



THE INDIAN POLICE JOURNAL

Vol. 64 No.2 & 3

ISSN 0537-2429

April-September 2017

The Indian Police Journal

Vol. 64 No. 2 & 3 April-September 2017

BOARD OF REVIEWERS

1. Shri R.K. Raghavan, IPS(Retd.)
Former Director, CBI
2. Shri. P.M. Nair
Chair Prof. TISS, Mumbai
3. Shri Vijay Raghawan
Prof. TISS, Mumbai
4. Shri N. Ramachandran
President, Indian Police Foundation.
New Delhi-110017
5. Prof. (Dr.) Arvind Verma
Dept. of Criminal Justice,
Indiana University,
Bloomington, IN 47405 USA
6. Dr. Trinath Mishra, IPS(Retd.)
Ex. Director, CBI
Ex. DG, CRPF, Ex. DG, CISF
7. Prof. V.S. Mani
Former Prof. JNU
8. Shri Rakesh Jaruhar
Former Spl. DG, CRPF
9. Shri Salim Ali
Former Spl. Director, CBI
10. Shri Sanjay Singh, IPS
IGP-I, CID, West Bengal
11. Dr. K.P.C. Gandhi
Director of AP Forensic Science Labs
12. Dr. J.R. Gaur,
Former Director, FSL, Shimla (H.P.)
13. Prof. Ajay Kumar Jain
B-1, Scholar Building, Management
Development Institute, Mehrauli Road,
Sukrali
14. Shri Balwinder Singh
Former Special Director, CBI
Former Secretary, CVC
15. Shri Nand Kumar Saravade
CEO, Data Security Council of India
16. Shri M.L. Sharma
Former Director, CBI
17. Shri S. Balaji
Former Spl. DG, NIA
18. Prof. N. Bala Krishnan
Hony. Professor
Super Computer Education Research
Centre, Indian Institute of Science,
Bengaluru
19. Dr. Lalji Singh
MD, Genome Foundation,
Hyderabad-500003
20. Shri R.C. Arora
DG(Retd.) Former Director (R&D), BPR&D
21. Prof. Upneet Lalli
Dy. Director, RICA, Chandigarh
22. Prof. (Retd.) B.K. Nagla
Former Professor
23. Dr. A.K. Saxena
Former Prof. of SVP National Police
Academy, Hyderabad

Opinions expressed in this journal do not reflect the policies or views of the Bureau of Police Research & Development, but of the individual contributors. Authors are solely responsible for the details and statements made in their articles. BPR&D Reserves the right to delete/amend any paragraph or content.

Website: www.bprd.gov.in

The Indian Police Journal
April-September 2017 • Vol. 64 • No. 2 & 3



Editorial Board

Chief Patron

Dr. A.P. Maheshwari, IPS, DG BPR&D, MHA, New Delhi

Editor-In-Chief

Shri V.S.K. Kaumudi, IPS, ADG BPR&D, MHA, New Delhi

Managing Editor

Dr. Nirmal Kumar Azad, IPS, IG/Director (S&P) BPR&D, MHA, New Delhi

Executive Editor

Shri B.S. Jaiswal, IPS, DIG/DD (S&P) BPR&D, MHA, New Delhi

Editor

Shri Diwakar Sharma, Editor, BPR&D, MHA, New Delhi

CONTENTS

	Page No.
1. Strengthening Civil Police for Efficient and Humane Policing <i>Deepika Tiwari, IPS</i>	1
2. Analysis of Five Years Trends in F.I.C.N Cases (2011-2015) <i>Mr. A. Dutta, Mr. R. C. Arora, IPS (Rtd)</i> <i>Dr. Nityanand Kumar, Dr. A. S. Deoskar</i>	9
3. Terrorism and Counter Terrorism Strategies <i>Dr A.P. Maheshwari</i>	67
4. Use of Technology for Better Investigation <i>Gurcharan Singh</i>	70
5. B-TRAC - Technology Driven Traffic Management <i>Dr. M. A. Saleem, IPS</i>	74
6. Significance of Forensic Science in Indian Criminal Justice System <i>Dr. Keval Ukey</i>	88
7. Surrogate Motherhood: Legal and Ethical Issues <i>Dr. Shweta Dhand</i>	96
8. Simulation and 3D Visualization of Mobile Call Detail Records to Assist Crime Detection Algorithm Design <i>Nishaba D Rana, Himanshu S Mazumdar</i>	105
9. Public Perception of Police in Nagpur : An Exploratory Study <i>Dr. Pragya Mathur Kumar</i>	127
10. Accidents due to Drunken Driving in Tribal Culture and Predictive Deployment of Police <i>Rohit Malpani, IPS</i>	150
11. Psychosocial Determinants of Criminal Psyche: An Exploration <i>Deepa Mary Thomas, C. Jayan</i>	159

Editorial

The Indian Police Journal (IPJ) has come a long way since its first edition way back in 1984. Over the years, the journal has enlightened its readers worldwide. It has crafted a niche for itself and has been a source of knowledge for millions. It is our consistent endeavor to cover a variety of topics catering to wide sections of society and law enforcing agencies.

Through the ages, the police system continued to evolve and improve in some form or the other. The Indian Police Journal has always been striving for ways and means to promote a more efficient and humane police system.

The article "Strengthening of Civil Police for Efficient & Humane Policing" exhorts the Police Community to be friendly, tolerant and disciplined. It also speaks of the political will to implement police reforms as public perception of the police matters a lot. It is obvious that the Police behaviour requires attitudinal changes particularly towards the common citizen and the weaker sections of the society.

Causes of criminality and criminal psyche have been analyzed very well in "Psycho-social Determinants of Criminal Psyche". Better technologies, over the years, have improved the working of the Criminal Justice System in India. Technology is being used to improve the day-to-day police investigations and related subjects. In "B-Track – Technology Driven Traffic Management", the author has presented the case of Bengaluru City, which has successfully integrated technology to reduce traffic congestion.

Forensic Science is providing potent tools to identify and punish the offenders. The article on "Significance of Forensic Science in Indian Criminal Justice System" highlights the problems of the Indian Legal System and also factors in Forensic Science as an important scientific basis to find evidence for prosecution in the court of law.

Mobile devices like laptops, palmtops and smart phones have become an essential part of human life. The stolen computer data is often misused by criminals. Various methods used in recovery of stolen devices by law enforcement agencies have been discussed in the article "Use of Technology for Better Investigation: Tracking of Lost/Stolen Mobile Devices (Laptops and Smart Phones)-New Methodologies".

Fake currency is a big challenge before us. It has the potential to create economic downturn, and political instability in any country. It is also a tool for financial sabotage in the form of proxy war against a target country. The present issue of this journal has also included subjects like FICN with legal provisions to combat fake currency menace in India, laws against counterfeiting of currency and criminal codes followed in other countries.

Assisted reproduction technologies have proved to be a blessing for many couples who want to enjoy parenthood. "Surrogate motherhood", despite being a controversial issues, is

gaining popularity. A balanced approach is required in supporting such methods, which, at times, have potential for misuse or an exploited by the rich and influential. It is heartening to note that the guidelines issued by the ICMR are being implemented for public good. It is hoped that future legislation on this may provide more robust regulatory mechanism to plug the existing gaps.

Terrorism has been a global concern. A comprehensive approach with the right ideology, policy agenda and strategy, supported with equality of faith, uniform global laws against terrorism, gender equality, zero tolerance approach and sound democratic practices would prove effective and would bring lasting peace and prosperity.

I am sure that this edition will make a fascinating reading and will further enhance the understanding of our readers about the subjects of their interest. Thanks for your patronage.

Happy reading!

(Varun Sindhu Kul Kaumudi)
Editor-in-Chief

“Strengthening Civil Police for Efficient and Humane Policing.”



The Indian Police Journal
©BPRD, MHA
BPRD Publication
www.bprd.gov.in

Deepika Tiwari, IPS*

Abstract:

In this concluding part of the essay we shall take a look at how we can move on from our current position towards further strengthening of the civil police. We have all the reforms needed listed out by various committees and commissions. The civil society and the NGOs must also play a greater role in asking for police reforms. There is no argument over the need for these reforms. Police reforms have made no significant headway in the three decades. The Chapter articulates Police Community to be friendly, tolerant and disciplined. It also speaks of Political will to implement police reforms in which public perception of police matters a lot. With this focus in mind, the author has carried out a study and describes how "public perceives the Police in Nagpur", wherein he relied on Questionnaire Survey, Results were no surprises as police was rated poorly by the residents. The take away is, Police behavior need attitudinal changes particularly towards common man and weaker sections of Society.

Key words:

Strengthening, Efficient, Humane Policing, Socio-Economic, International Scenario, Stakeholders, humane Aspirations

Civil Police has been variously defined as 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”. It has also been defined as an “organized civil force for maintaining order, preventing and detecting crime and enforcing the laws”.

These definitions are a reflection of the perceived role of police since times immemorial. The concept of Policing finds its mention in the ancient texts of Vedas, Arthashastra, Ramayana and several other texts. Kautilya's Arthashastra contains an elaborate system of Policing which controls almost every aspect of human life. Through the ages the police system continued in some form or the other flourishing under some rulers and languishing under some others. With the coming of British

Author Introduction

*Supdt. of Police, Chandauli, Uttar Pradesh

colonizers and later on their governments, the police system became more organized at every level. But the leitmotif of this organization was the consolidation of the British empire and with that purpose in mind they created a police force which would be totally subservient to the executive. The British wanted a force which would quell any local rebellious tendencies and keep the revenue flowing peacefully into their coffers. The Police Act of 1861 formed the basis of this organization. Owing to their efforts the British succeeded in creating a Police Force which was unaccountable to anybody else but their British seniors. The ills of this system were noted by the Indian Police Commission 1902 under Sir A.H.L. Fraser "The Police Force is far from efficient; it is defective in training and organization; it is inadequately supervised; it is generally regarded as corrupt and oppressive; and it has utterly failed to secure the confidence and cordial cooperation of the people". However nothing came out of this commission's report.

It is clear from this historical backdrop that right through ancient and medieval times and pre independence India, the idea of a "police" was always present in all societies and their main purposes were to put a check on criminals and strengthening their ruler. There was clearly no idea of a connect between police and public in general. There was no emphasis on developing professional competence especially during the British rule. There were no efforts at improving or enhancing their efficiency as a group. This scenario continued in the post-independence era as well and this is what defines the anomaly that we are faced with today.

It was during the emergency period(1975-1977) that for the first time the ills of the police system became obvious. The police excesses during this time sparked a lot of criticism and debate. It led to the appointment of the Shah Commission of enquiry which further led to the appointment of the National Police Commission in November 1977 under the chairmanship of Shri DharamVira. The terms of reference of this commission marked for the first time a departure from what was perceived as the traditional role of Police. The Resolution No. VI – 24021/36/77 – GPA of the MHA stated :

"Far reaching changes have taken place in the country after the enactment of the Indian Police Act 1861 and the setting up of the second Police Commission 1902, particularly during last thirty years of independence. Though a number of states have appointed Police Commissions after Independence to study the problems of the Police in their respective states, there has been no comprehensive review at the national level of the police system after independence despite radical changes in the political, social and economic situation of the country. A fresh examination is necessary of the role and performance of the Police – both as a law enforcement agency, and as an institution to protect the rights of the citizens enshrined in the Constitution. The Government of India have therefore, decided to appoint a National Police Commission."

Thus, it was recognized that it is not only the role of police to curb crime and criminals and enforce the law of the land but it is also the role of the police to be an active participant in the preservation of the rights of the citizens of the country as enshrined in the constitution. Police was expected to emerge as a protector and preserver of basic human rights of all citizens within the framework of law.

It was the task of this commission as outlined by the central Government which in my view marks the watershed point from where the role of Police became an area of concern. The idea of a healthy and friendly police-public relationship was mooted. After the Emergency Period (1975-1977), there have been several events where Police excesses were committed and the need was felt for introducing wide ranging reforms in the Police System. The Sikh Riots of 1984, the days of Punjab Terrorism, Communal riots in various parts of the country, Kashmir Insurgency, the Gujarat Riots.....in all these occurrences the role of Police came under the scanner. Both media and civil society continued to grow stronger through these events. The methodologies of Police began to be discussed in the open and the smallest instance of what was seen as Police excess became a point of concern. In 1993 the National Human Rights Commission(NHRC) was established to receive complaints and grant redressal in cases of human rights violations. Over the years it was found that a large chunk of complaints received at NHRC were against the Police. The NHRC through its various reports emphasized the need for 'Policing the Police'.

It is thus, in this backdrop that we have to see the emergence of the need felt for strengthening the police and making it more efficient and humane. While the Police must continue to perform its traditional role of crime prevention and detection and maintenance of law and order, it must find ways to do so in a more efficient manner and also take care so as not to trample upon the basic human and constitutional rights of the citizens of the country.

In this part of the essay, we will focus on the ways and means by which we can move towards strengthening the civil Police for a more efficient and humane Policing.

Legal Framework :

As has been pointed out earlier, right from pre-independence times committees and commissions were being appointed to ensure better Policing. The 1860 Police Commission was followed by the Police Act of 1861. This Act continues till date to form the basis of Policing in India. Though some states have passed their own Police Acts but they are not a major departure from this Act of 1861. The Second Police Commission was established in 1902 which remarked, " the Police Force is far from perfect : it is generally regarded as corrupt and oppressive and it has utterly failed to secure confidence of and cordial relations with people." After Independence some states passed new legislations: for instance-Bombay Police Act 1951, Kerala Police Act 1960, Karnataka Police Act 1963, and the Delhi Police Act 1978. But these legislations did not bring about any significant changes for the better. The National Police Commission was constituted by the government of India after emergency. Its terms of reference have already been specified. During the period between 1979-81, the NPC produced 8 reports. It made several recommendations ranging from insulating the Police from excessive political and bureaucratic interference to improving the training and career management of Police personnel, giving them fixed minimum tenures, modernization of police working and police weaponry and above all it recommended replacing the Police Act of 1861 with a new Police Act. The major recommendations were not adopted by any Government which led to 2 former DGPs filing a PIL in 1996 in the Supreme Court asking the court to direct Governments to

implement the recommendation of the NPC. In 1998, the Governments set up the Ribeiro Committee in compliance with the directions of the court. The Committee was to review the action taken to implement the recommendations of the NPC and the NHRC. In 2005, the Government set up another committee known as PADC(Police Act Drafting Committee) chaired by Soli Sorabjee. This committee submitted a model Police Act to the Union Government in October 2006. The Preamble released by the committee sets out its vision of policing and places the whole need of strengthening police and making it more efficient and humane in the right perspective.

[“ WHEREAS Respect for and Promotion of human rights of the people, and protection of their civil, political, social and economic and cultural rights is the primary concern of the Rule of Law;...

...AND WHEREAS, such functioning of the police personnel needs to be professionally organized, service oriented, free from extraneous influences and accountable to law;

AND WHEREAS, it is expedient to redefine the role of the police, its duties and responsibilities, by taking into account the emerging challenges of policing and security of state, the imperatives of Good Governance, and respect for Human Rights;

AND WHEREAS, it is essential to appropriately empower the police to enable it to function as an efficient, effective, people friendly and responsive agency;

NOW THEREFORE, since it is necessary for this purpose to enact a new law relating to the establishment and management of the police service, it is hereby enacted as follows.”]

In 2006, Supreme Court delivered its verdict in the Prakash Singh case. It ordered that reforms must take place. In 2008, it set up a three member Monitoring Committee to examine compliance by States. The Court focused on seven directives to kickstart the reform process. These related to setting up of State Level Commissions to lay down broad policy guidelines, procedure for appointment of DGP, fixed tenures, separation of Investigation and law and order functions, setting up of police establishment boards, Police Complaints Authority, and a National Security Commission at Union Level. All these recommendations and Supreme Court Directives have received varying levels of acceptability. Several states have complied with the Directives of the Supreme Court in letter but not in spirit. While the High Courts of various states and UTs have emerged as loud supporters of police reforms, the reforms continue to find lukewarm response with the state leaderships.

The legal framework has been created for the setting up of a police system that is more efficient and more humane and responsive to the new challenges and requirements of society. It is not the State executive/ bureaucratic/ political leadership alone that must be put in the dock for non implementation or partial or half hearted implementation of police reforms. But there is also some reluctance from within the police community. There are sections of police personnel as well who

fear what a whole hearted acceptance of these recommendations might bring.. There is belief that if the police has to succeed in doing its job of curbing and tackling crime and criminals, it has to resort to certain measures which will never go down well with civil society in general and human rights activists in particular. In my view, these concerns would be better and more appropriately addressed by a full implementation of the proposed reforms. These reforms would set a benchmark of standard procedures to followed, codes of conduct to be observed and will address a lot of grey areas left behind by the Police Act of 1861.

Socio-Economic Framework :

India has changed a lot from its days of Independence. Our technological competence and business acumen is acknowledged and respected world over. Foreign Investors are finding it increasingly lucrative to invest in India and Indians are investing and opening new business ventures abroad. There is development and reform in all sectors of the economy – farming, health, rural infrastructure, business, technology, research and science, financial sector. In this scenario the role of Police assumes greater significance. Any violence or law and order problem creates an in equilibrium in society and impacts economic growth. This makes the police community a partner and a major stake holder in the growth of the society and its economy. Police community needs to be friendly, responsible, tolerant, disciplined and professional. Police stations need to reflect the technological and economic developments surrounding them. There have to be systemic changes in our interrogation techniques, in quality of our investigations, in our information and intelligence gathering systems and in our equipments. Forensic Science must make advancements in tune with International tools and procedures. There is need to provide adequate training to police personnel at all levels.

Economic and Social changes have brought new challenges for the Police viz. traffic management, cyber crimes, narcotics drugs prevention, naxalism, terrorism. Criminal minds are taking recourse to latest available technologies. If we are to strengthen the police for efficient and humane delivery we have to take note of these socio-economic developments. Several states are currently working towards modernization and training of their police personnel.

Political Will

has to be generated to bring about a complete implementation of police reforms. Until and unless the Governments feel the need for these reforms not much can be done and the reforms will remain piecemeal. Several state governments have taken keen interest but still much has not been achieved. Criminalization of Politics is a key factor in slowing the face of Police Reforms. It leads to undermining the leadership and discipline of the police force. There are several instances where political leaderships across states have used police forces for their own interests and agendas. It is also seen that police have sometimes been given a tacit permission to commit excesses in dealing with serious law and order problems such as terrorism, communal riots, rising crime graph ,etc by the political leadership in order to bring the situation under control. The political leadership will

have to exercise restraint in its use of police force. They will have to ensure that all kinds of situations are dealt with in a lawful manner within the framework of law. Political will is central to the entire process of police reforms and therefore must be generated.

International Scenario:

we, today live in a world without barriers. One country cannot remain impervious to what is happening in other countries. Our economies are now linked in ways that were unimaginable 50 years ago. There is a worldwide acceptance of certain values and principles and every society and every culture is expected to uphold these basic values and principles in order to earn International respect. Policing being an integral part of any society world over has undergone changes in its functions and its attitudes. In the USA, three primary functions of police have been cited viz order maintenance, law enforcement and service (first aid, tourist information, educators). There is clear distinction between rural and urban police. They have specialized technologies for information sharing and communications. While the US police has its share of corruption issues and human rights violations, it is widely regarded as a professional force in tune with technological advancements of the time. In the British model of Policing, a phrase that has emerged is "Policing by Consent". It follows from a general consensus of support for the police among the public and is generated by a certain amount of transparency and accountability. Police in Australia and New Zealand have been working towards enhancing community participation in controlling crime and maintaining law and order.

Thus, world over, the emphasis is on ensuring better police public relations, better professional standards and minimizing unnecessary political and executive interference.

In this concluding part of the essay we shall take a look at how we can move on from our current position towards further strengthening of the civil police.

We have all the reforms needed listed out by various committees and commissions. There is no argument over the need for these reforms. What is needed now is the agreement of all the stakeholders in this reform process and the political will to see them through. Combining the strength of central and state police forces we have over 2 million police personnel. This is a huge trained manpower resource which can become a catalyst for positive change in society. A consensus must be arrived at by the political leaderships at state and central level to take the police reforms to their logical conclusion.

The civil society and the NGOs must also play a greater role in asking for police reforms that will bring about a higher level of efficiency, accountability and transparency in the functioning of the police. Many NGOs are working towards asking for reforms in the police but they are not able to create the right kind of pressure upon governments. The leaders of civil society, academicians, thinkers, teachers, researchers all must create a public opinion in favor of bringing about these

reforms. The police community has a mammoth task before itself. It not only must ask for reforms from outside, but must step forward to first reform from within. We need to introspect and reflect upon what the society expects from us and what we are able to deliver. There needs to be brought about a radical shift in our behavior and attitudes towards public. The police is overburdened with work almost everywhere. There are no fixed working hours, the nature of job is extremely stressful and the housing facilities and working conditions are far from perfect. In these conditions, it is not difficult to understand the reactions of police personnel when their behaviors are questioned. Hence we need to portray these basic needs of the personnel before governments in an emphatic manner. The police leadership has to insist on redressal of these issues before anything else. Along with this we need to organize conclaves and conferences for instilling the right attitudes among police personnel. Behavioral course has to be decided upon and training courses have to focus on this aspect above all. Constables are the first point of direct contact with public. If during training they are taught the correct attitudes while dealing with various sections of the society, it will go a long way in improving the perception of the police in civil society. Police personnel also have to be necessarily taught how to deal with stress and the extraordinary demands of a police job. They have to be taught how to take care of themselves and their family. Special efforts have to be made to make their training commensurate with the technological advancements of the time. They have to be given exposure by sending them to other states, other countries so that they gain on experiences and gather a wider perspective.

The judiciary has been playing an active role in trying to bring about reforms in the police. In the Prakash Singh and Others Vs. Union of India case, the supreme court took very adverse view of the lackadaisical approach shown by majority of states in enforcing the recommendations of police commission. It even went on to set up a high powered monitoring committee to monitor the steps being taken by states to implement police reforms. It was due to efforts by the Supreme Court that several states implemented certain recommendations of the police commission at least in letter if not in spirit. The High Courts of various states have on various occasions reinforced and upheld the directives of Supreme Court in this regard.

The NHRC is also playing a pivotal role in trying to make the police system more accountable and transparent and more humane. It has been dealing with individual complaints against police brutality or misbehavior in a sustained manner.

The role of media in bringing about this change can hardly be overemphasized. During the last few decades it has undergone huge transformation. There are no boundaries and no barriers for the media. As a result even the smallest incidents get national coverage and can create public opinion in favor or against within minutes. Any human rights violations or any wrongful conduct by police personnel is reported widely. The police has to utilize the media and its coverage to reform itself and correct itself. Even though there are cases where media goes overboard without correct knowledge of facts and tries to sensationalize news, we have to learn to work around this fact. Many a times we do not share the right information with media which leads to embarrassing situations. We have to

learn to engage with the media in a proactive manner and we must share their vision of zero tolerance towards inhumane working. Summing up, we can say that the need for a more efficient and humane police can no longer be ignored. All the stakeholders have to make concerted efforts towards bringing about changes in the police system to keep it in tandem with the expectations of society. We can no longer remain immune to the humane aspirations of those that we police.

Analysis of Five Years Trends in F.I.C.N cases (2011-2015)



The Indian Police Journal
©BPRD, MHA
BPRD Publication
www.bprd.gov.in

Mr. A. Dutta *

Mr. R. C. Arora, IPS (Rtd)**

Dr. Nityanand Kumar ***

Dr. A. S. Deoskar ****

Abstract:

Fake currency is a global problem and is universally considered, an important factor which hampers economic growth and political stability of any sovereign country in a significant manner. Phenomenon of counterfeiting of currency is as old as printing of currency notes itself. There are several recorded instances where one sovereign country, clandestinely, pushes counterfeit currency notes of another sovereign country into that country, with an object to subvert the economy of that country. The problem of fake currency is essentially characterised by multi dimensional criminological aspects like- Waging economic war against the State, Adverse effect on economy, Terror finance, Organized crime and the like aspects. An attempt has been made, in this document, to discuss the various aspects perpendicularly with the help of case laws, statistics, discussions in parliament, observations of international bodies and academic references regarding the problem of F.I.C.N. Several suggestions have been appended at conclusion to that may be considered by the enforcement agencies and other stakeholders to solve the problem.

Key words:

Fake Currency, Pakistan, India, Parliament, Border, State, Bank, Interpol, Police, IPC, U A (P) Act, N.I.A, RBI.

Author Introduction

* B.Sc, P. G. Dip. in Criminology & Forensic Science, M.Sc. (Forensic Science), Demonstrator, Dept. of Forensic Medicine & Toxicology, Late Shree Lakhiram Agrawal Memorial Govt. Medical College, Raigarh, Chhattisgarh, E-mail : arunava_dutta2001@yahoo.com

** B.Sc., M.A., LL.B, I.P.S (Retd) (1979 RR/ Madhya Pradesh Cadre), E-mail: ramesharora1154@hotmail.com

*** Asst. Prof., Dept. of Forensic Medicine & Toxicology, Late Shree Lakhiram Agrawal Memorial Govt. Medical College, Raigarh, Chhattisgarh, E-mail: nitin26nov@gmail.com

**** Ex. Prof. & H.O.D., Dept. of Forensic Medicine & Toxicology, N.K.P. Salve Institute of Medical Science, Nagpur, Maharastra, E-mail: nad_deoskar@yahoo.co.in

Brief Introduction to Currency:

Currency is the basis for trade, and is universally accepted as medium of exchange for goods and services. It is available in the form of either coin or paper notes, issued by a government (Central Bank/ Reserve Bank), and circulated within economy as a legal tender duly guaranteed by that sovereign government. Every sovereign country is having its own currency like \$(Dollar) for U.S., ¥ (Yen) for Japan, ₹ (Rupees) for India, € (Euro) is the official currency of the euro zone, which consists of 28 countries of European Union etc. Even currency itself is being traded on Foreign Exchange Market, one of the most heavily traded markets in world.

A **Currency note** can be defined as “**an amount of paper money in particular currency**”. It is believed that the first paper currency was introduced in China in 10th century.¹ A fruitless experiment for introduction of currency notes was also carried out by Mohammed- Bin- Tughlaq in 14th century in India. In 17th century paper currency was introduced in western world. Early currency was in the form of “**I owe you / promissory notes**” issued by banks or royal courts, appeared in India in late 18th century. Some of the banks established under Royal Charter like- Bank of Hindustan (1770–1832), The General Bank of Bengal and Behar (1773–75), The Bengal Bank (1784–91), The Commercial Bank, etc, issued bank notes. After establishment of semi government Presidency Bank use of paper currency became more popular in our country. Paper Currency Act, was enacted in 1861 A.D., after that British Government started printing of currency notes in India.

From 1928 A.D. onwards, Indian currency note printing was started in Currency Printing Press, Nasik, in the then Bombay Presidency (now Maharashtra). **Reserve Bank of India** was established in 1935 to supervise the printing and issue of currency notes. Currently, there are two security paper mills are functioning in Hosangabad (Madhya Pradesh) and Mysore (Karnataka) to manufacture security paper to be used in the printing of currency notes. Apart from currency printing press in Nasik there are three more currency printing presses at **Salboni** (West Bengal), **Mysore** (Karnataka) and **Dewas** (Madhya Pradesh) are functioning under the aegis of Reserve Bank of India. According to Annual Report 2015-16 of R.B.I total 90,266 million in numbers, pieces of Indian currency notes were in circulation, of which 41.9% were of high value currency notes (i.e. in the denomination of Rs. 1000/=, Rs. 500/=, Rs. 100/=)

Apart from use of paper for production of currency notes, first **polymer currency** was developed jointly in 1980's by **Commonwealth Scientific and Industrial Research Organization, Reserve Bank of Australia and University of Melbourne** with an objective to check counterfeiting of **Australian** currency notes. Within 1996 Australia completely shifted to polymer currency notes. Moreover, same kind of currency notes are currently in monetary circulation in Brunei, Canada, New Zealand, Papua New Guinea, Romania, Vietnam, Chile, Trinidad and Tobago etc.

In 2013, as a part of field trial, R.B.I had introduced **polymer** currency of Rs.10/= denomination in five selected cities viz. **Shimla, Kochi, Jaipur, Bhubaneswar and Mysore**. All security features can be embedded in such currency like paper currency. Moreover, polymer currency is considered superior over paper currency in terms of cleanness, durability, environment friendly (saving of trees), cheaper in long run, more security features can be embedded in polymer currency.

About the contributors:**Size and Security Features of Indian currency Notes**117 x 63 mm¹⁹⁰

137 x 63 mm [3, 4]

147 x 63mm⁴

147 x 73 mm [3, 4]



157 x 73 mm [3, 4]



167 x 73 mm [3, 4]



177 x 73 mm [3, 4]

Security features of Indian currency notes⁵ are appended below, which can be a useful help to a common citizen to differentiate genuine currency notes from counterfeit one-

1. **Water mark:** The Mahatma Gandhi Series of banknotes contain the Mahatma Gandhi watermark with a light and shade effect and multi-directional lines in the watermark window.
2. **Security Thread:** Rs.1000 notes introduced in October 2000 contain a **readable**, windowed security thread alternately visible on the obverse with the inscriptions 'Bharat' (in Hindi), '1000' and 'RBI', but totally embedded on the reverse. The Rs.500 and Rs.100 notes have a security thread with similar visible features and inscription 'Bharat' (in Hindi), and 'RBI'. When held against the light, the security thread on Rs.1000, Rs.500 and Rs.100 can be seen as one continuous line. The Rs.5, Rs.10, Rs.20 and Rs.50 notes contain a readable, fully embedded windowed security thread with the inscription 'Bharat' (in Hindi), and 'RBI'. The security thread appears to the left of the Mahatma's portrait. Notes issued prior to the introduction of the Mahatma Gandhi Series have a plain, **non-readable** fully embedded security thread.
3. **Latent Image:** On the obverse side of Rs.1000, Rs.500, Rs.100, Rs.50 and Rs.20 notes, a **vertical band** on the right side of the Mahatma Gandhi's portrait contains a latent image showing the respective denominational value in numeral. The latent image is visible only when the note is held horizontally at eye level.

4. **Microlettering:** This feature appears between the vertical band and Mahatma Gandhi portrait. It contains the word 'RBI' in Rs.5 and Rs.10. The notes of Rs.20 and above also contain the denominational value of the notes in **microletters**. This feature can be seen well under a magnifying glass.
5. **Intaglio Printing:** The portrait of Mahatma Gandhi, the Reserve Bank seal, guarantee and promise clause, Ashoka Pillar Emblem on the left, RBI Governor's signature are printed in **intaglio i.e. in raised prints**, which can be felt by touch, in Rs.20, Rs.50, Rs.100, Rs.500 and Rs.1000 notes.
6. **Identification Mark:** A special feature in intaglio has been introduced on the left of the watermark window on all notes except Rs.10/- note. This feature is in **different shapes** for various denominations (Rs. 20-Vertical Rectangle, Rs.50-Square, Rs.100-Triangle, Rs.500-Circle, and Rs.1000-Diamond) and helps the visually impaired to identify the denomination.
7. **Fluorescence:** Number panels of the notes are printed in **fluorescent ink**. The notes also have **optical fibres**. Both can be seen when the notes are exposed to ultra-violet lamp.
8. **Optically Variable Ink:** This is a new security feature incorporated in the Rs.1000 and Rs.500 notes with revised colour scheme introduced in November 2000. The numeral 1000 and 500 on the obverse of Rs.1000 and Rs.500 notes respectively is printed in **optically variable ink viz., a colour-shifting ink**. The colour of the numeral 1000/500 appears **green** when the note is held flat but would change to blue when the note is held at an angle.
9. **See through Register:** The small floral design printed both on the front (hollow) and back (filled up) of the note in the middle of the vertical band next to the Watermark has an accurate back to back registration. The design will appear as one **floral design** when seen against the light.

History of counterfeit currency notes: Dr Duvvuri Subbarao, Governor of the Reserve Bank of India, at the Foundation Stone laying function for the Bank Note Paper Mill, at Mysore on 22nd March 2010 said-“**Counterfeiting of money is almost as old as printing of currency.**”⁶. During civil war of America, counterfeit currency notes of America were found rampantly.⁷ In post World War-I **Hungarian** government counterfeited huge amount of **France** currency notes “**Francs**” as an act of **revenge** after having lost huge parts of their territories in the Peace Treaty of Versailles in 1919.⁸ During 2nd world war Nazi regime counterfeited Pound (£) in huge amount with the object to destabilize economy of England.⁹ Therefore, from the reference of America, France and England counterfeiting of currency notes can surely be coined as a State sponsored economic subversion measure with an object to destroy the economic growth of another country by the external agency of inimical country .

According to INTERPOL, primary cause behind huge production of counterfeit currency are of two folds viz. recent development in **computer science, photography and printing technology** coupled with availability of **low cost** equipment for these activities. The same organization also opined that increasing quality of the counterfeit currency produced poses a serious threat to national economy, financial institutions and consumer's globally.¹⁰ Income generated through circulation of counterfeit currency is also a component of black money.¹¹ Relationship between fake currency and

its impact on internal security can be exemplified from the Report of the Group of Ministers on National Security (2001)¹² as “2.33 **A large amount of fake Indian currency is being smuggled into the country, giving a totally new dimension to the internal security scene.....**”

Prevalence of circulation of fake currency notes in western countries and India are given below –

1. **Australia:** Seven pieces per million notes in circulation (2008-09)⁶
2. **Canada:** 76 pieces/ million circulation of notes (2008)⁶
3. **New Zealand :** 71 pieces/ million circulation of notes (2008-09)⁶
4. **Switzerland:** 10 pices/ million circulation of notes.⁶
5. **European Union:** One counterfeit Euro/ 14600 bank notes in circulation.⁶
6. According to Annual Report of R.B.I (2015-16) FICN as a proportion of NIC (Notes in Circulation) was 0.0000070 (this calculation does not include counterfeit notes seized by the police and other enforcement agencies).² More over in a recent session of Rajya Sabha, Ministry of Finance had tabled **an estimate of 400 crore of face value of fake currency is in circulation** in Indian economy , which remained constant for last four years.¹³

Notorious counterfeiters of currency for last 100 yrs, in the world, are Alves dos Reis (Portugal), Edward Mueller (United States), Bernhard Krüger (Germany), Mike DeBardeleben (United States), Stephen Jory (United Kingdom), Arthur Williams (United States), Wesley Weber (United States), Anatasios Arnaouti (United Kingdom), Albert Talton (United States) etc.¹⁴

Legal provisions to Combat F.I.C.N in India

The main penal provisions regarding counterfeit currency have been constituted in the Indian Penal Code, 1860. Relevant sections of the IPC are extracted below-

Sec.489A. of I.P.C- Counterfeiting currency-notes or bank-notes.—Whoever counterfeits, or knowingly performs any part of the process of counterfeiting, any currency-note or bank, note, shall be punished with [imprisonment for life], or with imprisonment of either description for a term which may extend to **ten years**, and shall also be liable to fine.

Explanation.—For the purpose of this section and of sections 489B, [489C, 489D and 489E], the expression “**bank-note**”, means a **promissory note or engagement for the payment of money to bearer on demand** issued by any person carrying on the business of banking in any part of the world, or issued by or under the authority of any State or Sovereign Power, and intended to be used as equivalent to, or as a substitute for money.

Sec.489B of I.P.C-Using as genuine, forged or counterfeit currency-notes or bank-notes.—Whoever sells to, or buys or receives from, any other person, or otherwise traffics in or uses as genuine, any forged or counterfeit currency-note or bank-note, knowing or having reason to believe the same to be forged or counterfeit, shall be punished with [**imprisonment for life**], or with imprisonment of either description for a term which may extend to **ten years**, and shall also be liable to fine.

Sec.489C of I.P.C- Possession of forged or counterfeit currency-notes or bank-notes.—Whoever has in his possession any forged or counterfeit currency-note or bank-note, knowing or having reason to believe the same to be forged or counterfeit and intending to use the same as genuine or that it may be used as genuine, shall be punished with imprisonment of either description for a term which may extend to **seven years**, or with fine, or with both.

Sec.489D of I.P.C—Making or possession instruments or materials for forging or counterfeiting currency-notes or bank-notes.—Whoever makes, or performs, any part of the process of making, or buys or sells or disposes of, or has in his possession, any machinery, instrument or material for the purpose of being used, or knowing or having reason to believe that it is intended to be used, for forging or counterfeiting any currency-note or bank-note, shall be punished with [**imprisonment for life**], or with imprisonment of either description for a term which may extend to ten years, and shall also be liable to fine.

Sec.489E of I.P.C- Making or using documents resembling currency-notes or bank-notes.—

1. Whoever makes, or causes to be made, or uses for any purpose whatsoever, or delivers to any person, any document purporting to be, or in any way **resembling, or so nearly resembling** as to be calculated to deceive, any currency-note or bank-note shall be punished with **fine** which may extend to **one hundred rupees**.
2. If any person, whose name appears on a document the making of which is an offence under sub-section (1), refuses, without lawful excuse, to disclose to a police-officer on being so required the name and address of the person by whom it was printed or otherwise made, he shall be punished with **fine** which may extend to **two hundred rupees**
3. Where the name of any person appears on any document in respect of which any person is charged with an offence under sub-section (1) or on any other document used or distributed in connection with that document it may, until the contrary is proved, be presumed that person caused the document to be made.

After careful analysis of all the sections essential ingredients of counterfeit currency notes are-

- a. Having **possession** of currency notes which is **counterfeit** or having **incriminating instruments** which can be used for printing of **fake currency**
- b. Having **knowledge** that the currency notes are in possession of the person are fake or counterfeit in nature/ instruments are in possession are capable to produce counterfeit notes.
- c. With reference to **knowledge** that the currency notes are counterfeit although engaged in the process of distribution or selling or buying or trafficking or manufacturing of such notes.

All the above mentioned sections of I.P.C are **Non Bailable, Non Cognizable, Non Compoundable** and Traiable at the **Court of Sessions**.

In *State of Kerala v. Mathai Varghese*¹⁵ Apex Court held that the expression 'any currency note or bank note used in Indian Penal Code (Ss 498-A to 498-E) was **construed to include currency note of all countries and not only Indian currency note rejecting the plea for taking a strict view.**

Sec.26 of Reserve Bank of India Act, 1934- Legal tender character of notes-

- (1) Subject to the provisions of sub-section (2), every bank note shall be **legal tender** at any place in [India] in payment or on account for the amount expressed therein, and shall be guaranteed by the [Central Government].
- (2) On recommendation of the Central Board the [Central Government] may, by notification in the Gazette of India, declare that, with effect from such date as may be specified in the notification, any series of bank notes of any denomination shall **cease to be legal tender** [save at such office or agency of the Bank and to such extent as may be specified in the notification].

Section 26A of Reserve Bank of India Act. - Certain bank notes to **cease to be legal tender**- Notwithstanding anything contained in section 26, no bank note of the denominational value of five hundred rupees, one thousand rupees or ten thousand rupees issued before the 13th day of January, 1946, shall be **legal tender** in payment or on account for the amount expressed therein.

In *K. Hasim v. State of Tamil Nadu*¹⁶, where **Apex Court held** that the object of legislature in enacting Ss.489-A to D is not only to protect the economy of the country but also to provide **adequate protection** to currency notes and bank notes.

Foreign Exchange Management Act 1999- u/s. 2 (i)- "currency notes" means and includes **cash in the form of coins and bank notes**; The **import** of counterfeit currency into India is **prohibited** in terms of Ministry of Finance, Department of Revenue Notification No. 23/1999-Cus, dt. 13.4.1999 issued under section 11 of the Customs Act, 1962. Any attempt to import counterfeit currency into India is consequently an **offence under the Customs Act, 1962** rendering the smuggled counterfeit currency liable to confiscation under **section 111** and the **perpetrators** liable to penalty under **section 112** and criminal prosecution under section 135 which provides for punishment by imprisonment which may extend to **seven years with fine.**¹⁷

Sections 489-A and 489-B of I.P.C are also included in **Prevention of Money Laundering Act 2002 as scheduled offences.**¹⁸ Rule 3 (1) (C) of Prevention of Money-laundering (Maintenance of Records of the Nature and Value of Transactions, the Procedure and Manner of Maintaining and Time for Furnishing Information and Verification and Maintenance of Records of the Identity of the Clients of the Banking Companies, Financial Institutions and Intermediaries) Rules, 2005 made the compulsory record keeping of transactions by banking company or financial institution or intermediary where counterfeit currency notes have been used.¹⁹

Under the **National Investigation Agency Act, 2008-** Offences committed u/s 489-A to 489-E (both inclusive) of the Indian Penal Code (45 of 1860) - Empowered National Investigation Agency to conduct investigation of such cases after receiving due permission from Govt. of India. The **legal regime has been further strengthened** by amendments in the section 15 of the **Unlawful Activities (Prevention) Act, 1967 (UAPA) (w.e.f 01.02.2013)**, wherein the **damage to the monetary stability** of India by way of production or smuggling or circulation of High Quality Fake Indian Paper currency, coin or any other material has been declared as a **"terrorist act"**.²⁰ In exercise of the powers conferred by sub-section (1) and clause (f) of sub-section (2) of section 52 of **Unlawful Activities**

(Prevention) Act 1967, (37 of 1967) Govt. of India had enacted “**Investigation of High Quality Counterfeit Indian Currency Offences Rules, 2013**”, through Gazette Notification “Extraordinary” PART–II, September 27, 2013.²¹

Punishment for counterfeiting of currency notes in some other countries

1. **18 U.S. Code § 472 - Uttering counterfeit obligations or securities-** Whoever, with intent to defraud, passes, utters, publishes, or sells, or attempts to pass, utter, publish, or sell, or with like intent brings into the United States or keeps in possession or conceals any falsely made, forged, counterfeited, or altered obligation or other security of the United States, shall be fined under this title or imprisoned **not more than 20 years**, or both.²²
2. **Criminal Code of Canada**²³ -
 - A. **Sec. 449-** Everyone who makes or begins to make counterfeit money is guilty of an indictable offence and liable to imprisonment for a term **not exceeding fourteen years**.
 - B. **Sec. 450-** Possession, etc., of counterfeit money- Everyone who, without lawful justification or excuse, the proof of which lies on him,
 - (a) Buys, receives or offers to buy or receive,
 - (b) Has in his custody or possession, or
 - (c) Introduces into Canada,
 Counterfeit money is guilty of an indictable offence and liable to imprisonment for a term **not exceeding fourteen years**.
3. **The Penal Code of Poland (Act 6 of June 1997)**²⁴ -
 - a. **Article 310. § 1-** Whoever counterfeits or alters Polish or foreign money, other legal tender, or a document which entitles one to obtain a sum of money or contains an obligation to pay capital, interest, share of profits, or verifies a share in a company, or whoever removes a sign of cancellation from money, other legal tender or from such document shall be subject to the penalty of deprivation of liberty for a **minimum term of 5 years or the penalty of deprivation of liberty for 25 years**.
 - b. **Article 310 § 2-** Whoever releases into circulation money or other legal tender or document as specified in § 1 or for such purpose receives, stores, transports, carries, dispatches it or assists in selling or concealing it shall be subject to the penalty of **deprivation of liberty for a term of between 1 and 10 years**.
 - c. **Article 310 § 3-** In the event that the act is of a lesser significance, the court may apply an extraordinary mitigation of the penalty.
 - d. **Article 310 § 4-** Whoever makes preparations to commit the offence specified in § 1 or 2 shall be subject to the penalty of deprivation of liberty for a term of **between 3 months and 5 years**.

