# "Role of Technology in Police Organisations in India: A Critical Analysis"
### -Samrat Dutta

## Abstract[1]

Police is an institution which is entrusted with the task of establishing social order. 'Policing' implies processes with specific social functions and Police may not be found in every society, but policing is a universal requirement of any society. The concept of technology is basically the use of science in day to day life and Indian Police organisations today are thoroughly equipped with the technology, although a lot more is to be accomplished. The police in India is still carrying the legacy of the colonial rule in its structure, duties, work culture and expectations.

Police in India has its origin in Vedic period but there is no specific rule or regulations, which can be attributed to it. The functions of the police and their duties were limited in scope in early times, which by the winds of time have increased with population and means of communication.[2] The British Raj in India has fostered various developments and those in the field of police are the most commendable one. The establishment and organisation of the same in the Presidency towns have been analysed here as it is not possible to analyse police in all Indian cities. Indian Police owes its origin to the British Raj and bears a lot of resemblance from its past mentor. But, however, the times have changed and so is the police organisation. The era when technology in the police organisation was just a stick has now changed to wireless, radars and various other devices catering to the need of the twenty first century. Police using technology can be attributed under two broad categories, which are Police as users and Police against abuse. Police in today's world use the available technology to track the criminals and punish them, but in the course of doing so, they also face serious problems and threat to their life as well as most of times Indian Police do not possess the required arms and ammunition to fight the  perpetrators of crime. Indian Police is still very backward with regard to the use of technology.

Technology is the need of the hour and the force has to be well equipped with technology to fight the intermittent dangers of the society. The paper shall focus upon the evolution of police organisations in India and the technological difference between the ancient and

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[2] Drekmier, C. (2005) Kingship *and Community in Early India*, OUP, California p. 106.

modern police and the means to overcome the hurdles to make a crime free society and at the same time the need of technology in the twenty first century in the police organisations.

**Key Words: Police, Policing, Technology and ICTs (Information and Communication Technology)**

**ROLE OF TECHNOLOGY IN POLICE ORGANISATIONS IN INDIA: A CRITICAL ANALYSIS**

**1. CONCEPTUALISING POLICE AND POLICING**

The word 'police' is derived from the Greek word *politeia* and is equivalent to the Latin word *politia*, which connotes state or administration. In this sense, the term police may mean a body of civil servants whose primary duties are preservation of order, prevention and detection of crimes and enforcement of law. In the words of Earnest Fround, police functions generally relate to promoting public welfare by restraining and regulating the use of property and liberty of persons. The role of police in the modern times extends to police as a social service organisation in a modern welfare state and the paradigm has shifted from the ancient notion of the watchdog agency. But, before dwelling into the domain of police in the modern age, we should concentrate on the past and the development of police during that time. Police may be defined in a wider and generic sense managerial of internal economy and enforcement of government regulations of a country.[3]

According to **Oxford Dictionary**, the term police means a system of regulation for the preservation of order and enforcement of law; the internal government of State. The term broadly refers to purposeful maintenance of public order and protection of persons and property, from the hazards of public accidents and the commission of unlawful acts. It refers to civil functionaries charged with maintaining public order and safety and enforcing the law including the prevention and detection of crime.

The Indian Police system is a creation of the British Government and rests on the basic ideals of efficiency and subordination to the law of the land. On the whole it represents a complete break away from the pre – British systems which can be traced in India, chiefly because it provides a professional and regularly organised police force, with strictly defined privileges,

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[3] Swamy, N. Maheshwara, (2009) *Criminology and Criminal Justice System*, Asia Law House: New Delhi (1st Ed.) p. 251.

powers and duties because it separates the investigating and the preventive agencies from which authority tries and punishes criminals.

