in what Saussure calls a symbol, i.e. an iconic representation such as a descriptive drawing of a pear). After all, it's not as if the word "pear" looks or sounds anything like a pear! In fact, a moment's reflection makes it clear that the connection between the signifier and the signified is due to a contingent historical convention. It didn't have to happen the way it did. In principle, the word "pare", "wint", or even "apple" would have worked just as well in associating a word with the concept pear! But given that the word "pear" has come to signify the concept pear in English, no one has the power to simply change it at will. In other words, the relationship between a word and a concept is arbitrary in one sense (in terms of its origin) but not in another sense (in terms of its use).

Saussure makes a second point about the arbitrariness of the sign. He points out that the relation between the sign itself (signifier/signified pair) and what it refers to (what is called the referent, i.e. the actual piece of fruit-the physical object) is also arbitrary. This claim is less plausible than the former. For example, one might object that the concept in the mind of the speaker is formed, either directly or indirectly, by actual pears. Ideally then we would expect it to be the case that the properties of actual pears would be causally related to our concept of a pear-that the characteristics of pears produce in one's mind the concept of a pear either directly through experience with pears, or indirectly through pictures of pears, descriptions, or some such thing. Thus, the concept pear might be thought of as some basic information and set of beliefs about actual pears, e.g. what they look like, how they feel and taste, what they're good for, etc.

Saussure's way around this obvious objection is to say that his interest is in the structure of language, not the use of language. As a scientist, Saussure limited his investigation to the formal structure of language (*langue*), setting aside or bracketing the way that language is employed in actual speech (*parole*). Hence, the term structuralism. Saussure bracketed out of his investigation any concern with the real, material objects (referents) to which signs are presumably related. This bracketing of the referent is a move that enabled him to study the way a thing (language and meaning) is experienced in the mind. In this sense, his motivation was similar to Husserl's. And in the end, Saussure never offered a method for investigating how language as a system hooks up to the world of objects that lie outside language. As we shall see, this was to have far-reaching effects.

Thus, according to Saussure's structural linguistics, each sign in the system of signs which makes up a language gets its meaning only because of its difference from every other sign. The word "pear" has no meaning in itself or in the intention of the speaker, but only due to the fact that it differs from other possible graphic images such as p-e-e-r, p-e-a-k, f-e-a-r, b-e-a-r, etc. In other words, it doesn't matter how the form of the signifier varies, as long as it is different from all the other signifiers in the system (*langue*). To the structuralist, meaning arises from the functional differences between the elements (signs) within the system (*langue*).

An economic analogy helps to illustrate Saussure's theory of meaning. The signs of a linguistic system are like the coins of a monetary system or currency. Thus, a system of signs (words of a language) is analogous to a system of values.

A quarter has a certain monetary value determined by its exchange value. Quarters can be exchanged for other things because they have a designated (but flexible) value. Quarters can be used to buy goods or commodities. But they also have a fixed value in relation to other coins. So, for example, a quarter is equal to two dimes and a nickel; it is more than a penny; it is less than a dollar, etc., etc.

Linguistic signs also have values in relation to other signs. For example, the word "bachelor" can be "exchanged" for the term "unmarried man". This is, in many ways, an equal exchange. That's what it means for words to be synonymous - they have the same meaning or linguistic value. They can be substituted or exchanged for one another just as the quarter can be exchanged for two dimes and a nickel.

The Significance of Structuralist Theory

The first thing to notice is that, according to structuralist theory, meaning is not a private experience, as Husserl thought, but the product of a shared system of signification. A text is to be understood as a construct to be analyzed and explained scientifically in terms of the deep-structure of the system itself. For many structuralists, this "deep-structure" is universal and innate.

If we consider the application of structuralism to art and extend the monetary analogy, we can think of paintings as comprised of many languages or sets of conventions that play a role in the exchange of signs. For example, the language of western academic painting can be contrasted with the language of African sculpture or Japanese brush painting. Just as one word in the English language is paired with a concept, so a visual image, icon, or symbol is paired with a concept or idea that it is said to "express". Such a study of signs in the most general sense, whether visual or verbal, is called semiotics. In the West, art schools are the institutions that have the function of passing on these visual conventions.

Second we should note that in structuralism, the individual is more a product of the system than a producer of it. Language precedes us. It is the medium of thought and human expression. Thus, it provides us with the structure that we use to conceptualize our own experience.

And third, since language is arbitrary, there is no natural bond between words and things, there can be no privileged connection between language and reality. In this sense, reality is also produced by language. Thus, structuralism can be understood as a form of idealism.