Detection and Impounding of Counterfeit Notes- Related R.B.I. guide lines²⁵

Reserve Bank of India, the central bank of the government of India, is the Nodal agency for all matters related to currency. It has issued some important directions from time to time to control and to combat the problem of counterfeiting of currency. Some of the notable guidelines/directions issued by the R B I have been summarised in the succeeding para.

- A. Authority to Impound Counterfeit Notes-** The Counterfeit Notes can be **impounded** by-
1. All branches of Public Sector Banks.
 2. All branches of Private Sector Banks and Foreign Banks.
 3. All branches of Co-operative Banks & Regional Rural Banks.
 4. All Treasuries and Sub-Treasuries.
 5. Issue Offices of Reserve Bank of India.
- B. Detection of counterfeit notes-** Authenticity should be checked through machines. **No credit to customer's account** is to be given for counterfeit notes, if any, detected in the tender received over the counter or at the back-office / currency chest. In no case, the counterfeit notes should be returned to the tenderer or destroyed by the bank branches / treasuries.
- C. Impounding of counterfeit notes-** Notes determined as counterfeit shall be **stamped** as "COUNTERFEIT NOTE" and **impounded** in the prescribed format. Each such impounded note shall be recorded under authentication, in a separate register.
- D. Issue of Receipt to Tenderer-** When a banknote tendered at the counter of a bank branch/back office and currency chest or treasury is found to be counterfeit, an **acknowledgement receipt** in the prescribed format must be issued to the tenderer, after stamping the note as in Paragraph 2 *ibid*. The receipt, in running serial numbers, should be authenticated by the cashier and tenderer. Notice to this effect should be displayed prominently at the offices / branches for information of the public. The receipt is to be issued even in cases where the tenderer is unwilling to countersign it.
- E. Detection of Counterfeit Notes - Reporting to Police and other bodies-**
1. For cases of detection of counterfeit notes **upto 4 pieces, in a single transaction**, a consolidated report in the prescribed format should be sent by the Nodal Bank Officer to the police authorities or the Nodal Police Station, along with the suspect counterfeit notes, at the end of the month.
 2. For cases of detection of counterfeit notes of 5 or more pieces, in a single transaction, the counterfeit notes should be forwarded by the Nodal Bank Officer to the local police authorities or the Nodal Police Station for investigation by filing FIR in the prescribed format.
 3. A copy of the monthly consolidated report / FIR shall be sent to the **Forged Note**

Vigilance Cell, constituted at the Head Office of the bank (**only in the case of banks**), and in the case of the **treasury**, it should be sent to the Issue **Office of the Reserve Bank** concerned.

4. **Acknowledgement of the police authorities** concerned has to be obtained for note/s forwarded to them both as consolidated monthly statement and FIR. If the counterfeit notes are sent to the police by insured post, **acknowledgement of receipt** thereof by the police should be invariably obtained and kept on record. A proper follow-up of receipt of acknowledgement from the police authorities is necessary. In case, any difficulty is faced by the Offices / Branches due to **reluctance** of the police to receive monthly consolidate statement / file FIRs, the matter may be sorted out in consultation with the **Nodal Officer** of the police authority designated to coordinate matters relating to investigation of counterfeit banknotes cases. The list of Nodal Police Station (**Officers**) may be obtained from the respective Regional Office of Reserve Bank.
5. Banks should also **monitor the patterns / trends** of such detection and suspicious trends / patterns should be brought to the notice of RBI/Police authorities immediately.
6. The progress made by banks in detection and reporting of counterfeit notes to Police, RBI, etc. and problems thereof, should be discussed regularly in the meetings of various **State Level Committees** viz. State Level Bankers' Committee (SLBC), Standing Committee on Currency Management (SCCM), State Level Security Committee (SLSC), etc.
7. The data on detection of counterfeit Indian notes at bank branches & treasuries should be included in the monthly Returns forwarded to the Reserve Bank Issue Offices.

F. Examination of the Banknotes before Issuing over Counters, Feeding ATMs and Remitting to Issue Offices of the Reserve Bank-

1. The banks should re-align their cash management in such a manner so as to ensure that cash receipts in the denominations of 100 and above are **not put into re-circulation without the notes being machine processed for authenticity**. The said instructions shall be applicable to all bank branches, irrespective of the volume of daily cash receipt. Any non-compliance will be construed as violation of the Directive No.3158/09.39.00 (Policy)/2009-10 dated November 19, 2009 issued by the Reserve Bank.
2. In order to obviate complaints regarding receipt of counterfeit notes through **ATMs**, and to curb circulation of counterfeits, it is imperative to put in place adequate **safeguards/checks** before loading ATMs with notes. Dispensation of counterfeit notes through the ATMs would be construed as an attempt to circulate the counterfeit notes by the bank concerned.
3. **Detection** of counterfeits in **chest remittances** is also liable to be construed as **willful involvement** of the chest branches concerned in circulating Counterfeit Notes and may attract special investigation by police authorities, and other action like suspending the operation of the chest concerned.

4. **Penalty** at 100% of the notional value of counterfeit notes, in addition to the recovery of loss to the extent of the notional value of such notes, will be imposed under the following circumstances:
 - a) When **counterfeit notes are detected** in the soiled note remittance of the bank.
 - b) If counterfeit notes are **detected in the currency chest** balance of a bank during Inspection / Audit by RBI
5. In terms of circular No.DPSS.CO.PD2298/02.10.002/2011-12 dated June 20, 2012, the **responsibility** of ensuring the quality and genuineness of cash loaded at White Label ATMs would be that of the **Sponsor Bank**.

G. Designating Nodal Bank Officer- Each bank should designate Nodal Bank Officer, **district-wise** and notify the same to the concerned Regional Office of RBI and Police Authorities. All cases of reporting of counterfeit note detection should be through the Nodal Bank Officer. The Nodal Bank Officer will also serve as the contact point for all counterfeit note detection related activities.

H. Establishment of Forged Notes Vigilance Cell at Head Office of Bank- Each bank shall establish at its Head Office, a Forged Note Vigilance Cell to undertake the following functions:

1. **Dissemination of instructions** issued by the Reserve Bank on counterfeit notes to bank's branches. **Monitoring** the implementation of these instructions. **Compilation of data** on detection of counterfeit notes, and its submission to Reserve Bank and FIU-IND as per extant instructions. **Follow-up of cases** of counterfeit notes, with police authorities / designated nodal officer.
2. **Sharing of the information** thus compiled with bank's CVO and report to him / her all cases of acceptance / issue of counterfeit notes over the counters.
3. Conducting **periodic surprise checks** at currency **chests** where shortages/ defective /counterfeit notes etc. are detected.
4. **Ensuring operation of Note Sorting Machines** of appropriate capacity at all the currency chests / back offices and closely monitoring the detection of Counterfeit Notes and maintaining the record of the same. **Ensuring** that only properly sorted and **machine examined banknotes are fed into the ATMs / issued over the counters** and to put in place adequate safeguards, including surprise checks, both during the processing and in transit of notes.

Forged Note Vigilance Cell shall submit status report on a quarterly basis covering the aforesaid aspects to the Chief General Manager, Department of Currency Management, Reserve Bank of India, Central Office, Amar Building, Fourth Floor, Sir P. M. Road, Fort, Mumbai 400 001, and to the Issue office of the Regional office of Reserve Bank under whose jurisdiction the FNV Cell is functioning, **within a fortnight** from the conclusion of the quarter under report. The said report should be sent by mail. No hard copy need be sent.

In order to update the record of the addresses of the Forged Note Vigilance Cells, the bank shall furnish by **e-mail**, in the prescribed format, the address etc. particulars to the Reserve Bank every year, as on 1st July. No hard copy need be sent.

- I. Provision of Ultra-Violet Lamp and Other Infrastructure-** With a view to facilitating the detection of counterfeit notes, all bank branches / identified back offices should be **equipped with ultra-violet lamps / other appropriate banknote sorting / detection machines**. In addition, all currency chest branches should be equipped **with verification, processing and sorting machines** and should be used to their optimum capacity. Such machines should conform to the guidelines on '**Note Authentication and Fitness Sorting Parameters**' prescribed by the Reserve Bank in May 2010.
- J. Reporting of Data to RBI-**
1. **By Bank Branches-** Data on counterfeit notes detected by all the branches of the bank shall be reported in the prescribed format, on a monthly basis. A statement showing the details of counterfeit notes detected in the bank branches during the month shall be compiled and forwarded to the **Issue Office of Reserve Bank** concerned so as to reach them by 7th of the next month. Under Rule 3 of **Prevention of Money Laundering Rules, 2005**, Principal Officers of banks are also required to report information on cash transactions where forged notes have been used as genuine note to the **Director, FIU-IND, Financial Intelligence Unit- India, 6th Floor, Hotel Samrat, Chanakyapuri, New Delhi-110021, within seven working days**. A "nil" report may be sent in case no counterfeit has been detected during the month.
 2. **By Co-operative Banks and Regional Rural Banks-** Data on Counterfeit Notes detected by branches of Co-operative Banks and Regional Rural Banks should be furnished on monthly basis to the respective **Issue Office of Reserve Bank** in prescribed format.
- K. Preservation of Counterfeit Notes Received from Police Authorities-** All Counterfeit Notes received back from the police authorities/courts may be carefully **preserved in the safe custody** of the bank and a record thereof be maintained by the branch concerned. Forged Note Vigilance Cell of the bank shall also maintain a branch-wise consolidated record of such Counterfeit Notes. These Counterfeit Notes at branches should be subjected to **verification on a half-yearly basis** (on 31st March and 30th September) by the Officer-in- Charge of the bank office concerned. They should be **preserved for a period of three years from the date of receipt from the police authorities**. They may thereafter be sent to the concerned Issue Office of Reserve Bank of India with full details. Counterfeit notes, which are the subject matter of **litigation in the court of law, should be preserved with the branch concerned for three years after conclusion of the court case**.
- L. Detection of Counterfeit Notes - Training of Staff-** the Controlling Offices / Training Centers should also organise / conduct training programmes on the security features of banknotes for members of staff to enable detection of counterfeit notes at the point of receipt itself. The banks should ensure that all bank personnel handling cash are trained on features of genuine Indian bank notes. The Reserve Bank will also provide faculty support and training materials.

Some Important Case Laws on Counterfeiting of Currency in India

Key points that prosecution need to prove along with necessary steps to be ensured by prosecution to establish the guilt:

Essentiality of proving mens rea in cases of fake currency notes:-

1. In **Umashanker v. State of Chhattisgarh**²⁶, where Division Bench of Supreme Court of India comprising S.S.M. Quadri and S.N. Phukan, JJ. while **setting aside the conviction**, at para 8 of the impugned order, **held that “8. A perusal of the provisions, extracted above, shows that mens rea of offences under Sections 489B and 489C is, 'knowing or having reason to believe the currency-notes or bank-notes are forged or counterfeit'. Without the afore-mentioned mens rea selling, buying or receiving from another person or otherwise trafficking in or using as genuine forged or counterfeit currency-notes or bank-notes, is not enough to constitute offence under Section 489B of I.P.C. So also possessing or even intending to use any forged or counterfeit currency-notes or bank-notes is not sufficient to make out a case under Section 489C in the absence of the mens rea, noted above.....”**
2. **Absence of mens rea and requisite knowledge of fake currency-** In **Rony Dubey v. State of West Bengal**²⁷, it was held that:- “There was no material before Court to show that the appellant had the **requisite knowledge** that the three fifty rupee notes found from his possession were fake notes nor was there anything to suggest that with the knowledge that they were fake he intended to use them unless it was found that the accused had the knowledge or reason to believe that the said questioned note was a forged one, the question of his palming it off as genuine could not arise. Therefore, the **conviction under Section 489-C was altogether bad.”**
3. **Presence of mens rea- When counterfeit currency notes and incriminating articles seized from the accused and counterfeit coin recovered from co- accused, co- accused was liable to be punished u/s. 489-B and 489-C of I.P.C-In Golo Mandla Ram Rao and Ors. v. State of Jharkhand**²⁸, where the counterfeit currency notes and incriminating articles were recovered from the possession of the accused and only the counterfeit coins from the possession of the co-accused. It was **held** that the persons in possession of counterfeit coins were having the **mensrea** and were **liable to be convicted** under Section 489-B and 489-C of I.P.C.

Regarding possession of huge quantity of fake currency note

- a. Division Bench of **Gujarat High Court** at para 10 of the impugned order in **Rayab Jusab Sama v. State of Gujarat**²⁹, division bench of Gujarat High Court comprising R.K. Abichandani and A. Dave JJ. **held** that-“10..... This submission(of defese) is wholly erroneous because the evidence clearly establishes that the appellant was found carrying 250 fake currency notes on a public road in the city of Bhuj concealed in a Thela beneath cloth pieces as alleged in the charge. He was, therefore, **transporting** the said currency notes at the time when he was apprehended with them. Therefore, this is not a case of mere dormant possession, but, it is a case of active transportation of the currency notes, which would fall within the expression 'traffics in such currency notes.' Section 489-B of the Indian Penal Code clearly contemplates the cases where the counterfeit currency notes are received from any

other person as also the cases where a person **traffics in such currency** notes knowing or having reason to believe the same to be forged or counterfeit. In our opinion, these **ingredients of the offence** under S.489-B are clearly established against the appellant. He was not only carrying 250 counterfeit currency notes on 9.4.1996 but he had concealed 101 other such counterfeit currency notes which he later discovered before the Panchas on 12.4.1996. It is, therefore, clearly established that the appellant was trafficking in these counterfeit currency notes which he had received from some source. The appellant is, therefore, rightly held guilty of the offences under Ss. 489-B and 489-C of the Indian Penal Code by the trial Court and we are in complete agreement with the reasoning adopted by the trial Court for reaching its conclusions on this count....."

- b. Similarly in **Chanduri Lakshmanachari v. State of A.P.**³⁰ - Andhra Pradesh High Court **held** that in a case of recovery of **huge quantity** of counterfeit notes from the possession of the accused itself justifies **presumption of guilt** against the accused.

Non eligibility of regular bail when the suspect was arrested with huge amount of counterfeit currency notes:

- a. In **Bipin Kumar Jayantilal Muchhala v. State of Gujarat**³¹, while rejecting the appeal of regular bail of the appellant in a case of counterfeiting of Indian Currency Notes his lordship Z. K. Saiyed J. of **Gujarat High Court** held-“.....I have gone through the charge-sheet papers. Prima-facie the involvement of the present applicant is established and under the discovery panchnama, 94 fake currency notes of Rs.1000/- denomination each have been found from the possession of the applicant accused. From the perusal of the papers it transpires that the allegations against the applicant are very serious in nature and the **gravity of offence is quite obvious and it relates to the economy and economical transaction of the State as well as the whole country and it will affect the financial schemes of the nation.** Therefore, the Court cannot enter into the moral issue when the alleged offence is harmful to the economy of nation. When in such type of recovery of used **fake currency notes** made out against the accused, then **no leniency** can be shown to such type of offender.....”

Non eligibility for temporary bail for taking treatment outside prison hospital by a convicted prisoner in counterfeiting currency notes case and necessary direction to prison authority for the treatment of such convicts-

1. In **Jaipal JayantKumar v. State of Gujarat** and Anr.³², While **rejecting appeal** of the appellant Division Bench of Gujarat High Court comprising J. R. Vhora and J. C. Upadhyay JJ. **held** –“What is material is whether appropriate treatment is provided to the prisoner by the Jail Authorities. **Curing of a disease is all-together a different thing and may be dependent upon many other factors and that, hardly, may be a ground for a temporary bail to a convict-prisoner, who is undergoing sentence for a very serious economic offence against the Country of faking currency notes. It is hazardous in the given circumstances to release such a convict-prisoner on temporary bail on such grounds.** We have seen the medical certificate, being Outward No.680/2008 dated 24th July, 2008 produced

on record and accordingly pain in abdomen to convict-prisoner since last 4-5 months has resulted in weight loss and weakness and, therefore, he requires regular follow up for his chest infection and operative procedure for appendicitis along with good nourishment. **The Jail Authorities are directed to strictly adhere to medical opinion and treat the convict-prisoner accordingly and, therefore, there is no cause for releasing the convict-prisoner on temporary bail.**"

No mercy to the offender of counterfeiting of currency notes:

1. In **Anil Kumar @ Iqbal @ Shyam Sunder v. State of Rajasthan**³³ with **Kapil Madan v. State of Rajasthan**³⁴ his lordship R. S. Chauhan J. of Rajasthan High Court while **rejecting** the appeal of the appellants observed-“.....**Trafficking fake currency adversely affects the national security as it undermines the political and economic stability of the country. Since trafficking fake currency is on the rise, a serious view of the offence has to be taken in the national interest. Those who undermines the foundation of the country, they have to be dealt with severely. Thus, no mercy can be shown to them by this Court.**”

Although Supreme Court of India in **Gudikanti Narasimhulu and Ors v. Public Prosecutor**, High Court of Andhra Pradesh³⁵ **held** that '**bail is rule and jail is exception**' but in above mentioned paras different High Courts were **not inclined to show soft corner** to the **offenders of counterfeiting of currency notes** because such offence is directly relating to economic well being of the country as well as political stability. Even in **Pramod Kumar Saxena v. Union of India & Others**³⁶, Hon'ble Apex Court has **held** that mere long period of incarceration in jail would not per se be illegal, if the accused has committed offence, he has to remain behind the bars, as such detention in jail even as **under trial prisoner would not be in violation of Article 21 of the Constitution of India.**

Nationwide data [2011- 2015] on F.I.C.N

Table-1

Year wise data on Total No. of confiscated by law enforcing agencies and Detected FICN by R.B.I, Face value of Confiscated FICN & Recovered by R.B.I (in Rs.), No. of FIR lodged, Total Arrest (Persons) [2011- 2015]

Year	Total No. of confiscated F.I.C.N by law enforcing agencies and Detected F.I.C.N by R.B.I	Face value of Confiscated F.I.C.N & Recovered by R.B.I (in Rs.)	No. of FIR lodged	Total Accused (Persons)
2011 ³⁷	6,01,219	27,09,84,566	2,129	1,569
2012 ³⁸	9,27,789	45,24,12,319	1,904	1,518
2013 ³⁹	8,46,966	42,90,25,555	1,509	1,265
2014 ⁴⁰	7,09,551	36,11,52,515	1,096	1,32
2015 ³⁹	6,32,517	30,43,56,115	788	816

From 2011 to 2012 **growth** in terms of Face value of **confiscated** F.I.C.N by law enforcing agencies and Recovered from Banking Channels as reported by R.B.I was observed and from 2013- 2015 downwards trends were observed in this regard.

Table-2

**Denomination wise data along with Face value of F.I.C.N (Seized by Law Enforcing Agencies) [2011- 2015]
(All India)**

Year	Rs 1000/= (No.)	Rs.500/= (No.)	Rs.100/= (No.)	Rs. 50/= (No.)	Others (No.)	Total No.	Face Value (Rs/=)
2011 ³⁷	53,033	1,18,118	75,782	22,313	519	2,69,765	12,07,92,811
2012 ³⁸	1,05,744	3,41,840	1,26,832	16,825	775	5,92,016	29,01,99,202
2013 ³⁹	89,836	1,73,879	72,624	5,837	23,120	3,65,296	18,44,65,160
2014 ³⁹	65,422	1,04,083	53,340	2,786	2,982	2,28,615	12,29,55,425
2015 ³⁹	77,229	98,004	56,826	2,811	761	2,35,631	12,67,38,315

In terms of Face value of seized F.I.C.N from 2011- 15 a **mixed trend** was observed, Maximum number of high value (i.e. Rs 1000/= & Rs. 500/= and Rs 100/=) were seized in 2012. This is in consonance with the intention of the offenders to make as much money as feasible with the use of lesser number of notes. It ensures pretty high rate of returns and also tempts the potential trafficker to accept the job in trafficking of fake currency notes higher denomination.

Table-3

**Denomination wise data along with Face value (Detected at Banking Institution) [2011- 2015]
(All India)**

Year	Rs. 1000/= (No.)	Rs. 500/= (No.)	Rs.100/= (No.)	Rs. 50/= (No.)	Others (No.)	Total No.	Face Value (Rs/=)
2011 ³⁷	46,017	1,90,141	86,913	8,207	176	3,31,454	15,01,91,755
2012 ³⁸	59,689	1,88,477	78,226	9,208	173	3,35,773	16,22,13,117
2013 ³⁹	1,04,931	2,55,878	1,13,241	7,205	415	4,81,670	24,45,60,395
2014 ³⁹	1,09,066	2,30,598	1,35,633	5,281	358	4,80,936	23,81,97,090
2015 ³⁹	81,207	1,63,154	1,45,892	4,290	2,343	3,96,886	17,76,17,800

In terms of Face value of detected F.I.C.N **mixed trend** was observed during the period (2011- 2015), highest face value of F.I.C.N was detected in Banking channel was observed in the year 2013. This again works in favour of the racketeers to ensure very high rate of return in this business of illicit trafficking in counterfeit currency.

Table-4

**State wise data of No. of FIR vs. Total Accused in F.I.C.N case
[2011-2015]**

Sl. No	State/ U.T	2011 ³⁷		2012 ³⁸		2013 ³⁹		2014 ³⁹		2015 ³⁹	
		No. of F.I.R	Total Accused	No. of F.I.R	Total Accused	No. of F.I.R	Total Accused	No. of F.I.R	Total Accused	No. of F.I.R	Total Accused
1	A & N ISLANDS	0	0	1	0	0	0	1	2	1	0
2	ANDHRA PRADESH	186	195	172	246	170	242	108	149	74	112
3	ARUNACHAL PRADESH	2	2	2	2	0	0	1	0	2	5
4	ASSAM	70	81	55	63	81	72	49	54	61	85
5	BIHAR	46	52	29	53	31	44	19	28	10	16
6	CHANDIGARH	0	0	2	0	0	0	0	0	1	1
7	CHHATTISGARH	67	61	55	38	29	29	0	0	12	3
8	D & N HAVELI	2	0	0	0	1	0	1	2	0	0
9	DAMAN & DIU	1	0	0	0	1	2	0	0	0	0
10	DELHI	42	64	61	73	67	50	66	42	66	22
11	GOA	30	19	16	3	19	0	13	5	6	3
12	GUJARAT	250	57	213	133	143	83	95	49	53	32
13	HARYANA	14	23	15	30	16	25	37	17	20	38
14	HIMACHAL PRADESH	3	4	1	2	12	21	2	2	1	4
15	JAMMU & KASHMIR	39	73	17	30	26	45	10	11	9	12
16	JHARKHAND	22	34	8	7	7	21	4	7	0	0
17	KARNATAKA	95	150	80	85	53	NA	46	2	1	0
18	KERALA	53	72	60	38	49	35	59	82	26	20
19	LAKSHADWEEP	0	0	0	0	0	0	0	0	0	0
20	MADHYA PRADESH	19	27	19	31	29	63	25	56	22	52
21	MAHARASHTRA	331	175	279	204	231	186	193	173	144	148
22	MANIPUR	12	12	2	2	1	1	1	1	10	9
23	MEGHALAYA	14	19	18	21	15	19	10	9	6	6
24	MIZORAM	1	1	6	7	6	11	7	11	9	9
24	NAGALAND	8	16	7	10	5	18	4	10	6	3
26	ORISSA	4	7	6	10	14	28	4	4	9	19
27	PUDUCHERRY	4	0	5	7	5	1	2	0	4	5
28	PUNJAB	51	91	28	51	29	41	5	10	7	9
29	RAJASTHAN	46	61	49	69	9	17	165	96	18	0
30	SIKKIM	1	5	1	1	1	1	4	6	1	0
31	TAMIL NADU	276	83	373	71	288	25	165	96	103	64
32	TELANGANA							54	78	20	56
33	TRIPURA	9	14	9	17	17	22	4	4	0	0
34	UTTAR PRADESH	208	108	176	148	124	129	44	66	79	74
35	UTTARAKHAND	24	19	17	21	30	34	11	10	6	8
36	WEST BENGAL	199	44	122	35	NR	NR	NR	NR	1	1
Total		2129	1569	1904	1518	1509	1265	1096	1372	788	816

During the period 2011- 2015 **downward trend** was observed in terms of registration of F.I.R relating to F.I.C.N cases, Maximum number of F.I.R were registered in the year 2011 (2129) and in 2015 number of F.I.R registered were 788 only. During the same period **downwards trend** was observed in no. of **arrested persons in 2011** were **1569** where as in **2015** it was **816**.

Table-5
State wise data of detected FICN [Face Value]
[2011-2015]

Sl. No	State	Year				
		2011 ³⁷	2012 ³⁸	2013 ³⁹	2014 ³⁹	2015 ³⁹
1	A & N ISLANDS	0	500	0	25100	15000
2	ANDHRA PRADESH	8985440	14537980	35742390	23869040	19073530
3	ARUNACHAL PRADESH	11000	19300	0	1000	138500
4	ASSAM	1828650	2056140	4100735	5040810	10760765
5	BIHAR	2636325	5321060	10022100	8710340	7513650
6	CHANDIGARH	11052360	12855660	11150240	11122100	5347800
7	CHHATTISGARH	278350	649450	1366850	0	283900
8	D & N HAVELI	6500	0	1500	77000	0
9	DAMAN & DIU	1000	0	12000	0	0
10	DELHI	49598680	209432484	103586240	90980880	93113960
11	GOA	395320	141200	1229550	269300	86200
12	GUJARAT	9553180	10198280	29002540	32166390	30180920
13	HARYANA	147300	1949200	15990760	937850	12967700
14	HIMACHAL PRADESH	111000	5500	391100	10500	18000
15	JAMMU & KASHMIR	3863590	3174350	3526910	2029750	995900
16	JHARKHAND	265910	375600	1088000	174500	0
17	KARNATAKA	14751600	30306740	26671680	15818200	138000
18	KERALA	3018160	2932090	6382570	8973260	14354060
19	LAKSHADWEEP	0	0	0	0	0
20	MADHYA PRADESH	2230840	2473110	9824500	7745620	7147320
21	MAHARASHTRA	21140710	24810710	60717475	59843020	14473530
22	MANIPUR	26000	1500	1000	13000	259500
23	MEGHALAYA	286500	570150	478500	85500	241000
24	MIZORAM	3000	752000	882000	695500	1777000
24	NAGALAND	126400	355500	907460	187100	122500
26	ORISSA	689820	450070	2627650	1891050	3671520
27	PUDUCHERRY	9600	413100	80020	5050	69200
28	PUNJAB	10847550	5378200	8925800	177300	1294900
29	RAJASTHAN	10985815	12452030	7897225	9126610	5862970
30	SIKKIM	9000	22000	54500	277585	7000
31	TAMIL NADU	33046810	45262425	37815110	30840350	21950450
32	TELANGANA				4728100	2581200
33	TRIPURA	75500	88500	594000	65300	0
34	UTTAR PRADESH	26420495	35761780	28810310	30123140	32860790
35	UTTARAKHAND	215550	317800	1224400	112070	32100
36	WEST BENGAL	58366611	29347910	17920440	15030200	17017250
	Total	270984566	452412319	429025555	361152515	304356115

During the period 2011-2015, in the states of **West Bengal, U.P., Maharastra, Karnataka, Delhi and Chandigarh, Andhra Pradesh**, the value of detected as well as seized F.I.C.N, had crossed the level of one crore. In maximum states value of detected and seized F.I.C.N had reached the level of seven digit (**Ten lakhs and more**). **Lakshadweep** is the only U.T among the States and U.T.s where no F.I.C.Ns either detected in Banking Channels or seized by law enforcing agencies.

Table-6

State/ U.T wise data of Face Value of F.I.C.N (Detected by R.B.I and Seized by Law Enforcing Agencies) [2011- 2015]

Sl. No	State/ U.T	2011 ³⁷		2012 ³⁸		2013 ³⁹		2014 ³⁹		2015 ³⁹	
		R.B.I	Police	R.B.I	Police	R.B.I	Police	R.B.I	Police	R.B.I	Police
1	A & N ISLANDS	@	0	@	500	@	0	@	25100	@	15000
2	ANDHRA PRADESH	989000	799644 0	102763 0	135103 50	111160 10	246263 80	1496 0440	890860 0	102228 70	885066 0
3	ARUNACHAL PRADESH	&	11000	&	19300	&	0	&	1000	&	138500
4	ASSAM	349550	147910 0	384640	167150 0	134643 5	275430 0	3306 560	173425 0	614796 0	461280 5
5	BIHAR	381900	225442 5	324400	499666 0	732855 0	269355 0	7218 660	149168 0	709557 0	418080
6	CHANDIGARH	110523 60	0	127692 60	86400	111502 40	0	1112 2100	0	533330 0	14500
7	CHHATTISGARH	~	278350	~	649450	~	136685 0	~	0	~	283900
8	D & N HAVELI	\$	6500	\$	0	\$	1500	\$	77000	\$	0
9	DAMAN & DIU	\$	1000	\$	0	\$	12000	\$	0	\$	0
10	DELHI	457829 90	381569 0	380353 42	171397 142	458799 80	577062 60	4462 2400	463584 80	416034 90	515104 70
11	GOA	~	395320	~	141200	~	122955 0	~	269300	~	86200
12	GUJARAT	122819 0	832499 0	131862 0	887966 142	204753 30	852721 0	2040 5160	117612 30	180501 20	121308 00
13	HARYANA	#	147300	#	194920 0	#	159907 60	#	937850	#	129677 00
14	HIMACHAL PRADESH	#	111000	#	5500	#	391100	#	10500	#	18000
15	JAMMU & KASHMIR	723250	314034 0	498250	267610 0	797810	272910 0	6437 50	138600 0	578500	417400
16	JHARKHAND	}	265910	}	375600	}	108800 0	}	174500	}	0
17	KARNATAKA	934086 0	541074 0	175331 80	127735 60	187687 30	790295 0	1329 1060	252714 0	0	138000
18	KERALA	556430	246173 0	485300	244679 0	434677 0	203580 0	7667 830	130543 0	118356 20	251844 0
19	LAKSHADWEEP	{	0	{	0	{	0	{	0	{	0
20	MADHYA PRADESH	141709 0	813750	339100	213401 0	661844 0	320606 0	5086 650	265897 0	530532 0	184200 0
21	MAHARASHTRA	995681 0	111839 00	996808 0	148426 30	451897 30	155277 45	4189 1110	179519 10	490127 0	957226 0
22	MANIPUR	&	26000	&	1500	&	1000	&	13000	&	259500
23	MEGHALAYA	&	286500	&	570150	&	478500	&	85500	&	241000
24	MIZORAM	&	3000	&	752000	&	882000	&	695500	&	177700 0
24	NAGALAND	&	126400	&	355500	&	907460	&	187100	&	122500
26	ORISSA	660820	29000	420970	29100	213805 0	489600	1891 050	52200	299932 0	672200
27	PUDUCHERRY	^	9600	^	413100	^	80020	^	5050	^	69200
28	PUNJAB	#	108475 50	#	537820	#	892580 0	#	177300	#	129490 0
29	RAJASTHAN	827016 0	271565 5	740783 0	504420 0	743894 0	458285	7075 010	205160 0	573507 0	127900
30	SIKKIM	@	9000	@	22000	@	54500	@	277585	@	7000
31	TAMIL NADU	222046 80	108421 30	269308 45	183315 80	203980 70	174170 40	1855 3160	122871 90	182536 60	369679 0
32	TELANGANA							[472810 0	[258120 0
33	TRIPURA	&	75500	&	88500	&	594000	&	65300	&	0
34	UTTAR PRADESH	219714 65	444903 0	274971 70	826461 0	236468 70	516344 0	2548 4150	463899 0	226314 80	102293 10
35	UTTARAKHAND	%	215550	%	317800	%	122440 0	%	112070	%	32100
36	WEST BENGAL	153062 00	430604 11	172725 00	120754 10	179204 40	NR	1503 0200	NR	169242 50	93000
Total		150191 755	120792 811	162213 117	290199 202	244560 395	184465 160	2381 9709 0	122955 425	177617 800	126738 315
Grand total:		27,09,84,566		45,24,12,319		42,90,25,555		36,41,52,515		30,43,56,115	

In 2011, 2013, 2014, 2015 **maximum Face value of detected F.I.C.N was in banking sector**, except in 2012 where Face value of seized F.I.C.N by law enforcing agencies was more than the detected Face value of F.I.C.N in banking sector. It is quite natural as the thousands of Bank branches have far more opportunities to detect the same in the course of their normal duty of handling cash during public dealing hours than the enforcement agencies that operate on information from sources.

Table-7
State wise data on detection of number of F.I.C.N (R.B.I & Law Enforcing Agencies)
[2011- 15]

Sl. No	State/ U.T	2011 ³⁷		2012 ³⁸		2013 ³⁹		2014 ³⁹		2015 ³⁹	
		R.B.I	Police	R.B.I	Police	R.B.I	Police	R.B.I	Police	R.B.I	Police
1	A & N ISLANDS	@	0	@	1	@	0	@	26	@	15
2	ANDHRA PRADESH	2392	18217	2368	27594	25722	50222	37043	16656	24217	13737
3	ARUNACHAL PRADESH	&	21	&	49	&	0	&	2	&	269
4	ASSAM	748	2506	773	4090	2876	4243	6377	2845	12796	6856
5	BIHAR	1523	18918	1222	11277	16426	7440	15846	2432	16279	1185
6	CHANDIGARH	37264	0	40683	193	37071	0	33569	0	15947	27
7	CHHATTISGARH	~	1030	~	1998	~	2840	~	0	~	498
8	D & N HAVELI	\$	11	\$	0	\$	3	\$	77	\$	0
9	DAMAN & DIU	\$	1	\$	0	\$	12	\$	0	\$	0
10	DELHI	93332	16710	73994	366821	87711	127381	87985	95420	86830	103856
11	GOA	~	680	~	339	~	2056	~	425	~	119
12	GUJARAT	2891	14463	2650	16489	35526	13954	35011	20073	30735	18237
13	HARYANA	#	783	#	3485	#	35120	#	3173	#	26170
14	HIMACHAL PRADESH	174	174	#	11	#	1263	#	17	#	18
15	JAMMU & KASHMIR	2320	4535	1274	5927	2530	4207	1903	2744	1633	824
16	JHARKHAND	}	466	}	627	}	1435	}	328	}	0
17	KARNATAKA	15905	11055	27817	22804	29510	12228	22002	4142	0	138
18	KERALA	981	5152	833	4296	6490	6592	11577	2349	20620	2977
19	LAKSHADWEEP	{	0	{	0	{	0	{	0	{	0
20	MADHYA PRADESH	4550	3952	1641	7921	7705	24480	12865	6216	12884	2083
21	MAHARASHTRA	19793	20553	19021	25340	76606	28015	69748	26683	14385	24237
22	MANIPUR	&	33	&	2	&	1	&	13	&	294
23	MEGHALAYA	&	513	&	1034	&	762	&	157	&	328
24	MIZORAM	&	6	&	1107	&	1164	&	948	&	1900
24	NAGALAND	&	216	&	687	&	985	&	300	&	245
26	ORISSA	2113	41	969	53	4479	1262	4136	75	10254	1516
27	PUDUCHERRY	^	19	^	583	^	150	^	9	^	131
28	PUNJAB	#	18798	#	8550	#	14784	#	227	#	3042
29	RAJASTHAN	19835	7936	16990	7883	17289	1158	16124	4953	12985	345
30	SIKKIM	@	18	@	22	@	107	@	351	@	7
31	TAMIL NADU	40397	18247	48297	31955	33122	25678	31276	18338	34933	6728
32	TELANGANA								9806	[4928
33	TRIPURA	&	147	&	162	&	863	&	109	&	0
34	UTTAR PRADESH	58267	12409	65933	17646	58211	12010	68342	9472	71725	14573
35	UTTARAKHAND	%	431	%	3698	%	1656	%	249	%	162
36	WEST BENGAL	29143	91724	31308	19372	31326	NR	27132	NR	30663	186
Total		331454	269765	335773	592016	481670	365296	480936	228615	396886	235631
Grand total:		601219		162213117		846966		709551		632517	

@ - Data sent by RBI Kolkata, ~ -Data sent by RBI Nagpur/Nv. Mumbai, \$ - Data sent by RBI Ahmedabad, # - Data sent by RBI Chandigarh, { - Data by RBI Thiruvananthapuram, } - Data sent by RBI Patna, & - Data sent by RBI Guwahati, ^ - Data sent by RBI Chennai, % - Data sent by RBI Kanpur, [- Data sent by RBI Hyderabad, **NR**- Data Not Received

Similarly in 2011, 2013, 2014, 2015 **maximum numbers of detected F.I.C.N was in banking sector** except in 2012 where numbers of F.I.C.N detected in banking channels were less than the number of seized F.I.C.N by Law enforcing agencies.

Objectives behind production and circulation of counterfeit currency:

The **main objectives** behind production and circulation, as also conclusively held by our constitutional courts while deciding very many cases involving counterfeit currency, can be classified into categories in the succeeding paras. The reasoning accepted by the judicial courts while upholding the prosecution cases can best be appreciated as part of judgment delivered. Hence **relevant case laws have** been selected to drive home the motive(s) established by the investigation agencies and also duly accepted by the courts at trial/appeal stage. Some of the **notable case laws** depicting the **objectives** are, therefore, described in brief as under -

1. **Waging war against the nation:** The very serious nature of the impact of the offence(s) of counterfeit currency by committed wilfully by some one individually or in combination with other co-accused, which is very often the case, and its nationwide spread, tantamounts to waging war against the lawful authority of a country. The same has been held by the highest judicial forum in our country from time to time. Some illustrative case laws are discussed in the following para-
 - a. **In State of Maharashtra v. Rajendra Shantilal Nahar⁴⁰**, while accepting the appeal of the appellant (i.e. State of Maharashtra) for cancelling the order of bail granted by MOCCA court to the respondent, his lordship B.H. Marlapalle, J. of Bombay High Court at para 14 of the impugned order observed-“14. **The charge of obtaining and circulating fake currency notes is nothing short of waging a war against the Nation from inside and this economic offence hits at the very root of the economy of this Nation. No leniency is required to be shown by the Criminal Law Justice System to such accused. The rights of such an accused for being released on bail, or, for that matter, the protection under Article 21 of the Constitution of India must yield to the National Interest.....**”
 - b. **In Savinder Kaur v. State (U.T., Chandigarh)⁴¹** while **rejecting** the petition of the petitioner for granting bail in F.I.C.N case his lordship Mahesh Grover J. of Punjab-Haryana High court observed-“..... In fact, the facts reveal that the petitioner is the vital and crucial link in a chain where a number of persons are involved in flooding the country with the counterfeit currency. **The heavy amount recovered from her is an indicator of this fact. In the opinion of this Court, it is an extremely serious offence which not only reflects on the attempt to affect the economy of the country, but has other ramifications in the present scenario where such like currency is used to subvert the security interest of the country as well.**”

2. Attempt to subvert the financial system of a sovereign country:

In **Rajim Sk & Anr vs the State of West Bengal**⁴², while **rejecting the appeal** of the appellants against the order of conviction his Lordship Indrajit Chatterjee J. of Calcutta High Court in his impugned order also underlined the deleterious impact of the circulation of counterfeit currency in subverting the crucial financial system of a country. His Lordship observed-“..... Before I part with the judgment I like to say that the Fake Indian Currency Notes are **damaging the fiber of the financial system of our country**. The economic prestige has also been lowered down in the neighbouring countries. The countries like Bhutan and Nepal will not accept any Indian currency notes of the denomination of Rs.500/- or 1,000/- on the apprehension that those may be fake." His Lordship also felt constrained to draw the attention of the Director General of the state Police to take note of the inadequacies in the investigation wherein the carriers alone are being proceeded against while no worthwhile efforts are visible in nabbing the kingpins behind the large illicit trafficking in the counterfeit currency.