Indian Police bears reminiscence to its past mentor, that is, the British Police and the entire concept of police and policing was brought to India as early as 1793 through the Cornwallis Code, but the police as it exists today owes itself to the Peelian Reforms in England and finally in 1861, The Police Act came into force which regulated the police organisation in India. However, times have changed, and so has the Act and today The Model Police Act, 2006 has been designed to suit the needs of the people, but it must be remembered that technology still remains the same and more efforts are required to raise its standards.

## 1.1. POLICE AS AN ORGANISATION

Organisation basically means a group of people who work together for the fulfilment of a purpose and it operates through hierarchy tied by division of labour and remuneration. Police in India is considered to be an organisation as it involves all the elements mentioned above. The major purpose of police is the maintenance of peace and order in the society, however, the roles have changed today but during the British Raj, the police had only one objective that is to maintain law and order and crime prevention.

Moreover, since the Police in India owe its origin to the English Police, the hierarchical division of labour as stipulated by the *Metropolitan Act, 1829* had been maintained in India as well.

Remuneration is another important factor that supports the view that police is an organisation. Police is paid for the services rendered by them to the society at large. This includes crime prevention by the form of patrolling which may either be foot beat, bicycle or vehicle. Thus it can be rightly said that since all these characteristics are vehemently seen in the police force, it is classified to be an organisation.

Police is a functionary of the criminal justice system, and plays a crucial role in the maintenance of peace and enforcement of law and order within its territorial jurisdiction. Its primary duty is to safeguard the lives and property of people and protect them against violence, intimidation, oppression and disorder. Crime prevention invariably involves the services of certain law enforcement agencies to detect and investigate crimes and apprehend criminals for prosecution in the law courts. Generally the transgressions in the law are

brought to the attention of the police which paves the way for criminal investigation in the future.[4]

Police is primarily concerned with the maintenance of law and order and the security of person and property of individuals. The police force has always been an indispensable appendage of the state organisation in most civil societies of the world. Only the persons of proven ability and those having thorough knowledge of the local region and its people were recruited in the police force so that they could tackle the problem of law enforcement effectively. However, with the progress of civilization, dimensions have changed beyond limits and now it has become a social organisation in the welfare states from the ancient stigma of watchdogs.[5]

A **police** force is a constituted body of persons empowered by the state to enforce the law, protect property, and limit civil disorder. Their powers include the legitimized use of force. The term is most commonly associated with police services of a state that are authorized to exercise the police power of that state within a defined legal or territorial area of responsibility. Police forces are often defined as being separate from military or other organizations involved in the defence of the state against foreign aggressors; however, gendarmerie are military units charged with civil policing.[6]

The Constitution of India provides that the 'police' are a state subject. It is therefore the states which are to maintain their own police force for the purpose of security and peace within their own jurisdictions. However, in certain cases, the Central Government is authorised to intervene in the law and order problems of the State because the Centre is under a duty to protect the States from internal disturbances.[7]

## 1.2. POLICING AS A PROCESS

The police have a very important role to play in a country. The principles underlying policing in a free, permissive and participatory democracy may be categorically assessed as –

- Contribute towards liberty, equality and fraternity in human affairs;
- Help and reconcile freedom with security and to uphold the rule of law;

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[4] Paranjapayee, N. V. (2006) *Criminology and Penology along with Victimology*, Central Law Publications: Allahabad (15th Ed.) p. 338.
[5] Ibid.
[6] http://en.wikepedia.org/wiki/police visited on 26.03.2015 at 7:00 pm.
[7] Article 355 of The Constitution of India.

- Uphold and protect human rights;

- Contribute towards winning faith of the people;

- Strengthen the security of persons and property;

- Investigate, detect and activate the prosecution of offences;

- Facilitate movements on highways and curb public disorder;

- Deal with major and minor crisis and deal with those who are in distress by holding public grievance redressal meetings periodically every month.[8]

In the words of **Robert Reiner** policing is an inherently conflict ridden enterprise. Police has a professional responsibility demanding from them the highest standards of conduct, particularly those of honesty, impartiality and integrity. It is unfortunate that the police in the modern society are looked upon with fear, suspicion and distrust by the people and the public apathy towards the police demoralizes them and policemen lose self-confidence and are hesitant in taking up firm step to prevent violations of law because of the apprehensions of public criticism.[9] The other functions of policing are: -

- Serving and protecting the citizens.