It should be clear from what we've just said that structuralism undermines the claim of empiricism that what is real is what we experience. It can also be seen as an affront to common sense, esp. to the notion that a text has a meaning that is, for all intents and purposes, straightforward. This conflict with common sense, however, can be favorably compared with other historical conflicts (e.g. Copernicus' heliocentric system). In other words, things are not always what they seem. Thus, the idealist claim of structuralism can be understood in the following way: Reality and our conception of it are "discontinuous". This view has important implications, as we shall see below.

According to structuralist theory, a text or utterance has a "meaning", but its meaning is determined not by the psychological state or "intention" of the speaker, but by the deep-structure of the language system in which it occurs. In this way, the subject (individual or

"author") is effectively killed off and replaced by language itself as an autonomous system of rules. Thus, structuralism has been characterized as antihumanistic in its claim that meaning is not identical with the inner psychological experience of the speaker. It removes the human subject from its central position in the production of meaning much as Copernicus removed (de-centered) the Earth from its position at the center of the solar system. And since language pre-exists us, it is not we who speak, as Heidegger was to say, but "language speaks us".

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ROLE OF EFFECTIVE TEACHING IN YOUTH DEVELOPMENT

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ABSTRACT

One may agree with the fact that true education lies not in information but in transformation. Such sort of transformation of young students is only possible through effective teaching. A teacher creates an enlightened atmosphere where the students can materialize full of their potential. It means that merely imparting of information is not knowledge. Knowledge is quality/virtue which must be inculcated among the students. The purpose of present paper is to describe a few ways that a teacher can help youth with their overall development. The paper presents general teaching strategies for helping youth to achieve social competence and to foster social growth in them.

Keywords: Teaching, Communication, Development, Youth, Education.

It is surprising that things learnt in childhood are remembered for ever. But as a man grows old in years, his memory fails him. Students are taught in schools and colleges for so a long time but many fail to recognize the real motive of education. A number of students in schools and colleges do not possess the level of competence in their subjects. Passing on examination, in fact, does not help one to earn a decent living. Learning of facts and getting information from it is not sufficient to survive in present global scenario. According to Plato, a teacher teaches nothing new to the students. A teacher only imparts information to the students which is already in existence. Then the question arises what is the role of a teacher. According to Plato, a teacher creates an enlightened atmosphere where the students can materialize full of their potential. It means that merely imparting of information is not knowledge. Knowledge is quality/virtue which must be inculcated among the students.

The purpose of present paper is to describe a few ways that a teacher can help youth with their overall development. The purpose is to get through to youth, to listen to them, trust them and respect them. The paper presents general teaching strategies for helping youth to achieve social competence and to foster social growth in them.

Social Competence among Youth

Much social understanding and many skills are needed to maintain reciprocal relationships. Those children who have a basic knowledge of the language, norms and customs of their peers are more likely than others to participate competently in their peers' activities. Children's growing capacities for communicating, discussing, co-operating, articulating preferences and empathizing with others play a part in social interaction.

Socially skilled children are able to synchronize themselves with others by establishing common ground, exchanging information and exploring similarities and differences. Young children in schools and colleges display a wide variety of social difficulties that can have an equally wide variety of underlying causes.

Some children lack in achieving enough impulse control for successful negotiation, bargaining and other strategies for resolving conflicts with peers. Some lack knowledge and experience of the give and take of peer interaction. Some may have acquired some beginning social skills, but do not use them with enough confidence to succeed in dynamic interplay with peers. Some remain so dependent on adults that their interaction with playmates is too frequently interrupted by requests for adult assistance. Some may have not yet mastered ways of stating their feelings and desires enough to effectively communicate with peers. Others may have not yet learned how to clearly articulate their reasons for insisting on their preferences and rights.

Classroom Competence

Children who resist or reject classroom norms and procedures do so for various reasons. Uncooperative and disruptive behaviors can be expressions of underlying emotional distress originating outside the classroom. Resistance to classroom procedures may be a manifestation of children's increasing but poorly managed autonomy. In other case, the resistance may be due to the development in appropriateness of the curriculum for the individual. The activities may be too formal, academic, or boring, or they may not be relevant enough to the child's experience. Sometimes either a permissive or an authoritarian classroom ethos may lead to the manifestation of social problems among children whose social functioning in other settings might be quite adequate. Some children create social disturbances because they cannot perform the tasks expected of them, and some cannot attend to the tasks because of their social difficulties. Social difficulties in the class may indicate that some children are too young to spend more than a few hours per day in a group setting or that the number of children with whom they must interact is too great for their stage of social development. However, since participation in a child care group is the best option available to their families, teachers look for ways to minimize the stresses some youngsters feel when surrounded by group of peers for long periods of time.