His Lordship observed: " **This court is coming across several such cases of FICNs and unfortunately only the carriers of such notes are apprehended by the police or other such agencies like BSF etc.** It is the duty of the investigating agency to unearth from whose possession such carriers are getting such FICNs or for whom those were meant for that is who would have been the receivers of such FICNs from such carriers. **In not a single case of this nature that is under Section 489 B or 489C, the investigating agency has failed to investigate or crack wherefrom those notes were collected by the receiver or for whom those were meant for.** If the police cannot reach up to that extent, such type of crime cannot be curbed. The investigating agency should not keep in its mind what would be the result of trial against those persons without any recovery being made from them. **Let this matter be placed before the Director General and Inspector General of Police, West Bengal at Bhavani Bhawan, Alipore, Kolkata - 27, to introspect this problem and he in his turn will circulate this to the other Heads of Police Administration in his control on whom the charge of investigation have been vested, like the Inspector General of Police, CID, West Bengal, the Commissioners of Police of different Police Commissionerates, the Superintendents of Police of all the districts of West Bengal etc. for such introspection.** Today, the Indian citizens are in fear while accepting either 500 rupee note or 1000 rupee note from unknown persons and in some occasions the depositors of such currency notes are to mention the numbers of those notes, name and address of such depositors before those are deposited to the authority. This cannot be an example of healthy economy or trust on a citizen by the other citizen. **This fear must be taken care of by the Police Administration of the State. Simple arrest of some carriers who will be out of jail after serving some period of detention cannot be a panacea for this. I feel that it is my duty to place this paragraph to the Director General and Inspector General of Police, West Bengal, for the purpose noted above, this has reference to English Bazar Police Station Case Number 547 of 2011 dated 29.08.2011 in which FICNs to the tune of two lakh was seized from the possession of two accused convicts.....”**

3. **Terror Finance:** The proceeds of the crimes related to counterfeiting of currency also provide resources to the terror outfits to finance commission of the terror related crimes. It has been established in the studies of various agencies noted as under-

a. Findings of authoritative figures, Parliamentary proceeding report and reports of foreign agency in support of relation between fake currency and terror finance-

Manufacture/Import and circulation of Fake Currency are carried out by **organized syndicates** worldwide. It has been observed from different reports as well as observation of authoritative figures that income generated from circulation of fake currency notes is also used for funding terrorism. Colin Powell former Secretary of States, U.S. said that **“Money is the oxygen of terrorism”**.⁴³ Phillips (2006)⁴⁴ observed counterfeiting of currency notes as “.....the world's fastest growing crime wave” Chadha (2015)⁴⁵, Garge (2015)⁴⁶ also mentioned the role of Fake Currency Notes for the purpose of fuelling terrorism in their publications. International Narcotics Control Strategy Report (2011), Vol II47, FATF Report (June 2013)⁸ also acknowledged the use of fake currency by Indian Terror outfits (especially in case of Mumbai Terror Attack and Terror financing by using IBB of Malda district of West Bengal by using over ground workers of terror outfits of J&K).

Finacial Action Task Force (FATF) Report (June 2013) also informed about arrest of four Pakistani and seven Bangladeshi by Dhaka Metropolitan Police on charges of conspiring to carry out subversive activities in Bangladesh and **illegal possession of counterfeit Indian currency notes**. The **seizure included counterfeit Indian currency notes with a face value of INR 12.⁹ million, US\$ 4,000 in cash, a small amount of Pakistani currency and some explosive materials.**⁸

During parliamentary proceeding use of fake currency in terrorists activity in India was also acknowledged by Ministry of Home Affairs in 2013.⁴⁸ Since INCSR (2011), Vol II⁴⁴ had mentioned that the source of production of F.I.C.N is Pakistan; therefore it is necessary to examine the role of I.S.I with respect to trafficking of fake currency in India. Long back Report of the Group of Ministers on National Security (2001)¹² had mentioned about the base of ISI in Bangladesh and Nepal. Role of I.S.I to instigate terrorism in Indian Territory by means of providing logistics, training and finance and using of porous IBB, INB, IMB by the Indian terror groups for subversive activity in India can also be referred from the information tabled by M.H.A. in Lok Sabha in 2015.

b. Judicial observation regarding findings of fake currency from terrorists -

In **Mohd. Maroof @ Ibrahim and Ors v. State**⁵⁰, while **rejecting bail application** of the appellants His Lordship Manmohan Singh J. of **Delhi High Court**, in his impugned order mentioned that the appellants were arrested on the basis of information gathered from one Mohd. Quateel Siddiqui @Sajan @Siraj @Vivek Mishra (since expired), who was arrested with possession of arms, ammuniton, fake Indian currency and other incriminating articles near Anand Vihar Inter State Bus Terminal on 21st November, as a

result of that FIR No.54/11 dated 22nd November, 2011 under Sections 489B/489C IPC and Section 25 of Arms Act was registered at Police Station Special Cell, New Delhi.. Moreover Mohd. Quateel Siddiqui @Sajan @Siraj @Vivek Mishra (since expired) was a member of "Indian Mujahiddin" (IM), a banned terrorist outfit and was involved in various terrorist activities, i.e. German Bakery Blast in Pune, 2010, Chinnaswami Stadium blast at Bengaluru, 2010 and Jama Masjid attacks in Delhi, 2010. Even from Samba of J&K fake currency notes were recovered from the deceased terrorists who were trying to infiltrate to Indian territory from Pakistan.⁵¹ Moreover the possibility of relationship between the traffickers of fake currency and terrorist out fits also cannot be ruled out.⁵²

c. Role of Dawood Ibrahim gang and ISI in financing terror activities in India in recent times-

In **Vinay Kumar and Anr. v. State of Karnataka**⁵³, while **quashing** the petition filled by the appellants u/s. 482 of Cr. P. C to quash proceeding against them in Crime No.275/2010 (C.C.No.48974/2010) of CCB (OCW) on the file of the I Addl. Chief Metropolitan Magistrate, Bangalore., His Lordship V. Suri Appa Rao J. of Karnataka High Court at para 2 of the impugned order had mentioned –“2.... The respondent-Police registered the case in Crime No.275/2010 against the petitioners and others for the offences punishable under Sections 120B, 121, 121A IPC and Section 18 of The Unlawful Activities (Prevention) Act, 1967. In the complaint, it is alleged that the Pakistan inter services intelligence agency has hatched conspiracy to establish contact with Maoist elements in India through underworld Chota Shakeel operating for Dawood Ibrahim in concert with ISI to organize terrorist act in India. It is further alleged that in that connection, one Altaf @ Rakesh from Dubai contacted Vinay Kumar to get in touch with leaders of Maoist (Naxalite) groups and accordingly Vinay Kumar contacted certain Naxal leaders and informed Altaf that an amount of Rs.2 crores was required to engage the naxalites and accordingly Rs.25 lakhs was sent by Altaf to Vinay. It is further alleged that as per the discussions, Devaiah was to visit Dubai and assist Altaf in talks with Naxals and accordingly. Visa for Devaiah was organized by Altaf. Basing on the above information, the respondent-Police suo motu registered a case in Crime No.275/2010 and after completion of investigation, charge sheet was filed.....” More over involvement of Dawood Ibrahim gang in Fake currency printing and circulation can be referred from the case of Anthony Das v. State represented by The Standing Counsel National Investigating Agency⁵⁴, while rejecting the appeal of the appellant for bail division bench of Kerala High Court comprising K.T. Sankaran ,V. Raja Vijayaraghavan JJ in their order at para 5 mentioned- “5. The final report filed in the case reveals that the prosecution case is the following: On 26.1.2013, the officers of the Customs Department, Cochin intercepted a passenger Abid Chullikulavan (accused No.1) at Nedumbassery International Airport when he was coming from Dubai and seized 1950 numbers of counterfeit Indian Currency Notes of the denomination of Rs.500/- from him. The investigation revealed that Kunjumohammed @ Kunjuttu (accused No.6), who was undergoing sentence in Central

Prison, Mumbai earlier, got acquaintance with K. M. Abdullah, who was a convict in a murder case. Through K. M. Abdullah, accused No.6 got acquaintance with Antony Das (appellant/accused No.4) and Mohammed Haneefa (accused No.2). They agreed to smuggle high quality of counterfeit Indian Currency Notes to India with the help of the other accused. The appellant procured genuine Indian Currency Notes to the tune of Rupees four lakhs for obtaining counterfeit Indian Currency Notes. **The genuine Indian Currency Notes were used for procuring counterfeit Indian Currency Notes printed at Pakistan by the syndicate of Dawood Ibrahim, a notorious criminal.** Abdul Salam (accused No.3) arranged Abid Chullikulavan (accused No.1) as carrier of the counterfeit Indian Currency Notes and he was directed to handover the fake Indian Currency Notes to one Abdul Kareem at the Airport and Abdul Kareem in turn was directed to handover the fake Indian Currency Notes to the appellant. When Abid Chullikulavan arrived at Nedumbassery Airport, he was intercepted as stated above.”

The observations of the Hon'ble court, alluded to above, throw ample light as to the role, and extent of involvement of **Trans -border criminal gangs** in the large scale illicit trafficking of counterfeit currency along with other contraband in our country.

Sources of smuggling of F.I.C.N through foreign country:

Authoritative figures like Lal (2000)⁵⁵, N.S. Jamwal (2003)⁵⁶, Gen. V. K. Nayar (2003)⁵⁷, K. Subrahmanyam (2003)⁵⁸, Kalim Bahadur (2006)⁵⁹, Vaidyanathan (2009)⁶⁰, Sashikumar (2009)⁶¹, Banerjee (2011)⁶², INCSR (2011), Vol II⁴⁷, Padmashri Prakash Singh (2013)⁶³, Chadah (2014)⁶⁴ in their respective publications indicated the role of foreign country namely Pakistan, liable for production coupled with smuggling of F.I.C.N in India. Activity of smuggling of F.I.C.N is carried out through **porous border** of Nepal, Bangladesh, and Myanmar by using land route, From U.A.E and other countries by using Air route and also using Indo- Pakistan border, even there are references of use of sea route for the same purpose.

Seventy Ninth report of Standing Committee on Finance of Lok Sabha (2008)¹⁷: **Para 32 of the Report mentions about the testimony of Home Secretary, G.O.I regarding production of F.I.C.N in Pakistan and role of I.S.I in trafficking the same .There are reports published in media regarding recovery of F.I.C.N and arrest of Pakistani operatives in Bangladesh, Dubai, Thailand and Sri Lanka in the year 2014⁶⁵. After careful examination of the above mentioned facts it is true that Pakistan is the source for production of F.I.C.N and I.S.I as the external agency of that country is solely responsible for smuggling of the same. This conclusion can be strengthened by the information tabled by M.H.A in Lok Sabha in 2015.⁶⁶ and can be more strengthen by the recent statement of Hon'ble Home Minister in Rajya Sabha on 3rd August 2016 as-“..... As per the information available high quality fake Indian currency notes printed in Pakistan is directly or indirectly smuggled into India through the Indo-Bangladesh border with the connivance of ISI.....”⁶⁷ **Role of Pakistan in smuggling of F.I.C.N in India through Nepal⁶⁸ and Bangladesh⁶⁹ can be linked with the news regarding expulsion of Pakistani Diplomats from Nepal⁶⁸ and Bangladesh⁷⁰ for their suspected involvement in F.I.C.N matters. In recent times a rout of F.I.C.N smuggling from China to India via Nepal was also recorded.**³⁷**

Judicial references regarding smuggling of F.I.C.N from foreign countries into India and involvement of Agents of the Agency of foreign country-

The role of agencies of some foreign countries, not favourably disposed towards India, has also come to notice quite frequently in the smuggling of FICN into India. A good number of such cases have been instituted against the accused caught from time to time. Very revealing findings have been recorded by the courts at trial and appeal stage. It will be useful to peruse some of these court decisions in order to appreciate the role of, and involvement of foreign agencies in this organised crime in our country. Some of the **notable court decisions** are depicted in the succeeding para to this effect.

1. In **Isaak Ibrahim Sandhi Novda v. State of Gujarat**⁷¹, while **rejecting** the appeal of the appellant for bail in a case of fake currency H.R. Shelat, J. of Gujarat High Court at para 9 of the impugned order held- “9..... Mr. S.K. Patel, learned A.P.P. is also right in submitting that this **incident is a part of a conspiracy hatched by the Inter Service Intelligence**, the secret service of Pakistan and intention is to destabilise Indian economy. If such applicant is released on bail, the agency at international level, planning to have economic war with India and make India a poor and weak country, will get further chance to fabricate more and more fake notes or get the same from other countries, put into circulation, and foist on people by different devices, the result of which is to make our economy rickety, and the police attempts, to go to the root and burst fake currency notes racket, will fail. In short, when possibility of abusing the liberty granted cannot be ruled out, the applicant, who seems to be the scamster being a part to the organised crime, cannot be released on bail.”
2. In **Gurcharan Singh v. State of Punjab**⁷², while **rejecting** the petition of the appellant u/s. 389 of Cr. P. C., his lordship Naresh Kumar Sanghi J. of Punjab and Haryana High Court at para 5 **held**- “5. 37 fake currency notes of the denomination of `1,000/- and 76 fake currency notes of the denomination of ₹500/- were recovered from the applicant-appellant. He was also involved in yet another case of similar nature. **According to the material available on record, the fake currency was procured from Pakistan via Nepal.** No ground for suspension of sentence is made out.”
3. **Karnail Singh and others v. The State of Punjab**⁷³, while **rejecting** the appeal of the appellants his lordship K. C. Puri J. of Punjab- Haryana High Court in his impugned judgment mentioned-“3**During investigation accused disclosed that the fake currency notes related to ISI of Pakistan and had been received from smugglers Chaudhary Ashraf Irani, Nimayat Ghurki, Balal Ghurki and Ravi Bhadana whose aim is to damage the economy of India.** It also came to light that the accused person had already spent some fake currency notes in the market. The fake currency notes as aforesaid were in the denomination of `100/- each.....”
4. In **State v. Mohd Aish-ur-Rehman** S/o late Mohd Riazuddin, R/o Village & P.O. Rehmatpur, Dania, Ward No 8, P.S. Rangeli, District Morang (Nepal)⁷⁴, where Mohd Aish-ur-Rehman

was arrested with fake Indian currency note worth 1, 95, 000 and 23.28 gms of Heroine at Delhi, while convicting him u/s. 21 of NDPS Act and u/s. 489 C of I.P.C, Ld. Add. Session Judge/ Spl. Judge (NDPS), Sh. Babu Lal in his impugned judgment at para 43 observed- “43. **It is important to note that nature of information available with the police was that accused was an ISI agent who would come with fake Indian currency notes to pass on the same to some person at New Delhi Railway Station. Information was quite serious. Keeping in view the nature of information, it cannot be expected that police party should have made a haunt for independent witness. If a haunt had been made by the police officials for independent witnesses, perhaps, accused would have escaped.** Therefore, even if no reasonable efforts were made by the raiding party to join independent witness, it was because of the valid reasons.”

5. In **Ajay Suryavanshi and Ors. v. Union of India and Ors.**⁷⁵, where Division Bench of **Delhi High Court** comprising Pradeep Nandrajog and Pratibha Rani JJ at para 17 of the impugned observed-“17. Still partially unfenced, the Eastern border attracts large number of illegal Bangladeshi immigrants. Border smuggling in cattle and essential commodities, euphemistically called informal trade, is prevalent. **Cases of counterfeit currency and apprehension of jihadi elements have also taken place in recent years in the Eastern theatre.**”
6. In **Tehseem v. Intelligence Officer, DRI, Amritsar**⁷⁶ while **rejecting** the appeal of the appellant Anita Chaudhry J. of Punjab and Haryana High Court in her impugned order mentioned- “..... No recovery was effected from the personal search **but the search of the vehicle revealed fake currency which was concealed in two secret boxes welded and bolted beneath the floor of the vehicle, one on the left side and other one on the right side. On opening the said boxes, 46 bundles of Indian Fake Currency were recovered, which were valued at Rs.22, 84, 500/-.** The notes were in the denomination of Rs.500/- each. Panchnama (Annexure A) was prepared and the currency notes were placed in 46 white envelopes which were put in a polythene bag and wrapped in white cloth..... Tehseem could not produce any document to show his lawful possession of recovered Indian fake currency. **Tehseem suffered a statement before Mr. Ramesh Sharma, Senior Intelligence Officer, DRI, Amritsar and admitted to the fact and disclosed how the currency was brought from Pakistan and he named two persons. He had stated that he had earned the money and was acting in connivance with Aamir Ahmed and Riyasat and the money was brought from Pakistan via Samjhauta Express.** He gave a detailed statement as to how he had come in the contact with those persons.....”
7. In **Suraj Kumar Singh v. Union of India**⁷⁷ while **rejecting** the prayer for bail by the appellant Aditya Kumar Trivedi J. of Patna High Court in his impugned order mentioned “.....it transpired that **recovery of fake Indian Currency Note counting of Rs.24, 50,000/-, which was imported from Thailand through courier service was for promoting ISI activity and on account thereof...**”
8. In **Shareef @ Mohammed Yusuf @ Farooq v. State (Represented by National Investigation Agency)**⁷⁸, while rejecting the appeal filed by the petitioner, Division Bench of Kerala High Court at Ernakulum comprising K. T. Shankaran and M.L. Joseph Francis JJ. in their

impugned order mentioned-“6..... "It is submitted that the Investigation Officer is of the opinion that the **Counterfeit/Fake Indian Currency Notes (FICN) seized in this case from A1 to A3 were procured by them from A4. A4 had in turn procured the same from A6 and A7 while in UAE. It has to be noted that A7 was in UAE throughout that time. On questioning, A7 has revealed that the source of the FICN was one Abdul Rehman @ Rehman Bhai, a Pakistani national working in Dubai.** Investigation is in progress to identify the said Rehman Bhai. All these angles are yet to be investigated since the events were from the UAE. As per the above, it has occurred to me that, the acts of the accused and their accomplices were intended to destabilize the financial stability and internal security of India. **It is submitted that the FICN are printed in Pakistan and brought to India through Dubai and Abu Dhabi.....”**

Analyzing Border wise Status of Trafficking in Counterfeit Currency

Indo- Myanmar Border (IMB) -

India shares **1643 KM of border with Myanmar.**⁷⁹ Following States of India are having international border with Myanmar viz. Arunachal Pradesh, Nagaland, Manipur and Mizoram. Mutual Evaluation Report of India (2010)⁸⁰, Rajya Sabha Report (2010)⁸¹, Mirza Zulfiqur Rahman (2011)⁸², Buch (2012)⁸³ Katoch (2014)⁸⁴, Singh etal (2014)⁸⁵ also acknowledged the problem of trafficking of F.I.C.N through I.M.B. **The main reasons** behind smuggling of F.I.C.N via I.M.B are of many folds- (i) Insurgent groups operating in N.E. are having base in Myanmar, (ii) **Open border** (i.e. restriction free movement in IMB on both sides upto 16 KM), (iii) Its **close proximity with Thailand**, which is also used as prominent dumping ground of F.I.C.N via Pakistan because there is instance of arrest of Pakistani nationals with fake currency⁸⁶, (iv) Consolidation of strength of Pakistan based terrorists group in Myanmar in pre and post era of Rohingya and Buddhist conflict⁸⁷ and close proximity of Rohingas with other Islamic terror outfits.⁸⁸

Table-08

**Year wise seizure of F.I.C.N (face value) and No. of arrests in IMB [Indo- Myanmar Border]
[2011-2015]**

Sl. No	Year	Face value of confiscated F.I.C.N in Rs/=	No. of Arrests
1	2011 ⁸⁹	7000	3
2	2012 ⁸⁹	1,58,000	5
3	2013 ⁹⁰	7,66,000	158
4	2014 ⁹⁰	200	86
5	2015 ⁹⁰	2,36,000	95
Total		11,67,200	347
Average Face Value of Confiscated F.I.C.N per Arrest - Rs. 3,363.69/=			

Indo- Bangladesh Border (IBB)-

India shares 4096.7 Km of its land border with Bangladesh. West Bengal, Assam, Meghalaya, Tripura and Mizoram are the States which share the border with Bangladesh, of which maximum length of such border located in West Bengal (2216.70 K.M).⁹¹ Authoritative figures like Pushpita Das (2010)⁹², Bangladesh Political Weekly Brief of Vivekananda International Foundation (Oct 21-27, 2011)⁹³, Anand Kumar (2012)⁹⁴, Prof. Jayanta Kumar Ray (2013)⁹⁵, Dr. Ahrar Ahmad (2013)⁹⁶, Dr. S. Binodkumar Singh (2013)⁹⁷, Sushil Kumar Sharma (2014)⁹⁸ in their respective presentations acknowledged the fact of smuggling of Fake Indian Currency Notes using Bangladesh as sprig board. Even in recent times Hon'ble M.O.S for Home Affairs in his statement informed the House (Lok Sabha) about the sensitivity of IBB relating to smuggling of fake currency and Malda district of West Bengal became hub for such activity.⁹⁹ The main reasons for using of IBB for such activity are of many folds (i) **Islamic extremist organizations of Bangladesh** are having close tie up with ISI, (ii) **Extremist organizations of India** like ULFA etc are having base in Bangladesh, (iii) **Porous IBB** coupled with **similarity in spoken language of West Bengal and Bangladesh**. Moreover recent statement of Hon'ble Home Minister in Rajya Sabha regarding relationship between fake currency smuggling through IBB and ISI factor is also very important in this regard.⁶⁷

Even in 2016 His Lordship Siddhartha Chattopadhyay J. of Calcutta High Court in **Narendra Prasad v. the State of West Bengal**⁵² also acknowledged the problem regarding F.I.C.N smuggling through IBB of Malda as- "18. The District of Malda is famous for cultivation of mangoes and fruit processing industries. **But nowadays Malda District has become den of Fake Indian Currency Notes traffickers and acknowledged by the country with an extreme annihilation and it has become infamous for Fake Indian Currency Notes. It is expected that district administration will rise to the occasion to accept the challenge of such type of activities. Certainly judiciary will take care of them.**"

Table- 09**Year wise seizure of F.I.C.N (face value) and No. of arrests in IBB [Indo- Bangladesh Border]****[2011- 2015]**

Sl. No	Year	Face value of confiscated F.I.C.N in Rs/=	No. of Arrests
1	2011 ⁸⁹	44,86,300	55
2	2012 ⁸⁹	66,09,900	88
3	2013 ⁹⁰	95,74,800	49
4	2014 ⁹⁰	1,94,52,000	62
5	2015 ⁹⁰	40,69,800	30
Total		3,88,55,400	284
Average Face Value of Confiscated F.I.C.N per Arrest - Rs 1,36,814.79/=			

Indo- Nepal border (INB) -

India shares a **1751 Km long border with Nepal**. Uttarakhand, Uttar Pradesh, Bihar, West Bengal and Sikkim are the States, which share the border with Nepal, of which U.P. and Bihar share 560 KM and 729 KM respectively.¹⁰⁰ Reports of Harinder Baweja (2000)¹⁰¹, Standing Committee on Home Affairs, Rajya Sabha (2006)¹⁰², Hari Bans Jha¹⁰³, Pushpita Das (2008)¹⁰⁴, Jason Miklian (2009)¹⁰⁵, Buddhi Narayan Shrestha (2014)¹⁰⁶, Lekh Nath Paudel (2014)¹⁰⁷ etc on their respective papers and presentations acknowledged the problem of smuggling of fake Indian currency through Indo-Nepal border. **Main reasons** behind the problem of F.I.C.N in Indo- Nepal border are (i) **Free movement for the citizens** of both the countries, (ii) **Porous border**, (iii) **Misuse of open border** by the criminals of both side,¹⁰⁸ (iv) Use of such border by the militant outfits, who are receiving patronage etc from Pakistan, (v) Use of Nepalese soil by ISI.^[68,109,110,111] Further the role of Pakistan in intruding FICN to India via Nepal can be exemplified by refereeing the incident of expulsion of Pakistani diplomats from Kathmandu with respect to their alleged connection in F.I.C.N matter.⁶⁸

Table-10

**Year wise seizure of F.I.C.N (face value) and No. of arrests in INB [Indo- Nepal Border]
[2011- 2015]**

Sl. No	Year	Face value of confiscated F.I.C.N in Rs/=	No. of Arrests
1	2011 ⁸⁹	74,000	1
2	2012 ⁸⁹	1,49,000	5
3	2013 ⁹⁰	13,73,600	15
4	2014 ⁹⁰	5,83,700	12
5	2015 ⁹⁰	13,16,500	11
Total		35,01,800	43
Average Face Value of Confiscated F.I.C.N per Arrest - Rs. 81,437.21/=			

Indo- China border (ICB)- India shares 3488 Km of border with China that runs along the States of Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Sikkim and Arunachal Pradesh.¹¹² Border wise data on seized F.I.C.N and arrest w.r.t. F.I.C.N is given below-

Table- 11

**Year wise seizure of F.I.C.N (face value) and No. of arrests in Indo- China Border
[2011- 2015]**

Sl. No	Year	Face value of confiscated F.I.C.N in Rs/=	No. of Arrest
1	2011 ⁸⁹	0	0
2	2012 ⁸⁹	0	0
3	2013 ⁹⁰	0	0
4	2014 ⁹⁰	0	0
5	2015 ⁹⁰	0	0
Total		0	0
Average Face Value of Confiscated F.I.C.N per Arrest = 0			

Indo- Bhutan border- India shares a **699 Km long border with Bhutan**. Sikkim, West Bengal, Assam and Arunachal Pradesh are the States, which share the border with Bhutan.¹¹³ Year wise data on face value and no. of arrest w.r.t. F.I.C.N is given below-

Table- 12
Year wise seizure of F.I.C.N (face value) and No. of arrests in Indo- Bhutan Border
[2011- 2015]

Sl. No	Year	Face value of confiscated F.I.C.N in Rs/=	No. of Arrests
1	2011 ⁸⁹	3,13,000	3
2	2012 ⁸⁹	0	0
3	2013 ⁹⁰	0	0
4	2014 ⁹⁰	0	0
5	2015 ⁹⁰	4,61,955	9
Total		7,74,955	11
Average Face Value of Confiscated F.I.C.N per Arrest = Rs. 70,450.45/=			

Indo- Pakistan Border:

Table- 13
Year wise seizure of F.I.C.N (face value) and No. of arrests in Indo- Pakistan Border
[2011- 2015]

Sl. No	Year	Face value of confiscated F.I.C.N in Rs/=	No. of Arrest
1	2011 ⁸⁹	44,45,500	3
2	2012 ⁸⁹	60,41,500	2
3	2013 ⁹⁰	57,00,500	2
4	2014 ⁹⁰	17,92,000	1
5	2015 ⁹⁰	6,56,500	3
Total		1,86,36,000	11
Average Face Value of Confiscated F.I.C.N per Arrest = Rs. 16,94,18,1.82/=			

From the analysis of Border wise data it has been observed that in each Border there is **mixed trend** relating to amount of F.I.C.N confiscated and No. of arrests has been observed during 2011-2015. For the five year period (2011- 2015) maximum amount of F.I.C.N was seized from Indo- Bangladesh border followed by Indo- Pakistan, Indo- Nepal, Indo- Myanmar, Indo- Bhutan border. **Maximum** number of **arrests** in F.I.C.N cases was in **Indo- Myanmar border** (347) followed by Indo- Bangladesh border, Indo- Nepal, Indo- Bhutan, Indo- Pakistan border during 2011-2015. Average face value of confiscated F.I.C.N per arrest is maximum in Indo- Pakistan border followed by Indo- Bangladesh, Indo- Nepal, Indo- Bhutan and Indo- Myanmar border during the period 2011-2015. More interesting point to be noted that **no fix border is used regularly** for such purpose but using different border on rotation wise.

Analysis of Modus operandi adopted by F.I.C.N rackets:

For the purpose of smuggling of F.I.C.N **modus operandi adopted** by the criminal gangs are as follows-

1. From smuggling to distribution an organized racket used to deal the same and because of organized racket F.I.C.N used to distribute to other places.^[51,114,115,116]
2. Use of the time of either **night or early morning** due to less probability of detection in poor light.^[117,118]
3. Infiltrate with F.I.C.N. in Indian Territory.^[51,119,120,121]
4. Keeping the incriminating article along the international border **in concealed manner**.^[122,123]
5. Acquiring land on either lease or purchased along with international border with an object to receive incriminating articles easily.^[124]
6. For the cross border smuggling methods adopted are- **throwing the packet of consignment** along the line of international border or keeping the packet within the **close vicinity** of international border^[114,117,118]
7. Using concealed mode for smuggling as well as for distribution.^[51,76]
8. Using land of any third country apart from the country of production or the end destiny country for the same purpose.^[72,77,78]
9. Use of **juveniles** for the same purpose.^[114,124]
10. Use of **courier service**^[51,77,125]
11. Recovery of foreign sim cards^[51, 118, 124, 126, and 127] from the possession of the arrested criminals without any satisfactory explanation, possession of foreign sim card is helpful for the trans-border smugglers for easy communication with their counterparts in other countries.
12. Apart from land route others routes are used for the same purpose are sea^[83, 128], rail^[51,76] and air route.^[51,78,129]
13. Use of diplomatic bags of Pakistan embassy^[128, 130], involvement of Pakistan diplomatic mission members stationed in third country^[68,70] and involvement of ISI^[17,62,66,67,71,73, 74,77]
14. As well as use of P.I.A for the purpose of smuggling.^[128,131]
15. Relationship with other **heinous crime syndicates dealing** with Arms smuggling^[51, 119, 124], narcotics trafficking^[51,124,132], Human trafficking^[133,134] Cattle smuggling^[121,135,136] and extortion (i.e. part of earning from the activity of extortion was utilized for fake currency trafficking)^[137].
16. Ratio for conversion of fake currency in to genuine currency may be of 2:1 or even more.^[8,83,114,138,139]
17. **Modus operandi for placement of fake currency** - The following ways are adopted -a. Purchasing goods of low value, b. Mixing counterfeit with genuine currency, c. Selling it to members of the public, d. Intermingling in cash intensive business, e. Gambling, f. Exchanging through currency exchanges, g. Others.^[8]

18. Involvement of Staffs of Banks^[17, 140, 141], Rifleman of Army^[142], BSF Jawan^[143] and Police constable^[144] were also found as arrested due to either their involvement in F.I.C.N rackets or recovery of huge amount of F.I.C.N from them.
19. There are also instances of production of F.I.C.N within the country.^[138, 145, 146, 147] These kinds of counterfeit currency notes having less features than High quality F.I.C.N produced at Pakistan.
20. Involvement of offenders with previous history of apprehension with fake currency.^[72, 139, 148]

Application of scientific evidence to prove the guilt of the offender

Scientific evidence proving the fact regarding production of F.I.C.N in Pakistan – In a N.I.A case⁵¹ it was proved beyond reasonable doubt by comparing scientific features of F.I.C.N seized from two Pakistani terrorists who were killed in an encounter while trying to infiltrate in India through Samba of J&K, F.I.C.N seized from one Savinder Kaur, while getting down from Attari Express coming from Pakistan at Chandigarh etc with the F.I.C.N seized from the accused in the case of N.I.A (New Delhi C.R. No.03/09 tried at the court of Special Judge at Gr. Mumbai constituted under N.I.A Act 2008), that in all the cases F.I.C.N were manufactured at Pakistan. **Principal similarities** found after scientific examination were-

1. 100% cotton rag, which is used for manufacturing of currency paper was used in all the cases in which F.I.C.Ns were seized.
2. Currency paper used for printing of F.I.C.N was manufactured by regular cylindrical mould machines which only sovereign nations have access to.
3. On scientific analysis it was found that the sophistication of security features found on the seized F.I.C.N were concluded that the F.I.C.N were manufactured in regular currency making machines, which are available only to sovereign nations and the Central Banks.
4. The GSM of the FICN was exactly similar to the GSM of Pakistan Legal Tender and it was different from the GSM of Legal Tender of India.
5. The PH Value of F.I.C.Ns which determines the compositions of the currency paper was also exactly similar to the currency notes of Pakistan and not matching with the legal tender of India
6. The waxpick quotient and the poly venyel alcohol coating of seized F.I.C.Ns were also exactly similar to the genuine Pakistan currency notes and at any point these features (wax pick quotient and venyel alcohol coating) are not similar to Indian currency notes or the legal tender of India.

From points 1, 2 and 3 the fact of production of F.I.C.Ns in a sovereign country was established beyond reasonable doubt. Moreover points no. - 4, 5 and 6 are the clues which clearly indicated that the F.I.C.Ns was printed in Pakistan.

In these cases seized F.I.C.Ns were compared with admitted genuine currency notes of Pakistan, Bangladesh, Nepal, Thailand, U.A.E etc procured from authorised source (i.e. S.B.I) through court order.

Even in Abdul Rahiman v. State of Kerala¹⁴⁹, where Kerala High Court held that **even if the expert opinion is not available, if naked eye examination of the counterfeit note itself indicates that it is a fake note, then the Court can rely on such facts for the purpose of coming to the conclusion that it is a fake note.**

Role of CDR (Call Details Record) in the investigation - In State (N.C.T of Delhi) v Navjot Sandhu @ Afsan Guru¹⁵⁰ apex court held that- “.....We are therefore of the view that the call records are admissible and reliable and rightly made use of by the prosecution.” Even in Mohammed Ajmal Mohammad Amir Kasab @ Abu Mujahid and Others v. State of Maharashtra and Others¹⁵¹, link between the terrorists who committed attack on Mumbai, popularly known as Mumbai Terror Attack (M.T.A) or 28/11 incident with their Pakistani gurus were established beyond reasonable doubt with the help of call Details Record. Similarly in the case of N.I.A (New Delhi C.R. No.03/09 tried at the court of Special Judge at Gr. Mumbai constituted under N.I.A Act 2008)⁵¹ where Call Details Record of A-1, A-2, A-3, A-4, A-5, A-6 proved beyond reasonable doubt that they hatched a conspiracy to destabilize the economic sovereignty of India by circulating F.I.C.N and for the purpose of procurement of F.I.C.Ns they were in close contact with a Bangladeshi F.I.C.N delar, who had also supplied FICN to the accused in Crime No.139/2009 of STF, Kolkatta. In another NIA case¹¹⁴ it was proved beyond reasonable doubt that the A-1 Morjen Hossain, a resident of Malda district of West- Bengal in connection with others [one Bangladeshi (A-18) and one Pakistani (A-17) citizens] were engaged in smuggling and distribution of F.I.C.N in different States of India i.e. Bihar, Jharkhand, Uttar Pradesh, Delhi, Tamil Nadu, Karnataka and Andhra Pradesh. This was disclosed after lawful interception of communication of cellular communication sets of the accused person's u/s. 5 of Indian Telegraphic Act., 1885.

Evidence regarding Mobile Tower Location (M.T.L) - In Mohd.Arif @ Ashfaq v. State (N.C.T of Delhi)¹⁵², where apex court accepted Mobile Tower Location (M.T.L) as accepted evidence. Similarly in Ramchandra @ Ramchandra Hajra vs The State of Bihar & Anr¹⁵³, while rejecting the petition of bail of the appellant Sh. Gopal Prasad J. of Patna High Court in his impugned order had mentioned- “There is allegation against the petitioner is that he was indulged in smuggling of the Fake Indian Currency Notes (FICN) from Bangladesh to Bettiah, West Champaran, Bihar and was caught with one bundle of Fake Indian Currency Notes of Rs. 1,000/- and a mobile. It is further submitted that he has confessed before the Custom Officer and the **phone location** was at Village-New 18th mile, P.O., Pubarun, P.S. Baishnabnagar, Distt. Malda, which is quite closer to the Indo-Bangladesh border....”

Evidence relating to discussion over telephone for tendering demand of fake currency along with time & mode of supply- In *Isaak Ibrahim Sandhi Novda v. State of Gujarat*⁷¹, while rejecting the appeal of the appellant for bail in a case of fake currency H.R. Shelat, J. of Gujarat High Court at para 6 of the impugned order held- “6. From the police papers, the learned A.P.P. draws my attention to the statement of Kishorsinh Jayavant Jadeja, who is running his S.T.D. Booth. What appears from his statement is that the applicant was often going to his Booth for having telephonic talk with the other scamsters involved in the conspiracy. Whatever he was talking on phone was being over heard by this witness. According to this witness, during the talk, the petitioner was inquiring how-many fake currency notes and of what denomination were required and how he should supply the same and when, for putting the same into circulation through different persons/agencies. His statement, at present is sufficient to prima facie hold that he is involved in the offence alleged.....”

Scope of Application of Sec. 124A of I.P.C relating to sedition in Fake Currency cases

Sec.124A. of I.P.C- Sedition.—Whoever, by words, either spoken or written, or by signs, or by visible representation, or otherwise, brings or attempts to bring into hatred or contempt, or excites or attempts to excite disaffection towards, the Government established by law in [India], shall be punished with [imprisonment for life], to which fine may be added, or with imprisonment which may extend to three years, to which fine may be added, or with fine.

Explanation 1.—The expression “**disaffection**” includes **disloyalty and all feelings of enmity.**

Explanation 2.—Comments expressing disapprobation of the measures of the Government with a view to obtain their alteration by lawful means, without exciting or attempting to excite hatred, contempt or disaffection, do not constitute an offence under this section.

Explanation 3.—Comments expressing disapprobation of the administrative or other action of the Government without exciting or attempting to excite hatred, contempt or disaffection, do not constitute an offence under this section.]

The Supreme Court of India in *Nazir Khan v. State of Delhi*, (2003) 8 SCC 461 explained "**sedition**" as : -"37. Sedition is a crime against society nearly allied to that of treason, and it frequently precedes treason by a short interval. Sedition in itself is a comprehensive term, and it embraces all those practices, whether by word, deed, or writing, which are calculated to disturb the tranquillity of the State, and lead ignorant persons to endeavour to subvert the Government and laws of the country. The objects of sedition generally are to induce discontent and insurrection, and stir up opposition to the Government, and bring the administration of justice into contempt; and the very tendency of sedition is to incite the people to insurrection and rebellion. "Sedition has been described as disloyalty in action, and the law considers as sedition all those practices which have for their object to excite discontent or dissatisfaction, to create public disturbance, or to lead to civil war; to bring into hatred or contempt the Sovereign or the Government, the laws or constitutions of the realm, and generally all endeavours to promote public disorder.....”

From Explanations of Sec. 124 A of I.P.C and apex court observation in Nazir Khan case to frame a charge of sedition essential ground that are needed are-

1. Commission of an act. of disloyalty and all feelings of enmity.
2. Act done may be by means of words, deed or writing.
3. Contempt the Sovereign or the Government, the laws or constitutions of the realm, and generally all endeavours to promote public disorder.

Now analyzing the facts of fake currency production and smuggling-

The conduct of **wilful involvement** in trafficking in counterfeit currency **leads to following consequences-**

1. Act of disloyalty as because only the sovereign government has right to print and circulate currency notes.
2. Such acts badly affect economy of a sovereign country.
3. Circulation of fake currency among the public can cause dissatisfaction of losing the hard earned money.
4. It is amounting to wage war against the nation.
5. Involvement of foreign country of hostile origin in production, External agency of inimical country in circulation, profit gained by hostile country from such activity by means of production and circulation.
6. Arrest of terror outfits were possible after recovery of information from arrested fake currency smugglers.¹⁵⁴
7. There are instances of recovery of fake currency notes from the terror outfits.
8. Use of such currency for TF.
9. Even in a recent judgment Calcutta High Court acknowledged the possible relationship between the traffickers of fake currency and terror outfits.
10. Fake currency smuggling and distribution is conducted by an organized racket and having relationship with other types of heinous crimes like arms and explosive smuggling, drug trafficking etc.
11. Moreover such act (i.e. production and circulation of F.I.C.N) itself is an act of enmity against the nation because there are three components- (i) Waging war and (ii) An attempt to destabilize the economy and (iii) Terror finance (TF)

So considering the above mentioned facts relevant to and pre-requisite to the invoking of a charge of sedition under Section 124A of the IPC, we are of the firm view that an accused involved in trafficking FICN can safely be arraigned with the charge of sedition.

Factors affecting successful prosecution in FICN trafficking cases

Study of various court cases related to trafficking of counterfeit currency in our country has underlined the importance of following factors for the success of prosecution case in the courts:-

1. **Non maintenance of Chain of Custody coupled with non-mention of No. of currency seized and place of seizer-** In *State (Govt. of N.C.T. of Delhi) v. Pratap Narayan Singh@ Prem Nath Singh and Ors*¹⁵⁵ while **rejecting** the appeal of appellant against the acquittal recorded by trial court, His lordship S.P.Garg of Delhi High Court at para 9 of the impugned order observed-“ 9. The Trial Court also noted that while dispatching the fake currency notes for Forensic examination, material was sent in **unsealed condition**. There is no clue as to how and why the currency notes were sent to Devas and thereafter to Hyderabad. Besides this, there was no cogent evidence on record to infer that the accused persons knowingly and intentionally were in possession of the fake currency notes.....”

2. **When differentiation between genuine and counterfeit currency notes in terms of colour and texture was not produced by prosecution-**In *Munshi Mohammed Ayub Mohammed Yusuf Shaikh v. State of Maharastra*¹⁵⁶ while **acquitting** the appellant Anuja Prabhudessai J. of Bombay High Court in her impugned order mentioned- “19.**The evidence adduced by the prosecution does not indicate that the colour and the texture of the notes was different and the difference was so apparent that a mere look at the same would convince a lay man that it was counterfeit. In absence of any such knowledge it cannot be presumed that the accused had knowledge or that he had reasons to believe that the notes were counterfeit.**”

3. **Non mention of proper date, time and place of seizer-**
In the *State of Bihar v. Mithilesh Tiwary*¹⁵⁷ while rejecting the appeal of the appellant in a case of acquittal recorded by Ld. Trial court in case of F.I.C.N, division bench of Patna High Court comprising I. A. Ansari A.C.J and Chakradhari Sharan Singh J. in their impugned order mentioned- “10. **In the present case, we have noticed that admittedly, the seizure was made on 31.03.2010, whereas the seizure list was prepared on 01.04.2010. This seizure list does not disclose the place, where it was prepared. This casts a serious doubt over the case of the prosecution. We do not find any infirmity in the judgment and order under appeal, whereby learned trial Court has recorded acquittal of the respondent giving him benefit of doubt to the respondent.**”

4. **Irregularity of maintenance of arrival and departure record in P.S. -** In *State v. Om Prakash*¹⁵⁸ while **rejecting** the appeal of the appellant, division bench of Delhi High Court comprising G.P.Mittal and G.S.Sistani JJ. in their impugned order held that-“**11..... The trial court has observed, after perusing the relevant rules under Punjab Police Rules, 1934, that all police officials irrespective of their rank are bound to record their arrival at the time of joining their duties and departure at the time of leaving their office. However, in the instant case, the members of raiding party did not make any entry of their arrival or departure in the register.**

In light of this fact, we are of the view that the trial court has rightly held that it is possible to manage the rojnamcha register.”