- Engaging the citizens and gaining their cooperation.

- Policing of beat.

- Patrolling.

- Collecting intelligence to support police work.

- Traffic Duties.

- Investigating and enquiring the cases reported to them and maintenance of police station reports, registers, records etc.

- Auxiliary duties such as technology support skill support and other outdoor duties.

Having understood the different aspects of police and policing it is desirable to know how the police force functions today and how technology forms an important and essential part of the entire police organisation.

## 2. TECHNOLOGY AND THE POLICE

Technology plays an important and essential role in modern policing, and it ensures that the investigator is bestowed with an array of opportunities to prosecute the perpetrators of the

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[8] Siddique, A. Criminology and Penology (2009) Central Law Publications p. 79 – 80
[9] Supra note 7 p. 352.

crime and do justice effectively.  It also plays an effective role in robust communication systems, traffic management, intelligence gathering and administrative solutions.

Technology basically means the use and application of science in day to day mundane activities and today the police use technology in a wide array of opportunities. Technology today plays a vital role in detecting the organised crime and combating terrorism which has become a global phenomenon today. The challenge lies in the fact that today the police organisation has to work within the limited budgets and the introduction of new technology has to be tackled very carefully because these are resource intensive and very expensive.

Moreover, the **police legitimacy** is another feature of poignant importance to be considered while dealing with modern policing ad technology. Modern policing involves in working with the public and enumerating the concept of community policing and so, it has been seen that technology today is being used in such a way that could compromise the legitimacy of the police, as police in order to combat fight also at times misuse the technology by infringing upon the right to privacy of the citizens, but it is seen in rarity as the police is always serving as an enabling force working for the benefit of the general public.[10]

## 2.1. HISTORICAL PERSPECTIVE OF POLICE AND TECHNOLOGY

The Modern Police today has access to a wide range of technology to be used for combating crime; however, the traditional police did not have such a wide range of opportunities. When initially the police started its journey in India, it began with stick, whistle and handcuffs. However, today they have batons, mobiles, internet, GPS and what not. Along with this technology, there are various organisations which aid and advise the police in science and technology. India although has to go a long way to achieve all this but in the United Kingdom, The Motherland of Modern Police, Home Office Science and Research Group deals with the development in the field of forensic science and trains the police to use technology and thereby reduce their workload. There is also a premiere police science e crime unit which has catered to improve the police response to the victims of e crime, law enforcement to all types of e crime and national investigative capability to most serious e

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[10] www.cpni.gov.u.k.visited on 18.06.2012 at 15:35 p.m.

crime incidents. [11] The following table attempts to compare the past and the present technology used by the police: - [12]

| THE OLD TECHNOLOGY | THE MODERN TECHNOLOGY |
|---|---|
| | |
| Rattles and Whistles | Sophisticated National Digital Radio Services in cases of Emergency |
| Handcuffs & Uniform with no protection | Side handled Batons, Bullet Proof Jackets |
| Signal Boxes, Telegraph | Mobile Phones, Internet, Video Conferencing |
| Locally based manual systems for collation of intelligence | Local and National Networked IT Systems |
| Manual Finger Print Checking | Forensic Checking |
| Resource Intensive Identification parades | Automated Video Identification Parades |

It is important to note that although the following have not been categorically used in India, but definitely a major part of it has been used and is catering to the needs of the generation, but the drawback lies in the fact that there is inadequacy of funds and various other implications as a result of which these technologies is not been used competently in India today.