Some are shy, withdrawn, ignored or isolated. And some behave as though they do not want to interact with their peers and are thus not invited to join the ongoing activities. To support children's social growth, the classroom environment should be characterized by respect for children's feelings. Some children are reluctant to participate in activities like group discussion and other learning activities. I would like to mention here my personal experience of one of my classes. One day after delivering my lecture, I asked my students to prepare the concerned topic for discussion in the next class. The next day no one was interested to take the initiative to start the discussion. The excuse they gave me was that "Sir we cannot speak in English." I asked them to speak in Hindi and the response was tremendous. Every student contributed in the discussion. In this way by respecting their feelings a teacher can involve his students in such kind of learning activities.

In case of reluctant students a teacher can encourage them to take their time and make their own decisions about when they are ready to change their minds. If a teacher attempts to coax, cajole, nag or punish individual students into a desired behaviour, they may feel intimidated or threatened. Validating students' feelings reassures them that they are understood and respected and that help is available when it is needed or desired.

Motivating Children without Putting Others Down

Teachers and parents often try to motivate children by implying that undesirable behaviour mean that they belong elsewhere. In this case, a clear statement or description of the desired behaviour would have been preferable. For example, I observed a teacher chiding a first grader for inappropriate behaviour by saying, “You’re not in Kindergarten now.” A comparative strategy of this kind is risky because it may undermine children’s capacities to respond charitably to less mature children and may encourage them to take comfort from others’ troubles. This strategy may also teach children to become disdainful of their own progress and previous efforts. It is suggested that teachers strive to create a classroom and school/college climate in which children learn to regard younger children in a positive light. In such a climate, children learn to take delight in seeing how far they have progressed and to accept and respect where their younger peers still are.

Arousing Children’s Empathy and Altruism

In some contexts it is appropriate to simulate children’s empathic and altruistic dispositions. Suppose, for example, that a child has been waiting a long time for a turn with a piece of equipment. When the teacher feels that the child who is using the equipment should yield it to the child who is waiting, he can calmly say, “Rahul has been waiting a long time, and you know how it feels to wait.” The second part of the statement is made in straightforward manner that conveys no accusation of meanness or shame or any other negative characteristic. Along the same lines, a strategy that may be particularly important in the case of aggressive children is to help them develop some understanding of the effect of their actions on other children and of others’ feelings in difficult situations.

Need to Inculcate Moral Values among Youth

Decline in moral values is a global phenomenon. To check the slide and reverse it requires global initiatives in which every individual has to play his/her part. In this context a teacher’s role is the most important. A teacher can act as model for his students in this situation. Apart from syllabus/course a teacher can help students imbibe the moral fibre. He can make them understand history, heritage and culture of their country. The minds of young students are just like photographic plates; whatever impressions are left on them would be retained by them. So values like cooperation, courage, devotion, good manners, honesty, justice, kindness, obedience, punctuality, patriotism, brotherhood etc. are to be inculcated in them during their school as well as college days. It becomes the utmost duty of the teachers to inculcate moral values in the young students.

Hence a teacher’s role in the development of the youth becomes paramount in the present scenario. He needs to inculcate/improve the academic and social skills of young students. Like an ideal teacher, he will be one who will leave an indelible mark on the minds of the young children. The time spent alone with the teacher, doing something simple and pleasurable, often reassures individual children that the teacher really cares about them.

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INDIA-EU FOREIGN DIRECT INVESTMENT: PROBLEMS AND PROSPECTS

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ABSTRACT

On a global level, the EU appears as the most important foreign direct investor and it reveals the ability and tendency of their firms to internationalize business activities. In the fast growing markets of India, however, the share of EU firms in total FDI is rather low and not particularly dynamic. Foreign direct investment has become the major pillar of internationalization of economic activities of their firms. Yet it global FDI flows are still much lower than trade flows, FDI can be seen as the main channel of international competition. Firms undertake FDI primarily in order to expand and compete with domestic and other firms in the irrelative markets. Some other factors like perception of country risk found to be decisive factor for FDI in emerging markets. The flow of FDI has been comparatively low in India. India is far back among the developing countries like China, Hong Kong and Singapore. There are various reasons for India lagging behind in attracting FDI. In 2006 the Government of India undertook a comprehensive review of the FDI policy and associated procedures (GOT, 2006). A number of measures have been undertaken to make India a more attractive destination for FDI. Some key measures include allowing FDI in new sectors, dispensing with the need of multiple approvals from Government and/or regulatory agencies that exist in certain sectors, and extending the automatic route to more sectors. Under the automatic route, FDI up to 100 percent is allowed in most sectors' activities. No prior approval from the Government of India or the Reserve Bank of India (RBI) is required for FDI under the automatic route. While the relaxation of these FDI norms may have helped attract greater FDI inflows, prima facie India's inward FDI should be huge or at least much bigger than what it currently receives. India has displayed good performance over the past years in business sophistication, innovation and financial market sophistication. However, areas like infrastructure, primary education, health and the fiscal situation dragged India down. The report also stated that bureaucracy, over-regulation and corruption still affect functioning markets and labour markets in particular. In India, there are various problematic factors for doing business. So there is less inflow of FDI, since these factors discourage foreign investors to invest in Indian business.