5. **Unnecessary delay by bank to lodge F.I.R without any satisfactory explanation-** In *State of Karnataka v. VN Sathyanarayana and Anr.*¹⁵⁹ while rejecting the appeal of appellant, division bench of Karnataka High Court comprising K.L.Manjunath and B. Monahar JJ. observed in the impugned judgment as- “17..... In addition to that, there was no difficulty for PW-1, who is an experienced Chief Manager of the bank to lodge a complaint before the police and later recover the amount paid by the bank to the accused under the guise of exchange in the presence of police by drawing a mahazar. Therefore, at the first instance, there is nothing on record to show that M.Os.1 and 2 were handed over by the accused person to the bank and there is nothing on record to show that Rs.1.00 lakh was given by accused No.1 through accused No.2 under the guise of exchange. Similarly, there is nothing on record to show that cash was returned by accused No.1 to the bank on 8.2.2001. Instead of lodging a complaint on 8.2.2001, complaint is lodged on 9.2.2001 at about 10.15 p.m.”
6. **Non preparation of panchanama coupled with absence of due care of Mudda Mal (Seized item)-** In *State of Gujarat v. Senma Naranbhai Sendhabhai*¹⁶⁰ while rejecting the appeal of appellant, division bench of Gujarat High Court comprising M.R.Shah and S.H.Vora JJ mentioned as under-“10.00. It is also required to be noted at this stage that even no sufficient care was taken by the investigating officer to keep the said muddamal currency note in a safe custody, as there was no sealing and till the muddamal note was sent to the Press at Nasik i.e. for a period of two months, the muddamal note was kept in the police station without sealing. It is also required to be noted that though the muddamal note was sent to the Press at Devas (Nasik) and the report at Mark 11/1 was received, neither the same has been exhibited nor it is read in the evidence. Even no panchnama was prepared while sending the muddamal note to the Press at Nasik.”
7. **Not sending the seized item to Forensic Expert-** In *Inthiyas @ Inthiyas Ahmed vs the State of Karnataka By City Railway Police*¹⁶¹, the appellant was acquitted from the case of counterfeit currency notes because **prosecution had not sent the seized items to scientific expert** for chemical or electronic examination, with an object to determine whether the seized items were counterfeit currency notes or not.
8. **Non production of expert witness at the courts of Law-** In *State by Lashkar Police Station v. M.V. Srinivasa*¹⁶², while rejecting the appeal of the appellant, Division Bench of Karnataka High Court comprising M.F. Saldanha and K Ramanna JJ. Observed at para 5 of the impugned judgment as -“5. What transpires thereafter is unfortunately the **most disastrous aspect of the prosecution case**. Firstly, it does appear from the record that the I.O. did send the notes for expert opinion but this opinion which is Ex. P. 5 was tendered through the I.O. In our considered view, **particularly in a case like this where knowledge is of paramount legal consequence it was absolutely unpardonable on the part of the prosecution not to have**

summoned the expert to give evidence. The first reason for this is because in the present case it would be too hazardous to base a conviction on Ex. P. 5 without this having been substantiated by the expert. **The more important reason for it is because if that report Ex. P. 5 which is a highly incriminating document is to be used as the main foundation for a conviction against the accused, then the prosecution was duty-bound to have summoned the author of this document so that the accused could have had a fair opportunity of testing its veracity.** While it is not open to us to assail the correctness of Ex. P. 5 what we need to point out is that we cannot at the same time accord this document the weight of evidentiary value that would clearly attach to it for the reasons that have already been incorporated by us. This factor goes heavily against the prosecution.”

9. **Gross defect during investigation observed by judiciary in terms of not taking F.P. with the permission of court, I.O. did not appear at dock as witness coupled with other irregularities - In Sandeep Thakran v. State of Rajasthan¹⁶³ while acquitting the appellant Division Bench of Rajasthan High Court comprising S. K. Sharma and V. Kothari JJ at para 14 of the impugned judgment observed as - “14. In the instant case we find that the Investigating Officer did not make serious efforts to collect the threads of evidence in order to find out the path which leads to the culprit. The appellants after their arrest were not subjected to identification parade so that Rajesh Kumar (PW-18), who had seen those two persons at Taxi-stand on September 2, 1999 around 10-11 a.m. could have identified them. No efforts were made to collect the evidence of those persons who had seen the appellants leaving Maruti car at Manoharpur town. Finger prints of appellants were not taken before the Magistrate, as was required under Section 3 of the Identification of Prisoners Act. Even if the finger prints of appellants were taken by the Investigating Officer himself it was necessary to draw a memo for taking such finger prints before motbirs but no such memo was drawn. The Investigating Officer, who was an important witness, did not choose to appear before the learned trial Judge. Thus we find that the prosecution has failed to bridge the gap between 'may be true' and 'must be true' by clear, cogent and unimpeachable evidence and guilt against the appellants is not proved beyond reasonable doubt. There are many missing links in the chain of circumstantial evidence and this aspect was not properly considered by the learned trial Judge.”**
10. **Discrepancy about the timing and about the number of notes recovered from the appellant coupled with tutored panch witness-In Mohammed Shabbir, S/O. Mohammed Khurshid Shaikh v. State of Maharastra¹⁶⁴, while acquitting the appellant at para 10 of the impugned judgment the Hon'ble Court observed as - “10. In my opinion, the discrepancy about the timing and about the number of notes recovered from the appellant was sufficient - in the light of some improbabilities and infirmities from which the prosecution case, even otherwise suffers, to create a serious doubt about the truth of the matter.** The learned Additional Sessions Judge noticed the discrepancy about the time when the appellant gave a counterfeit currency note to Santosh Poojari (PW2), but dismissed it as 'minor discrepancy.' The learned

Additional Sessions Judge was very much impressed by the fact that panch Sayyed Jalal (PW3) had remembered the serial number of the fake note and identified the note on that basis, without realizing that this was quite improbable and indicated that the panch was a tutored one. The panch even did not say that he remembered the number of the note to have been recorded properly in the panchnama, but stated categorically that he remembered the number.”

11. **Non examination of independent witness present during seizer without proper explanation-** In **Manjur Samsuddin Shaikh v. the State of Maharashtra**¹⁶⁵, while acquitting the appellant his lordship A. M. Thipsay J. of Bombay High Court at para 18 of the impugned order **held as under-** “18.....**In the instant case, since no explanation at all has given for not examined independent witnesses in spite of associating them with the search operation it would be unsafe to place reliance on the evidence of P.W. 14. It would be legitimate to presume that the panch witnesses, if had been examined, would not have supported the case of prosecution and that that is why they were held back.....**”
12. **Only telephonic conversation between an accused caught red handed with fake currency and the appellant was not held sufficient to link the appellant in fake currency case when no fake currency recovered from the possession of the appellant and coupled with other discrepancies-** In **Mohammed Rashid Kunju v. State of Maharastra & Ors**¹⁶⁶, while **acquitting** the appellant His Lordship A. M. Thipsay J. of Bombay High Court at para 13 of impugned order **observed-**“13. **In my opinion, merely because of such telephonic contacts, the case against the appellant cannot be held to be proved. The telephonic contact would only establish that the accused No. 1 and the appellant knew each other, but it would be difficult to stretch the matter further and to hold that the appellant knew about the counterfeit currency notes, which were found in possession of the accused No-1. Apart from this, there are a number of weaknesses in that regard.**”
13. **Co- accused turns as approver, no pardon was granted to him and he cannot be examined as a witness for the prosecution-** In **Asadjamal @ Irfan @ Dada v. the State of Maharashtra**¹⁶⁷, while acquitting the appellant His Lordship A. M. Thipsay J. of Bombay High Court at para 11 of impugned order **observed as-** “11. The learned Additional Sessions Judge further observed that under Section 133 of the Evidence Act, 'an accomplice shall be a competent witness against an accused person.' He observed that the accused No.1 Abdul Haque is in a position of an accomplice and therefore, there was material to proceed against the applicant. **This reasoning is also erroneous. The question of examining an accomplice would arise only after he is turned into an approver by grant of pardon. In this case, no pardon has been granted to Abdul Haque and, therefore, there would be no question of his being a competent witness against the applicant or other accused. As a matter of fact, he being an accused obviously cannot be examined as a witness for the prosecution.**”

14. **Non establishment of relationship between seized articles, printing of fake currency notes and the accused persons-** In *Shri Chuwan Subba, v. State of Sikkim*¹⁶⁸, while **acquitting** the appellant, division bench of Sikkim High Court comprising Permod Kohli CJ and S.P. Wangdi J observed-“20. **From the analysis of the prosecution evidence we may accept that the seizure of all the incriminating articles have been proved but, the question which is most crucial is as to whether any nexus has been established between those seized articles, the printing of the fake currency notes and the accused persons. Having regard to the evidence led by the prosecution we are not convinced that this crucial aspect has been established by the prosecution.**”

The factors underlined in the aforesaid illustrative cases are also **treated as fatal for the success of prosecution cases in other criminal cases. But in this category of cases(trafficking in counterfeit currency) of this category forensic examination of evidence collected, and its proper custody, examination, its adducing of expert analysis report and the testimony of expert assume greater importance and any defect in the same, have very significant bearing on the success of prosecution.**

Important questions need to be answered during investigation with supporting evidence

To ensure completion of investigation in a case of counterfeit currency in a highly professional manner, in order to enhance chances of securing conviction in the court, the Investigation Officer has to prepare himself very thoroughly with the type of information essentially required to be brought on case diary. An illustrative list all such questions as shall get him the much needed information to prepare a failsafe case against the accused is given below-

1. Who are the arrested persons? What are their address and nationality?
2. What are the incriminating articles seized from the arrested person/ (s) and from where the items were seized?
3. Who supplied the incriminating articles? Who is/are the end receiver/(s) of such incriminating articles?
4. If the subject/ (s) had previous criminal history, then what type of criminal activity?
5. Whether he/ they was/ were prosecuted/ convicted for the previous criminal history or not?
6. With whom he/ they was/ were in contact? What was the objective for such contact?
7. Whether the subject/ (s) is/ are having link with hawala racket or not? If yes then what was the objective behind such link?
8. Whether any change was observed in his/ her financial capacity by his/ her neighbours or not?
9. What is his official source of income?

10. Whether bank statement of the arrested person/ (s) shows evidence of suspected transaction or not? If yes then what are the details?
11. Whether his/ her/ their life style is/ are giving any clue regarding his/ her/ their excess income than his/ her/ their official source of income? Is there any evidence relating to Suspected Transaction Report (STR) in the bank A/C of the arrested person/ (S)
12. Is he/ she inclined to any specific ultra regions group or not? Is there any evidence regarding the acquaintances of the subject/ (s) with terror outfits or not? Whether the accused/ (s) has/ have any direct or indirect link with external agencies of inimical countries? If yes then how such link was established? Whether the subject/ (s) had received any political patronage or not? If yes then what was / were the reason(s) for the patronage?
13. Is/ are he/ she/ they tech savvy or not?
14. What about the Call Details Record (C.D.R) of the arrested person/ (s)?
15. Whether they had any telephonic call to any foreign country or not?
16. If they made such call for what purpose they did so?
17. Is there any evidence regarding telephonic discussion regarding placing of demand for fake currency coupled with mode of supply?
18. Is there any evidence regarding mobile tower location of the arrested persons in sensitive areas of the international border famous for smuggling of fake currency or not?
19. Whether the subject/ (s) had visited any foreign country or not? If yes then what was/ were the purpose/ (s)? With whom the subject/ (s) meet there?
20. Who are giving support to them?
21. What is the mode of distribution of fake currency?
22. What is the exchange ratio for fake currency to genuine currency?
23. What was the origin of fake currency? What are the parameters which fix up the origin of fake currency?

Towards preventive measures

The problem of production and circulation of counterfeit currency, as discussed above, is not only very complex but also of universal prevalence, albeit to varied degree. Attempts have been made from time to time to evolve effective countermeasures to curb and control it. Some of the notable recommendations made by these committee/study groups are summarised below-

- A. **Shilabhadra Banerjee committee recommendations:** A Committee constituted by Ministry of Finance under chairmanship of Shree Shilabhadra Banerjee I.A.S (Rtd.) to review the acquisition procedure of the security features for currency notes recommended the followings¹⁶⁹-
 1. Directorate of Currency to be created under Ministry of Finance to coordinate & oversee acquisition and R&D efforts of security features for currency notes and other security

products. This Directorate to be headed by an officer of the rank of Special Secretary to Govt. of India.

2. Suggested new acquisition procedure for the security features of currency notes for increased levels of transparency and accountability;
3. Emphasis on indigenisation of manufacture of bank note paper, security inks, security features, related equipments and coin plating.
4. Setting up of National Level R&D centre under the proposed Directorate of Currency for R&D in the field of raw materials, security features and machinery required for the production of Indian bank notes and other security sensitive items.
5. Security paper manufactured in India to be exempted from Excise duty. Further financial incentives like waiver of the customs duty on imported machinery for the production of the bank note paper and printing to be provided.
6. Single national level coordinating agency for intelligence, law enforcement and investigation to tackle the menace of Fake Indian Currency Notes.
7. RBI to launch a sustained a widespread multimedia campaign for educating the public to distinguish genuine bank note from the fake ones.
8. Modifications in the Procurement Manuals to encourage indigenisation and level playing field.

B. Apart from Banerjee committee recommendations eminent civil servant **Padma Bhushan M. N. Buch (2013)**⁸³ suggested the following steps to control counterfeit currency problem in India –

1. Encouragement of use of credit cards/ debit cards and online/ digital transaction among the common citizens,
2. Effective real time intelligence and relevant information sharing
3. Reduced dependence on foreign supply of currency papers and inks necessary for printing of currency notes by means of increasing indigenous production,
4. Continuous surveillance on buyer of papers for currency notes and inks for printing of currency from Pakistan by E.U. and maintenance of secrecy by the suppliers of the inks and papers for currency notes,
5. New Delhi also should press relentlessly through INTERPOL for extradition of those criminal elements involved in the fake currency racket based in foreign countries.
6. Providing technical assistance and training to neighbouring countries customs officials to detect and identify F.I.C.N.
7. Identifying and keeping watch over frequent travellers to Dubai, Dhaka, Colombo and other neighbouring countries.

- C. Arthakranti Prathistan Proposal laid trace on (1) Maximum transaction through banking channel rather than hard cash, (2) Demonetization of higher currency notes, (3) Fixation of higher limit for cash transaction.¹⁷⁰
- D. Govt. of India had established FCORD in M.H.A coupled with TFFC Cell in N.I.A as an instrument to tackle the problem.
- E. **Bilateral treaties, talks and discussions:** India had M.O.U with several countries to curve the problem of drug trafficking, money laundering, counterfeit currency, smuggling of arms and explosives, etc.¹⁷¹
- F. **Demonetization of Higher Denomination of currency notes-** Demonetization of higher currency note was first occurred in Indian scenario in 1946, when Rs 1000/= and 10,000/= face value currency notes were demonetized.¹⁷² Again in 1954 higher denomination currency notes like Rs 1000/=, Rs 5000/= and Rs. 10,000 were reintroduced in market.¹⁷² In 1978 all the high valued currency notes were demonetized through the enactment of The High Denomination Bank Notes (Demonetisation) Act, 1978, the main objective behind for the same can be read as “.....the availability of high denomination bank notes facilitates the illicit transfer of money for financing transactions which are harmful to the national economy or which are for illegal purposes and it is therefore necessary in the public interest to demonetise high denomination bank notes....”¹⁷³ After passing the Bill to amend the High Denomination Bank Notes (Demonetisation) Act, 1978, in the year 1998, Govt. of India had reintroduced currency notes amounting to face value Rs. 1000/= in Indian market with an object to fulfil the gap between the demand and supply of currency notes in market.¹⁷³ While opposing the bill Mr. P.C. Chacko¹⁷⁴, Ld. Member of Parliament had pointed out the fact of fake currency, while others¹⁷⁵ raised the issue of black money, inflation and poverty in the country. **But the issue of black money and fake currency are not similar, while black money is unaccounted money and fake currency is an offence under Indian Penal Code.**

Use of Newer techniques to reduce problems of fake currency

- A. **Polymer currency-** Research of Bank of England confirmed the facts that production of counterfeit polymer currency notes are slow, expensive, requirement of highly skilled expertise and different machinery and techniques are necessary to reproduce the same, thus chance of counterfeiting is very less.¹⁷⁶ Moreover experience of New Zealand¹⁷⁷, Australia¹⁷⁸, and Malaysia¹⁷⁹ shows drastic reduction in detection of counterfeit currency notes. Polymer currency can be dispensed through ATM like paper currency and also reduced cost of ATM maintenance than use of paper currency.¹⁸⁰
- B. **RFID tagging** can also act as deterrent to counterfeiting of currency notes.¹⁸¹ Study of Eldefrawy and Khan (2012) advocated about the use of tamperproof chips of RFID in bank notes can reduce the event of counterfeiting.¹⁸² Euro and U.S. \$ had such embedded chips for the purpose of prevention of counterfeiting of currency.¹⁸³ It is important to mention that RFID tagging was successful as deterrent act against counterfeiting of drugs^[184,185], software piracy¹⁸⁶

etc.

Conclusion:

Fake or Counterfeit currency is a curse for the economic sustainability of a sovereign country. In historic perspective it has been observed that during civil war of America, during 1st and 2nd world war currency of America, France and England were counterfeited respectively with an object to destroy the economy of the respective countries. Circulation of fake currency is having multi dimensional criminological aspects like waging economic war against the state, terror finance and ultimately to destroy the economy by means of organized crime syndicate. Therefore to reduce the menace of fake currency from the common citizen it is expected from judiciary not to grant bail to the arrested persons unless and until the conclusion of trial, which will reduce the tendency of the offender to abscond or attempt to destroy the prosecution evidence. Similarly keeping the grave nature of this offence, having bearing on the vital financial systems of the country, there should be no scope for leniency while awarding sentence to the accused held guilty.

Apart from expectation from judiciary it is necessary to adopt multi pronged approach to tackle the same. This **multi pronged approach** may consist of components like-

1. **Strengthening legal regime by shifting burden of proof** to the accused to prove his innocence at the court of law like S. 304-B of I.P.C,
2. **Limiting personal cash limit and fixing the limit for cash transaction** can also resist inflow of F.I.C.N,
3. **Demonetisation of currency notes of higher denomination**, at regular interval like five years, can also curb the creation and circulation of counterfeit currency because the smugglers used to prefer high valued currency.
4. **Installation of fake currency detector at A.T.M** can prevent further dispensing of fake currency since there are instances of complain of dispensing fake currency from ATM¹⁸⁷,
5. Either installation of **R.F.I.D chips in higher denomination currency notes or introduction of polymer currency** of higher denomination also act as preventive measure,
6. **Extending technical assistance coupled with training facility** to detect F.I.C.N to those countries which are used as spring board can be useful,
7. **Encouraging transaction through bank** can reduce cash transaction will contribute a significant share in reducing problem,
8. **Bilateral Int. sharing** regarding organized criminal gangs with the countries having land border can also act as deterrent against the movement of F.I.C.N,
9. **Legal sanctity to undercover ops** can help in better prosecution of terror suspects with strong evidence being brought against them in the court since in internal context there are references of use of fake currency for terror funding^[8,44,48], judiciary also acknowledged recovery of fake currency from terrorists,^[50, 51] possible relationship between fake currency trafficking and terror outfits,^[41,52,71] and country like U.S¹⁸⁸, England and Walls¹⁸⁹ are having legal recognition

of undercover ops in criminal activity.

References:

1. <http://www.nbbmuseum.be/en/2007/09/chinese-invention.htm> accessed on 19-01-2016
2. Annual Report , Reserve Bank of India 2015-16,Chapter- VII, Currency Management, internet source: <https://rbidocs.rbi.org.in/rdocs/AnnualReport/PDFs/8CURRENCYC8DA67E8EB574B8C84A75AE4D52DEBED.PDF> accessed on 04-09-2016
3. <https://www.rbi.org.in/currency/museum/p-rep.html> accessed on 09-08-2016
4. RBI/2012-13/104, DCM (FNVD) No .G-/16.01.05/2012-13, dated: July 2, 2012, internet source: <https://www.rbi.org.in/commonman/Upload/English/Notification/PDFs/104MASC020712.pdf> accessed on 10-6-2016
5. https://www.rbi.org.in/Scripts/ic_banknotessecurity.aspx accessed on 09-08-2016
6. BIS Review 35/2010, <http://www.bis.org/review/r100325d.pdf> accessed on 20-06-2016.
7. <https://uneasymoney.com/2012/02/15/counterfeiting-and-american-monetary-history/> accessed on 20-06-2016
8. FATF REPORT- Money laundering and terrorist financing related to counterfeiting of currency June 2013, internet source: <http://www.fatf-gafi.org/media/fatf/documents/reports/money-laundering-terrorist-financing-related-to-counterfeit-currency.pdf> accessed on 22-07-2016
9. Lawrence Malkin, Krueger's Men: The Secret Nazi Counterfeit Plot and the Prisoners of Block 19, Back Bay Books / Little, Brown and Company Hachette Book Group USA 237 Park Avenue, New York, NY 10017, 1st E- Book Edn, 2008, ISBN: 978-0-31602-916-2, internet source: [http://dlx.bookzz.org/genesis/1323000/63be6f1d466bc67f017a5e4b0230702a/_as/\[Lawrence_Malkin\]_Krueger's_Men_The_Secret_Nazi_C\(BookZZ.org\).epub](http://dlx.bookzz.org/genesis/1323000/63be6f1d466bc67f017a5e4b0230702a/_as/[Lawrence_Malkin]_Krueger's_Men_The_Secret_Nazi_C(BookZZ.org).epub) accessed on 02-08-2016
10. <http://www.interpol.int/Crime-areas/Financial-crime/Counterfeit-currency-and-security-documents> accessed on 23-07-2016
11. Black Money, White Paper 2012, Ministry of Finance, Dept. of Revenue, Central Board of Direct Taxes, New Delhi, internet source: http://finmin.nic.in/reports/whitepaper_blackmoney2012.pdf accessed on 05-06-2016
12. Report of the Group of Ministers on National Security (2001), Cabinet Secretariat OM No.141/1/2000/TS dated April 17, 2000, internet source: <http://www.vifindia.org/sites/default/files/GoM%20Report%20on%20National%20Security.pdf> accessed on 13-08-2016
13. Rajya Sabha Un starred Q. No- 1719, answered on 2nd August 2016, internet source: <http://164.100.47.234/question/annex/240/Au1719.docx> accessed on 15-08-2016
14. <http://www.businesspundit.com/10-most-notorious-counterfeiting-operations-of-the-last-100-years/> accessed on 13-08-2016
15. (1986) 4 SCC 746: (1987 Cri LJ 308): AIR 1987 SC 33: 1987 SCR (1) 387, internet source: <https://indiankanoon.org/doc/58373/> accessed on 23-07-2016

16. AIR 2005 SC 128
17. Seventy Ninth Report of Standing Committee on Finance of Lok Sabha, "Counterfeit Currency Notes in Circulation", Lok Sabha Secretariat, New Delhi, December 2008, internet source: http://164.100.47.134/lssccommittee/Finance/14_Finance_79.pdf accessed on 01-07-2016
18. http://www.enforcementdirector.gov.in/scheduled_offences_under_pmla.pdf accessed on 22-07-2016
19. <http://finmin.nic.in/law/moneylaunderingrule.pdf> accessed on 22-07-2016
20. <http://pib.nic.in/newsite/erelcontent.aspx?reid=145179> accessed on 13-06-2016
http://www.nia.gov.in/writereaddata/Portal/LawReference/18_1_IndianCurrencyOffencesRules_2013.pdf
22. <https://www.law.cornell.edu/uscode/text/18/473>, accessed on 02-08-2016
23. <http://laws-lois.justice.gc.ca/eng/acts/c-46/FullText.html> accessed on 02-08-2016
24. https://www.imolin.org/doc/amlid/Poland_Penal_Code1.pdf accessed on 02-08-2016
25. Reserve Bank of India, Dept. of Currency Management, Master Circular – Detection and Impounding of Counterfeit Notes, R.B.I./2016- 17/22, DCM (FNVD) G-6/16.01.05/2016-17, 20th July 2016, internet source: <https://rbi.org.in/scripts/NotificationUser.aspx?Mode=0&Id=10517> accessed on 01-08-2016
26. AIR 2001 SC 3074; 2001 (2) ALD (Cri) 717; 2001 ALLMR (Cri) 2398 (SC); 2001 Cri LJ 4696; JT 2001 (8) SC 322; 2001 (7) SCALE 37; (2001) 9 SCC 642; 2001 (2) LC 1556 (SC), internet source: <https://www.legalcrysal.com/case/662695/umashanker-vs-state-chhattisgarh> accessed on 28-09-2016
27. 2007 Cri. LJ 4577 at 4579 (Call)
28. 2004 Cri. LJ 1738 (Jhar), internet source: <https://indiankanoon.org/doc/477423/> accessed on 19-07-2016
29. 1999 Cri. L. J. 942, internet source: <https://indiankanoon.org/doc/1359547/> accessed on 23-07-2016
30. 2002 Cri. L. J, N.O.C 283
31. CR.MA/9531/2008, Order dated: 14th August 2008, internet source: <https://indiankanoon.org/doc/75356/> accessed on 11-07-2016
32. Criminal Misc. Application No.8167/2008, decided on 5th August 2008, internet source: <https://indiankanoon.org/doc/684512/> accessed on 10-07-2016
33. S.B. Criminal Appeal No.311/2007, Decided on 21st April 2010, internet source: <http://rhccasestatus.raj.nic.in/smsrhcb/rhbcis/jttextfile.asp?ID=CRLA&nID=311&yID=2007&d oj=4%2F21%2F2010> accessed on 11-07-2016
34. S.B. Criminal Appeal No.1740/2003, Decided on 21st April 2010, internet source: <http://rhccasestatus.raj.nic.in/smsrhcb/rhbcis/jttextfile.asp?ID=CRLA&nID=311&yID=2007&d oj=4%2F21%2F2010> accessed on 11-07-2016
35. AIR 1978 SC 429

36. 2008 (63) ACC P.115
37. R.S.U.S.Q.NO. 3777 FOR 13.8.2014, internet source: <http://mha1.nic.in/par2013/par2014-pdfs/rs-130814/RS%203777.pdf> accessed on 19-07-2016
38. L.S.U.S.Q.No. 1559 FOR 08.12.2015, internet source: <http://mha1.nic.in/par2013/par2015-pdfs/ls-081215/1559.pdf> accessed on 01-07-2016
39. LS.US.Q.No. 1542 FOR 03.05.2016, internet source: <http://mha1.nic.in/par2013/par2016-pdfs/ls-030516/1542%20E.pdf> accessed on 01-07-2016
40. Cri. Appl. No. 5175 of 2003, decided on 4th December 2003, 2004 (2) Mh. LJ 555, internet source: <https://www.legalcrystal.com/case/365444/state-maharashtra-vs-rajendra-shantilal-nahar> accessed on 19-07-2016
41. Crl. Misc. Petition No. M-28714 of 2009, decided on 8th December 2009, internet source: <https://indiankanoon.org/doc/1889439/> accessed on 03-08-2016
42. C.R.A No- 545 of 2012, Decided on 4th September 2015, internet source : <https://indiankanoon.org/doc/94802597/> accessed on 12-05-2016
43. Ashley, Sean Paul. "The Future of Terrorist Financing: Fighting Terrorist Financing in Digital Age." *Penn State Journal of International Affairs* 02, no. 01 (Spring 2012): 10., internet source: https://psujia.files.wordpress.com/2012/04/terrorist_financing_final1.pdf accessed on 28-06-2016
44. Phillips, T. (2005): *Knockoff: The Deadly Trade in Counterfeit Goods*. Kogan Page Limited, London.
45. Vivek Chadha, *Life Blood of Terrorism Countering Terrorism Finance*, Bloomsbury Publishing India Pvt. Ltd, 1st Edn 2015, internet source: http://www.idsa.in/system/files/book/Book_LifebloodofTerrorism.pdf accessed on 30-05-2016
46. Ramanand Garge (2015), *Combating Financing of Terror: An Indian Perspective*, Occasional Paper – October 2015, internet source: <http://www.vifindia.org/sites/default/files/combating-financing-of-terror-an-indian-perspective.pdf> accessed on 28-06-2016
47. International Narcotics Control Strategy Report (2011), Vol. II, U.S. Dept. of State, internet source <http://www.state.gov/j/inl/rls/nrcrpt/2011/vol2/156375.htm#india> accessed on 12-05-2016
48. L.S.U.S.Q.NO. 2919 FOR 27.8.2013 , internet source:<http://mha1.nic.in/par2013/par2013-pdfs/ls-270813/2919.pdf> accessed on 19-06-2016
49. L.S.U.S.Q.NO. 2102 FOR 10.3.2015, internet source: <http://mha1.nic.in/par2013/par2015-pdfs/ls-100315/2102.pdf> accessed on 19-07-2016
50. Crl. M.C. No.3644/2014, date of order 12th May 2015, internet source: <https://www.legalcrystal.com/case/51388/mohd-marroof-ibrahim-vs-state> accessed on 11-07-2016
51. The State of Maharashtra, (at the instance of National Investigation Agency(N.I.A), New Delhi C.R. No.03/09) V. Ravi Dhiren Ghosh and Others, Sessions Case No: 674/2009, Order dated- 29th January 2014, internet source: http://www.nia.gov.in/writereaddata/Portal/LawReference/34_1_judgasesions674-09.pdf accessed on 20-06-2016

52. Narendra Prasad v. The State of West Bengal, C.R.A No. 93 of 2014, decided on 3rd August 2016, para 18, internet source: <https://indiankanoon.org/doc/115046167/> accessed on 18-08-2016
53. Criminal Petition No- 5397 of 2011, decided on 16th March 2012, internet source: <https://www.legalcrystal.com/case/925434/vinay-kumar-son-late-mohan-vs-state-cottonpet> accessed on 12-07-2016
54. CRL. A. No. 1036 of 2015 (D), decided on 12th Nov. 2015, Kerala High Court, internet source: <https://www.legalcrystal.com/case/1181656/antony-das-vs-represented-investigating> , accessed on 13-09-2016
55. Bhure Lal, The Monstrous Face of ISI, 1st Edition 2000, Reprints 2004, Siddharth Publications, New Delhi, ISBN : 81-7220-124-9, pg- 40, 83,104, internet source: http://fame-india.com/up47/Bhurelal_ISI.pdf accessed on 01-01-2015
56. N.S. Jamwal, Counter Terrorism Strategy, Strategic Analysis, Vol. 27, No. 1, Jan-Mar 2003, Institute for Defence Studies and Analyses, internet source: [http://www.idsa.in/system/files/JDS1\(1\)2007_0.pdf](http://www.idsa.in/system/files/JDS1(1)2007_0.pdf) accessed on 30-05-2016
57. Gen.V K Nayar (2003), India's Internal Security Compulsions, Research Projects on India- 2025, Centre for Policy Research, New Delhi, internet source: http://planningcommission.nic.in/reports/sereport/ser/vision2025/vsn2025_ndx.htm accessed on 04-08-2016
58. K. Subrahmanyam (2003), External Security, Research Projects on India- 2025, Centre for Policy Research, New Delhi, internet source: http://planningcommission.nic.in/reports/sereport/ser/vision2025/vsn2025_ndx.htm accessed on 04-08-2016
59. Kalim Bahadur (2006), Regional Implications of the Rise of Islamic Fundamentalism in Pakistan, Strategic Analysis, Vol. 30, No. 1, Jan-March 2006, Institute for Defence Studies and Analyses, pg- 7-29, internet source: http://www.idsa.in/system/files/strategicanalysis_kbahadur_0306.pdf accessed on 30-05-2016
60. R Vaidyanathan, Fake currency notes can destabilize our economy, DNA, Tuesday, August 11, 2009, internet source: <http://www.iimb.ernet.in/~vaidya/Fake%20currency%20notes%20can%20destablize%20our%20economy.pdf> accessed on 23-07-2016
61. V. K. Sashikumar (2009), Pakistan's export of fake currency via Nepal , Indian Defence Review, Issue: Vol. 23.4 Oct-Dec 2008, internet source: <http://www.indiandefencereview.com/interviews/pakistans-export-of-fake-currency-via-nepal/> accessed on 13-08-2016
62. Rana Banerji, Pakistan: Inter Services Intelligence Directorate (ISI) An Analytical Overview, Journal of Defence Studies, Vol. 5 No. 4 October 2011, internet source: http://www.idsa.in/system/files/jds_5_4_rbanerji.pdf accessed on 30-05-2016
63. Prakash Singh (2013), India: Internal Security Challenges and Responses, Occasional Paper 2013, Vivekananda International Foundation, New Delhi, internet source: <http://www.vifindia.org/sites/default/files/India%20Internal%20Security%20Challenges%20and%20Responses.pdf> accessed on 10-06-2016
64. Vivek Chadha (2014): Terrorism Finance: Sources and Trends in India, Journal of Defence Studies, Vol.8, No. 3, July–September 2014, pp. 57–100,

65. http://articles.economictimes.indiatimes.com/2014-11-20/news/56304334_1_ficn-fake-indian-currency-notes-pakistani-nationals accessed on 28-06-2016
66. L.S.US.Q.NO.2154 FOR 10.03.2015, internet source: <http://mha1.nic.in/par2013/par2015-pdfs/ls-100315/2154.pdf> accessed on 28-06-2016
67. Rajya Sabha, Starred Q. No- 191, Answered on 3rd August 2016, internet source: <http://mha1.nic.in/par2013/par2016-pdfs/rs-030816/191%20E.pdf> accessed on 12-08-2016
68. <http://pib.nic.in/archive/releases98/lyr2003/rfeb2003/18022003/r1802200314.html> accessed on 28-06-2016
69. <http://timesofindia.indiatimes.com/india/Fake-Indian-currency-notes-worth-Rs-12-crore-seized-since-January/articleshow/45220808.cms> accessed on 21-07-2016
70. http://articles.economictimes.indiatimes.com/2015-02-06/news/58878817_1_fake-indian-currency-notes-terror-groups-dhaka accessed on 22-07-2016
71. (2000) 3 GLR 602, internet source: <https://indiankanoon.org/doc/201303/> accessed on 19-07-2016
72. CRM-55079-2012 in CRA-S-1173-SB-2012, decided on 7th February 2013, internet source: <https://indiankanoon.org/doc/132172359/> accessed on 19-07-2016
73. Criminal Appeal No.353 SB of 2003, decided on 13th September 2012, internet source: <https://indiankanoon.org/doc/158574550/> accessed on 19-07-2016
74. FIR No 68/2005, P.S. Special Cell, Lodhi Colony, u/s 21 NDPS Act, 489C IPC, S.C. No-97/05, decided on 4th April 2008, internet source: <https://indiankanoon.org/doc/186653151/> accessed on 19-07-2016
75. W.P.(C) 1611/2015, decided on 22nd April 2015, internet source: <https://indiankanoon.org/doc/106961374/> accessed on 19-07-2016
76. CRA-S No.3058-SB of 2011, decided on 21st November 2013, internet source: <https://indiankanoon.org/doc/116556549/> accessed on 19-07-2016
77. Criminal Miscellaneous No.27123 of 2013, decided on 5th November 2014, internet source: <https://indiankanoon.org/doc/43612780/> accessed on 19-07-2016
78. CrI. A. No. 1030 of 2013, decided on 24th June 2014, internet source: <https://indiankanoon.org/doc/147894826/> accessed on 19-07-2016
79. Management of Indo- Myanmar Border, Ministry of Home Affairs, Govt. of India, internet source: [http://mha.nic.in/hindi/sites/upload_files/mhahindi/files/pdf/BM_MAN-IN-MYAN\(E\).pdf](http://mha.nic.in/hindi/sites/upload_files/mhahindi/files/pdf/BM_MAN-IN-MYAN(E).pdf) accessed on 28-08-2016
80. Mutual Evaluation Report of India (2011), Financial Action Task Force (FATF) and the Asia/Pacific Group on Money Laundering (APG), Para 25, internet source: http://www.finmin.nic.in/the_ministry/dept_eco_affairs/capital_market_div/India_Mutual_Evaluation_Report.pdf accessed on 28-08-2016
81. Parliament of India, Rajya Sabha, Department Related Standing Committee on Home Affairs, One Hundred and Fourty Third Report on The Land Ports Authority of India Bill, 2009, Presented

- in Rajya Sabha on 22nd February 2010, pg- 59, internet source: <http://www.prsindia.org/uploads/media/Land%20Port/SCR%20Land%20Ports%20Authority%20of%20India%20Bill,%202009.pdf> accessed on 28-09-2016
82. Mirza Zulfiqur Rahman, Armed Conflicts in South Asia 2010, D. Subha Chandran and R. P. Chari (Eds), Chapter-6, Northeast India: Protracted Conflicts and Protracted Peace Processes, 1st Edn, 2011, Routledge, New Delhi, pg- 138, internet source: <http://file.ebook777.com/017/9780415612562.pdf> accessed on 29-08-2016.
 83. M.N. Buch (2012), Counterfeit Currency: Threat to India's Internal Security, Vivekananda International Foundation, internet source: <http://www.vifindia.org/article/2012/march/05/Counterfeit-currency-threat-to-india-s-internal-security> accessed on 27-08-2016
 84. Maj. Gen. Dhruv C. Kotch (2014), Guarding the India Myanmar border, Centre for Land Warfare Studies (CLAWS), internet source: <http://www.claws.in/1131/guarding-the-india-myanmar-border-maj-gen-dhruv-c-katoch.html> accessed on 28-08-2016
 85. Singh etal (2014), Cross Border Crime and its Impact in Manipur, India, International Journal of Interdisciplinary and Multidisciplinary Studies (IJIMS), 2014, Vol 1, No.5, 161-165, internet source: http://www.ijims.com/uploads/6123c4cd506070e2d8bazppd_575.pdf accessed on 28-08-2016
 86. http://www.business-standard.com/article/pti-stories/3-pak-nationals-arrested-with-fake-indian-currency-in-thailand-114072301322_1.html accessed on 27-08-2016
 87. Pakistan based terrorist groups strengthen themselves in Myanmar, S. D. Pradhan, 12th February 2012, internet source: <http://blogs.timesofindia.indiatimes.com/ChanakyaCode/pakistan-based-terrorist-groups-strengthen-themselves-in-myanmar/> accessed on 28-08-2016
 88. Sampa Kundu, Asian Strategic Review (2016), S.D. Muni, Vivek Chadha (Eds) Chapter-18, Buddhist versus Islamic Extremism: A Case Study of Myanmar, 1st Edn, Pentagon Press, India, pg-335, internet source: http://www.idsa.in/system/files/book/book_ASR2016.pdf accessed on 28-08-2016.
 89. L.S.U.S.Q.No.2385 for 12.3.2013, internet source: <http://mha1.nic.in/par2013/par2013-pdfs/ls-120313/2385.pdf> accessed on 22-07-2016
 90. LS.USQ.No 1837 FOR 8.3.2016, internet source: <http://mha1.nic.in/par2013/par2016-pdfs/ls-080316/1837.pdf> accessed on 23-07-2016
 91. Management of Indo-Bangladesh Border, Ministry of Home Affairs, Govt. of India, internet source: http://mha.nic.in/sites/upload_files/mha/files/BM_MAN-IN-BANG-270813.pdf accessed on 28-08-2016
 92. Pushpita Das (Eds), India's Border Management Select Documents, 1st Edn, 2010, Institute for Defence Studies and Analyses, New Delhi, pg- 151, internet source: http://www.idsa.in/sites/default/files/book_IndiasBorderManagement.pdf accessed on 28-08-2016
 93. Bangladesh Political Weekly Brief , Oct 21- 27, 2011, Vivekananda International Foundation, internet source: <http://www.vifindia.org/weeklybrief/bangladesh/political/2011/43> accessed on 28-08-2016