## 2.2. CONCEPT OF ICT (Information and Communication Technology)

Information Communication Technology (ICT) denotes a range of technologies for gathering, storing, retrieving, processing, analysing, and transmitting information. It may also be defined as the umbrella which includes any communication device or application like radios, televisions, computer networks, and satellite systems and the various services and applications associated with them. The police force makes use of ICT in many areas of its operation such as records maintenance, surveillance through the CCTV technology and traffic through the speed cameras that are usually mounted on the police cars. The use of ICT in the police force has greatly enhanced service delivery to public.[13]

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[11] Ibid

[12] Association of Chief Police Officers (ACPO) (2009) ACPO e-Crime Strategy, London: ACPO

[13] Sethi, V. Role of ICT in Police Force in India International Journal of Advanced Research in Computer Science and Software Engineering Volume 3 Issue 11 (November, 2013)

### 2.2.1.  ROLE OF ICT IN POLICE ORGANISATION

Broadly speaking police can be divided in to two branches with regard to its use of technology namely:

- Police as users of Technology
- Police Combating the Abuse of Technology

### 2.2.1.1. POLICE AS USERS OF TECHNOLOGY:

So, when we are talking about police as users of technology, the fore most important thing which the police force rampantly uses is ICT.

Policing is a complex amalgamation of various processes with specific social functions and it requires the integration of multiple data sources, in a very short span of time. The sensitive nature of work and the need for delivering results in a very short span of time increases the relevance of adequate design and use of ICT. ICT systems motivate the police forces to increase their capabilities. ICT concepts, architecture and design have matured significantly and are subject to continuous innovation and ICTs may range from systems installed in public environments over PC-based systems in offices, to systems installed in cars and mobile systems used on-site. Moreover, systems specifically designed for the police, include radars, GPS, mobile printers etc. Emerging ICT and their appropriation by society may also constitute a threat that demands new competencies and practices to be developed and integrated in existing police work. However, the risk does not lower down, as the offenders may use systems directly against the police or against the general public. The extended use of ICT turns out to be much more than just a technical innovation to make police work easier and more efficient.[14]

The major ICTs that the Indian Police is using today can be evaluated as follows: -[15]

- **CCTVs:** Closed Circuit Television or CCTVs are one of the most important ICTs that the police use today. It is one of the most convenient and easily accessible modes of ICT used to detect the criminals. It is also known as video surveillance and is used to transmit a

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[14] Grabosky, P.N. 1998. 'Crime and Technology in The Global Village', Paper presented at the conference: Internet Crime held in Melbourne, 16-18February1998, by the Australian Institute of Criminology.

[15] Mitra, A. Cyber Crime and the Police: Insinuations to the Police Commissionerate of Bhubaneswar and Cuttack published in Orissa Law Review (2012) pp. 52 – 57.

signal to a specific place, on a limited set of monitors. It is used in conjunction with other devices to detect crime and penalise the criminals.

- **Radio Frequency Identification (RFID):** RFID is basically wireless use of electromagnetic fields to transfer data, for the purposes of automatically identifying and tracking tags attached to objects. This technology is used by the police authorities so that transportation systems can be verified to prevent movement of unauthorized materials which can affect the public safety.

- **Electronic Breath Alcohol Test:** One of the most significant ICT that is being rampantly used in today's world, so that the rash and negligent driving can be stopped. The Home Guards and the traffic police are entrusted with the task of checking the people who are drunk driving at night so that accidents can be prevented and these are generally located in the highways and the accident prone areas of the states.

- **Global Positioning System (GPS):** A space-based navigation system that provides location and time information in all weather conditions, anywhere on or near the Earth where there is an unobstructed line of sight to four or more GPS satellites. This enables the police to track criminals through their mobile phones ad detect their location and conduct raids which are essential part of police investigations and also conduct sting operations as well.