Key Words: FDI, GDP, EU, ECSC, RBI, NCRB, MNCs, EPZ, SEZ.

After second world war the whole world was divided into two blocs. One was represented by Soviet Union and another was U.S.A. Soviet Union was our formidable ally and supported us

not only politically also provided economic aid to India. With the disappearing of it we lost a very strong ally and we had to search a new ally. European Union emerged as strong alternate for India.

European Union is one of the most powerful economic and political unions of 28 countries member states of Europe with a combined population of over 500 billion people or 7.3 per cent of the world population. The combined GDP of EU is 17.6 trillion US\$ in 2011 representing nearly 20 per cent of the global GDP when measured in terms of purchasing power parity. The EU traces its origin from the European Coal and Steel Community (ECSC) and the European Economic Community (EEC) formed by six founding members in 1951 and 1958 respectively. After sixty years of its formation, the membership of EU has reached 28 and Croatia became 28th member in July 2013.

With the end of the Cold War India inclined progressively to the EU for trade and investment. Its policy of Liberalization, Privatization and Globalization (LPG) in 1991 was taken positively by the EU also. The policy of LPG with constant high economic growth rate, all led to recognition of India as a potential global player by the EU. A cooperation agreement signed in 1994 took the bilateral relationship beyond trade and economic cooperation. At the 5th India-EU Summit at Hague in 2004, the relationship was upgraded to a 'Strategic Partnership'. The two sides adopted a Joint Action Plan in 2005 which again reviewed in 2008 that provided for strengthening dialogue and consultation mechanisms in the political and economic spheres, enhancing trade and investment.

The EU as a bloc of 28 countries is India's largest trading partner and one of the largest sources of FDI for India. India and EU are in the process of negotiating a bilateral broad-based trade and investment agreement since 2007 which will significantly enhance the commercial relationship once implemented.

In a world of increasing globalization, where political, economic and technological barriers are rapidly disappearing, the ability of a country to participate in global activity is an important indicator of its performance and competitiveness. In order to remain competitive, modern-day business relationships extended well beyond the traditional foreign exchange of goods and services, as witnessed by the increasing reliance of enterprises on mergers, partnerships, joint ventures, licensing agreements, and other forms of business cooperation. Foreign Direct Investment (FDI) is considered as an alternative economic strategy, adopted by those enterprises who invest to establish a new plant/office, or alternatively, purchase existing assets of a foreign enterprise. These enterprises seek to complement or substitute external trade, by producing goods and services in countries other than where the enterprise was first established. The inward FDI depends to a certain extent on the step which a country or a group of countries have reached in investment development path paradigm.

There are two kinds of FDI (i) the creation of productive assets by foreigners, or (ii) the purchase of existing assets by foreigners (for example, through acquisitions, mergers, takeovers). FDI differs from portfolio investments because it is made with the purpose of having control, or an effective voice, in the management of the enterprise concerned and a lasting interest in the enterprise. Direct investment not only includes the initial acquisition of equity capital, but also subsequent capital transactions between the foreign investor and domestic or and affiliated enterprises. Conventional trade is less important for services than

for goods. While trade in services has been growing, the share of services in total intra-EU trade has changed little during the last decade. However, FDI is expanding more rapidly for services than for goods, and is increasing at a more rapid pace than conventional trade in services. As a result, the share of services in total FDI flows and positions has increased substantially, as the service sector has become increasingly international.

On a global level, the EU appears as the most important foreign direct investor and it reveals the ability and tendency of their firms to internationalize business activities. In the fast growing markets of India, however, the share of EU firms in total FDI is rather low and not particularly dynamic. Foreign direct investment has become the major pillar of internationalization of economic activities of their firms. Yet it global FDI flows are still much lower than trade flows, FDI can be seen as the main channel of international competition. Firms undertake FDI primarily in order to expand and compete with domestic and other firms in the irrespective markets. Some other factors like perception of country risk found to be decisive factor for FDI in emerging markets.