94. Anand Kumar, *Return from the Precipice: Bangladesh's Fight Against Terrorism*, 1st Edn, 2012, Pentagon Security International, New Delhi, pg- 88, internet source: http://www.idsa.in/system/files/book/book_BangFightTerrorism.pdf accessed on 28-08-2016
95. Interview with Prof. Jayanta Kumar Ray (2013), *FPRC Journal*, 2013 (4), Foreign Policy Research Centre, New Delhi, pg- 18, internet source: <http://www.fprc.in/pdf/J-16.pdf> accessed on 28-08-2016
96. Dr. Ahrar Ahmad (2013), *Indo- Bangladesh Relation- A Long View*, *FPRC Journal*, 2013 (4), Foreign Policy Research Centre, New Delhi, pg- 56, internet source: <http://www.fprc.in/pdf/J-16.pdf> accessed on 28-08-2016
97. Dr. S. Binodkumar Singh (2013), *Insurgency in North Eastern Region (NER) of India*, *FPRC Journal*, 2013 (4), Foreign Policy Research Centre, New Delhi, pg- 147, internet source: <http://www.fprc.in/pdf/J-16.pdf> accessed on 28-08-2016
98. Sushil Kumar Sharma (2014): *Insurgency in North-East India: External Dynamics*, *Journal of Defence Studies*, Vol. 8, No. 4 October-December 2014, pp. 111-131, internet source: http://www.idsa.in/system/files/jds/jds_8_4_2014_sushilkumarsharma.pdf accessed on 28-08-2016
99. LS.USQ.No. 865 FOR 1.3.2016, internet source: <http://mha1.nic.in/par2013/par2016-pdfs/ls-010316/865.pdf> accessed on 28-08-2016.
100. *Management of Indo- Nepal Border*, Ministry of Home Affairs, Govt. of India, internet source: http://mha.nic.in/sites/upload_files/mha/files/Indo-Nepal-270813.pdf accessed on 04-09-2016
101. Harinder Baweja, *The Kathmandu nexus*, *India Today*, June 12, 2000; internet source: <http://indiatoday.intoday.in/story/isi-consolidates-hold-in-nepal-through-politicians-businessmen-after-hijacking-of-ic-814/1/244309.html> accessed on 04-09-2016
102. Standing Committee on Home Affairs, Rajya Sabha, 123rd Report on Sahastra Seema Bal Bill 2006, pg- 9/15, internet source: <http://www.prsindia.org/uploads/media/1167469057/SCR%20sashastra%20seema%20bal%202006.pdf> accessed on 04-09-2016
103. Hari Bans Jha, *Nepal's Border Relation with India and China*, pg-10, internet source: http://webcache.googleusercontent.com/search?q=cache:http://srch.slav.hokudai.ac.jp/publicntn/eurasia_border_review/Vol41/V4N104J.pdf&gws_rd=cr&ei=R6HLV8mGlojtvATxzK7QBA accessed on 04-09-2016
104. Das, Pushpita(2008)'Towards a Regulated Indo-Nepal Border', *Strategic Analysis*,32:5,879 — 900
105. Jason Miklian, *Illicit Trading in Nepal: Fueling South Asian Terrorism*, South Asia Briefing Paper #3, PRIO Paper, 27 January 2009, International Peace Research Institute, Oslo (PRIO), internet source: [http://file.prio.no/Publication_files/Prio/Illicit%20Trading%20in%20Nepal%20\(South%20Asia%20Briefing%20Paper%203\).pdf](http://file.prio.no/Publication_files/Prio/Illicit%20Trading%20in%20Nepal%20(South%20Asia%20Briefing%20Paper%203).pdf) accessed on 04-09-2016
106. Buddhi Narayan Shrestha, *Case study : Nepal-India Border Management and Its Challenges and Opportunities*, FIG XXV Congress 2014, Kuala Lumpur, Malaysia, 16-21 June 2014, internet source: https://www.fig.net/resources/proceedings/fig_proceedings/fig2014/ppt/ts01d/TS01D_shrestha_6774_ppt.pdf accessed on 04-09-2016

107. Lekh Nath Paudel (2014), *The Highway Routes- Small Arms Smuggling in Eastern Nepal*, Small Arms Survey, 47 Avenue Blanc, 1202 Geneva, Switzerland, internet source: http://www.genevadeclaration.org/fileadmin/docs/2014RRC/0._Resources/Draft-briefing-NAVA-Small-arms-smuggling.pdf accessed on 04-09-2016
108. Nihar R. Nayak, *Strategic Himalayas: Republican Nepal and External Powers*, 1st Edn, 2014, Pentagon Press, New Delhi, internet source: http://www.idsa.in/system/files/book/book_StrategicHimalaya.pdf accessed on 04-09-2016
109. Kavitha K K (2016), *The Changing Paradigm of India- Nepal Relations: Problems and Prospects*, Quest Journals, *Journal of Research in Business and Management*, Volume 4, Issue 5 pp: 10-15, ISSN(Online) : 2347-3002, internet source: <http://www.questjournals.org/jrbm/papers/vol4-issue5/B451015.pdf>
110. *Managing Borders of the Country*, Government of India, Based on the Recommendations of the Group of Ministers on Reforming the National Security System, internet source: <http://pib.nic.in/feature/feyr2001/fsep2001/fl70920011.html> accessed on 27-05-2016
111. *ISI Activity on Indo Nepal Border*, Ministry of Home Affairs, Press release, 18th February 2003, internet source: <http://pib.nic.in/archive/releases98/1yr2003/rfeb2003/18022003/r1802200314.html> accessed on 04-09-2016
112. *Management of Indo- China Border*, Ministry of Home Affairs, internet source: http://mha.nic.in/sites/upload_files/mha/files/Indo-China-270813.pdf accessed on 04-09-2016
113. *Indo- Bhutan Border Management*, Ministry of Home Affairs, internet source: http://mha.nic.in/sites/upload_files/mha/files/Indo-Bhutan-1011.pdf accessed on 04-09-2016
114. *State v. Morjen Hussain and Ors*, Crime Number: 01/2012 of National Investigation Agency, Hyderabad, Special Sessions Case No- 02/2013, decided on 19th February 2015, internet source: <http://www.nia.gov.in/writereaddata/Portal/CasesPdfDoc/Judgement-1.pdf> accessed on 20-07-2016
115. *Case No- RC-07/2011/NIA/DLI*, 2nd Supplementary Charge sheet, internet source: <http://www.nia.gov.in/writereaddata/Portal/CasesPdfDoc/RC-07-2011-DLI-SCS-2-1.pdf> accessed on 15-08-2016
116. *Criminal Appeal No- 261 and 262 of 2014*, decided on 23rd February 2016, Allahabad High Court, Lucknow Bench, Division Bench of Surendra Vikram Singh Rathore and Pratyush Kumar JJ
117. *Border Security Force*, Press Release, 25th August 2013, internet source: <http://bsf.nic.in/doc/press/pr66.pdf> accessed on 09-06-2016
118. *Border Security Force*, Press Release, 2nd August 2013, internet source: <http://bsf.nic.in/doc/press/pr62.pdf> accessed on 09-06-2016
119. *Border Security Force*, Press Release, 08th February 2013, internet source: <http://bsf.nic.in/doc/press/pr37.pdf> accessed on 06-09-2016
120. http://www.satp.org/satporgtp/detailed_news.asp?date1=5/3/2013&id=8 accessed on 15-08-2016

121. Meghalaya Time Line 2016, 10th February, internet source: <http://www.satp.org/satporgtp/countries/india/states/meghalaya/timelines/index.html> accessed on 13-8-2016
122. Border Security Force, Press Release, 11th February, 2013, internet source: <http://webcache.googleusercontent.com/search?q=cache:rxeiQyVSORkJ:bsf.nic.in/doc/press/pr38.pdf+&cd=3&hl=en&ct=clnk&gl=in> accessed on 13-08-2016
123. Border Security Force, Press Release, 21st March 2014, internet source: <http://bsf.nic.in/doc/misc/ficn.pdf> accessed on 09-06-2016
124. State v. Dilbag Singh and Ors, S.C. No- 16/07-04-2014 , decided on 20-07-2015, internet source: <http://www.nia.gov.in/writereaddata/Portal/CasesPdfDoc/JUDGEMENT-RC-07-2012-DLI-1.pdf> accessed on 13-08-2016
125. Case No- RC-08/2016/NIA/DLI, internet source: <http://www.nia.gov.in/case-detail.htm?126> accessed on 15-08-2016
126. In re Mantu Mia, C.R.A. No- 354 of 2012, Order dated 11th June 2013, Toufique Uddin, J., Calcutta High Court , Appellate Side, internet source: <https://indiankanoon.org/doc/118695641/> accessed on 19-08-2016
127. Mehmood @ Mohammad v. State of Rajasthan, S.B. Criminal Appeal No- 6272/2016, Order dated- 24th May 2016 , Rajasthan High Court of Judicature for Rajasthan, Bench at Jaipur, Sabina J., internet source: <http://rhccasestatus.raj.nic.in/smsrhcb/rhbcis/judfile.asp?ID=CRLMB&nID=6272&yID=2016&doj=5/24/2016> accessed on 19-08-2016
128. Shrideep Biswas, FICN: Currency of Terror, internet source: http://www.southasianoutlook.com/issues/2011/august/india_pakistan_FICN_currency_of_terror.html accessed on 02-08-2016
129. Case No- RC-02/2014/NIA/DLI, internet source: <http://www.nia.gov.in/case-detail.htm?53> accessed on 15-08-2016
130. http://www.satp.org/satporgtp/detailed_news.asp?date1=4/22/2014&id=21 accessed on 15-08-2016
131. <https://southasiaspeaks.wordpress.com/2009/08/13/bihar-%E2%80%93-terai-land-where-fake-notes-don%E2%80%99t-have-borders/> accessed on 15-08-2016
132. L.S .U.S.Q. NO.3086 FOR 11.02.2014, internet source: <http://mha1.nic.in/par2013/par2013-pdfs/ls-110214/3086.pdf> accessed on 28-06-2016
133. <http://bdnews24.com/bangladesh/2015/12/04/pakistani-national-five-others-held-with-fake-money-in-dhaka> accessed on 15-08-2016
134. <http://www.oneindia.com/international/fake-currency-and-human-trafficking-the-deadly-cocktail-from-pakistan-1947107.html> accessed on 15-08-2016
135. Case No- RC-07/2011/NIA/DLI, 2nd Supplementary Charge sheet, internet source: <http://www.nia.gov.in/writereaddata/Portal/CasesPdfDoc/RC-07-2011-DLI-SCS-2-1.pdf> accessed on 15-08-2016
136. BSF unearths nexus, The Telegraph, 29th July 2016, internet source:

- http://www.telegraphindia.com/1160729/jsp/northeast/story_99379.jsp accessed on 05-08-2016
137. Amit Chowdhury @ Madhav Chowdhury v. State of West Bengal, C.R.R. No.3701 of 2014, decided on 6th May 2015, Calcutta High Court, Shib Sadhan Sadhu, J.(para-2), internet source: <https://indiankanoon.org/doc/46420692/> accessed on 19-08-2016
 138. <http://www.thehindu.com/2005/09/06/stories/2005090603030600.htm> accessed on 28-06-2016
 139. Kanhaiya Lal Gupta v. State of U.P., Criminal Misc. Bail Application No- 24312 of 2010, decided on 27th August 2012, Hon'ble Kalimullah Khan, J., High Court Judicature at Allahabad.
 140. <http://indianexpress.com/article/cities/kolkata/5-sbi-employees-including-cashier-held-for-dealing-in-fake-currency-notes/> accessed on 28-06-2016
 141. <http://www.oneindia.com/2008/09/16/cbi-finally-takes-up-sbi-dumariyaganj-fake-currency-case-1221584531.html> accessed on 28-06-2016
 142. Press Information Bureau, Govt. of India, Seizer of Fake Currency, Ministry of Defence, 26th August 2013, internet source: <http://pib.nic.in/newsite/PrintRelease.aspx?relid=98716> accessed on 05-08-2016
 143. BSF Jawan caught with counterfeit currency, Deccan Chronicle, 17th August 2015, internet source: <http://www.deccanchronicle.com/150817/nation-crime/article/bsf-jawan-caught-counterfeit-currency> accessed on 05-08-2016
 144. Fake currency seized, two held, 10th July 2007, The Economic Times, internet source: http://articles.economictimes.indiatimes.com/2007-07-10/news/27666885_1_fake-currency-counterfeit-notes-counterfeit-currency accessed on 05-08-2016
 145. Balla @ Balram Jangde and Another v. State of Chhattisgarh, M. Cr. C No. 6125, 6175 of 2014, decided on 6th January 2015, internet source: <http://highcourt.cg.gov.in/Afr/courtJudgementandAFR/2015/Jan/MCrCNos6125to6175of2014.pdf> accessed on 10-07-2016
 146. Merajbhai Kuershibhai Rabri and Ors. v. State of Gujarat, Criminal Appeal (Against Conviction) No- 58 of 2012, decided on 18th Nov. 2014, S.G.Shah J., Gujarat High Court (para-17), internet source: <https://indiankanoon.org/doc/150728101/> accessed on 19-08-2016
 147. Jayeshkumar Kantilal Panchal v. State of Gujarat, 2007 Cri. LJ 2254, internet source: <https://indiankanoon.org/doc/450949/> accessed on 19-08-2016
 148. Beena Rani @ Veena Rani @ Beena Devi v. State of Haryana, CrI.Misc.No.14169 of 2014 and CrI.Appeal No.S-3003-SB-2010, decided on 9th December 2014, Darshan Singh J., Punjab-Haryana High Court (para-34), internet source: <https://indiankanoon.org/doc/163324001/> accessed on 19-08-2016
 149. I.L.R. 2015 (1) Kerala 641, internet source: [http://highcourtofkerala.nic.in/ILR/IndextoILR2015\(1\)Kerala.pdf](http://highcourtofkerala.nic.in/ILR/IndextoILR2015(1)Kerala.pdf) accessed on 20-07-2016
 150. (2005) 11 SCC 600, AIR 2005 SC 3820, <http://indiankanoon.org/doc/1769219/> accessed on 20-07-2016 (para 15)
 151. Criminal Appeal Nos- 1899-1900 of 2011, decided on <https://indiankanoon.org/doc/193792759/> accessed on 20-7-2016

152. Criminal Appeal Nos- 98-99 of 2009, decided on 10th August 2011, internet source: <https://indiankanoon.org/doc/265365/> accessed on 20-07-2016
153. Criminal Miscellaneous No.14263 of 2014, decided on 10th August 2015, internet source: <https://indiankanoon.org/doc/73967981/> accessed on 20-09-2016
154. Kolkata police arrest six linked to Bangladesh terror group, internet source: <http://indianexpress.com/article/india/india-news-india/bangladesh-terror-group-arrest-kolkata-police-terrorism-3051871/> accessed on 28-09-2016
155. CRL.L.P. 135/2007, decided on 27th May 2013, internet source: <https://indiankanoon.org/doc/138278365/> accessed on 19-08-2016
156. Criminal Appeal No- 1271 of 2013, decided on 1st April 2015, internet source: <http://bombayhighcourt.nic.in/generatenewauth.php?auth=cGF0aD0uL2RhdGEvanVkZ2VtZW50cy8yMDElLyZmbmFtZT1DUkFQRUFMMTIzNDEzLnBkZiZzbWZsYWc9TiZyanVkZGF0ZT0mdXBsb2FkZHQ9MTcvMDQvMjAxNSZzcGFzc3BocmFzZT0yMDA4MTYwMDAyNDU=> accessed on 19-08-2016
157. Govt. Appeal (DB) No.09 of 2016, Arising Out of P.S. Case No. -48 Year- 2010 Thana -Raxaul (Haraiya) District- East Champaran (Motihari), internet source: <https://indiankanoon.org/doc/166047223/> accessed on 19-08-2016
158. CRL.L.P. 74/2013, date of order- 5th August 2013, Delhi High Court, internet source: <https://indiankanoon.org/doc/72174254/> accessed on 19-08-2016
159. Criminal Appeal No- 935 of 2007, decided on 12th December 2012, internet source: <https://indiankanoon.org/doc/50198104/> accessed on 19-08-2016
160. Criminal Appeal No- 1691 of 2012, decided on 21st March 2013, internet source: <https://indiankanoon.org/doc/45217802/> accessed on 19-08-2016
161. CRL.A 929/2004, decided on 11th April 2011, B. V. Pinto J. Karnataka High Court, internet source: <http://judgmenthck.kar.nic.in/judgmentsdsp/bitstream/123456789/52567/1/CRLA100205-14-20-03-2015.pdf> accessed on 21-08-2016, <http://judgmenthck.kar.nic.in/judgments/handle/123456789/533520> accessed on 21-08-2016
162. 2004 (2) Kar LJ 19, internet source: <https://indiankanoon.org/doc/1669800/> accessed on 21-08-2016
163. RLW 2006 (4) Raj 2709, 2006 (2) WLC 197, internet citation: <https://indiankanoon.org/doc/842941/> accessed on 19-08-2016.
164. Criminal Appeal No- 662 of 2009, decided on 18th January 2016, internet source: <https://indiankanoon.org/doc/192822545/> accessed on 28-09-2016
165. Criminal Appeal No- 863 of 2012, decided on 30th January 2015, internet source: <http://www.lawweb.in/2016/01/when-accused-who-has-not-filed-appeal.html> accessed on 26-08-2016, also reported in 2015 ALLMR (Cri) 4274
166. Criminal Appeal No- 314 of 2013, decided on 15th January 2015 internet source:

- <http://bombayhighcourt.nic.in/generatenewauth.php?auth=cGF0aD0uL2RhdGEvanVkZ2VtZW50cy8yMDE1LyZmbmFtZT1DUkFQRUFMMzAxMTMucGRmJnNtZmxhZz10JnJqdWRkYXRIPSZ1cGxvYWRkdD0xNy8wMS8yMDE1JnNwYXNzcGhyYXNIPTI3MDgxNjEzMTYzNA==> accessed on 27-08-2016
167. Criminal Appeal No-181 of 2013, decided on 14th October 2013, internet source: <https://indiankanoon.org/doc/188570830/> accessed on 27-08-2016
 168. Criminal Appeal No- 07 of 2012, decided on 28th February 2013, internet source: <http://highcourtofikkim.nic.in/downloads/judgment/March%202013/CRL.A.%20NO.%2007%20OF%202012%20SHRI%20CHAWAN%20SUBBA%20VS.%20STATE%20OF%20SIKKIM.pdf> accessed on 28-08-2016
 169. <http://pib.nic.in/newsite/erelcontent.aspx?relid=60002> accessed on 15-08-2016
 170. <http://www.arthakranti.org/downloads/finish/5/8> accessed on 20-09-2016
 171. http://mha.nic.in/International_Cooperation accessed on 02-07-2016
 172. https://www.rbi.org.in/scripts/BS_CurrencyFAQView.aspx?Id=39 accessed on 26-09-2016
 173. <https://indiankanoon.org/doc/1547/> accessed on 26-09-2016
 174. <http://parliamentofindia.nic.in/lsdeb/ls12/ses3/2709129801.htm> accessed on 26-09-2016
 175. <https://indiankanoon.org/doc/1570178/> accessed on 26-09-2016
 176. <http://www.bankofengland.co.uk/banknotes/polymer/Documents/counterfeitresilience.pdf> accessed on 05-06-2016
 177. <http://www.rbnz.govt.nz/-/media/ReserveBank/Files/Publications/Bulletins/2002/2002mar65-1lang.pdf> accessed on 05-06-2016
 178. http://www.polymernotes.de/files/ipca/ipca03_0401.pdf accessed on 05-08-2016
 179. <http://www.ipedr.com/vol59/013-ICEMM2013-P00019.pdf> accessed on 05-08-2016
 180. <https://www.innoviasecurity.com/guardian-facts-and-figures/> accessed on 05-08-2016
 181. <http://www.google.co.in/patents/US20060115797> accessed on 05-08-2016
 182. M. H. Eldefrawy and M. K. Khan, "Detecting counterfeit money using RFID-enabled mobile devices," in Proceedings of the 7th International Conference for Internet Technology and Secured Transactions, 2012.
 183. <http://www.prisonplanet.com/022904rfidtagsexplode.html> accessed on 05-08-2016
 184. Bansal D, Malla S, Gudala K, Tiwari P. Anti-Counterfeit Technologies: A Pharmaceutical Industry Perspective. *Scientia Pharmaceutica*. 2013; 81(1):1-13. doi:10.3797/scipharm.1202-03., internet source: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3617666/> accessed on 07-08-2016
 185. <http://www.infoworld.com/article/2667927/application-development/fda-proposes-rfid-tagging-to-stop-drug-counterfeiting.html> accessed on 08-08-2016
 186. <http://www.rfidjournal.com/articles/view?1589> accessed on 07-08-2016
 187. Ministry of Finance, Press Information Bureau, Press release 16th December 2011, Fake Currency

- through ATMs, internet source: <http://pib.nic.in/newsite/PrintRelease.aspx?relid=78867> accessed on 04-09-2016
188. Guidelines on Undercover Operations, Council of the Inspectors General on Integrity and Efficiency, internet source: <https://www.ignet.gov/sites/default/files/files/guidelines-undercover-operations-june-2013.pdf> accessed on 05-09-2016
 189. An inspection of undercover policing in England and Wales, HMIC 2014, ISBN: 978-1-78246-515-7, internet source: <https://www.justiceinspectorates.gov.uk/hmic/wp-content/uploads/an-inspection-of-undercover-policing-in-england-and-wales.pdf> accessed on 05-09-2016
 190. Swapnil Gupta, Kopal Gupta, Deepak, R. Handa, Dr. Rajinder Singh & Keshav Kumar (2012), Decipherment of Indian Counterfeit Currency – Forensic Approach for A Layman, Indian Police Journal, April - June, 2012 ,Vol. LIX , No. 2, pg- 92- 109, internet source: <http://bprd.nic.in/WriteReadData/userfiles/file/8745635448-April%20June%202012.pdf> accessed on 01-10-2016

Terrorism and Counter Terrorism Strategies

(some 'thought ware' on issues and perspectives)

Dr A.P. Maheshwari*



The Indian Police Journal
©BPRD, MHA
BPRD Publication
www.bprd.gov.in

Abstract:

Terrorism and Counter Terrorism are two important phenomenon prevalent globally in the civil society. Terrorism in the pursuit of silent 'power games' is a real threat. 'Jihad' in the civic society due to wars of perception is fatal than a war of guns. Negative perception of governance too breeds terrorism. Across the globe need for proper political handling of terrorism and counter terrorism is strongly felt. An organized global approach with right ideology, policy agenda and strategy, equality of faith, uniform global laws against terrorism, gender equality, zero tolerance approach and good democratic set up prove to be effective and run usher in the higher equilibrium level of peace and prosperity.

Key words:

Terrorism, Counter Terrorism, Premises, perpetrators, dynamic, Congruently, conflicting

1. Before zeroing down on counter terrorism (CT) strategies, it would be interesting to glance through some viewpoints of several observers that has drawn our attention to the genesis of terrorism. Various premises as well as general comments floated in this context are relevant to gauge the under currents and the simmering realities whether perceived or real.

2. War as a rationale for peace has been the pet project of various super powers from time to time.. Iraq, Syria, Afghanistan, Turkey, Lebanon, Egypt - all are cited as glaring examples. Terrorism per-se may not be as a great a real threat as it emerges from the pursuit of silent 'power-games'. The perception of divine mandate, acute injustice and alienation have been used to fuel terrorism. Terror trading has further been accentuated by geo political alignment. One may not openly admit it but one cannot deny the fact that there is an elephant in the room.

3. There appears to be a persistent debate on the globally acceptable definition of terrorism. Is radicalism per-se an act of terrorism? Are we fighting against a common noun without focusing properly on the terror perpetrators? Terrorist for one is a hero for another. Where do we draw the line

Author Introduction

* DG, BPR&D, New Delhi

as a global community? Similarly, we find a lack of cohesive congruency with respect to the global uniformity of laws and strategies in dealing with terrorism. Even the agencies engaged in terror neutralization have evolved their own contradictory sub cultures. The global response is also marked by a lack of proper alignment. The declaration of a global war since 20/11 episode has evolved some proactive approaches. But the question again being raised is whether international forces are really fighting with the right enemy at the right place? The multi-mode, multi-networked terrorism that stands technologically exported across the globe in form of proxy war, needs a serious consideration in identifying and controlling the terror sponsors. As such, are we slowly edging towards a police or military state? Can we afford to ignore the risk of ourselves turning into a monster during the process of controlling the monster? The problem with terrorism, as a technique, is that it may go out of the control of terror sponsors and damage the perpetrators themselves besides those who have been the silent sufferers. History is full of many glaring examples to substantiate this point, the 'good' Osama turning into 'bad' Osama. One can see strategic interests as well as diplomatic advantages finding their way in and brushing aside as well as undermining the normative policies in terror containment. Eventually everyone is busy creating their own defences as well as CT regimes.

4. The proxy war strategies also aim at creating a digital divide in order to control the mindset of the youth. In addition, getting them addicted to drugs or such similar extremities bears the potential of turning them useless, thus making a dent in the 'human assets' of a country. Proxy war has also taken the route of 'economic dominance' as a soft tool for the control of a country and creating influence systems to usher in their hidden agendas, where de-jure governments only enjoy geo-controls and de-facto drivers of peace lie elsewhere.

5. Under such a global scenario, how does one expect the right thinking countries to respond? They also between the 'cost of security' and 'left over value' amidst the terror onslaughts. They keep trying to fetch all the countries on to the same page and oppose a reconciliation with the terror groups at any cost. Within the domain of individual efforts, however, there have been certain success models where the 'Military-Victory' has been translated into a 'Civic-Victory'. Where such a conversion does not take place, the civic population has been seen to be subjected to varied controls by the opportunistic power groups and their manipulations, in terms of lethality as well as the economic debacle. In dealing with terrorism, therefore, increasing reliance is being placed on the civic society that is the actual centre of gravity. 'Jihad' of any type, therefore, sells when the civic society has not matured and wars of perception are ruling the roost. Wars of perception, thus, prove to be more fatal than a war of guns. Negative perception of governance too breeds terrorism.

6. Having seen various facets and derivative notions on the empirical formats of terrorism, experts feel that the solution may lie in the following domains-

- A common frame of reference for all countries across the globe, where trust and confidence is otherwise a rare commodity. An organized global response without any hidden agenda, therefore, holds the key.

- Equality of faith, equality before law, equality before society, economic equality and finally, a gender equality that is in other words, a good democratic set up would prove to be effective.
- A soft CT approach in terms of education, skill enhancement, psychological training, creativity enhancement, socio-cultural emancipation and economic growth is the need of the hour.
- Evolving multiple centres of gravity through right ideology, policy, agenda and strategy that is in other words, try applying the theory of conflict to conflict itself.

These suggestive solution domains too imply that there is a need for proper political handling of terrorism. Uniform global laws against terrorism and zero tolerance approach, along with a clear definition on terrorism, may in the long run usher in the higher equilibrium levels of peace and prosperity.

7. In so far as individual effort by the countries are concerned, security models of certain countries in mission mode do provide dynamic solutions. In India too, agencies have adopted certain congruent strategies. However, one can safely zero down upon the core areas that need to be congruently captured:

- Technologically integrated processes for access control, anti-sabotage and anti-subversion drills.
- National identification data base for each individual physically present in the country.
- Integrated data base for all financial, commercial, professional and estate related activities, including usage of various transportation modes, health and public services. Hence, the steps in the direction of creating a proper network for the coverage of individuals operating on any grid in the country.
- Intelligence set up that supports multi-mode and multi networked coverage as well as dissemination.
- Capacity enhancement and integrative empowerment of enforcement agencies in terms of their operational synergy, multi-tasking skill enhancement, shared technological support and logistics.
- Participating modules appropriately integrating the civic society in this mission.

However, different countries have attained different levels of optimalities owing to the limitation of resources, conflicting interests under the federal structure, and distorted values and limitations of the agency specific sub-culture. In fact, Indian efforts too have suffered on account of the above count to some extent. At places, synergetic response of agencies is still found lacking in some respects and thus coordination itself becomes a challenge.

8. Hence, the journey from the macro to the micro level takes one through many facets, different agendas and power games. We keep evolving neo-equilibriums as we traverse ahead with no last milestone yet in sight.

Use of Technology for Better Investigation

*TRACKING OF LOST/STOLEN MOBILE DEVICES
(LAPTOPS AND SMART PHONES) – NEW METHODOLOGIES*



The Indian Police Journal
©BPRD, MHA
BPRD Publication
www.bprd.gov.in

Gurcharan Singh*

Abstract:

The dependence of humans on mobile devices like laptop, palmtop and smart phones is increasing day by day. It has become an essential part of our life. The widely used devices are smart phones and laptops, which are not only very expensive but also very important for the user as they contain personal information and private data. If these devices are lost or stolen, then the user has to suffer not only the cost of the device but also the loss of important data, which may be misused by the criminals. Similarly, it becomes very tedious task for the Law Enforcement Agencies to localize the missing and stolen devices. In this paper, the methods of tracking and recovering the stolen devices like smart phones and laptops are discussed, which will help the law enforcement agencies to pin point the target.

Key words:

tracking devices, lost devices, icloud, Google Cloud, Geo-location, MAC address, EIR, Firmware.

Brief Introduction to Currency:

The dependence of humans on mobile devices like laptop, palmtop and smart phones is increasing day by day. It has become essential part of our life. The widely used devices are smart phones and laptops, which is not only very expensive but also very important for the user as it contains the personal information and the private data. If this device is lost or stolen, then the user has to suffer not only the cost of the device but also the loss of important data of the user which may be misused by the criminals. Similarly, it becomes very tedious task for the Law Enforcement Agencies to localize the missing and stolen devices.

Author Introduction

* Principal, CDTS, Chandigarh.

1.1 TRACKING OF SMARTPHONES

The IMEI search is the only prevalent and established method of tracing and localization of stolen and missing smartphones; but it shows very minimal result. The following methods are suggested for tracing the lost/stolen smart-phone:-

1.1.1 RUNNING OF IMEI WITH THE MANUFACTURERS CLOUD

The Smartphone apart from latching with the Equipment Identity Register (EIR) of the Mobile Service Providers also latches with the cloud of the Manufacturers for the firmware updates. The IMEI number of the target phone can also be run with the manufacturer cloud for getting its activity on their update server which in return may provide us the IP Address.

1.1.2 RUNNING OF IMEI ON THE GOOGLE AND ICLOUDS

The smartphone with internet connectivity also connects to the Android and Iclouds for synchronization of data. The request may be sent to the Android(Google) and Iclouds for providing us the information of the activity, which may in return provide us the IP Addresses and the MSIDN numbers. This will be of great use if the stolen devices are sent to some other country for use for keeping such devices out of the surveillance of the Law Enforcement Agencies. It will also help in perfect geolocation of stolen./missing devices.

1.1.3 SMARTPHONE SERVICE CENTRE HISTORY

Over the period, it has been experienced that most of the Apple phones snatched and stolen in the country are never traced. It has further been noticed that the criminal first ascertain those stolen apple phone which are under warranty and then physically damage the sim-tray or other part to claim the warranty. Apple replaces such phone with the new one, which never cum under surveillance of the law enforcement. One such gang was nabbed in Mumbai. In such situation the Apple India or Apple Service Centre must be questioned for getting the service history of the devices which are stolen so as to get the new IMEI numbers.

1.1.4 TRACKING IN CASE CRIMINAL CHANGE IMEI

The IMEI number, which is the only unique identifier of the Smartphone can be changed by the criminals by using the flasher to escape themselves from the surveillance of the Law Enforcement Agencies. In such cases, the Serial Number of the Device, which is generally written below the battery of the mobile or the Bill can also be used by searching on the update cloud of the manufacturer.

1.1.4.1 TRACKING OF THE SMARTPHONE THROUGH APPLICATIONS

Some of the daily-use applications and websites remembers the passwords of the user and they get executed the moment smart phone connects with the internet and register the IP.

Some of these applications are Dropbox, Facebook, Gmail, Whatsapp etc. The IP Address is the unique identity of the subscriber. The information may be sought from the Nodal Officers of such applications for providing the activity to figure out the IP Address (which may be other than the person whose device has been lost), if the criminal switch on the device and use his Wi-Fi Network or the GPRS.

1.2 TRACKING OF LAPTOPS/DESKTOPS

The laptops often contain a lot of sensitive data for work and personal use, and for most people, the thought of losing all that information is more than a little frightening. It's sort of like losing a wallet, but a wallet cannot hold gigabytes of potentially valuable or personal data. Credit data, email records, license keys, personal documents, all may be/can be at the fingertips of the kind of person who was willing to steal your laptop in the first place. Following are the few established methods for locating the stolen or missing laptop/desktop:-

1.2.1 TRACKING THROUGH MEDIA ACCESS CODE(MAC) ADDRESS

Each Device on the network has got a unique identifier called Media Access Code (MAC) Address. The Network Administrator of the complainant may be immediately notified in case of theft and if the thief gets on the laptop on the same Local Area Network as that of complainant, his/her identity can be ascertained.

1.2.2 NOTIFY THE SERVICE CENTRE OR CUSTOMER CARE

In case of a theft of the Laptops especially from the sellers showroom, the service centres/customer care of the concerned brand may immediately be notified to track them in case accused approach them for any technical fault in the devices.

1.2.3. TRACKING OF LAPTOPS/DEVICES THROUGH ANTI-VIRUS COMPANIES

This method plays a pivotal role in tracking the stolen or lost laptops. Most of the laptops are having anti-virus loaded on it, which gets executed the moment the laptop is on. The anti-virus loaded on the device first connects to the update server of the anti-virus companies to find the availability of the update. In such cases the IP Address of the user is registered with the anti-virus update servers. The Nodal officer of the Anti-virus companies may be notified to intimate the update activity and the IP Logs of the user to ascertain the IP Address of the thief. Quick Heal has already created a dedicated portal for the Law Enforcement Agencies and a user to notify and get information vide domain name www.trackmylaptop.net.

1.2.4. TRACKING OF LAPTOP THROUGH OPERATING SYSTEM UPDATE SERVER

The moment the internet connection of the laptop/desktop is established, the device connects with the update server of the Operating System, e.g. Window, Mac to find out the availability

of the update. The Update server of the Operating System may be questioned by furnishing them the Serial Number of the device and the product key of the Operating System of the Laptop to provide the IP Address of the user to ascertain the location of the thief.

1.2.5 TRACKING OF THE LAPTOPS THROUGH APPLICATIONS

Some of the daily-use applications like Outlook express, Dropbox, yahoo messengers and websites remembers the passwords of the user and they get executed the moment the laptop connects with the internet and register the IP. The IP Address is the unique identity of the subscriber. The information may be sought from the Nodal Officers of such applications provide the activity to figure out the IP Address (which may be other than the person whose device has been lost), if the criminal connects to the internet through Wi-Fi or broadband.

CONCLUSION

This novel procedure developed in this work is highly useful in tracking the stolen devices and the criminals who are responsible in stealing such devices. It will further help in localizing the criminals and suspects associated with various heinous crimes. It will further help in protecting the valuable data and privacy of the individuals against misuse by the criminals.

B-TRAC - Technology Driven Traffic Management

Dr. M. A. Saleem, IPS*



The Indian Police Journal
©BPRD, MHA
BPRD Publication
www.bprd.gov.in

Abstract:

Managing urban traffic requires finding a fine balance between, available resources, infrastructure and their effective use. As cities are expected to grow in the coming decades (leading to increased traffic demand), the challenge of managing traffic will increase, as space to develop road networks is often limited or non-existing. That urban traffic is characterized by a mix of different modes of transport (pedestrians, bicycles, public transport, motorized vehicles) makes the challenge even more complex. Traffic congestion occurs when a volume of traffic or modal split generates demand for space greater than the available road capacity; this point is commonly termed saturation. There are a number of specific circumstances which cause or aggravate congestion; most of them reduce the capacity of a road at a given point or over a certain length, or increase the number of vehicles required for a given volume of people or goods. By integrating the technology a wide range of traffic management options will become possible. Using the latest advances in computing and communications technology, it is possible to provide efficient, real-time, integrated traffic management and control. There are additional benefits that can be reaped from integrating applications including better services, reduced costs, and increased flexibility and efficiency. Integrating technology and infusing it into traffic management system at appropriate place and time can do wonders to improve the traffic management capabilities effectively. Anticipating growth in number of vehicle and serious problems in management of the traffic in Bengaluru City, the City Police have envisaged a Bengaluru Traffic Improvement Plan which is popularly known as B-TRAC Scheme.

Key words:

BTRAC, Urban mobility, Traffic management, ICT tools, Vehicle actuation, Automated enforcement

Introduction

Traffic management problems which are assuming alarming proportions in the cities of the industrially advanced countries are being experienced in the Indian cities too. They have reached a critical point strangulating the cities. Due to increased congestion and consequent delays the mobility of the traffic is affected and the city is becoming more liability than an asset. From the point of view of Road safety the conditions in the cities are far from satisfactory. The

Author Introduction

* IGP, Anti-Corruption Bureau, Bengaluru.

situation has arisen largely owing to an inadequate appreciation of the nature and type of a whole range of problems. Some of the significant problems leading to traffic congestion in Indian cities are;

- i) rising demand for travel due to increase in population and other activities;
- ii) concentration of land use in certain areas such as central business districts and office areas;
- iii) mixed nature of traffic;
- iv) inadequate facilities segregating slow traffic;
- v) insufficient road space;
- vi) inadequate width of pedestrian sidewalks and their encroachment by hawkers;
- vii) inadequate facilities to meet the heavy demand for parking requirements;
- viii) lack of road sense and indiscipline on the part of road users;
- ix) ineffective enforcement measures;
- x) inadequate funds to meet the increasing demand for essential improvements; and
- xi) non-existence of a specific organization with specialized personnel to deal with traffic problems.

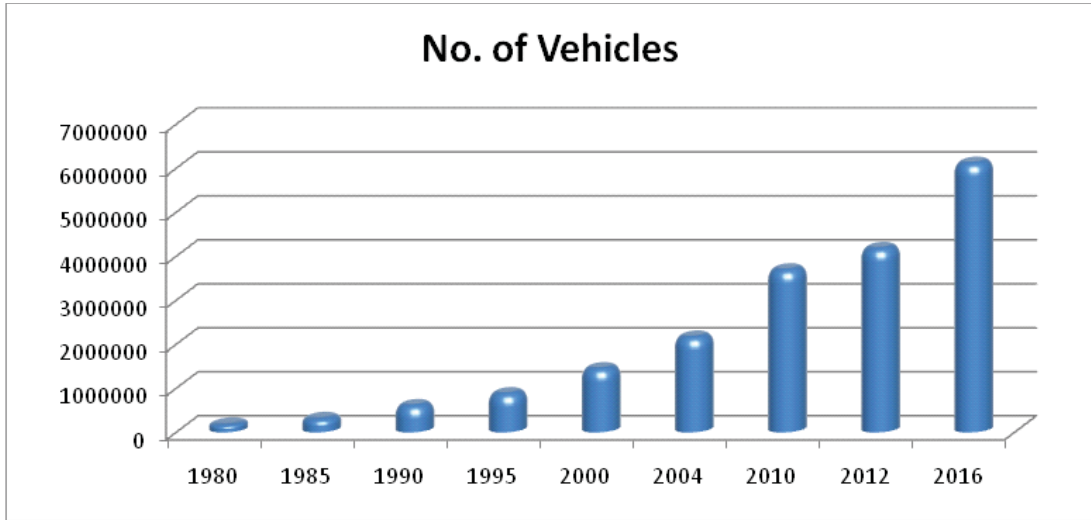
The above problems have largely contributed to huge traffic congestion in almost all Indian cities. Though majority of traffic problems is due to faulty urban planning by civic agencies, traffic police is most often blamed for chaotic traffic situation. In order to improve traffic situation and bring effective traffic regulation through use of technology, the Bangalore Traffic Police has initiated a unique project called 'B-TRAC'.

Bangalore is one of the premier cities in India having a population of nearly 10 million and vehicle population of about 4.2 million. It is a city which has registered a growth of more than 4% year-over-year during the last 2 decades and is still growing on at even faster rate.

Bangalore Traffic Police looks after the regulation and enforcement aspects of traffic management in the city. It manages traffic on 11000 Kms of network and nearly 40,000 intersections. The geographical coverage of Bangalore Traffic Police is 1005 Sq.Kms. The sanctioned strength of Bangalore Traffic Police is 3260 and is supplemented by 500 Home Guards.

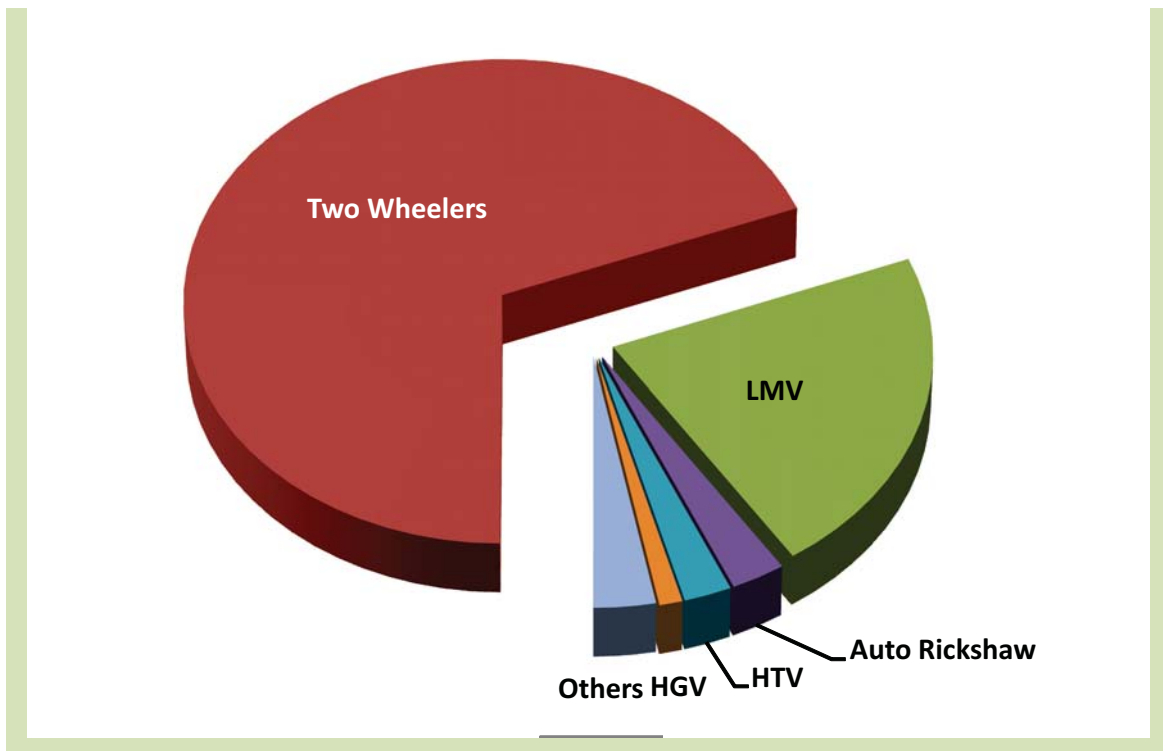
The growth of vehicles in Bangalore City is shown in the table below.