- **Geographic Information System (GIS) [16]:** A system designed to capture, store, manipulate, analyze, manage, and present all types of spatial or geographical data. The acronym GIS is sometimes used for geographic information science (GIS science) to refer to the academic discipline that studies geographic information systems and is a large domain within the broader academic discipline of Geoinformatics. What goes beyond a GIS is a spatial data infrastructure, a concept that has no such restrictive boundaries. Basically it is a form of device which closely works with the GPS and helps in tracking the criminals and their positioning.

- **Mobile Cameras:** These cameras help in detecting and tracing the running cars which break the traffic rules and regulations or run away after an accident without helping the persons with severe injury. These cameras help in tracking the criminals who do away crimes in the wee hours of the day and think that they are saved, but they forget that crime never lets you free and always pays.

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[16] www.esri.com/what-is-gisvisited on 11.11.2015 at 11:50 p.m.

- **Wireless Internet:** Another very useful means of ICT is the wireless internet by means of which message and data is transferred and at the same time finding the cases and searching pertinent information on relevant topics are also very useful and it can be used anywhere and anytime. Thus, it serves as an important means to help the police in carrying out their functions of general supervision and crime prevention.

- **Mobile Printers:** A very useful ICT are mobile printers as they allow the printing of prima facie photographs on the crime spot and also allow fast transmission of data and other photographs through the means of wireless.

Thus, it is evident that when we talk about the police as users of technology, we refer to the fact as to how police utilize the technology for their daily mundane works and how they investigate cases and how technology reduces their workload, and it helps in service delivery, risk management and law enforcement. Moreover, apart from the hardware's mentioned above, police force also use software's in training and other sensitizing programmes about technology and in service trainings. These programmes help in making the officers aware about the recent trends n crime and the latest technological advancements which suit the need of their work the software programmes also include the various mechanism of online redressal of the grievances of the general public, thus all these programmes help in the development of better police public relationships, however, there are certain limitations which are assessed below:[17]

- Senior police officers are technology shy and desist from using technology.

- The police officers suffer from the laid back attitude and as a result of it; they do not use the most updated technology.

- The in service training programmes in most cases lack the sufficient amount of training to be imparted for using the latest technology which serves to be another reason as to why the police force detach themselves from these ICTs.

- Lastly, the poor infrastructural facilities that the police stations have add on to their problems as recommendations have been given for I – Police Stations but none have been followed.

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[17] www.acpo.police.u.k. visited on 11.12.2014 at 12:44 p.m.

## 2.2.1.2. POLICE COMBATING THE ABUSE OF TECHNOLOGY[18]

This segment categorically enumerates the instances where police is seen combating the abuse of technology. No doubt, the measures and methods mentioned above aid the police not only in detecting crime but also combating them, but the major hurdle for the police today is combating cyber crime which is increasing rampantly in the modern era. Some of the various forms of cyber crimes are mentioned below:

- **Spamming:** When any person sends unwanted bulk emails so that the user at the other end is unable to access the emails for their own personal use is called spamming is a serious cyber crime which needs to be controlled.

- **Phreaking:** Trapping the telephone lines illegally is phreaking and it is another aspect of cyber crime which needs to be controlled at the grass root level.

- **Cyber Stalking:** When computer technology is used as a means to torture someone, it is known as cyber stalking and the mechanisms may involve false assertions, transmission of threats, obscene mails, abusive phone calls and many more.

- **Computer Damage:** When the hardware of any computer is damaged.

- **Mouse Trapping:** Whenever a person clicks on the back button of the mouse, in order to go back and avoid viewing the further pages, instead of going back he is further sent to the view other unwanted pages, and in turn the person has to turn off the computer or open a new browser.

- **Phishing:** When a person attempts to acquire sensitive information like user names, passwords etc. By disguising a trustworthy source as he believes that the information will be shared because the general public believes it to be trustworthy, the act is known as phishing, and is a very emerging cyber crime these days.

- **Information Tampering:** When a person intrudes into and damages information stored in various storage devices of the computer so that the relevant information by which he can be put behind the gallows is saved is tremendously increasing with the advancement of the time in today's world.