FDI, being a non-debt capital flow, is a leading source of external financing, especially for the developing economies. It not only brings in capital and technical know-how but also increases the competitiveness of the economy. Overall it supplements domestic investment, much required for sustaining the high growth rate of the country. Since 1999, significant changes have been made in the FDI policy regime by the government to ensure that India becomes an increasingly attractive and investor-friendly destination. India has created mechanism for dialogue at all level.

The current phase of FDI policy is characterized by negative listing, permitting FDI freely except in a few sectors indicated through a negative list. Under the current policy regime, there are three broad entry options for foreign direct investors. In a few sectors, FDI is not permitted; in another small category of sectors, foreign investment is permitted only till a specified level of foreign equity participation; and the third category, comprising all the other sectors, is where foreign investment up to 100 per cent of equity participation is allowed. The third category has two subsets — one consisting of sectors where automatic approval is granted for FDI (often foreign equity participation less than 100 per cent) and the other consisting of sectors where prior approval from the Foreign Investment Approval Board (FIPB) is required. FDI policy changes increasingly reflect the requirements of industry and are based on stakeholders' consultation. Upfront listing of negative sectors has helped focus on reform areas, which are reflected in buoyant FDI inflows.

FDI and services liberalization have proceeded alongside the liberalization of trade in goods. Manufacturing is fairly open to FDI. In terms of overall regulatory restrictiveness, India is on a par with China, but it is more restrictive than Russia and Brazil. Some services sectors, notably insurance, aviation, construction, retail and distribution, face especially high levels of protection. Restrictions include foreign-equity limits the form of commercial establishment and complicated and costly licensing procedures. Trade and FDI liberalization have rapidly integrated India into the global economy.

PROBLEMS AREAS

Although India is fast developing economy in the world and it has created structural and congenial atmosphere for inflow of FDI but even than it is not able to attract EU investors

upto the expectation level. They are hesitating to invest in India due to certain fundamental crisis. The coalitional politics in India is an irritant issue for inflow of FDI. The political environment in India is not so congenial for investors. Despite the repeated effort by the government to open new sectors, the coalitional partners of the government did not support it on this issue. UPA government wanted hundred percent FDI in multi—brand retail and some other important sectors, but due to the political opposition from opposition parties and even from their own partners in the government could not implement it.

The EU is also suffering from political compulsions from Europe. After the demise of communist regimes from the Eastern Europe, the weak nations of this block are demanding from the developed nations of Western Europe to develop their economy. Due, to these inner complexities the European investors are not in position to expand their investments from outside Europe.

In addition to political compulsions there are also several other factors in Europe which are responsible for creating irritant atmosphere for the investors.

The flow of FDI has been comparatively low.in India. India is far back among the developing countries like China, Hong Kong and Singapore. There are various reasons for India lagging behind in attracting FDI. In 2006 the Government of India undertook a comprehensive review of the FDI policy and associated procedures (GOT, 2006). A number of measures have been undertaken to make India a more attractive destination for FDI. Some key measures include allowing FDI in new sectors, dispensing with the need of multiple approvals from Government and/or regulatory agencies that exist in certain sectors, and extending the automatic route to more sectors. Under the automatic route, FDI up to 100 percent is allowed in most sectors' activities. No prior approval from the Government of India or the Reserve Bank of India (RBI) is required for FDI under the automatic route. While the relaxation of these FDI norms may have helped attract greater FDI inflows, prima fade India's inward FDI should be huge or at least much bigger than what it currently receives. India has displayed good performance over the past years in business sophistication, innovation and financial market sophistication. However, areas like infrastructure, primary education, health and the fiscal situation dragged India down. The report also stated that bureaucracy, over-regulation and corruption still affect functioning markets and labour markets in particular. In India, there are various problematic factors for doing business. So there is less inflow of FDI, since these factors discourage foreign investors to invest in Indian business. Various factors responsible for low FDI inflow to India are:

Inadequate supply of infrastructure is the most problematic factor for doing business in India. Delays in shipping, power shortage, water shortages, commuting times, etc., are few of the adverse consequences, which seriously undermine productivity. This situation penalizes local businesses and deters foreign investors. There are major factors that resulted in poor construction industry also, which include capacity constraints in delivery potential and performance, shortage of skilled and unskilled manpower, use of obsolete technologies and construction equipments, inadequate availability of quality construction materials, etc. From the side of the employer (i.e., the executing agency), flawed practices in bid design, viz., inappropriate qualification and evaluation criteria, unequal risk allocation, low weightage to quality aspects ad indecisiveness on project parameters etc. impair effective functioning of

contractors. An empirical study finds that individual production in India has had a unidirectional impact on inward FDI.