YEAR	1980	1985	1990	1995	2000	2004	2010	2012	2016 (31.03.2016)
No. of Vehicles	175325	306589	601059	870659	1438057	2157480	3686257	4171062	6108936



The following graph indicates different types of vehicles registered in Bangalore City.

Types of Vehicles registered in Bangalore City.



Phenomenal growth of population and number of vehicles registered in Bangalore City and the obstruction of carriage way by number of on-going works like Metro fly-overs, under-passes, over-bridges, the management of the traffic and ensuring smooth flow of the traffic has become a herculean task. In this background Bangalore Traffic Improvement Plan which is popularly known as B-TRAC was envisaged. The total estimated cost of the project is 350 Crores.

The scheme was started in the year 2006-07 and the total grants given by the Government is Rs. 217 Crores.

Though the Government had released funds from the financial year 2006-07, the implementation of the project started in the year 2007-08. The assets created under B-TRAC project are as follows:

B-TRAC ASSETS	
➤	Installation of 332 Traffic Surveillance Cameras
➤	Installation of 10 Enforcement Cameras
➤	Installation and up-gradation of 360 signals
➤	Installation of 625 Warning or blinking Signals
➤	Installation of 55 Pelican light signals for pedestrians
➤	Installation of 20 Variable Message Sign (VMS) Boards
➤	Provision of 650 BlackBerry Handsets with Bluetooth Printers
➤	30,000 road signage
➤	1000 traffic information boards
➤	2,00,000 Sq.mtr. road marking
➤	85 junction improvements
➤	Connectivity from all the signals, Surveillance Cameras and Enforcement Cameras to the Traffic Management Centre (TMC)
➤	Connectivity between TMC and State Transport Department
➤	Procurement of 9 interceptors for booking violation cases
➤	Procurement of 225 state of art breath analysers
➤	Procurement of 1000 Wheel Clamps for prevention of parking violation
➤	Construction of state of art Traffic Management Centre, Bangalore
➤	Construction of state of art Traffic Training and Road Safety Institute, Bangalore.

Bangalore City Traffic Police realizes that ever increasing expectations of citizens cannot be met by increasing the manpower alone. That is why there is a need for paradigm shift from manual regulation to technology driven traffic management plan. The core philosophy behind B-TRAC plan is:

- Creating a reliable real-time traffic information system.
- Analyzing such information and utilizing the traffic intelligence thus generated for ensuring better traffic management and planning.
- Disseminating such information to public in real time for enabling them to make informed choices on the roads.

The Components of B-TRAC are:

1) State-of-art Traffic Management Center

A State-of-art Traffic Management Center at a total cost of Rs.30 Crores was established on Infantry Road under B-TRAC project. The Traffic Management Center functions as a nerve center for all activities relating to traffic regulation and enforcement in Bengaluru City. The Traffic Management Center currently is responsible for;

connected to a controller, which in turn is connected to Traffic Management Centre (TMC) using leased line. These controllers are intelligent and can be programmed to perform as per the requirements of specific location and time. Some of the visible benefits are:

- Centralized manipulation and monitoring of the traffic signals like timing and patterns on short-term or long term basis using state-of-art and innovative application software.
- Pre-programming of signal controllers at junctions with different phase/cycle times, in



each direction, at different points of the time during a day and different days during a week. This is extremely helpful for handling peak hour and non-peak hour situations at junctions using different approaches. At present each signal in city has at least 4 to 5 programs. There is different time cycle for Saturdays and Sundays.

b) Vehicle Actuation

An underlying sensor (also referred to as loop) embedded below the asphalted road near the zebra crossing, senses the vehicles passing over it. The sensor is linked to a controller placed at the junction, which sends signals indicating presence or absence of vehicle over it. Every direction is allotted a minimum 9-second phase time to begin with. As long as vehicles are present on the loop, 4 seconds will continue to be added in the phase time i.e. 9,13,17 and so on, subject to an upper limit. In case of no vehicle passes for more than 4 seconds, the controller turns the signal red even if allocated green time is still unutilized. Hence, wastage of green time is avoided and traffic from other direction is released. As a result of this technology, a total cycle time in each cycle will vary according to traffic flow.



Vehicle actuation avoids wastage of green time and encourages discipline by reducing signal jumping offences. The maximum benefits of vehicle actuation are experienced during lean hours and at junctions where different directions have different traffic densities.

During peak hours, when there is over saturation in all the directions, vehicles actuated signal functions like fixed-time signal.

c) Signal Progression

This programme ensures that each junction turns green towards a priority direction in conjunction with its previous signal, in the same direction, but with a time traffic from a junction reaches the next junction it finds green signal awaiting them thus ensuring minimal wait at signals. The only short coming is that the time difference is manually fed and any modification of green time at a particular junction, participating in signal progression, can adversely affect the system. Moreover, signal progression works on the presumption of no non-signalized right turns in the corridor and an assumed average speed for all the vehicles. This concept is very useful for closely placed signals.

d) Area Traffic Control (ATC)

This concept is a combination of signal progression and vehicle actuation. In ATC, two sets of activities are conducted, namely;

- i. Optimization of green time allotted to each direction at each junction. A fixed time is allocated at each junction controller for each direction. This time is validated against the traffic passing in these directions; if it is observed that the entire allocated green time for a particular direction is not utilized then the green time in that direction is reduced by 10%. This activity is repeated till the optimum green time is achieved for each direction in all the junctions in the area or the corridor. In the entire process the embedded loops at junctions play an important role in detecting vehicles passing towards particular direction.



This information is processed by the controller placed at each junction and is passed to the central server placed at TMC, where an algorithm takes decision on green time optimization.

- ii. Alignment of each junction with one another so that signal progression can be implemented across a series of junctions falling in a priority direction. Such green time optimization happens all through the day. This change of time can cause the alignment between adjacent junctions, part of signal progression to break. As such software running on a server at the central TMC automatically prevents such break up between these junctions so that vehicle actuation and signal progression work simultaneously.

e) Power Backup and Management At Junctions

The traffic junctions in the city of Bangalore are now equipped with high-end equipment with required uninterrupted power supply (UPS). The traffic police department has drawn up an elaborate arrangement, which ensures that power at each junction is uninterrupted. This plan is implemented using two levels:-

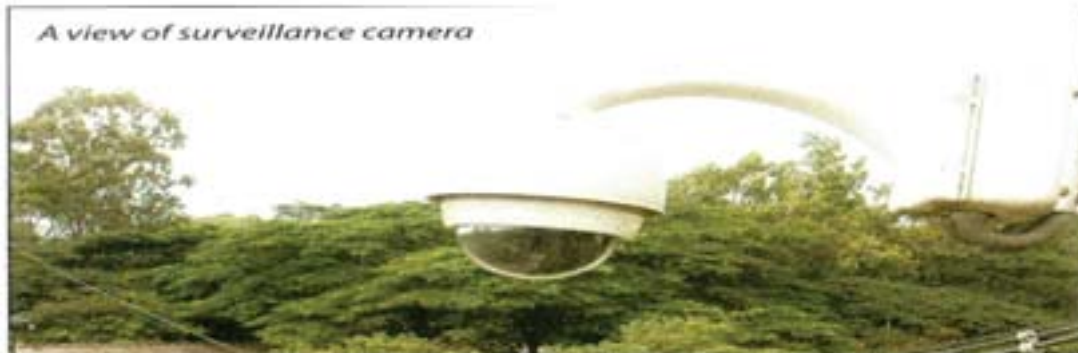
- Main power supply is provided to traffic signals using solar panels while networking devices and cameras are energized using BESCOM connections.
- The main power input is fed into an UPS, one each for networking devices, traffic signals and cameras, which provide a backup support for about 4 hours.

3) Enforcement Camera System



High resolution cameras placed at various junctions are meant to capture pictures of vehicles over speeding or jumping signals. These cameras are connected to central server kept at TMC using 4 Mbps leased lines. The central server also has the capability to interpret the number plates using alpha numeric character recognition software. This registration number is matched with transport department database for generating notices to violators.

4) Surveillance Camera System



332 junctions across the city of Bangalore are fitted with Pan-Tilt-Zoom cameras, capable of capturing live feeds and pass on them to the TMC where a 24-Terabyte storage solution is used to store the feed for a period of 15 days. The live feeds have their own strategic importance in regulating traffic as well as designing of traffic signals based on actual vehicle counts. Soon video analytics will be used to intelligently interpret these feeds.

5) Speed Interceptors

Realizing that it is not possible to have video surveillance for every junction or locations between the junctions, police has deployed nine-interceptor vehicles equipped with surveillance camera, laser speed gun and alcometer for recording the violation and prosecuting the offenders while on move.

6) Automated Enforcement System

Automated enforcement also known as contact less system of booking of traffic violations was initiated in the year 2003. In this system violations recorded through digital cameras and enforcement cameras are processed at Central Automation Centre and notices are sent to the owners of the vehicles involved in traffic violations. This is a highly transparent method of booking of cases against the traffic violators.

Bangalore Traffic Police has tied up with Bangalore-One, a citizen-friendly initiative of e-Governance department, for enabling anywhere, anytime payment of the fines imposed. Citizens can settle the violation tickets issued against their names as well as parking violation tags issued to them by visiting any Bangalore-One centre or any traffic police station.

These places are connected using a dedicated network to the central application server kept at State Data Center (SDC). Citizens can also pay their traffic violation notices and parking violation tickets online through traffic police website from the comforts of their home.

7) Blackberry driven Enforcement

Traffic Police has equipped its officers with handheld BlackBerry devices connected to Bluetooth-enabled printers. These devices are connected to a central server kept at State Data Center (SDC).

BlackBerry wielding officers enforce traffic rules and regulations and fine offenders. All these activities are done online resulting in real time monitoring and statistical analysis for the senior officers' review.



Online booking of violations using BlackBerry also ensures tracking of habitual traffic offenders thus ensuring enhanced punishment for them. In addition, it also tracks down unpaid violation notices issued in past.

8) Traffic Scan through GPS

600 BMTC busses running in Bangalore city are fitted with GPS devices. This facility is used to identify congestion across the roads of Bangalore and a real time GIS reporting mechanism projects the data thus collected into a map of the city. The time taken to travel between two locations of the city at a non-peak hour is taken as base time and any deviation from that is used to identify three basic traffic patterns, namely, heavy traffic (red) medium congestion (orange) and free flowing traffic (green).

9) Traffic Scan through Mobile Density

A supplementary mechanism of identifying congestion is by using density of mobile devices currently existing under a particular mobile tower. This value is processed for identifying the level of congestion at a particular junction and subsequently the processed data is used to create a real time GIS enabled map at TMC. The higher the number of mobile devices under a particular tower the more likely is the chance for congestion. The only weak point is this mechanism is that the system is capable of identifying congestion at the round junctions only.

10) Variable Messaging Systems

Message boards mounted on large gantries are being placed at convenient locations of the city for displaying traffic related information. This information is fed into terminals placed at TMC from where the message is relayed on to the boards using radio frequency waves. The

information displayed informs the travelers about existing traffic scenario to help them avoiding traffic snarls and making informed choices.



11) Parking Information System

All major parking places in the city of Bangalore, which are computerized are proposed to be connected to the TMC using web based services. The real time parking availability status from these parking places will be relayed to the traffic Police web site and made accessible to the citizens through VMS board and phones using SMS on need to know basis.

12) Multi-phased public interaction

- a) **Facebook:** In order to interact with public and to address their traffic related complaints and valuable suggestions, a platform is created by opening an account in facebook a social networking website. Bengaluru Traffic Police Facebook has more than 4 lakh followers as on March-2016.
- b) **Twitter:** A platform is created to the general public to interact with Bengaluru Traffic Police through twitter. Citizens of Bengaluru City is actively participating in regulation of traffic, enforcement of traffic rules. Bengaluru Traffic Police twitter has more than 1.2 lakh followers as on March-2016.
- d) **SMS Alerts:** BTP is also sending free traffic alerts to its subscribers regarding traffic situation. Anyone can subscribe to the service by sending SMS JOIN<space>BTP to 09219592195. As on March 2012 more than 35,000 people have subscribed to this facility.



IMPACT OF B-TRAC PROJECT

B-TRAC 2010 is the first of its kind project in the Country to address the issues of traffic congestion, safety etc by utilizing the latest traffic management technology and techniques, which are appropriate to our context. This will give the much-needed scope for larger infrastructure projects to be planned and implemented for improving the transportation system in Bangalore city.

Implementation of B-TRAC project has resulted in improvement in traffic regulation, enforcement and reduction in road accidents. The impact can be seen under the following heads;

1) Transparency in enforcement of traffic rules:

Replacing the paper based challan system with automated enforcement and BlackBerry based challaning system has brought in lot of transparency in booking of cases against violators of traffic rules. Permanent records are created for traffic violations through automated enforcement. Automated enforcement has helped in identifying the repeat offenders. The new system has resulted in increased number of registration of cases and an increase in collection of traffic fines, as appearing from the following table:

Sl. No.	Year	No. of Cases registered	Total Fine amount Rs. In Crores
1	2007	1444098	19.91
2	2008	2079071	29.51
3	2009	2640286	37.62
4	2010	3333112	47.56
5	2011	4790841	50.56
6	2012	5204800	53.85
7	2013	5432812	56.98
8	2014	7436284	65.92
9	2015	7626671	70.44
	2016 (30.06.2016)	4438760	31.28

2) Substantial compliance of Traffic laws and rules

The use of surveillance camera, enforcement camera, field traffic violation report (FTVR) and breath analyzer to identify and prosecute drunk drivers/riders, has brought in greater discipline among the road users. Identification of repeat offenders has resulted in suspension of more than 20,000 driving licenses during the current year.

2) Reduction in road accidents

One of the important achievements of B-TRAC project is reduction in number of road accidents. Accident Scenario has seen a positive change and severity of the accidents has come down due to strict automated enforcement. The reduction in number of accidents is shown in the table below:

Sl. No.	Year	Road Accidents In Nos.
1	2002	9856
2	2003	10505
3	2004	9101
4	2005	7578
5	2006	7561
6	2007	8426
7	2008	7772
8	2009	6875
9	2010	6483
10	2011	6024
11	2012	5502
12	2013	5230
13	2014	5004
14	2015	4828
15	2016 (Up to 30.06.2016)	2520

3) Reduction in traffic congestion in central areas



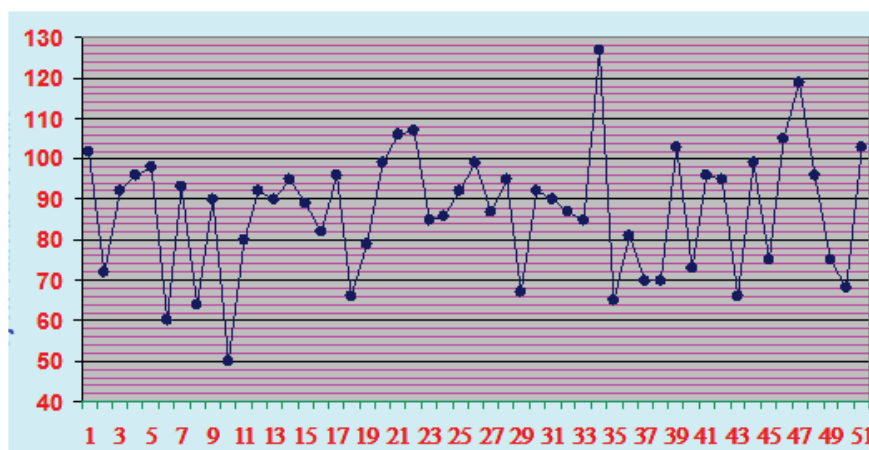
The topography of Bangalore city is typically full of crossroads. Handling the cross traffic is difficult, but this task is also being managed efficiently. It is for these very reasons around 190 roads were made one-ways in phases, and chaos in traffic has reduced to a great level and conflict points were resolved to a greater extent thus easing the traffic flow.

5) Reduced travel time due to scientific fine-tuning of signal timings at junctions



Average savings in green time by using customized traffic light configuration system

6) Reduced Journey time due to Signal synchronization



The average journey speed has increased from 18 Kmph to 23 Kmph in the city after the implementation of B-TRAC project. This is largely due to synchronization of signal lights on 10 important traffic corridors. Synchronization coupled with central control of traffic signal lights has resulted in faster flow of traffic and increase in average speed.

CONCLUSION

The initiative has started yielding results from the first day itself. The changes and the impact were dramatic and exceeded the expectations of the department. Here it is essential to state that the objective of the entire exercise was not to increase the revenue collections but to enhance the quality of traffic enforcement & traffic management by ensuring that violations are recorded and violators are penalized as well as traffic accidents are reduced.

The B-TRAC project was recognized by Government of India and Bangalore Traffic Police have received the following awards for its implementation.

1. National Award for Best use of Information and Communication Technology (ICT) by the Dept of Personnel and Training (DoPT), Government of India in the year 2011.
2. Award for Excellence in Urban Transport” Honoured by Ministry of Urban Development, Government of India.
3. “Golden Peacock Award” for Innovative Product / Service honoured by Institute of Directors (IOD) and Golden Peacock Secretariat.
4. “Golden Peacock HR excellence Award” honoured by Institute of Directors (IOD) and Golden Peacock Secretariat.
5. “Namma Bengaluru Award” honoured by Namma Bengaluru Foundation, Bengaluru.
6. “Best Project Award-2014” by Ministry of Urban Development.
7. “Skoch Platinum Award-2014” for best traffic management, good enforcement and reduction in accidents.
8. “Best Practice Award-2014-15” by Directorate of Municipal Administration, Govt. of Karnataka and City Manager's Association, Karnataka.

It is seen that many components of B-TRAC project like Automated Enforcement, e-challaning system etc are being implemented in many cities across India. In order to implement the project, the financial support from the concerned State Government is essential. Therefore it is recommended that traffic police organizations of important cities can implement this innovative scheme to bring greater efficiency in traffic regulation and enforcement. The systematical implementation of sustainable components of B-TRAC project will result in making our towns and cities more livable.

Significance of Forensic Science in Indian Criminal Justice System



The Indian Police Journal
©BPRD, MHA
BPRD Publication
www.bprd.gov.in

Dr. Keval Ukey*

Abstract:

India's accusatorial system places the entire burden of proof on the investigating agencies, almost coercing it to patch and plant evidence, or resort to all kinds of illegalities to build a full proof case by hook or crook. This pressure also compels the investigators to resort to third degree methods in order to gather evidence. But Forensic Science is a multidisciplinary science which helps in proving cases with scientific evidences. Various biological, physical & chemical evidence recovered from a crime scene enlighten its own tale and leads the investigator to the victim, suspect or people involved in the crime and helps the police to reach the suspect.

This paper helps to study the problem of Indian legal system for accommodating the forensic science as important scientific evidence which can help out the investigating agencies in finding out the truth and proving the case in the court. It gives some submission for time bound administration of justice for punishing a criminal or protecting the innocent from false allegations including the suggestions for amendment of existing criminal laws in India.

Key words:

Forensic Science, Criminal Investigations, Forensic Dimensions, Forensic Evidence, Cyber-crime, Medical Jurisprudence, Indian Evidence Act, Information Technology Act, Criminal Procedure Code, Indian Penal Code.

Introduction

In the age of Information technology, there is radical development in technology which made things much faster and simple. This technological advancement is leading to a drastic rise in the crime rate all over the world. Though India is somewhat slower in technological development, but is very much forward in advancement of criminality using new technologies which resulted in

Author Introduction

* Asst. Professor (Law), Institute of Forensic Science,
15, Madam Cama Road, Mumbai-32, Mobile: 09325592939, Email: kevalukey@rediffmail.com

increasing crime rate in India. With an increase in crime rate, the need to administer instant justice to the victims of the crime and their families is becoming the foremost duty of the Criminal Justice System. To administer time bound justice and to punish a criminal is the most important duty of the court.

The growing significance of science and its application in crime investigation has paved an easier path for scientific investigation and administering justice in the right place and at the right time. For every case that is being tried in the court of law, scientific evidence is required to prove the innocence of the suspect or to punish him according to the law. To make the task easier, the Criminal Justice System is looking towards giving scientific conclusions to cases and the branch of science which is helping in the application of scientific principles for effective administration of Criminal Justice system is called Forensic Science.

Forensic Science is a multidisciplinary science which helps in proving cases with scientific evidences. Evidence recovered from a crime scene enlighten its own tale and leads the investigator to the victim, suspect or people involved in the crime. A bloodstain, a seminal stain in sexual assault, a forged signature in document, a hair sample, skeletal remains recovered from crime scene, a morphed photograph, a fired weapon, a broken glass, a narcotic drug, a visceral sample collected after autopsy, a fingerprint or lip print on a tea cup found in the crime scene, a foot print at crime scene, and many more evidences can help the police to reach the suspect.

Forensic Science Notion

Forensic has several meanings, one of which pertains to courts of judicature. However, Webster includes 'relating to or dealing with the application of scientific knowledge to legal problems' in its more modern definition. The application can be in one or more of many specific fields of study or branch of specialized knowledge such as science, technology, medicine, or other area of knowledge used to assist courts to resolve disputes, whether criminal, civil or administrative.

Richard Saferstein writes a more specific definition in his book *An Introduction to Forensic Science*, which says that forensic science is the “application of science to those criminal and civil laws that are enforced by the police agencies in a criminal justice system.

Forensic science is a combination of broad scientific fields and is used to answer questions revolving around crime scenes and legal matters. Forensic science, because of the agglomerated framework, is often described as a broad discipline within the science and law enforcement community. Within forensic science exists a number of specific disciplines, which may range from forensic veterinary science to forensic anthropology.

Forensic science may be applied to a criminal act or a civil action. However used, the field of forensic science will apply various technologies and formulas to expedite an investigation. As a result of advancements in computer technologies and the evolution of scientific fields, forensic science is regarded as an integral aspect for crime scene investigation. Forensic science, regardless of the specific field, is used to evaluate crime scenes in hopes of extracting evidence that will ultimately lead to a conviction. Individuals involved in the field of forensic science are part of an ancient tradition where the facts of legal matters are thoroughly analyzed in scientific manner to gain pertinent information that can ultimately be used in an investigation and subsequent prosecution.

Legal Scenario of Forensic Science in India

In India, law regarding evidence is uniform in both Civil and criminal cases, the degree of proof required may be somewhat different in civil and criminal cases but mode of giving evidence is governed by same legislation. In India, we have adversarial system of justice administration and ordinarily medical evidence is admitted only when the expert gives oral evidence under oath in the courts of law

The law of evidence allows an opinion of any person other than the judge as to the existence of the facts in issue or facts that are relevant to a matter. The judge is not expected to be an expert in all fields especially where the subject matters involve technical or specialized knowledge. In these circumstances he needs the help of an expert- who has superior knowledge or experience in relation to the subject matter.

Sec. 45 to Sec.51 under Chapter two of the Indian Evidence Act provide relevancy of opinion of third persons, which is commonly called in our day to day practice as expert's opinion. These provisions are exceptional in nature to the general rule that evidence is to be given of the facts only which are within the knowledge of a witness. The exception is based on the principle that the court can't form opinion on the matters, which are technically complicated and professionally sophisticated, without assistance of the persons who have acquired special knowledge and skill on those matters. It is chiefly with respect to questions of science and trade, where often it is difficult to obtain direct and positive evidence, that persons of specialized skills or knowledge are allowed to give their opinions as evidence and are also allowed to testify to the facts.

The age-old code of criminal procedure and the Indian evidence act do not provide for appropriate legal status to forensic science in the criminal justice process. Criminal Procedure Code and Indian Evidence Act 1872 are the parent procedural laws which govern criminal trials in India, while Criminal procedure Code prescribes the procedure from the point of taking cognizance of crime by appropriate judicial Magistrates till the delivery of final order of Conviction or acquittal or

any appropriate order looking into the fact of the case. Indian Evidence Act is limited in its scope of leading evidences in civil or criminal cases either by the prosecution or defendant, applicant or respondent.

Forensic Dimensions of Existing Laws in India

The dimension of forensic science starts from Indian Constitution and admissibility of forensic evidence under Art. 20, 21 and 22 and Lie detector, Narco-analysis, DNA test etc. Several arguments on this point that lie detector test is anti constitutional or not. In article 20(3) There is bar for self incriminatory statement and it says that the accused of any offence cannot be compelled to be witness against himself. Supreme Court in one case says taking specimen fingerprints and handwriting from accused is not hit by article 20(3) as being 'witness against himself'. On other side in another case, it says test result of polygraph and brain fingerprinting test are testimonial compulsions and the bar of article 20(3) applies. At the same time, it says the protection against compulsion to be a witness is confined to persons accused of an offence. There is no constitutional protection to witnesses (i.e. persons other than the accused). However The Indian Evidence Act, 1872, in section 132 and 148, confers a limited protection for witness in civil and criminal courts.

Medical Jurisprudence is the old science which was in used for the new terminology of forensic science and already certain provisions relating to legality of documentary evidence such as medical certificates, medical reports, dying declaration, hospital records like admission/discharge register, birth/ death certificates etc. are existing in several concerned laws. Though the documentary evidences are dead proof of the fact, but medical evidences in criminal cases like murder, rape & assault are worth valuable evidence.

So far as criminal jurisprudence in India is concerned doctrine of *onus probandi* is in the field and therefore one shall be presume innocent till his crime is proved not only proved but proved beyond reasonable doubt, this principle of *onus probandiis* recognized under chapter of the Evidence Act which has restricted use of forensic science in criminal trials in India. It is very difficult to say anything beyond reasonable doubt so far as techniques of ascertaining fact with the help of forensic science is concerned. But with the passes of time modern techniques developed in the field of Forensic science are capable of ascertaining facts somewhat beyond reasonable doubt. In this background it is more appropriate to conduct a study in the recent Judgments of Supreme Court of India to see the change in the approach and attitude of Judiciary in appreciating forensic evidences in Criminal cases.

The internet in India is growing rapidly. It has given rise to new opportunity in every field like entertainment, business, sports, education etc. It is universally true that every coin has two sides, same for the internet, it uses has both advantage and disadvantage, and one of the most disadvantage is Cyber-crime. We can say, cyber-crime is any illegal activity which is committed using a computer network, especially the internet. Also, cyber-crime involves the breakdown of privacy, or damage to

the computer system properties such as files, website pages or software. In India most of cyber-crime cases are committed by educated person. So, it is required the deep knowledge about the cyber crime and its prevention. Also, in India most of the cases found where, crimes are committed due to lack of knowledge or by mistake. In India there is only Information Technology Act, 2000 is dealing with the cyber crime but its not covering all the aspect. Indian Personal Data Protection Law is still under pipeline and there is no right to privacy or data protection under any specific law and only some protection in Indian Constitution under Article 21 is dealing with right to privacy. Therefore these are another concern which yet to be dealt with under any specific law in India.

Importance of Forensic Science in Criminal Investigations

During the last few decades, forensic science has developed a large number of potent scientific tools to identify the criminals and convict them inescapably. Advancements in several disciplines of forensic science e.g. Physical, Chemical and Biological Sciences have taken place, which can be employed to drive evidence from physical clues for establishing elements of an offence. The scientific evidence is much speedier and specific and can stand the scrutiny of the court to prove guilt or innocence of an accused. For example, in case of disputed parenthood of a child, mere comparison of the DNA obtained from the body fluid or body tissues of the child with the father and the mother can offer the infallible proof of biological percentage within a week. No other evidence of corroboration is necessary. Similarly, in heinous cases of sexual assault, timely medical examination and proper sampling of body fluids followed by forensic analysis can offer irrefutable evidence, circumventing the need of prolonged arguments in the court of law. Evidence of eyewitnesses can be corroborated with scientifically explained and reconstructed crime scene from the physical clues. The relevant details gathered from the physical material might be used to check the veracity of eyewitness accounts, especially in those cases in which the witness become hostile. The truth behind the statements can be checked if the crime scene is reconstructed by using the latest methods of forensic science.

Imagine a world where criminals run freely. Detectives and police officers collect evidence much the same way as they do today, but there is one main difference. Science is not used. Due to the lack of scientific analysis, there would not be a lot of useful evidence. Without the use of science, criminals could not be convicted of their crimes, ranging from common theft to a homicidal rampage, unless there was an eyewitness present at the crime scene when the crime occurred. Murderers would continue killing, thieves would continue stealing, and drug traffickers would continue dealing. Fortunately, in today's world, science is used in solving crimes. Clues a criminal leaves behind can be traced to themselves through scientific evidence. This field of science dealing with criminal investigation is known as forensic science, which roughly means the application of science to law. Forensic science can be used to determine many things from the evidence when it is collected properly without any contamination. The people that need to learn the methods of collecting the evidence for forensic science analysis are those from law enforcement agencies that come into contact with the crime scenes frequently.

Unfortunately, nine times out of ten, this person is an officer from a police department, which is lacking in evidence collection training. In other words, scientific concepts and principles are used to convict criminals of their crimes. Due to the great importance of forensic science in the conviction of criminals, the basic ideas and concepts need to be taught to officers of local police departments so that evidence can be collected without contamination in order to keep criminals in mind. The improper collection and the use of various unsterilized items contaminated the evidence; Police departments need to know how to handle evidence to make sure some mistakes do not happen. If the scientific investigation applying the forensic science is done in all criminal cases, conviction rate of the cases will definitely increase.

Conclusion

The ultimate objective of the law and criminal justice delivery system, which enforces and administers law, is prevention of crime. When an offence is committed, the law must provide for its investigation, for establishing the guilt of the offender and for his punishment and correction in such a manner that not only the offender is retrieved from criminality but others too are deterred from doing so. India's criminal justice delivery system is based on anglo saxon accusatorial system under which the emphasis of the judiciary is not all truth but on evidence. The Indian Judiciary is not interested in finding out whether the criminal has committed an offence, whether the prosecution has presented clinching evidences against him. Even if the court is convinced that the accused has committed the offence, is inclined to give him the benefit of doubt if the evidence is not enough or convincing. Thus, the accusatorial system does not place any responsibility on judiciary in the control of crime or in ensuring that the offender is penalized. In comparison, most of the countries in Europe inquisitorial system, under which the judiciary is charged with the responsibility of finding out the truth and making it accountable for control of crime. Under the system, the judge functions as an activities, searching for facts and evidence, questioning the witness and the accused and delivering judgment on the basis of his personal findings.

Throughout history, evidence has been used to convict criminals of the crimes that they have committed. Today's society has improved upon the methods of the past to bring about more precise and accurate techniques. These techniques are more commonly known as the field of forensic science.

The aim of science, traditionally put, is to search out the ways in which truth may become known. Law aims at the just resolution of human conflict. Truth and justice, we might venture to say, having different aims, use different methods to achieve them. Unfortunately, this convenient account of law and science is itself neither true nor just. For law must know what the truth is within the context of the legal situation: and science finds itself ever engaged in resolving the conflicting claims of theorists putting forward their own competing brands of truth. It means the law needs to find the truth to resolve "human conflict" and one method of doing so is to use the field of science. The only problem with this method is that science is struggling to find the legal validity and its

unconditional acceptance in given case as legal proof of existing fact. In India, still the forensic method of evidence collection is not used in all criminal cases, it's been used in some rare cases which ultimately leading the cases in acquittal in large proportion at one side. On the other hand wherever it's been applied, the constitutional validity and legality of scientific proof is always questioned.

India's accusatorial system places the entire burden of proof on the investigating agencies, almost coercing it to patch and plant evidence, or resort to all kinds of illegalities to build a full proof case by hook or crook. This pressure also compels the investigators to resort to third degree methods in order to gather evidence. Our social setup is heterogeneous and majority of the population is illiterate, poor and caste ridden. Genuine witness, generally, are reluctant to tender evidence and even if they do, their evidence is diluted the intense battle of search, cross examination and re-emanation. Prolonged judicial trials, majority of them ending in acquittals have very demoralizing effect on society. The rate of acquittals, particularly in heinous offences, is quite disturbing. Eighty percent criminals, who commit heinous offence, get away for want of evidence of crime that can stand the scrutiny of the court.

The legal system in this country was largely modeled on the pattern of British laws, which were conspicuous, by the absence of provisions for application of scientific knowledge to the administration of justice. We are on the threshold of 21st Century and our criminal justice system continues relentlessly to be governed by the same old laws. The India criminal justice system has not shown resilience, the adaptability and required changes to cope with the increased responsibilities, heightened societal expectations and greater emphasis on human dignity. The British enacted The Police Act in 1861, a good 148 years ago and it's still continues on the statute books. The Indian Penal Code was enacted in 1860 and continues to command criminal punishment till today except some minor amendments. The Indian Evidence Act of 1872 did not have this kind of luck. It continues in its original form. The British enacted the code of criminal procedure in 1898. It is the only Act to have been updated, but only marginally in 1974, and continues to be still the quite ancient. Therefore there is need for change of all Indian criminal laws to accommodate the forensic science & scientific evidence as important evidence as for proof of the existing facts to increase the conviction rate and decrease the crime rate.

References

1. Richard Saferstein, *Criminalistics: An Introduction to Forensic Science*, 10th Edition, ISBN 0131384651/9780131384651
2. <http://criminal-justice.laws.com/forensic-science> dated 29/01/2017
3. State through SPE and CBI, A.P.v. M. Krishna Mohan, AIR 2018 SC 368
4. Selvi v. Sate of Karnataka, AIR 2010 SC 1974 (Paras 123, 136, 149, 160, 161)

5. Raja Narayan Bhansali v. Maneck Phiroz Mistry, AIR 1961 SC 29: (1961) 2 SCR 417
6. file:///C:/Users/Admin/Downloads/10_Present%20scenario%20of%20cybercrime%20in%20INDIA%20and%20its.pdf dated 02/02/2017
7. B.B.Nanda & Dr. R.K.Tiwari, Forensic Science in India, A vision for The Twenty first Centure, Select Publishers, 2001pg 230
8. <http://www.criminalistica.mx/areas-forenses/criminalistica/745-the-importance-of-forensic-science-in-criminal-investigations> dated 29/01/2017

Surrogate Motherhood: Legal and Ethical Issues



The Indian Police Journal
©BPRD, MHA
BPRD Publication
www.bprd.gov.in

By: Dr. Shweta Dhand*

Abstract:

Assisted reproduction technologies have been proved to be blessings for many infertile couples and helped them to have children that they would not have otherwise. Assisted reproductive technologies such as artificial insemination, in vitro fertilization, surrogate motherhood cherished the dreams of many infertile couples as well as singles and homosexual who want children. Of all, Surrogacy is most controversial one. Despite controversial and ethical issues arising out of it, surrogacy has been gaining popularity all over the world, especially in the west where adoption is not an easy option. The concept of 'rent a uterus' in fact may be readily acceptable in the more analytical frame of the mind with the argument "at least the baby is made with our gametes, even though nourished in a rented body.

Key Words

•Artificial Insemination, Assisted Reproductive Technologies (ART), Assisted Reproductive Technologies (Regulation) Bill-2010, Commercial Surrogacy, Indian Council of Medical Research (ICMR), IVF Surrogacy, Gestational Surrogacy, Surrogacy Contracts, Surrogate Motherhood, Traditional Surrogacy.

Introduction:

One issue, which is closely related to that of alternative methods of procreation and which at the same time is an especially controversial social innovation, is surrogate motherhood.

Author Introduction

* Assistant Professor in Laws, GHG Institute of Law for Women, Sidhwan Khurd, Ludhiana.

Surrogacy is a reproductive alternative, which aims at overcoming involuntary fertility.¹ There are number of feminists, who are in favour of surrogacy arrangements. The argument put forward by them, is that since women may decide on whether to have an abortion or not, they should also be allowed to offer their body for surrogacy if they want to do so. They, furthermore, claim that surrogacy as a reproductive alternative should be included in the right to found a family and to family planning. It has been maintained that the greatest gift a woman can give to another woman is a child. Thus, surrogacy is seen as an appreciation of pregnancy.²

Despite controversial and ethical issues arising out of it, surrogacy has been gaining popularity all over the world, especially in the west where adoption is not easy to come by. Research has stated that one in six couples have problems with infertility.³ It's these couples where the woman has undergone a hysterectomy or suffered multiple miscarriages or born without a womb where surrogacy comes to the rescue.⁴ The concept of 'rent a uterus' infact may be readily acceptable in the more analytical frame of the mind with the argument "at least the baby is made with our gametes, even though nourished in a rented body."⁵

Instances of Surrogate Motherhood in the Ancient World

Surrogacy is a method which is not exclusively dependent on advanced technology. It was known and practiced in ancient times and there are plenty of examples throughout our history in regard to different types of surrogate motherhood. For instance, the seventh pregnancy of Devaki, by the will of the Lord, the embryo was transferred to the womb of Rohini, the first wife of Vasudev to prevent the baby being killed by Kamsa.⁶ Another example of surrogacy is that of Sarah, the wife of Abraham in the Old Testament of Holy Bible. Sarah could not have children in the beginning. She gave the handmaid Hager to Abraham to produce them a child. The method used was copulation. The outcome in this arrangement did not prove to be a productive one and ended in disaster. In this scenario the spouse became jealous, the surrogate became proud and refused to give up the identity of the child and consequently the spouse had both her and her child ousted.⁷

1 R. Lee & D. Morgan (eds.), *Surrogacy: An Introductory Essay in Birth Rights: Law and Ethics at the Beginning of Life* 78 (Routledge Press, London, 1989).

2 Maja Kirilova Eriksson, *Reproductive Freedom: In the Context of International Human Rights and Humanitarian Law* 209 (Martinus Nijhoff Publishers, The Hague, 2000).

3 Irvi H. Thakkar, "Is Surrogate Motherhood Moral?" 117 *Cri LJ* 88 (2011).9 See supra note 5 at 104.

4 Irvi H. Thakkar, "Is Surrogate Motherhood Moral?" available at: www.Indianchild.com/pregnancy/ivf-experience-success-rates.html.

5 Pratibha Ganesh Chavan, "Psychological and Legal Aspects of Surrogate Motherhood" 95 *AIR* 103 (2008).

6 *Ibid.*

7 Grayee P-Storey, "Ethical Problems Surrounding Surrogate Motherhood" available at: <http://www.yale.edu/ynhti/curriculum/units>.

Meaning of Surrogacy

The word, 'surrogate' has its origin in Latin 'surrogatus', past participle of 'surrogare' meaning a substitute, that is, a person appointed to act in the place of another. The New Encyclopedia Britannica defines 'surrogate motherhood' as the practice in which a woman bears a child for a couple unable to produce children in the usual way.⁸ Hence, Surrogacy is an arrangement between a woman and a couple or individual to carry and deliver a baby. A surrogate mother is a woman who carries a child for someone else, usually a couple struggling with fertility issues. After the child is born, the surrogate mother surrenders it to the people who have hired her. The surrogate mother is also known as 'Gestational Carrier'.

In surrogate birth, there are three important entities - the intending mother, the biological mother and the genetic mother. The intending mother in this respect is the mother who wants the child, the biological mother is the one who gives birth to the child or provides her womb, and the genetic mother is the one whose ovum is used. There may be an overlap between the three in certain cases. If the ovum of the intending mother is used, she herself is the genetic mother but if the biological mother uses her own ovum then she becomes the genetic mother. And this is where the moral and legal questions arise that is out of the three, who should be the legal mother-the intending mother, the biological mother or the genetic mother.

Types of Surrogacy: There are two types of Surrogacy:

- **Traditional or Partial Surrogacy:** The traditional type of surrogacy involves the surrogate mother being artificially inseminated (AI) with the sperm of the intending father or sperm from a donor when the sperm count is low. In either case the surrogate's own egg will be used. Genetically the surrogate becomes the mother of the resulting child.
- **Gestational or Total Surrogacy:** In order for a pregnancy to take place, a sperm, egg and a uterus are necessary. In gestational surrogacy, the surrogate mother has no genetic ties to the offsprings. Eggs and sperm are extracted from the donors and in vitro fertilized and implanted into uterus of the surrogate. This is an expensive procedure. Again, the unused embryos may be frozen for further use if the first transfer does not result in pregnancy.⁹

International Position

There are plethoras of views regarding the issue of Surrogate Birth in various countries. It is rather a tumultuous point of law as there are only a handful of nations recognizing it and there is also a lack of uniformity in the principles being followed in these nations with respect to the phenomenon of Surrogate Birth.¹⁰

8 Law Commission of India, Report No. 228, Need for Legislation to Regulate Assisted Reproductive Technology Clinics as well as Rights and Obligations of Parties to a Surrogacy, August, 2009, para 1.3 & 1.4.

9 See supra note 5 at 104.

10 Reeta and Basabddutta, "Surrogate Birth" 96 AIR 109 (2008).

On this issues the position in Japan, is that the mother who gives birth to the child is the legal mother and the intending parents need to adopt the child to gain the legal status of parents.

In USA different state legislations have made different laws regarding the issue of surrogate birth. In Arizona, New York, North Dakota and Utah, the legislatures have taken a blanket approach, deeming all surrogacy contracts to be void and unenforceable. Kentucky, Louisiana, Nebraska, and Washington, on the other hand, have taken a less restrictive approach, passing legislation that voids only those surrogacy contracts that provide for compensation to that surrogate. In contrast Florida, New Hampshire, and Virginia have adopted the minority approach by making them legal and enforceable but they prohibit commercial surrogacy, with an exception of expenses incurred as a result of pregnancy and childbirth. They also allow the surrogate an opportunity to rescind the contract. Surrogacy legislation in New Hampshire requires judicial preauthorization of all surrogacy contracts subject to three conditions viz. informed consent by parties, completion of psychological counseling and evaluation, absence of unconscionable terms in the contract and orientation towards best interests of child.¹¹

Further in Australia, traditionally the birth mother, i.e. the biological mother and her husband, are treated as the legal parents, but the legal presumptions are contradicted due to fertility regulation. The Capital Territory has the most liberal surrogacy laws among all Australian states. Amendments in legislation have enabled the intending parents to be the legal parents¹² if at least one of the intending parents is the child's genetic parent.¹³ Whereas in Queensland both commercial and altruistic surrogacy agreements are invalid.¹⁴

In U.K., the Surrogate Arrangement Act does not allow commercial surrogacy and makes it a criminal offence.