- **Identity Theft:** The act is very similar to cheating by personation under The Indian Penal Code, 1860. In this crime a person basically uses the identity of another person claiming it to be his own and thereby gets all the benefit of online transactions which he is not

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[18] Supra note 15 p. 56 – 57.

legally bound to receive, which is a very serious cyber crime. The act involves stealing money and obtaining other information with the use of false identity.

- **Unauthorised Entry:** When a person gains illegal access to the information in a computer system without the knowledge of some other person, it is known as hacking which is once again a very serious cyber crime.

Thus, the police officers with the help of these technology help to combat the crimes which are going on in the outside world, however, these threats are not totally controlled because the police today still lacks the technology required for combating such serious crimes.

## 3. BENEFITS OF TECHNOLOGY

The new age technology is a boon the modern policing and serves a variety of benefits which may be assessed as below:

- Technology will lead to transparency as manual work is manipulated at times.
- Technology will also enhance the speedy registration and disposal of cases and also help to combat crime and aid the investigations as well.
- More accuracy will be preferred if technology is used in day to day work.
- More accountability will be assured and police personnel will look forward to work more efficiently.
- It will aid to easy retrieval of storage data as well and records will be categorically maintained.

## 4. SUGGESTIONS FOR TECH SAVY POLICING

In the developing age, where new technology has been welcomed and rampantly being used, the need for the establishment of new institutions to supervise policing and law enforcement is also desirable, and it should prevent commission of crimes rather than prosecuting the criminals. Certain suggestive measures have been catered to which if implemented would reduce the workload and at the same time create better police public relationships.[19]

- ➢ A separate cyber crime cells for all the states which would deal with computer crimes only.
- ➢ Cyber Forensic Laboratory with all the updated machinery and technology required to detect computer crimes to be established in all cities.

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[19] http://www.crime.hku.hk/cybercrime.htm visited on 12.8.2012.

> ➢ A team of officers must be specifically trained to deal with the cyber crimes and related cases of computer crimes.

> ➢ Moreover, another special group must be specifically trained in collection storage and retrieval of digital evidence.

> ➢ Police Commissionerate must take the initiatives to have the recent police technologies used abroad and also in the metropolitan cities (Chennai, Mumbai and Kolkata)

> ➢ Local Police Stations must keep a vigil on the local cyber cafes to prevent cyber crimes.[20]

> ➢ Every police website must be well designed and be user friendly so that the database may be effectively used to lodge complaints.

> ➢ Police should also impart in-service training so that there is no delay in delivery of services at times of need.

> ➢ The Police Commissionerate should also take the task of imparting significant knowledge to the general public so that they can use the database more efficiently which is beneficial for their safety.

> ➢ Awareness Programmes on Information technology must be carried on effectively and efficiently in all cities.

Thus, these shall create significant changes and bring about more police public participation to combat crimes and create a crime free society.

## 5. CONCLUSION

Information and Communication Technologies (ICTs) are being adopted in Police work to nurture the values of greater accountability and check cyber crime. The knowledge of cybercrime is inadequate among a significant section of the officers and the training programmes on cyber crime and its detection is only made available to a selected few, while the rest remain in darkness. As the number of victims of cybercrimes is increasing day by day, the policemen (even at the root level) must be aware and conscious of the problems associated with cybercrime so that they can guide the people and counter the growing menace. Meeting the challenges of the coming decades is essential to have a police force which is up-to-date with ICTs in its daily work is of poignant importance. This will build confidence of in public that the police force is effective and can serve the community efficiently. Not only does technology promise to improve police effectiveness and efficiency in controlling crime, it may also enhance their professional status and organisational

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[20] 'Cyber café Registration Mandatory', *The Sunday Express*, 19th August, 2012; p.4.

legitimacy. Thus technology shall play a very vital role in the detection of crime and police organisations will be highly benefitted as well and so role of technology must serve to be a very vital part of the police organisation at all times.

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