Although the total power generated in India has continued to increase, there are significant shortages. India is today the third largest energy consumer after the China and USA. However, these countries have the power generation capacity to meet the demand for electricity in order to exploit the optimal GDP level. India's electricity sector needs to boost investment to cope with demand, which has been growing at a significant pace fuelled by rapid population growth and continued high levels of economic growth. It is very common for towns and villages to face daily blackouts averaging more than 8 hours a day. Some 600 million Indians have no electricity at all. While 80 per cent of Indian villages have at least an electricity line, just 44 per cent of rural households have access to electricity. Some half of the electricity is stolen, and the stolen electricity amounts to 1.5 per cent of GDP. Transmission and distribution losses amount to around 20 per cent, because of an inefficient distribution system, handled mostly by cash-strapped state-run enterprises. Almost all of the electricity in India is produced by the public sector.

An emerging strand of research has dealt with the impact of institution on FDI. The institutional failure dealt on FDI. The Institutional failure and decreased economic and regulatory policy uncertainty proved a major obstacle for investment.

Power shortage is common, and many buy their own power generators to ensure electricity supply. Taxes levied on transportation of goods from State to State (such as octroi and entry tax) adversely impact the economic environment for export production. Such taxes impose both cost and time delays on movement of inputs used in production of export products as well as in transport of the latter to the ports. At the local level (sub-state) issues pertaining to land acquisition, land use change, power connection, building plan approval are sources of project implementation delay.

Business communities rank India poor on trust on politicians and administrative/bureaucratic corruption. India is still considered as a nation where business is affected by bureaucratic red tape. Nearly all sectors of officialdom are riddled with graft, from neighborhood cops to district bureaucrats to state ministers. Corruption delays infrastructure projects and raises costs for those that move ahead. Before a project of making road a long discussions of around 5-7 years take place before the decision is taken. May be a second round of reforms to eliminate the red tape is demand of the time now.

India ranks very low in health and primary education. The situation is linked to lack of government funds to invest in such sectors, lack of skill manpower and infrastructure. It is very telling because poor primary education is what has essentially caused India's so called demographic dividend to be somewhat illusory. Despite the country's huge working age population, there is already an acute shortage of talent in India which is having a negative repercussion on businesses — both domestic and foreign. Since many countries have achieved universal literacy at primary education level India still lags behind. India has made huge progress in terms of increasing primary education attendance rate and expanding literacy to approximately two thirds of the population. Further, there exist severe disparities in literacy rates and educational opportunities between males and females, urban and rural areas, and

among different social groups. Quality of primary education remains a problematic area. Poor spending is the primary reason for such abysmal performance.

India is facing severe challenges to curtail the increasing inflation rate. Particularly the food inflation rate is a matter of concern. India has been exploring the options of coming out populist budgets to cut back subsidy and to for reforms in tax structure. Withdrawal of subsidy in some sectors like IT corroborates the fact that government is giving priority to reduce fiscal deficit.

Threat of terrorism has been always associated with India. The serial bomb blasts in various cities of the nation followed by the Mumbai terrorist attack stains negative colours on the business environment of India. The rising tensions in the region, as well as frequent reports of foiled terror plots contribute to a general fear of future attacks and maintain a climate of insecurity. In addition corporate interests, especially Western companies, are seen to represent a prime target.

The National Crime Record Bureau (NCRB) data for cognizable crimes committed on yearly basis from 1953 to 2010 indicates a regular increase of crime rate in India. The possibility of all criminal incidents not reaching police remains a reality. In addition, organized crime is on the rise in India. Theft accounts for approximately 14.8 percent of the total recorded crime in India. Similarly the crime of kidnapping and abduction is rising which accounts for 1.7 percent of the total crime. Of late, white collar crimes are also increasingly making their presence felt among Indian firms. Indian firms have been afflicted by several types of white collar crime like investment, banking, credit card and online transaction frauds, medical scams, education, housing and job rackets, etc. While there has been an overall decline in frauds globally, as many as 84 percent of Indian firms have indicated their vulnerability to corruption and bribery. Failure to strengthen internal control mechanisms to control frauds in Indian firms has further made the situation worse. As most fraudsters are experts in using sophisticated technology to conduct their activities, the police are often not found to be well-versed in dealing with the rising number of such white collar crimes. Thus, crime and theft are most problematic factors for the development of business which will resulted in low FDI in India. India needs to improve its accounting and corporate governance practices in order to unmask such scams.

Inefficient bureaucracy and poor developed infrastructure is more important barrier for FDI inflow.