The Indian Scenario

To understand surrogacy in the Indian context, one must begin with the fact that, while the Transplantation of Human Organs Act, 1994 banned the sale of human organs, organ loaning an equally difficult and risky venture is being promoted through paid surrogacy.¹⁵

Ministry of Health & Family Welfare and Indian Council of Medical Research drafted the Assisted Reproductive Technologies (Regulation) Bill, 2010, which is pending with the law

11 Raghav Sharma, "An International, Moral and Legal Perspective: The Call for Legislation of Surrogacy in India" available at: SSRN: <http://ssrn.com/abstract=997923>.

12 Artificial Conception Amendment Act 2000 (ACT) gazetted on 28 September 2000.

13 Section 2(2), "Substitute Parent Agreement", Artificial Conception Act 1985(ACT).

14 See supra note 10 at 110.

15 Imrana Qadeer and Mary & John "The Business and Ethics of Surrogacy" Economic and Political Weekly. Jan 10, 2009 at 10.

ministry for its approval seeks to regulate Surrogacy in India. At present, the regulations are in the form of guidelines issued by the Indian Council of Medical Research (ICMR) and the National Academy of Medical Sciences (NAMC), who have released certain criteria for grant of accreditation to Assisted Reproductive Technologies (ART) Clinics.¹⁶

These guidelines define surrogacy as “an arrangement in which a woman agrees to carry a pregnancy that is genetically unrelated to her and her husband, with the intention to carry it to term and hand over the child to the genetic parents for whom she is acting as a surrogate.”¹⁷ The children born through these arrangements are considered those of the genetic parents and the surrogate mother must relinquish, in writing, all parental rights concerning the offspring.¹⁸

In India, surrogacy is an area that bristles with ethical, moral and legal infirmities. As it is, foreign citizens are finding it quite easy in India to “rent a womb” and “go back with a baby.” The Indian laws governing reproductive outsourcing are not tough. As it is, many western countries don't permit commercial surrogacy. However, no clear-cut figure on how many foreigners visit India each year for surrogate birth is available.¹⁹

This is due to a medical industry that welcomes profitable international ventures like “reproductive tourism”, even when infertility constitutes a small segment of domestic priorities.²⁰ The reasons for this boom in medical tourism is the low cost factor but high quality treatment provided by health-care professionals, easy availability of surrogate mothers, abundant choice of donors with similar racial attributes and the preferably healthy lifestyle of Indian women which is needed during pregnancy and lack of any law to regulate these practices.

But the surrogacy arrangements are drawn up in a random fashion and can be exploitative, especially since surrogates are mostly from socio-economically weaker sections. It is imperative that the practice be legally regulated to prevent victimization of both the surrogate and the intending parents.²¹ The complicated case of Japanese baby Manji born to an Indian surrogate mother with IVF technology upon fertilization of her Japanese parent's eggs and sperms in Tokyo and the embryo being implanted in Ahmedabad triggered off complex knotty issues.²² To regulate the mushrooming growth of these ART clinics and surrogacy arrangements, the need was felt to have a legislation to some sort which will deal with the various grey areas of law regarding the surrogacy arrangements

16 National Guidelines for Accreditation, Supervision & Regulation of ART Clinics in India (Guidelines for ART Clinics), available at http://icmr.nic.in/art_clinic/art_clinic.htm.

17 Id, Chapter 1, Para 1.2.33.

18 Id, Chapter 3, Para 3.10.1; also see Para 3.5.5 of the Guidelines for ART Clinics.

19 Radhakrishna Rao, “Is India Becoming A Hub For Reproductive Outsourcing” *Womens Era* 114 May (Second) 2009.

20 Imrana Qadeer & Mary E John, “The Business and Ethics of Surrogacy” *Economic and Political Weekly* Jan 10, 2009 at 10.

21 N.B. Sarojini and Aastha Sharma, “Guidelines not enough enact surrogacy laws” *Hindustan Times*, Aug 8, 2008 at 8.

22 Kush Kalra, “Surrogacy Arrangements Legal and Social Issues” *1 JOLTI* 128 (2010).

and also, to ensure that any of the party in the agreement is not cheated and the middlemen doesn't end up duping both the parties and specially the generally naive and gullible surrogate mother.²³

Taking into consideration the misuse of surrogacy and the possibility of exploitation by the foreigners, the Home Ministry altered the rules to protect the future of children born out of surrogacy agreements. In new rules, the government has mandated that only foreign couples who had two years of sustained marriage and whose countries of origin recognize commercial surrogacy will now be allowed to hire surrogate mothers in India for the purpose of having babies through this assisted reproductive technology (ART). Simply put, couples in same sex marriages (gays and lesbians) now stand barred from hiring Indian surrogates. Secondly, the new rules made it mandatory (as part of the visa documents) a letter from the embassy of the foreign country in India or of the foreign ministry of the country stating not just the fact that such a country recognizes commercial surrogacy but also that the child born to the Indian surrogate would be permitted entry to the foreign nation as a biological child of the couple that commissioned the ART service. Also, foreign couples would have to now furnish an undertaking along with their medical visa document that they will take care of the child thus born and the treatment will only be done at one of the ART centres registered with the Indian Council for Medical Research. "A list of such centres will be shared with the Ministry of External Affairs from time to time," Home Ministry said. Last but not the least the rules require the foreign couple seeking surrogacy service in India to produce a duly notarized agreement between the applicant couple and the prospective Indian surrogate mother and further foreign couples cannot exit India until they have ensured the safety of the child born through the ART. According to Home Ministry if any of these conditions as per the new rules, are unfulfilled, the visa application shall be rejected.²⁴ This effectively sealed the door on gay couples, single parents, and live-in couples conceiving via surrogacy. However in June 2013, the Government again declared that it would consider allowing visas for single parents opting for surrogacy provided DNA tests were performed on parent and child while existing in country.²⁵

As of now, even though surrogacy is an administrative concern and in the domain of Ministry of Health and Family Welfare (MoHFW), it has been decided that till the enactment of a law on the ART Bill, 2013, the guidelines issued by Ministry of Health Affairs (MHA) will prevail till then. Hence, foreign parent surrogacy is barred. In March 2014, the concerned departments and ministries of government of India proposed to revise the Bill with significant changes. The most crucial proposal is to restrict surrogacy in India to "infertile Indian married couples" only. Non-resident Indians (NRIs), Persons of Indian Origin (PIOs) and Overseas Citizens of India (OCIs) would be

23 Ibid.

24 "Same-Sex Foreign Couples can't hire Indian Surrogates" The Tribune, Jan 19, 2013 at 22.

25 Gayatri Jayaraman, Suhani Singh, et.al, "The New Baby Bloom" India Today, July 22, 2013 at 42.

26 Anil Malhotra, "Ending Discrimination in Surrogacy Laws" The Hindu, May 3, 2014 at 5.

eligible but foreigners, unless they are married to Indian citizens, will not. The purpose of this is to prevent exploitation of Indian women who may be tempted to take the risk of surrogacy in the face of financial hardships.²⁶

Legal and Ethical Issues in Surrogate Motherhood

Surrogacy is an agreement that pose a series of social, ethical and legal issues. From the human rights point of view the underpinning issues involve right to individual autonomy, procreative liberty, right to dignity, right to privacy, commercialization of human body etc.²⁷

There is always a risk of transmitting infections such as HIV or Hepatitis, to the surrogate mother from the infected parents. In full surrogacy, when more than one embryo is replaced into the surrogate mothers uterus, the risk of multiple pregnancy increases. Around 20 to 25% of the pregnancies resulting from in vitro fertilization will result in a multiple pregnancy of twins or triplets, depending upon the number of embryos replaced. This carries associated risk for both mother and babies and there are serious implications for the intended parents of raising children from a multiple pregnancy.²⁸

A surrogate mother may be vulnerable for a large number of reasons and can be open to the possibility of exploitation. This not only puts these already vulnerable women in situations where their bodies may be exploited, but it also jeopardizes their physical and mental health thus making them “object of reproduction”. If financial pressure have prompted her to be a surrogate mother, she could be at even greater risk if, for whatever reason, the intending parents do not agree to pay her as agreed.

As the child grows up, the child might experience anxiety about the identity of the surrogate mother. The members of the Chalmers Committee in Tasmani called attention to the risk of serious psycho-socio harm to the child who later finds out that he or she was born as a result of a surrogate motherhood arrangement.²⁹

Rights of child, surrogate mother and the commissioning parents are some issues which are also to be considered. Such as right of the child to succeed the property of the surrogate mother, if she is a single woman and has no issue of her own. What will be the fate of surrogate mother, if the childless parents die after reaching an agreement or the foreign parents never come back to get the

26 Anil Malhotra, “Ending Discrimination in Surrogacy Laws” *The Hindu*, May 3, 2014 at 5.

27 Kshitij Kumar Singh, “Human Genome and Human Rights: An Overview” 50 *JILI* 76 (2008).

28 http://www.bma.org.uk/ap.nsf/content/considering_surrogacy. (Nov., 2012).

29 Chalmers Report, para 5.2.10

child. The Medical Termination of Pregnancy Act, 1971 gives a right to the mother, to abort the child on the medical grounds without the consent of her husband. Will this right be available to surrogate mother, if she wants to terminate her pregnancy on medical grounds without the consent of her husband? Will this right be available to surrogate mother; if she wants to terminate her pregnancy on medical grounds, without the consent of commissioning parents?

Ethically also surrogacy raises many issues like tempering with the normal process of procreation, undermining the institution of marriage and family life, treating children as objects of sale etc. Most of the religions do not approve the idea of subrogation.

In considering the inter- related ethical, social and legal aspects of surrogacy, the society has in a long way had accepted the various functions and the role of a surrogate in relationship to this and alluding to common comparisons with adultery, prostitution and babysitting. In particular, the 'birth mother rule' 'commercial surrogacy' and restrictive legislation are explored and found to be inappropriate.³⁰

Conclusion

In the end it can be concluded by saying that even though surrogacy oversteps the natural way of procreation, only those who have been able to get a child from it knows the value of this technique. At times, in a society like India, where barrenness is considered as incompleteness for a woman and reproduction is one of the basic aims of marriage, people have no option, but to resort to it to have their own child which is indispensable and sentimental demand of a couple. So instead of prohibiting and criticizing the demerits of surrogacy what is required is that there should be check on technology so that it cannot be misused and should act as a facilitator and not a destructor. Further there is an urgent need to have a full proof legislation on this controversial subject.

Bibliography

- Ehrenreich, Nancy, *The Reproductive Rights Reader: Law, Medicine, and the Construction of Motherhood* (New York University Press, New York, 2008).
- Eriksson, Maja Kirilova, *Reproductive Freedom: In the Context of International Human Rights and Humanitarian Law* (Martinus Nijhoff Publishers, The Hague, 2000).
- Field, Martha A., *Surrogate Motherhood: The Legal and Human Issues* (Harvard University Press, Cambridge, 1990).
- Kerr, Joanna; Sprenger, Ellen; Symington, Alison, *The Future of Women's Rights: Global Visions and Strategies* (Zed Books, London, 2004).

30 Chintamani Rout, "Surrogacy – A Conceptual and Legal Analysis in 21st Century" VI Orient Journal of Law and Social Sciences 28 (Nov., 2012).

-
- Lee, R., and Morgan, D., (eds.), *Surrogacy: An Introductory Essay in Birth Rights: Law and Ethics at the Beginning of Life* (Routledge Press, London, 1989).
 - Ragone, Helena, *Surrogate Motherhood: Conception in the Heart* (Westview Press, Boulder, 1994).
 - Raymond, Janice G., *Women as Wombs: Reproductive Technologies and the Battle Over Women's Freedom* (Spinifex Press Pty. Ltd., Australia, 1995).
 - Robertson, John A., *Children of Choice: Freedom and the New Reproductive Technologies* (Princeton University Press, Princeton, 1996).

Simulation and 3D Visualization of Mobile Call Detail Records to Assist Crime Detection Algorithm Design



The Indian Police Journal
©BPRD, MHA
BPRD Publication
www.bprd.gov.in

Nishaba D Rana*

Himanshu S Mazumdar **

Abstract:

Investigation of large number of crimes those are committed in recent days use mobile call record analysis as one of the powerful method to detect crime suspects. Almost every person in modern world is electronically connected with each other in complex space time matrix. The presence of any individual and his communication with others are continuously monitored and logged by mobile service providers as Mobile Call Detail Records (CDR). Mobile has become a primary device for communication which has inbuilt identity and location services like IMEI, phone number, GPS etc. mobile call records for modern population are huge and fall under big data category of secure, private and protected archive. Access of such data is restricted and needs valid legal permission to use. This restriction poses a big hurdle in development of any algorithm or utilities using CDR which models call pattern of real criminal activities using computational intelligence. Discriminating natural social and business call patterns from call characteristics of criminal modus operandi is one of the major goals of such pattern recognition.

A simulation and 3D visualization method is developed to generate huge CDR database keeping natural but complex space time matrix of call patterns embedded with call characteristics of criminal modus operandi. Simulation is done first by generating subscriber detail records (SDR) considering the pattern of city telephone directory. A large size CDR database is generated using weighted random call pattern between simulated SDR. CDR is further modified using call pattern of different criminal modus operandi. Objective of such elaborate simulation of huge call records is to develop advanced search algorithms, queries and visualization methods that could be used on real call data to locate actual crime and criminal information.

Author Introduction

* Student, Information and Technology, Dharmsinh Desai University, Gujarat, India

** Professor and Head, Research and Development Center, Dharmsinh Desai University, Gujarat, India

Such algorithms will help detectives to speed up the investigation of a crime by observing the overall scenario of the call records for all suspects and their connections. 3D graphics display of highlighted call patterns will help visually and intuitively to understand the crime activity even by non-technical officials. Visually projecting the crime calls for dynamically viewing in chronological order gives better understanding of the suspicious activities in organized crimes.

Key words:

Simulation of CDR, Event simulation, Call Animation, 3D visualization.

Introduction

“Justice delayed is justice denied”. It is important to accelerate the crime investigation and law enforcement using state of art technology. The scenario of crime is expanding with IT revolution. It has spread from national to international terrorism, drug mafia, money laundering, murder, etc. Investigation of such crimes of modern day involves analysis of very large number of variables over large span of time which is in term big data concept [1]. Elagib et al proposed parallel DBMS and Map Reduce approaches to Big Data CDR analysis [2]. Large number of coordinated crime committed in recent days are directly or indirectly associated with mobile devices. Every mobile device is uniquely identified by its International Mobile Equipment Identity (IMEI), and Subscriber Identity Module (SIM) [3]. Most offenders' association with an offence is often detected either by his or her using or carrying a mobile device. Most of crime leaves clue in mobile as call records. This makes call record and calling device location analysis as one of the most powerful technique to detect crime suspects. Call records are collected by mobile service provider and is known as Call Detail Record (CDR) [4]. The association of collected information with other social media and email is equally important. If any mobile phone seized or found from victim needs to be preserved for further investigation and evidence. It is strongly recommended to seal the mobile in a non-metal box with provision to charge it from external charger so that it can be used as un-tempered evidence. Such arrangement will allow receiving incoming calls after the event. Any new contact received will be helpful in further investigation.

Table 1 shows a simulated sample Mobile Call Detail Records (CDR) Format

Call Detail Records										
ID	Name	Calling number	Called number	Start Date	End Date	Duraton	City	Latitude	Longitude	IMEI
1	Ralph Jordan	9852314762	8023149678	14022001	14022001	906	Folsom	38.6722° N	121.1578° W	1028930293013568
2	Ramesh Patel	9086542315	8920384940	23042001	23042001	234	Surat	23.0300° N	72.5800° E	1902910290102901
3	Dhara Gohel	8908756789	7786453422	12022003	12022003	776	Goa	22.7000° N,	72.8700° E	6789456743457890

Call monitoring and recording applications used by telecommunication companies generate very large amount of CDRs in real-time for all calling subscribers. They also collect location information of passive devices at non calling state. Relocation, searching and visualization of such huge database are horrendous tasks and need automated tools to perform most desired tasks [6] [7] [8].

Our main Objectives here are:

- Designing a simulator to create virtual Subscriber Detail Records (SDR) of desired size like any city telephone directory.
- Designing a simulator to create virtual realistic CDR of selected SDR and time period.
- Interactive design tool for simulation of crime event call records using selected modus operandi and superimpose these with generated CDRs.
- Interactive design tool for filtering desired data from huge CDRs using user friendly query.
- Interactive 3D Visualization of filtered CDRs in space- time cube for intuitive pattern search.

The main scope of this work here is to automate the crime investigation based on mobile call records of callers' information of location and time. The analysis of email and SMS records is similar and not covered in this work.

We have simulated the CDR data as well as SDR (Subscriber Detail Records) with validation. Utmost attention is given for the simulation of CDR so that it remains as real as possible. This is accomplished by introducing different level of association and estimated associative frequency.

SDR also includes generation of user database based on the clustering of the co-ordinates of the family based on survey on family size distribution. The call list of any individual is generated using contacts and its associative frequency data. This is generated from study of distribution of real life occurrences and corresponding weighted random interval generation.

These huge simulated records will help develop algorithms and methods to filter in the desired information and narrow down search space. It is proposed to implement the real system under supervision of judiciary in mirror servers of mobile service providers. Investigators using these records through protected queries will get only pattern information from restricted big CDR data and will not be able to access the real records. Only bare minimum real data will be released by judiciary for evidence presentation.

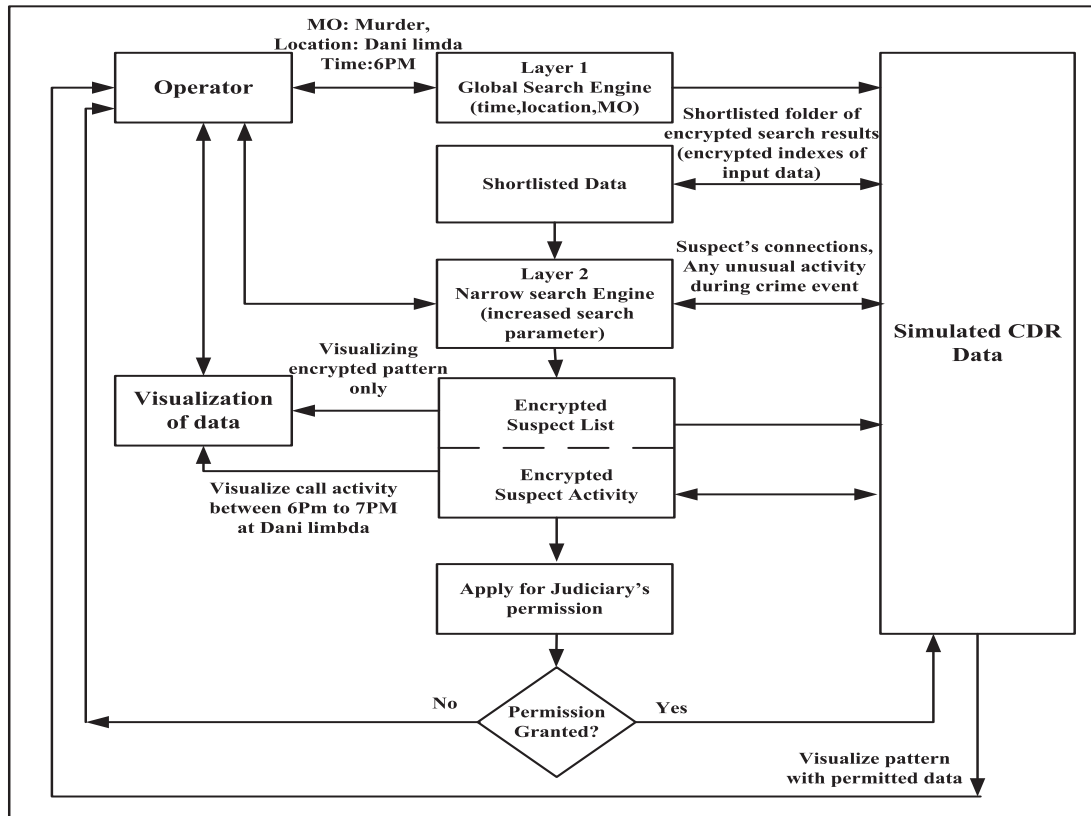


Figure 1 Block Diagram of Proposed Crime Investigation System using simulated CDR. Model is used to develop pattern based investigation with minimal public exposed of citizens call records.

Figure 1 shows the block diagram of proposed crime investigation development system. This includes development of search algorithm and visualization using simulated data. Two-tier search is conducted to locate the data request from big CDR database.

In first layer of global search, the querying parameters like time, location and MO, associated CDRs and contact links are short listed. In second layer, further narrow search is conducted on shortlisted data in reduced space and increased parameter for pin pointing the suspect list.

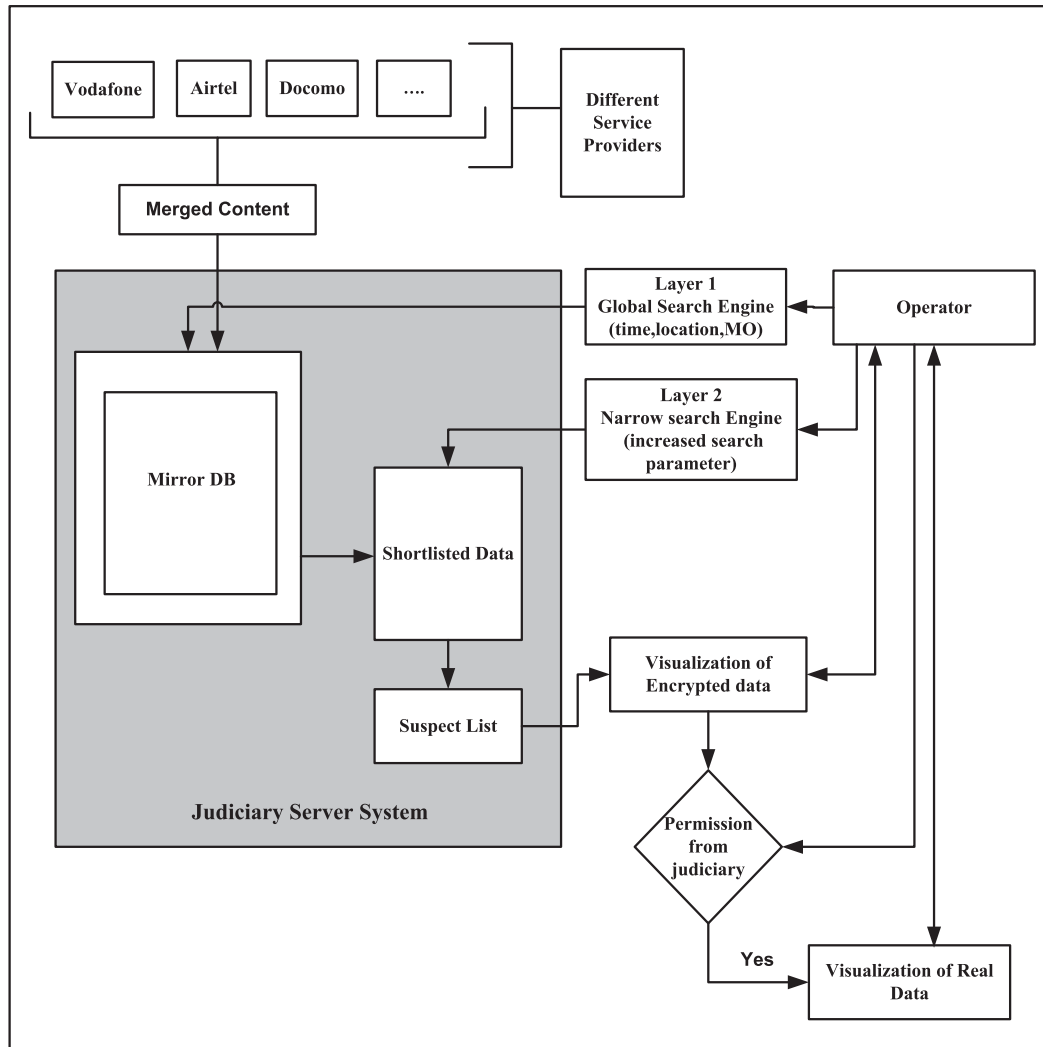


Figure 2 Mobile based Crime Criminal Investigation System

The real search list is not disclosed to the investigator till the authenticated permission from judiciary. Once permission is granted, associated CDR of suspect list and activities are made available in non-encrypted form for evidence presentation. In this method the investigator requests for only those records which are just relevant to the case and bear minima for evidence.

A novel technique of Visualization of CDR data in form of 3D graphics is proposed and developed. The 3D graphical display consist of various operations like rotate, zoom, slide and point utilities. Selection by pointing on any element on the 3D display, points to the text information extracted from database. Utilities like search, layers view and different filters are incorporated in

this tool. Animated video like display features are includes having controls like play, pause, fast forward, reverse and slow-motion for visualization of call in progress. The annotation from 3D displays to user list and calls details and vice versa is interactively made available for intuitive decisions and short listing suspicious activities.

Materials and Methods

To understand the complexity of CDR analysis, we simulate a case study consisting of locality of 10,000 persons. It is expected to have 50% of the persons having mobile connection in current urban population. Considering average calls per person being 10 per day, we have 50,000 call records generated per day. Figure-3 shows example of a small section of 50,000 calls of 5000 persons. View of all calls in this example is extremely crowded and beyond the scope of any investigation. Alternately the text version of the same will need 1000 pages at the rate of 50 lines per page.

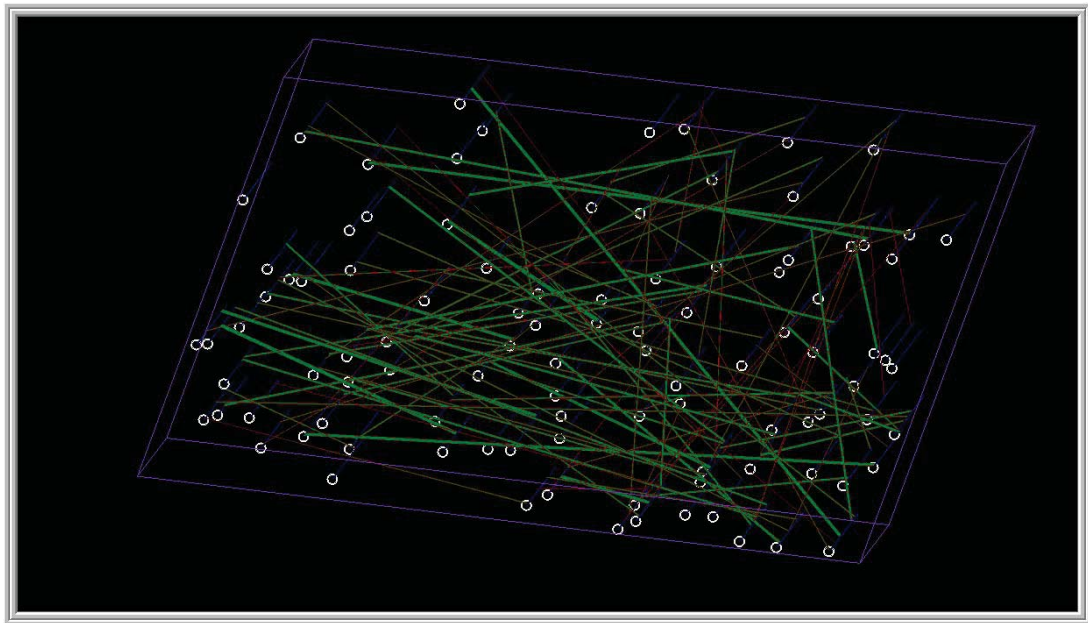


Figure 3 shows all calls present in CDR at same time in Call cube

It is extremely difficult to handle such a large data in its basic form. To overcome these difficulties the proposed method of data viewing techniques is developed at R&D Center, DDU to enables crime investigators to view desired segments of CDR using a unique 3D visualization tool.

We describe here the simulation and visualization algorithm. It is essential to developed Visualization, Pattern recognition and search algorithm using actual CDR. In absence of such data

the algorithms are developed with simulated data which closely resembles the natural and crime related calls so that these algorithms work with actual data in the same way.

The data reduction of such huge data depends on reduction of the search space by virtue of quick interaction of subject expert with the large volume of the data using intelligent, query and visual inspection. Both the above issues are addressed in the proposed work to reduce search space for an efficient CDR visualization and analysis system. In typical example of hired killing case, it is essential to establish link between registered contract killer and probable suspects within given space-time boundary of crime event.

SDR Simulation:

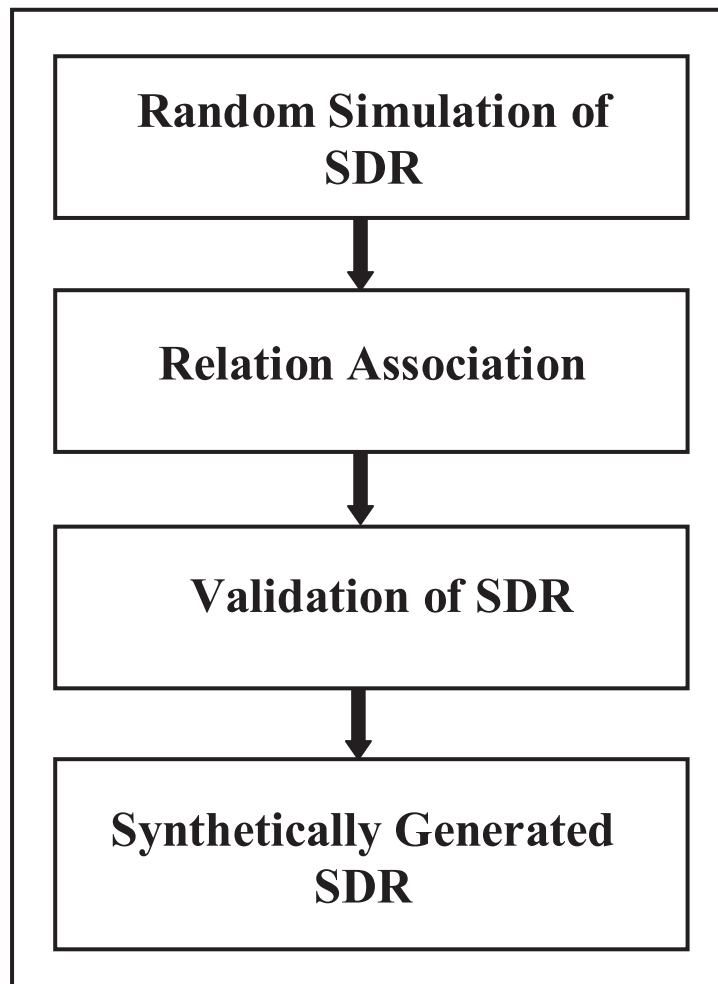


Figure 4 SDR Simulation

SDR data is the dataset which holds the personal information of mobile subscribers. It has fields like Name, Address, Email-Id, Photo, etc. of subscriber along with their registered Phone number. We have simulated SDR by extracting different elements of the above fields from few public directories of few institute members. Some of these elements are first name, last name, street name, email components, first 5 digits of mobile numbers etc. SDR is composed by random combination of extracted elements. Such combination gave more realistic names, addresses and phone numbers. We have used constrained combination of fields with realistic association to generate a large amount of person data which is validated to be used as a data set for SDR record. This person data is combined with uniquely allocated phone numbers with their unique record. The simulated data set is corrected for duplicate records using sorted list.

A special field is incorporated in SDR which holds the contact list of the person with a defined frequency. A special algorithm is used to generate this list of frequency and contacts which is based on weighted random technique. This distribution used is Gaussian. This field represents person's naturalistic call frequency distribution for close association, friends and family.

In SDR, following things incorporated while generating SDR:

1. SDR activity excluding call activity: This activity includes past possession of calling devices (based on IMEI number). For example one person has changed his phone device for his phone number.
2. The utilization of calling ID (phone number) and history of association of calling id to device IDs (IMEI's): This includes relation between phone number and IMEI number for each person record.
3. Use of other calling IDs by an individual in his device ID (or vice versa): Same device ID being used for different calling IDs of individuals have been different registered address. This is a semi static analysis which has time component like Call ID, swapping time and very use full for characterizing the user's intention.

CDR holds the information of call made by the mobile subscriber. In real life data, this data is generated by each service provider in their own specific format which is more or less similar to the standard format [5] as in Table-1.

CDR data is very sensitive and is available only if any registered complaint is present to police officials/ Law Enforcement Agencies. As per clause 8.2, 8.3 of UL (ISP) [9], the designated person of the Central/ State Government has been given the right to monitor the telecommunication traffic at any technically feasible point in the network set up by the Licensee.

Along with the monitoring of call, Security agencies/ LEA can access the Call Related Information such as CDR, Location/Coordinates etc. from Licensee (Service Provider). The Licensee are also required to provide the call data records of all the specified calls handled by the system at specified periodicity, as and when required by the security agencies in the format

prescribed from time to time. As per clause 7.1 of UL (ISP), TSPs are required to maintain CDR for a minimum period of one year. LEA can seek details of call details from service provider. The designated person of the Central/ State Government have right to seek the CDR from Service Provider. They can seek the information by providing the details of requirement in prescribed form duly signed by authorized officer.

CDR Simulation:

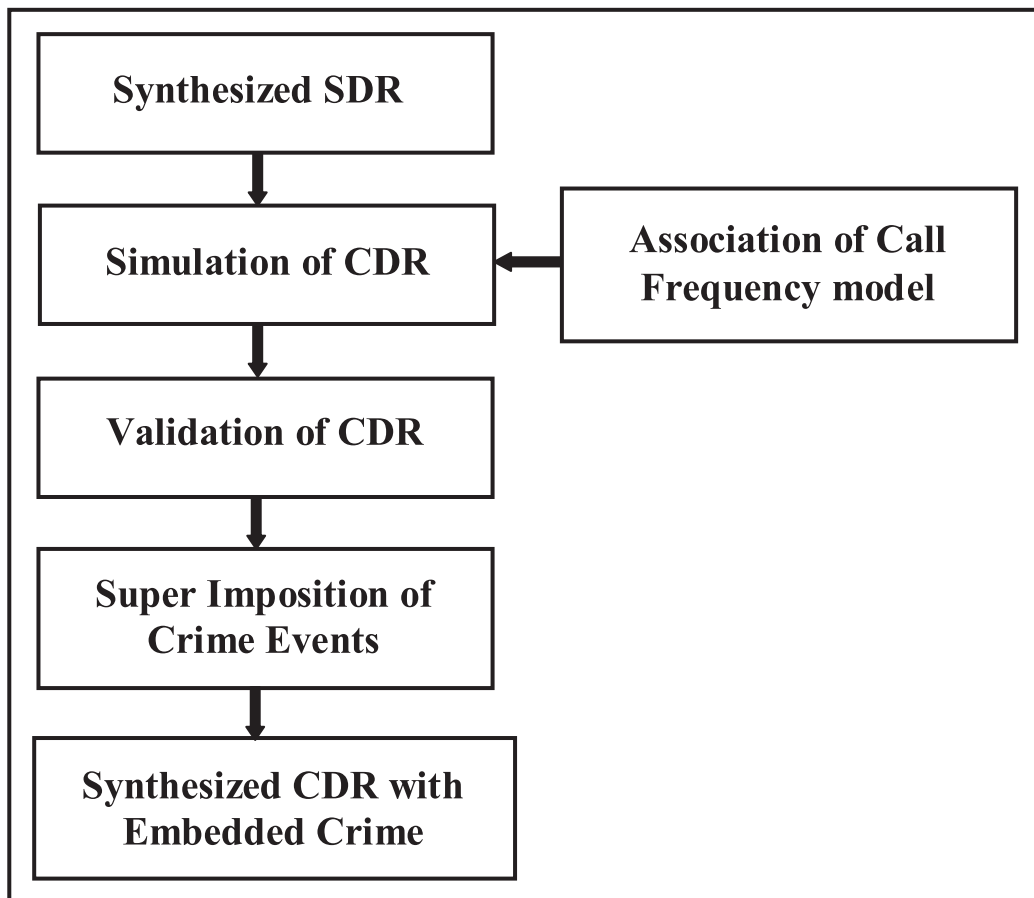


Figure 5 CDR Simulation with embedded crime activity

General public have no access to the CDR data. We have simulated the CDR data which uses simulated SDR dataset to represent realistic population with unique numbers. The CDR data simulation for each SDR member is performed using normal distribution of calls in SDR contact list. The frequency sorted contact list for each SDR record is used to generate the call data. The simulated CDR is validated for redundancy and single call received at a time by any receiver. This CDR Dataset is used to visualize the call in 3D graphical format.

To simulate a CDR like real life call pattern, a novel technique is proposed using a rule based weighted random call generator. A huge CDR file is generated using unique Caller Ids and Caller Contacts. Calls generated in this method are based on contact calling statistics only and do not represent any sequence of event. Any offence or crime event involves planning and its execution is like series of event which reflects through the call sequence associated with the crime event.

Recent TV serials depicting real life crime stories are studied to create call script associated with the crime event. These scripts are used to generate short CDRs corresponding to different Modus operandi. These CDRs are super imposed to the big CDR at desired location and time by changing the Caller Ids of actual location and time and validated. Once super imposed, it is extremely difficult to identify the crime event from huge call records like any real life situation. In this research we use this dataset as development environment to search and detect call activities. In the following chapter we have described some such methods to analyze and visualize crime events from jungle of big call data.

Visualization

CDR consists of very large number of records. Search, visualization and analysis of such big text data imposes serious processing problems to meet the challenges of interactive user interface.

There are several research carried out for visualization of criminal links and their networks. Ferrara et al represents how they employ some interactive visualization techniques to represent criminal and terrorist networks reconstructed from phone traffic data using foci, fisheye and geo-mapping network layouts [10], Xu et al using automated SNA and visualization techniques to reveal various structures and interactions within a network [11].

Inspired from the popular English idiom "A picture is worth a thousand words", a 3D CDR display tool is developed. An efficient display utility is developed to graphically view and analyze the caller location and call time.

To simplify the complexity of display, a small segment of CDR is filtered and enclosed in a 3D cube as shown in figure-12. Similar 3D display technique is demonstrated by Mazumdar to simulate the chemical bond reactions in three dimension [18]. Caller positions are displayed in as node of small circles inside the bounded cube along with vertical line representing time axis. Filter is implemented using location and time parameters to populate 3D cube.

The links between the nodes represent calls and width of the link as duration of the call (as shown in figure-12). The location and width of green bars in Z dimension of 3D display represents calling time and call duration respectively. The display cube is dynamically populated using the interactive query. The association of SDR members involved in any activity is enhanced by eliminating unassociated contacts inside the display cube. It also brings associated contacts inside

the display cube by non-linearly mapping the distances by using logarithmic plotting of distant associations. Display tool is packed with several functionalities, features and Utilities (as shown in diagram).

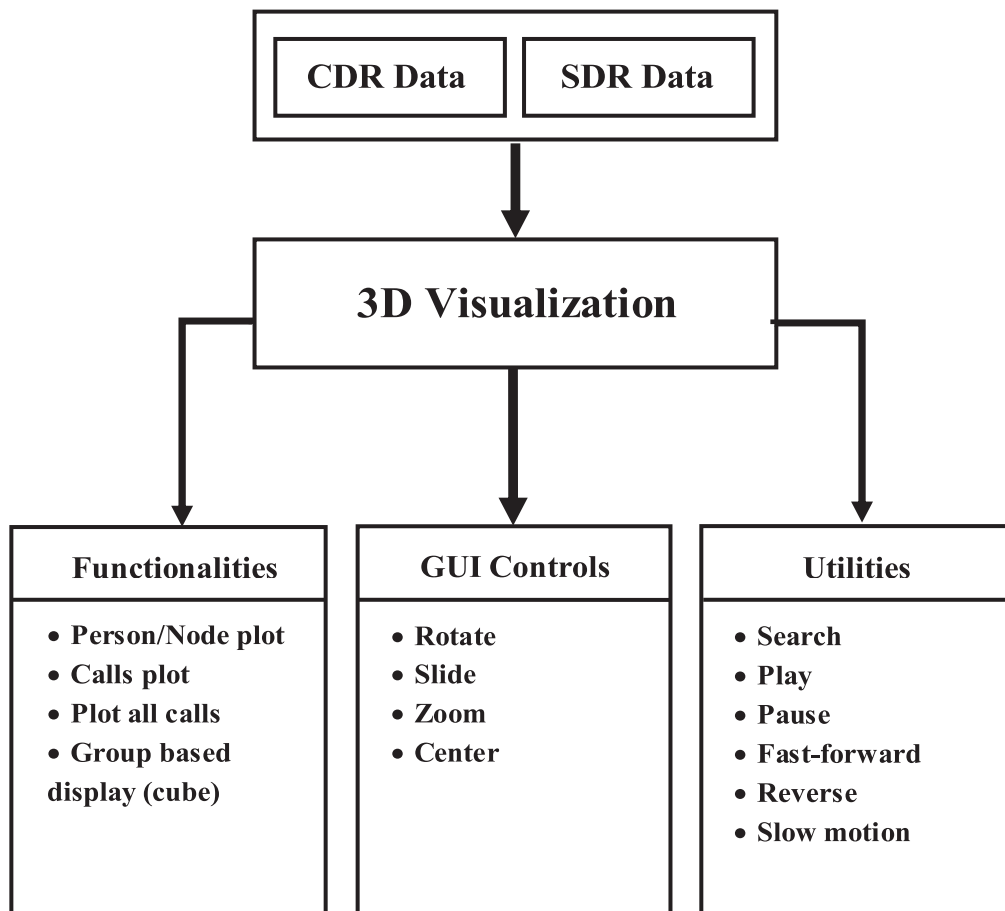


Figure 6 Block diagram of CDR Visualization and controls

Figure-6 above shows the block diagram of CDR visualization and controls. The display has control options like Rotate, Slide, Zoom-in, Zoom-out, Center Positioning etc. for making the user friendly visualization experience. For intuitive analysis of CDR, a video like viewing is developed. This has controls like play, pause, fast-forward and slow-motion display with different search utilities. This gives better user experience and provides a highly interactive environment for intuitive analysis.