Investors find it frustrating to navigate through the tangles of bureaucratic controls and procedures. The time taken for application/bidding/approval of FDI projects was too long. Multiple approvals, excessive time taken (2-3years) and long lead times of up to six months for licenses for duty free exports, lead to “loss of investors’ confidence despite promises of a considerable market size.” Of the three stages of a project, namely general approval (e.g. FDI, investment license for items subject to license), clearance (project specific approvals e.g. environmental clearance for specific location and product) and implementation, the second is the most oppressive. The clearances connected with investment are the most affected by India’s red tape. While many policy barriers have been removed on FDI in India, results have at times been disappointing due to administrative barriers at the state level as well as lack of coordination between the central and state governments.

Foreign investors have not viewed India as a major manufacturing hub for labor-intensive exports. Manufacturing investments have significant potential to develop ancillary industries and provide large-scale employment to people who are relatively unskilled compared to the service sector. However, the rigidities in Indian labour markets make it practically impossible to shed excess labour or get rid of nonperformers. The labour market remains characterized by high costs and restrictions on firing workers, which reduces the incentive for companies to hire permanent workers and grow their businesses. In addition to the difficulty of dismissing employees, the associated cost is high - equivalent to 56 weeks of salary (placing India 85th on this indicator). Thus, although hiring workers is very easy in India, the difficulty of firing them afterwards still creates a significant disincentive. The consequence is that large firms in the formal sector are becoming more capital-intensive despite the abundance of cheap labour.

In particular, India would need to focus on certain strategies in order to improve its quality of FDI and correspondingly its global competitiveness, growth prospects, and the attractiveness to FDI inflows. These are as follows:

FUTURE SUGGESTIONS FOR ENHANCING FDI INFLOW

It is well-recognized export-oriented FDI is an important means of expanding manufactured exports for developing countries, as it helps improve the quality and competitiveness of manufacturing industries. It is well documented that in the 1970s and 1980s, FDI played a crucial role in the rapid export growth achieved by East Asia's newly industrialized economies.

Focus of FDI in India is mainly on sectors such as infrastructure, power, capital goods and food processing, none of which fall under export-oriented units. Only one-fourth of total approvals were directed towards major exporting sectors like textiles, chemicals & pharmaceuticals, leather goods, transport, metallurgical industries and food processing industries. Of India's export basket of software products and services, gems and jewelry, minerals, and agricultural products, FDI is allowed only in software products. India needs a larger export market for manufactured goods where FDI could flow in. For example, the handicraft sector has consistently made the largest contribution to exports over the years 1990s. But since this sector falls under the reserved small-scale category, FDI is practically nonexistent in this area. Perhaps with the opening up of the small-scale industries, MNCs could be attracted and export-oriented FDI could get a significant boost. India should adopt competent incentive measures like tax break to attract FDI from the MNCs in these capital-intensive industries.

Export-oriented industries can be fostered through the creation of different types of special economic zones (SEZs). Virtually all of the East and South-east Asian countries have utilized export-processing zones (EPZs) or other SEZs to help attract foreign investment and to initiate the process of manufacturing export-led growth. These zones have attempted to carve out a geographical zone in which export-businesses can conduct profitable export-oriented activities, exempt from costly regulations, tax laws, and labor standards that apply more generally within the country. More generally, the relatively successful industrial policies have had a few common characteristics. First, they have aimed to promote exports, rather than to protect the domestic market; second, they have provided subsidies on the basis of successful performance (for example, the growth of exports) rather than to cover losses; and third, they

have been temporary rather than permanent subsidies (for example, a five-year tax holiday for new export firms). India also had similar models of EPZ and Export Oriented Units (EOU). EPZs are located at various places including Cochin, Falta (near Calcutta), Kandla, Chennai, Noida, Santacruz (Mumbai), Vishakhapatnam and Surat. A unit could be set up in these zones subject to availability of space. Incentives provided to attract investment in these areas were 'zero import duty', a 'special 10 years income tax rebate' and also the existence of no restriction on the quantity of domestic sales.

But these eight special zones failed to achieve the export target. One of the reasons posited for the failure is the poor quality of infrastructure of these special zones. In April 2000, the government of India introduced a new SEZ scheme in the Export & Import Policy that would substitute some of the existing EPZs and provide an internationally competitive and regulation and hassle free environment for export production and also generates an FDI base. The Exim Policy 2000 defined the SEZ as a specifically delineated, duty free enclave deemed to be foreign territory for the purpose of trade operations and duties and tariffs. Units may be set up in SEZ for manufacture of goods and rendering of services. All the import/export operations of the SEZ units will be on self-certification basis. The units in the Zone have to be a net foreign exchange earner but they shall not be subjected to any pre-determined value addition or minimum export performance requirements.

The setting up of an SEZ unit was made open to any private, public, joint sector or state government. There would be no customs and excise duties, automatic approval for all items barring select ones on the negative list. Up to 75% of the earnings of the company units in SEZs could be retained in foreign exchange. The infrastructure and management in these zones were envisaged to be provided by the private promoters to ensure quality and the proper pricing of services. The units within SEZs are planned to be declared as public utility services so that sudden strikes can be ruled out. All supplies going into the SEZs from the domestic markets will be duty-free, whereas in reverse the domestic sector will have to pay the equivalent amount of taxes as applicable in similar imports.

Units operating in these zones have full flexibility of operations and can import duty free capital goods and raw material. The movement of goods to and fro between ports and SEZ are unrestricted. The units in SEZ have to export the entire production. The Government has converted EPZs located at Kandla and Surat (Gujarat), Cochin (Kerala), Santa Cruz (Mumbai-Maharashtra), Falta (West Bengal), Madras (Tamil Nadu), Visakhapatnam (Andhra Pradesh) and Noida (Uttar Pradesh) into operational SEZs. SEZs are approved for establishment at Kanpur and Bhadohi (Uttar Pradesh), Indore (Madhya Pradesh), Kulpi (West Bengal), Paradeep and Gopalpur (Orissa), Positra (Gujarat), Dronagiri (Andhra Pradesh), Kakinara (Kerala) and Nanguneri (Tamil Nadu).

Since the initiation of economic reforms by the Indian government in 1991, attracting FDI has been an important area. The consistent difference between the approved and actual FDI inflows in India is an indication of the prevailing dissatisfactory investment climate in the perception of the FDI investors. For foreign investors therefore, bureaucracy and red-tapism at different levels are biggest transaction costs in making FDI to India. Further, the federal structure with many of the clearances vested in State-level authorities, leads to procedural delays. Environmental and legal clearances take up too much time. More important, the limited credibility of regulatory systems, and multiple and conflicting roles of agencies and

government affect foreign investors more than their domestic counterparts because the latter know how the system works.

There is certain other lacuna in the institutional structure of India that requires attention. One major problem in India is that there is a lack of harmonization of government policies in India. Two events, which occurred in 1995, illustrate this lack of coordination and often-contradictory government policy and damaged India as an investor-friendly country. First, Enron's project with the Maharashtra State government was scrapped after it had been approved by the government. Furthermore, Kentucky Fried Chicken's license in New Delhi, India's capital city was revoked as the company was accused of using ingredients that were harmful. To the end, her more remains to be done to improve the consistency in policy making, implementation, quality governance, and over regulated frames.

India has come a long way since 1991 in so far as quantum of FDI inflow is concerned. The popular wisdom is that FDI are discouraged from investing in India by bureaucratic hurdles and uncertainty about the sincerity of the government(s) about economic reforms. The Indian government policies towards FDI have changed over time in tune with changing developmental needs. This changing policy has affected the trends of FDI flows received by the country. In terms of investing countries, it can be noted that a major portion of total FDI in India comes from Mauritius. This is because of close political and cultural ties. Mauritius has low rate of taxation and an agreement with India on double tax avoidance regime. In spite of huge figures of FDI investment in India, she lags in attracting FDI compared to China, Hong Kong and Singapore. Only the FDI policy is not responsible for low amount of FDI as the policy has been revised on regular intervals to attract FDI. But the major reasons behind low amount of FDI investment in India are poor infrastructure facilities, rigidity in the labour market, bureaucratic government, length procedures, terrorism, crimes, level of educations and much more. But the major among all the reasons is the infrastructure facilities and primary education. Development of roads, focusing on ports and airports, providing electricity will help to attract good amount of FDI investment in India as due to this infrastructural problem the cost of production increases which makes the products less competitive in the market. India has to surpass each of these barriers in order to compete globally. But the World Economic Forum's executive survey demonstrates the need of further reforms in terms of restriction and liberalization. Access to financing, tax regulation and policy stability are viewed as hurdles in India. India needs to encourage entrepreneurs to invest in its economy so that the problem of unemployment could be tackled and some of the huge job seeker population could be turned into job-provider population. Rural industrialization and credit availability in rural sector could bring the neglected rural market to the forefront. Agricultural development has to be the focus to avoid acute food crises and inflation in food items. Value addition activities in minerals, food, and textile have mammoth potential of improvement. Value addition can help India improve its exports and narrow down the balance of payment issues.

Till 2000, India got FDI inflow from five major powers of EU nations and rest of them are dormant in terms of Investment in India, but after 2000 there is evidence that new EU members started gaining parts of global production chain. They showed keen interest in market of India. This is a happy sign for India.

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