Search utility is used to find most common contacts of a selected node or person. Search is performed layer wise. Layer is defined as set of contacts of each node. A second layer of contacts of any node represents set of all contacts of its contacts. Experimental results with simulated data shows that most persons are linked to one another if traced beyond fourth layer. This enables analyst to easily locate the persons with highly associated connection to the suspect. Also the connection heierarchy (as shown in Figure-7) can lead to a very important clues in the scenario.

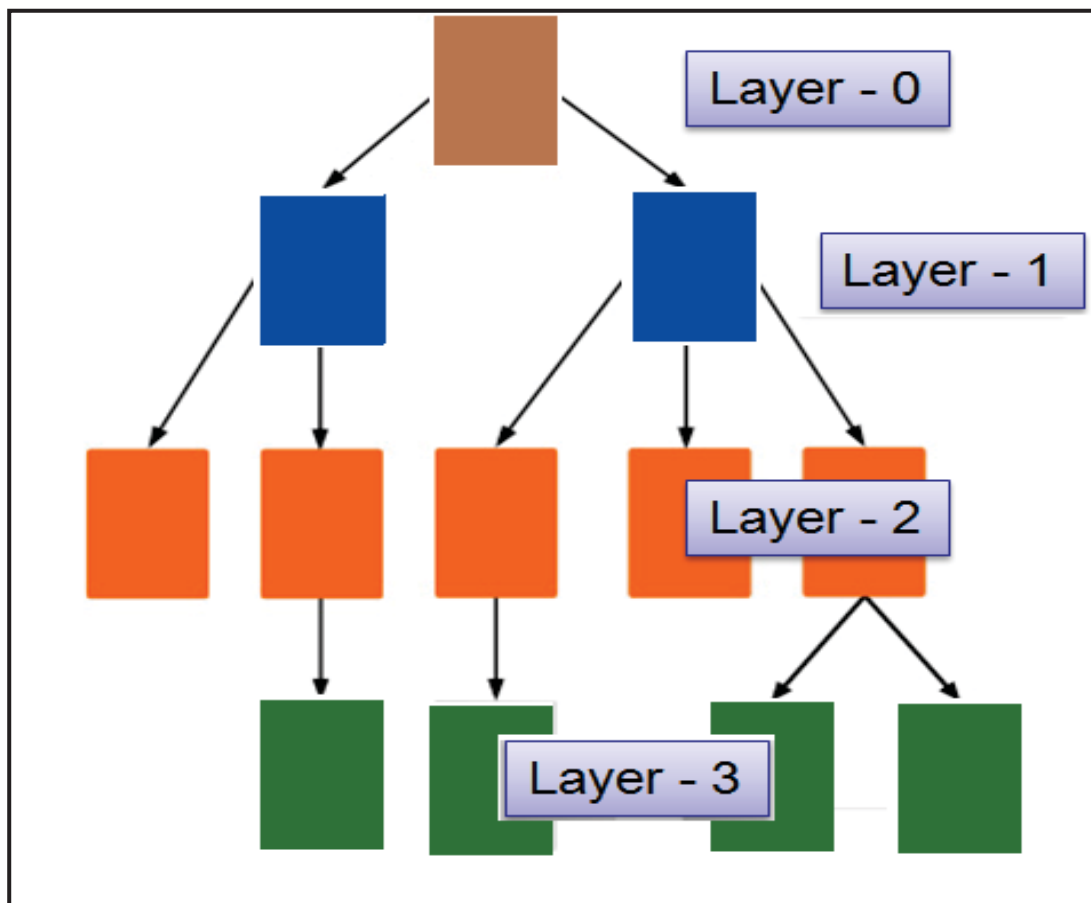


Figure 7 Search Utility-Layers hierarchy

Certain possible filters like query search based on the person name, phone number, IMEI number, etc. is more useful to the investigator as many situation demands to locate a person and then do the analysis on his or her movements. One possible application for this system will focus on the primary statement interogation part of the police inquiry. During the intial primary statement recording the police official can verify the statement provided by the complaint maker such as his or her call records, location at the time of crime event etc. This gives the investigation process can

considerably boost in detection of false complaints. With actual proposed CDR server of judiciary, online true or false results from investigators query will be provided with out disclosing actual CDR of the person being questioned.

Results

Id	Name	Address	Email	Mobile	Contacts
1	BASAVARAJ M	35/D2 SHANTI ...	Email: nbraj59@r...	M-9945399114	1042.68.1334.32...
2	JHALDIYAL K B ...	562 MANDAKINI...	Email: kbjhaldiy...@...	M-9866388855	175.42.986.30.8...
3	RAO U R PROF	CHAIRMAN PRL...	Email: urao.uro@...	M-9978564433	1071.69.1116.36...
4	DAVE H B PROF	6 NARENDRAP...	Email: hbdave@...	M-2682521025	1548.37.1284.35...
5	JAIN V K	E2/22 VIKRAMN...	Email: jainvk_sac...	M-9427308691	304.61.677.48.7...
6	SAKSENA RAVI	BE(L)C ENG(IET...	Email: saksena...@...	M-9898939135	544.44.68.42.45...
7	SARKAR ABHIJIT	54-2 BIMANAGA...	Email: abhi.sarkar...	M-9812456755	1201.55.211.53...
8	SINGH AMARJIT...	ADDITIONAL DI...	Email: amarjt_sg...	M-9712910668	1585.57.134.41...
9	SINGH SUVIR K...	C-3 NEW ANUR...	Email: sksacor@r...	M-9427048861	351.44.1145.38...
10	RATHOD JAGDI...	MIETE(I) MISTE...	Email: mr_rathod...	M-9428902849	23.60.847.21.70...
11	SAXENA MANIS...	BLDG NO 38 RO...	Email: msaxena...	M-9601905159	405.42.286.37.7...
12	VYAS AJITKUM...	A/5 BHAGYALA...	Email: avyas@gm...	M-9428009849	48.40.878.39.94...
13	AILSINGHANI VI...	E-75 NEAR DEN...	Email: vinod.allin...	M-9924304767	593.54.4.52.77.3...
14	AMIN MANTHA...	CHAKLSWAR M...	Email: aminmanth...	M-8977419589	98.41.1303.35.1...
15	ARJANBHAI B B	17 KANHA BUN...	Email: abbamba...	M-8877651234	860.44.875.32.1...
16	BARIA AJAY KU...	C/O BARIA RAM...	Email: ajay.barya...	M-7827232589	678.44.94.39.14...
17	BAROT MEGHA...	M205950L (N) A...	Email: barot.meg...	M-8141695674	181.52.250.51.5...
18	BHATIA VISHAL ...	HARI OM NIWA...	Email: vishal_bha...	M-9033777055	955.60.1099.45...
19	BHATT PRAVIN...	80 ISCON GREE...	Email: pj_bhatt20...	M-9227741622	625.49.926.39.7...
20	BHATT RACHIN...	4 AARSH BUNG...	Email: rachna.12...	M-9912234356	1576.52.302.43...
21	BHAVSAR KETA...	4 DEVKINIVAS B...	Email: ketannbha...	M-999031797	1235.36.1193.33...
22	BIHOLA VANRA...	27 AVNI ROW H...	Email: vanraj27...	M-8866140346	1450.83.296.45...

Figure 8 shows a screen shot of simulated SDR dataset having fields like Id, Name, Address, Email, Mobile number, and Contacts- Contacts field consists of connection number along with its associative frequency.

CallId	SrcId	DstId	SrcPt	DstPt	Date	TimeSt	Duration
1	230	45	61.12.38.24	14.16.89.79	17/11/2015	11.25.22	00:07.12
2	1211	439	7.16.197.29	29.64.308.82	17/11/2015	11.56.16	00:00.28
3	498	305	79.92.351.51	11.07.339.46	17/11/2015	13.24.50	00:01.51
4	675	43	-07.09.200.66	-3.13.243.31	17/11/2015	13.48.57	00:10.45
5	369	638	8.69.115.43	30.99.221.26	17/11/2015	14.53.50	00:02.47
6	912	1415	-09.57.193.51	81.04.31.06	17/11/2015	15.58.3	00:18.01
7	1035	1380	17.32.295.79	49.07.98.54	17/11/2015	16.44.17	00:03.53
8	474	490	76.45.188.82	-74.71.280.83	17/11/2015	17.32.58	00:13.55
9	1001	982	49.79.234.7	61.7.33.37	17/11/2015	18.10.47	00:00.05
10	865	71	-00.13.58.25	10.66.119.33	17/11/2015	19.18.42	00:19.48
11	955	181	58.65.315.35	-46.1.100.57	17/11/2015	20.4.29	00:00.13
12	1044	313	27.97.110.67	43.03.12.79	17/11/2015	20.24.5	00:07.39
13	394	1455	5.94.143.72	63.07.96.96	17/11/2015	21.42.24	00:11.59
14	1442	1011	-70.61.177.12	35.29.195.12	17/11/2015	23.9.12	00:18.14
15	122	810	12.11.130.41	71.83.131.33	18/11/2015	0.14.6	00:07.30
16	294	1332	44.61.312.53	45.47.241.11	18/11/2015	1.14.26	00:00.28
17	14	378	2.27.251.69	51.14.7.74	18/11/2015	3.7.2	00:00.40
18	320	356	6.51.149.55	17.77.261.05	18/11/2015	3.29.43	00:02.06
19	1322	789	-28.77.156.96	10.53.26.15	18/11/2015	4.25.40	00:04.47
20	1443	400	67.51.195.07	9.65.299.72	18/11/2015	4.28.42	00:00.15
21	400	345	-65.51.81.27	-30.96.345.26	18/11/2015	6.9.47	00:01.56
22	415	629	76.76.194.41	-71.56.175.58	18/11/2015	6.57.9	00:00.37
23	151	1300	55.39.210.6	-46.38.293.28	18/11/2015	7.13.39	00:02.03
24	1061	796	-05.61.224.14	-50.33.232.81	18/11/2015	8.41.55	00:00.25
25	1099	890	84.63.340.05	45.33.193.73	18/11/2015	9.50.58	00:03.11
26	1397	1439	40.95.1.11	49.91.145.84	18/11/2015	9.58.34	00:13.45

Figure 9 Shows a screen shot of simulated CDR data format having fields like CallId, SrcId (Caller's Id), DstId (Callee's Id), SrcPt (Caller's Location in terms of Latitude Longitude), DstPt (Calles's Location in terms of Latitude Longitude), Date, Start time, Duration.

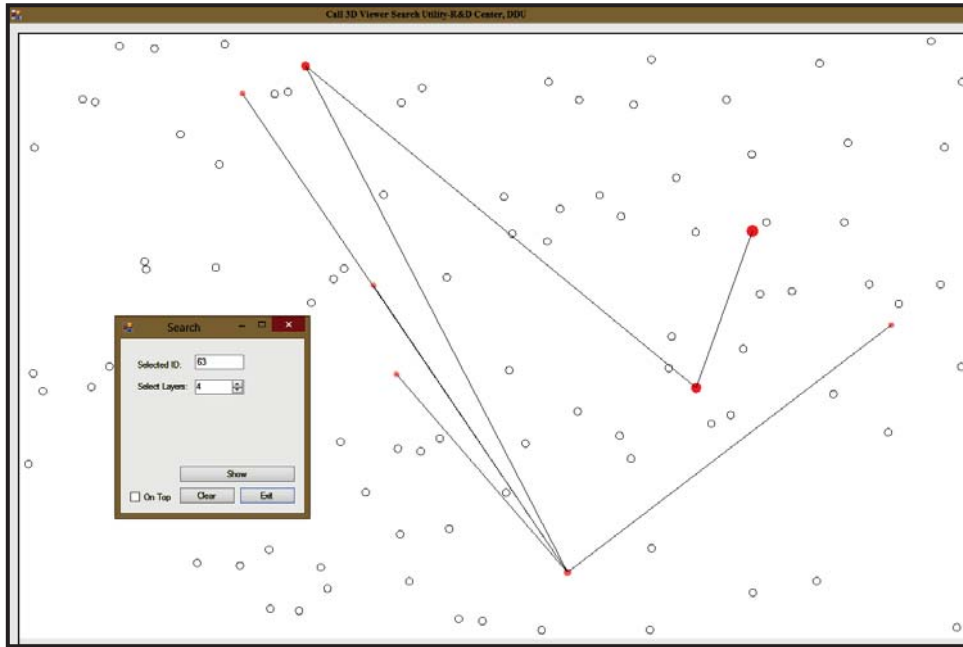


Figure 10 Shows Experimental results in which most persons in one are are linked to one another until we go upto depth of layer4 of connections.

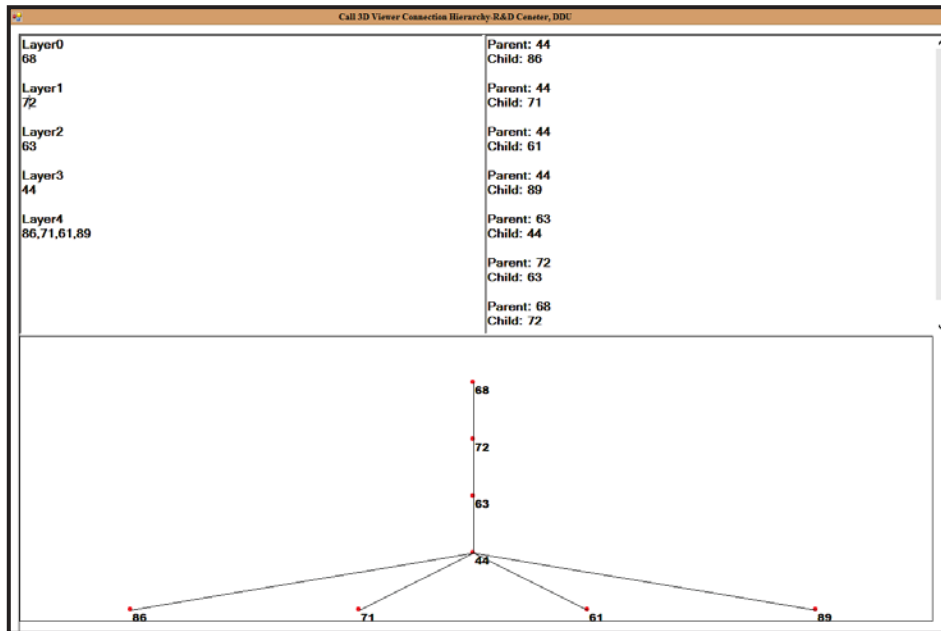


Figure 11 Shows the connection hierarchy of selected person in connection layers. Here left panel shows the layer wise nodes list and Right panel shows the complete description of node along with its parent and child branch details.

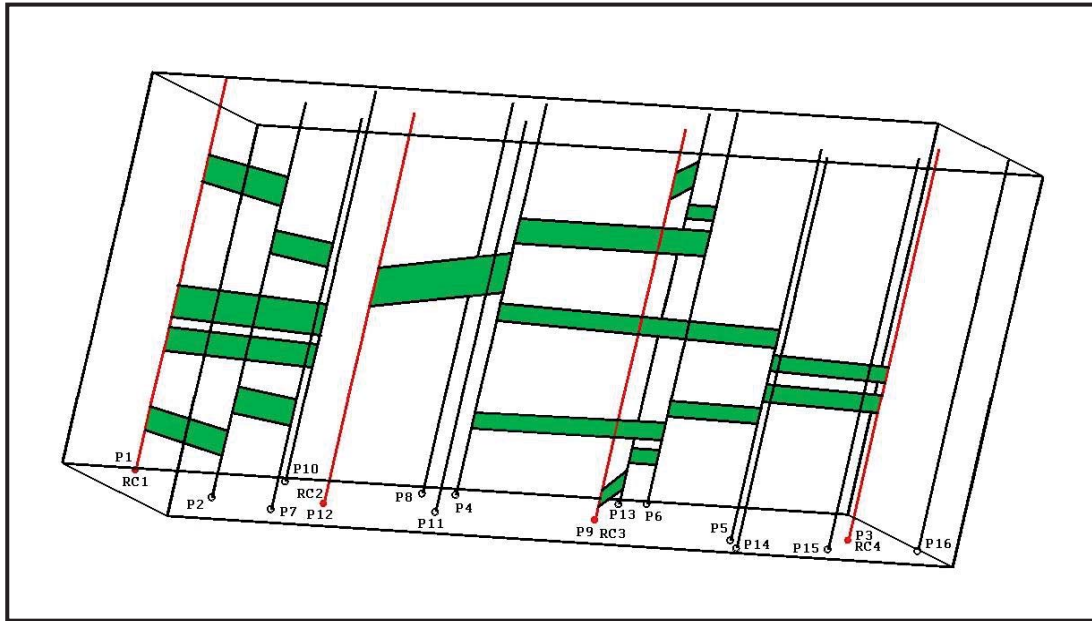


Figure 12 Shows a Call Cube for a Contract killing assignment story

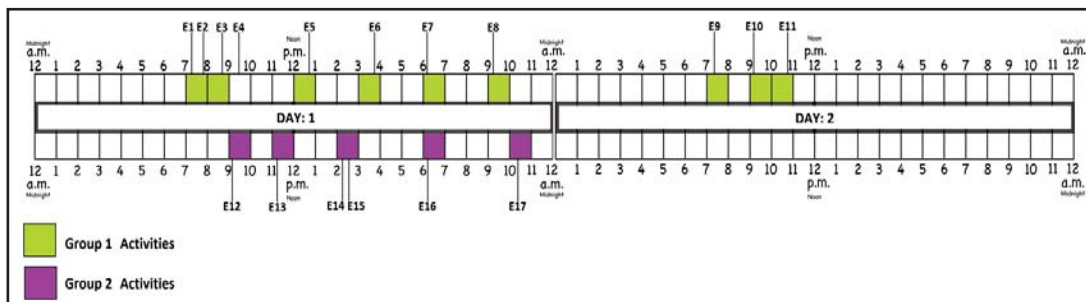


Figure 13 Shows Timeline chart for calls during Contract killing assignment scenario in figure 12

Table 2 Description of Calls during the Contract killing assignment story in figure 12 and 13

Events	Day	Time	Person Pair	Event Description
E1	1	7:15 AM	P9-P13	Registered Criminal-RC (P9) calls his agent (P13) and assigns him a task for Killing.
E2	1	7:46 AM	P13-P6	Agent (P13) calls one of his group members X (P6) and asks him to arrange for contact killing assignment.
E3	1	8:40 AM	P6-P4	X (P6) calls a contract taker (P4) and gives him a job for killing contract.
E4	1	9:15 AM	P6-P5	Then X (P6) tells other member Y (P5) to arrange payment and pay the contract taker (P4).
E5	1	12:43 PM	P5-P3	Y (P5) calls Z (P3/RC4) and asks him to make the payment ready in cash.
E6	1	3:50 PM	P3-P5	Z (P3/RC4) confirms the arrangement of money to Y (P5).
E7	1	6:05 PM	P5-P4	Y (P5) calls up to the contact taker (P4) and confirms about the payment.
E8	1	9:10 PM	P4-P12	The contract taker (P4) calls his Sharp Shooter (P12/RC2) and explains him about the target and plan for killing.
E9	2	7:25 AM	P4-P6	Contract Killer (P4) then ensures X (P6) about the contract kill.
E10	2	9:09 AM	P6-P13	X (P6) gives information to the Agent (P13) about the arrangement of contract killing.
E11	2	10:54 AM	P13-P9	Agent (P13) then confirms the arrangements to the Kingpin (P9/RC3).
E12	1	9:07 AM	P1-P2	At other side another Registered Criminal (RC1/ P1) call his agent (P2) and discuss about his on-going business and ask him to get the status.
E13	1	11:06 AM	P2-P7	Agent (P2) calls W (P7) and asks him to collect all business data.
E14	1	2:21 PM	P1-P10	Meanwhile P1 call his friend (P10) for normal talk but due to network issue the call dropped.
E15	1	2:28 PM	P10-P1	P10 calls back to P1(RC1)
E16	1	6:10 PM	P7-P2	W (P7) collects information and passes to Agent (P2).
E17	1	10:18 PM	P2-P1	Agent(P2) discuss the status of business with P1(RC1)

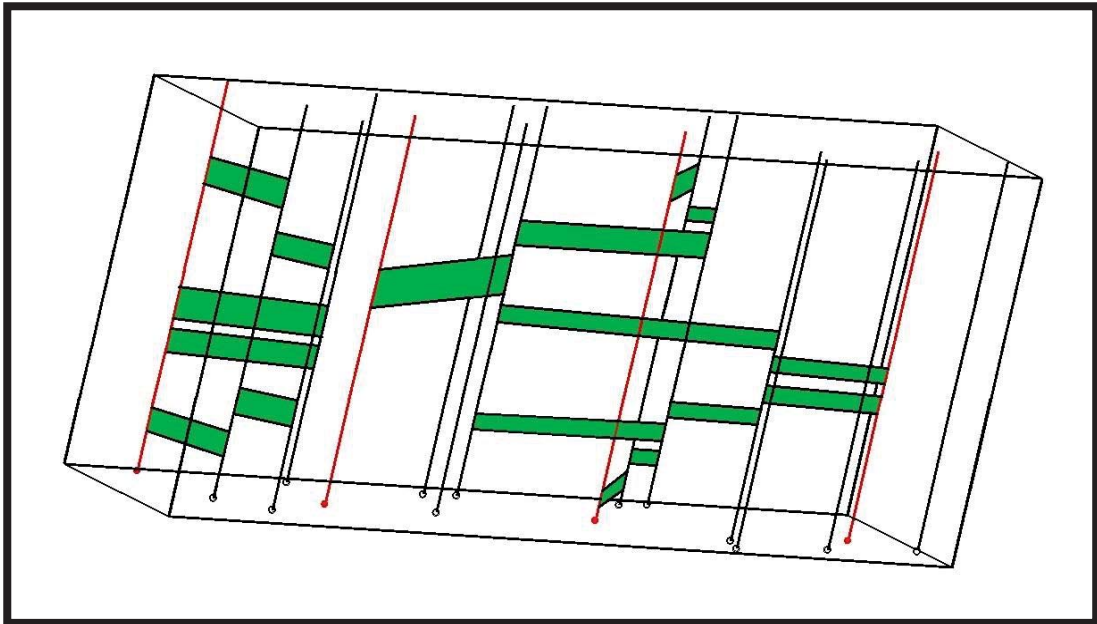


Figure 14 Shows a call cube having Rotation Utility on X, Y and Z axis according to Right hand thumb rule.

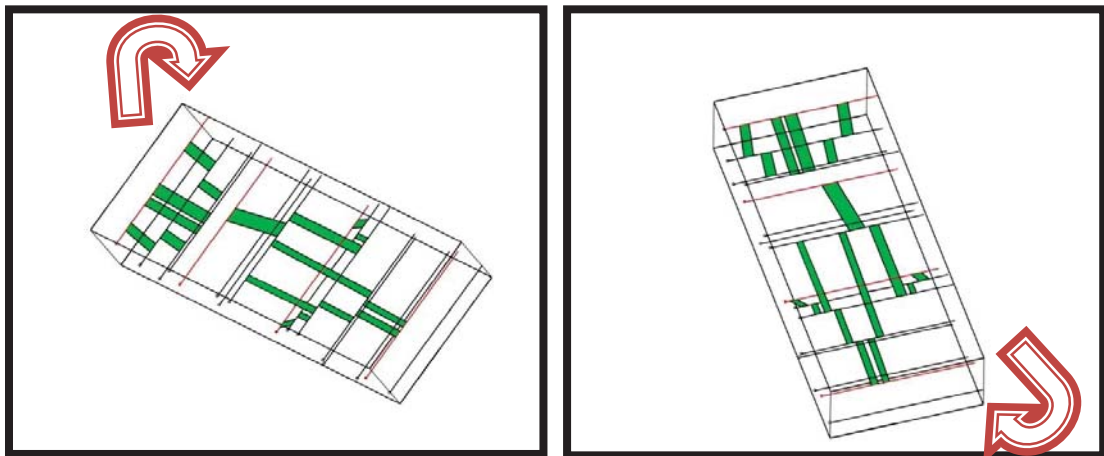


Figure 15 Shows the Clockwise rotation of call Cube

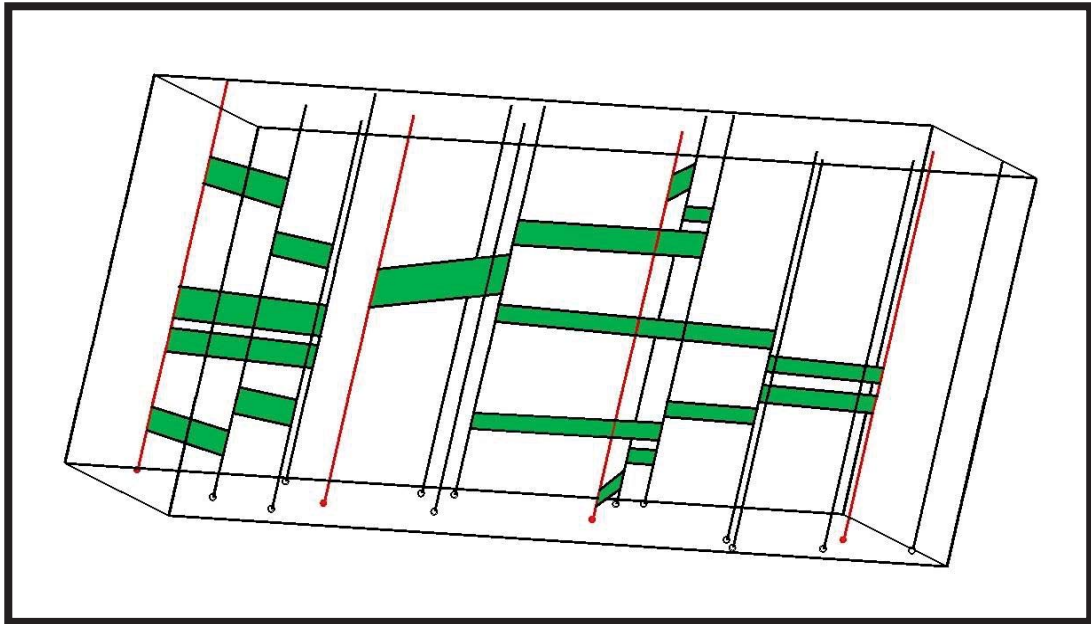


Figure 16 Shows Slide Utility of call Cube which can be shifted/ slid to all directions the screen.

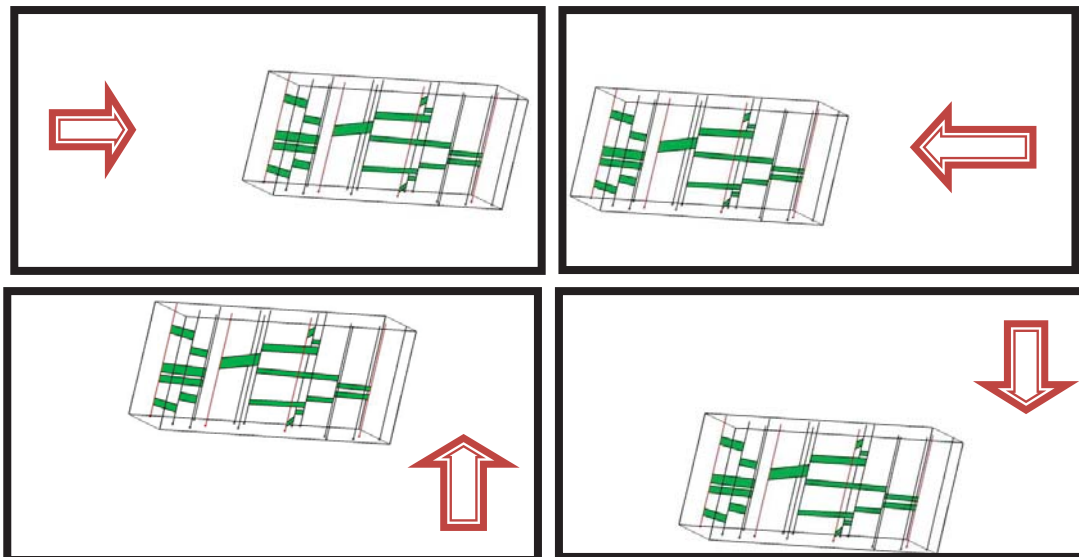


Figure 17 Shows Slide of call cube Upwards and Downwards ,Left, Right.

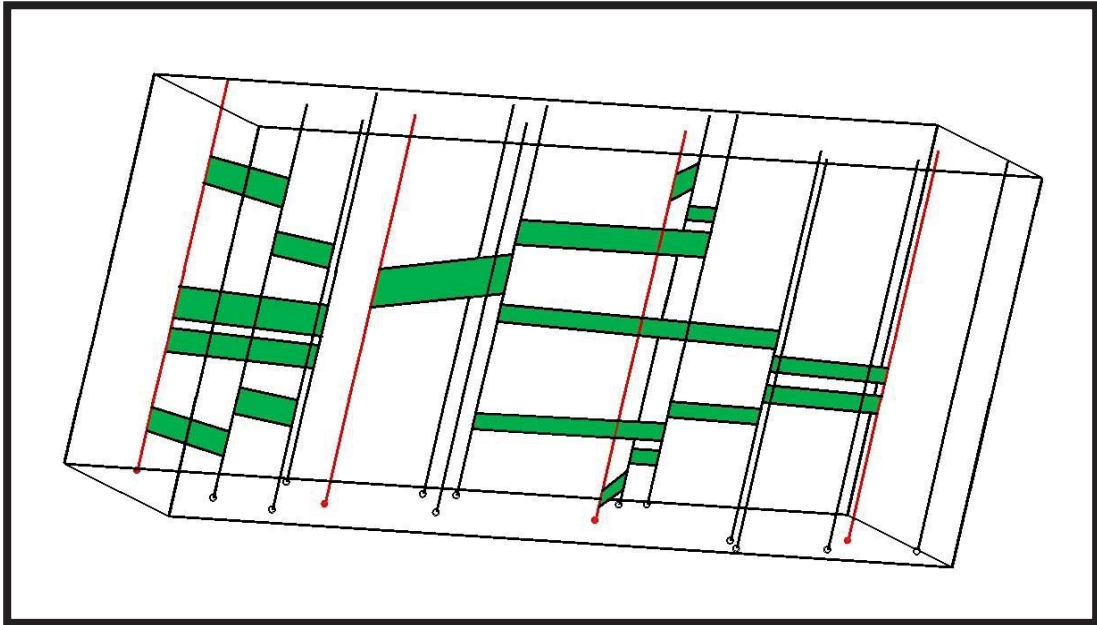


Figure 18 Shows zoom utility of call cube which can be zoom in and zoom out to the screen

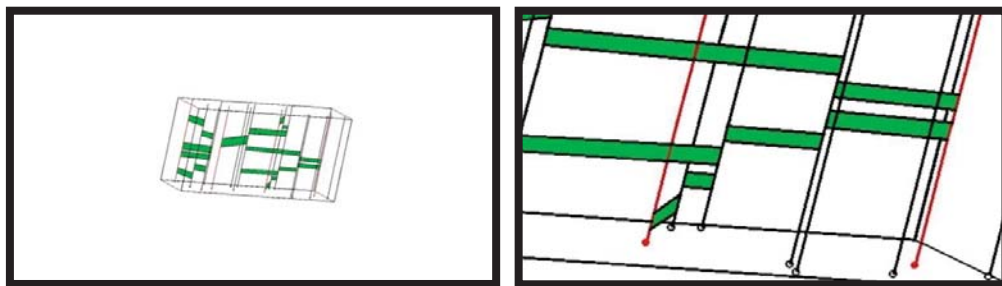


Figure 19 Shows zoom in and zoom out of the cube.

Conclusion

This project is not a magic solution to crime detection but it is to be used as a utility/ tool that can be used in the investigation procedure to accelerate the crime detection.

The concept of viewing all the interlinked CDR together in one utility with 3D graphical display provides hidden links between different activities related to crime events. This reduces the analysis time in investigation procedure compare to the present manual methods. One of the main objectives of this research work is to validate the simulated CDRs with available real CDRs. This

validation will increase the confidence level of developed Crime Pattern Recognition (CPR) algorithms using simulated CDRs.

The call pattern recognition technique in this DDU research work will be helpful for national security purpose as the security bureaus can get a clear view of identified crime call pattern. The pattern recognition algorithm will be implemented in next phase of the DDU research project. Algorithm developed for 3D projection of real time CDR gives a bird's eye view to suspicious call activities and is useful not only for detection but prevention of possible crimes.

This tool will help reducing search space hence minimizing the crime detection time.

Future Work

The proposed system in this paper has unique idea to predict crime patterns. The offline CDR will be used to train the intelligent algorithms and make them learn the crime pattern hidden in CDR. This learned module will then be used on online/ real time CDR data from judiciary server to predict the crime pattern in advance and help LEA to take precautionary actions. While other research on this area of finding out crime patterns and detection of criminal group is mentioned below:

After successful analysis of CDR records, Detection of criminal networks and the hidden patterns in CDR data are essential for crime detection. Ferrara et al presented LogAnalysis for detecting criminal organization [12], Goergen et al used weighted version of Page rank algorithm for abnormal communications events [13], Goergen et al proposed a method that detects abnormal communications events covering call data record volumes, comprising a country-level data set [14], Wang et al had analyzed Cambridge Police Department's data for analysis and proposed Series Finder algorithm for pattern detection which incorporates both the common characteristics of all patterns and the unique aspects of each specific pattern [15], Becker et al studied the involved clustering of usage patterns found in call detail records gathered in a small city. Also analyzed anonymized versions of these records, apply clustering algorithm to find phones that exhibited similar usage patterns, and then looked in more detail at these groups [16], Memon proposed system that finds associations between terrorist and terrorist organizations and is capable of determining links between terrorism plots occurred in the past [17].

Acknowledgement

This project consumed huge amount of work, research and dedication. Still, it would not have been possible if we did not have a support of Himanshu Purohit, Software Engineer, R&D center, DDU. Therefore we would like to extend our sincere gratitude to him. We have to express our appreciation to the Chaitanya Shah of Gujarat Police for sharing his pearls of knowledge with us during the course of this research.

References

- [1] "Real-time Big Data Analytics for Telecommunications", IBM Big Data and Analysis Hub. Retrieved from <http://www.ibmbigdatahub.com/blog/real-time-big-data-analytics-telecommunications> Accessed on 22 August 2015.
- [2] Elagib, Sara B., Aisha-Hassan A. Hashim, and R. F. Olanrewaju. "CDR analysis using Big Data technology." In *Computing, Control, Networking, Electronics and Embedded Systems Engineering (ICCNEEE)*, 2015 International Conference on, pp. 467-471. IEEE, 2015.
- [3] Hansmann, Lothar Merk, Martin Niclous, Stober, "Principles of Mobile Computing", 2nd Ed, 271p.
- [4] "Understanding CDR (Call Detail Records)", Cisco Support Community. Retrieved from <https://supportforums.cisco.com/document/53056/understanding-cdr-call-detail-records> Accessed on 22 December 2015.
- [5] "CDR Split Merge Tool", CDR Analysis & Investigation. Retrieved from <http://www.mobile-cdr.com/CDR-Merge-Split-Tool.html> Accessed on 26 November 2015.
- [6] "Analysis of Call Detail Records (CDR) using Excel Addin", GL Communication Inc. <http://www.gl.com/call-detail-records-analysis-tools.html>
- [7] CDR Analysis & Investigation Tool. Retrieved From <http://mobile-cdr.com/>
- [8] Cdr Analysis Software. Retrieved From http://www.purpleradiance.com/CDR_Analysis_Software.html
- [9] UnifiedLicence_0.pdf downloaded from http://dot.gov.in/sites/default/files/Unified%20Licence_0.pdf Accessed on 23 August 2016.
- [10] Ferrara, Emilio, Pasquale De Meo, Salvatore Catanese, and Giacomo Fiumara. "Visualizing criminal networks reconstructed from mobile phone records." *arXiv preprint arXiv:1407.2837* (2014).
- [11] Xu, Jennifer, and Hsinchun Chen. "Criminal network analysis and visualization." *Communications of the ACM* 48, no. 6 (2005): 100-107.
- [12] Ferrara, Emilio, Pasquale De Meo, Salvatore Catanese, and Giacomo Fiumara. "Detecting Criminal Organizations in Mobile Phone Networks." *Expert Systems with Applications* 41, no. 13 (2014): 5733-5750.
- [13] Goergen, David, Veena Mendiratta, and Thomas Engel. "Analysis of Large Call Data Records with Big Data." In *Proceedings of the Conference on Principles, Systems and Applications of IP Telecommunications*, p. 8. ACM, 2014.
- [14] Goergen, David, Veena Mendiratta, and Thomas Engel. "Identifying abnormal patterns in cellular communication flows." In *Proceedings of Principles, Systems and Applications on IP Telecommunications*, pp. 1-6. ACM, 2013.
- [15] Wang, Tong, Cynthia Rudin, Daniel Wagner, and Rich Sevieri. "Learning to Detect Patterns of Crime." In *Joint European Conference on Machine Learning and Knowledge Discovery in Databases*, pp. 515-530. Springer Berlin Heidelberg, 2013.
- [16] Becker, Richard A., Ramón Cáceres, Karrie Hanson, Ji Meng Loh, Simon Urbanek, Alexander

Varshavsky, and Chris Volinsky. "Clustering anonymized mobile call detail records to find usage groups." PURBA, San Francisco, CA, USA (2011).

- [17] Nasrullah Memon. "Detecting Terrorist Activity Patterns Using Investigative Data Mining Tool." The Proceedings of Symposium 5 Data/Text Mining from Large Databases IFSR 2005.
- [18] Mazumdar Himanshu S and Shivangi R. Shah. "Simulation and 3d Visualization of Complex Molecular Structure for Study of Protein and Nano Materials" International Journal of Research in Engineering and Technology, Volume: 04 Issue: 02 | Feb-2015 eISSN: 2319-1163 | pISSN: 2321-7308.

Himanshu S. Mazumdar, Ph.D., Senior Member-IEEE and is currently working as Professor, EC and Head of Research and Development Center at Dharmsinh Desai University, Nadiad. He has worked in important space missions in University College London, NASA's Space Shuttle and Indian Space Research Organization. He has worked as Director, Research and Development of Defense Training & Technologies Champaign, IL, USA. He is also the designer and developer of Color Portrait Building System (CPBS) for National Crime Record Bureau – NCRB.

(Email: hsmazumdar@hotmail.com Website: www.hsmzumdar.net)

Nishaba D. Rana received the Bachelor degree in Information Technology engineering in 2014 have completed Masters in Information Technology and has carried out dissertation work in Research and Development Center during 2015-2016 from Dharmsinh Desai University, Nadiad.

(Email: nisha.rana913@gmail.com)

Public Perception of Police in Nagpur : An Exploratory Study

Dr. Pragya Mathur Kumar*



The Indian Police Journal
©BPRD, MHA
BPRD Publication
www.bprd.gov.in

Abstract:

The relationship between the Police and Public in a society is a critical parameter for assessing how well the members of the uniformed agency are playing their various roles. It is important to assess how the police are perceived by the public because they rely upon the cooperation and support of the communities that they serve in order to reduce crime. The focus of this study, Nagpur Police is the law enforcement and investigation division of the country's police with jurisdiction over Nagpur district and Nagpur city in Maharashtra. Research focusing on citizens' perceptions of police has received little attention in India but is an important area that needs focus. The aim of the survey was to explore the "Public Perception of the Nagpur Police" by collecting primary data through a simple questionnaire from a section of the general public of the city. To explore the public perception of Nagpur Police, the researcher relied on a Questionnaire Survey. The findings reveal that a majority of respondents have a poor perception of the police and do not feel the police is doing a good job. However, the findings also reveal an awareness among respondents that the police job is a stressful one and the work conditions are difficult. Such data could provide a starting point for a Competency Framework, feedback for the selection process training inputs as well as Training Need Identification.

Key words:

Police, public perception, behavior, attitude, stress, working conditions, training, interventions.

Introduction :

The relationship between the Police and Public in a society is a critical parameter for assessing how well the members of the uniformed agency are playing their various roles. In a welfare state, it is expected that the police will be "citizen friendly and service oriented". One of the most important roles of the government perhaps is ensuring the safety of citizens with an effective police force. Maintenance of law and order requires the trust and understanding of the public. Unfortunately, the public perception of the police remains a major issue of concern. Inefficiency, corruption and a poor image create a curtain of mistrust and fear, leading to poor police-public relations. The perceptual worlds of the police and public may differ markedly from each other as well as both of them may diverge substantially from reality. The study of perception and its impact

Author Introduction

* Corporate Trainer & Counselling Psychologist, prakhar_pragya@yahoo.co.in

on behavior is of great significance for human relations and organizational behavior. To optimise job performance, the police leaders should have a proper assessment of the perceptual world of the public and policemen. It is important to assess how the police are perceived by the public because they rely upon the cooperation and support of the communities that they serve in order to reduce crime.

Role of Police In India

While preservation of law and order is the primary responsibility of the police, the society expects the cop to play the diverse roles with equal élan. The policeman is always trying to strike a balance between the conflicting role demands of “help or hinder”. At times he is expected to be a friend, guide, helper, guardian and yet he is also to be a referee and punish law breakers sometimes using force to enforce the rule of law. Functionally and emotionally the policeman ends up walking on a tight rope. Section 57 and 58 of the Model Police Act, 2006, Duties and Responsibilities of Police describe the roles, functions and responsibilities of Indian police personnel. The police is expected to be the most accessible, interactive and dynamic organization of any society. Its roles, functions and duties in the society are natural to be varied, such as multifarious on the one hand; and complicated, knotty and complex on the other. In a broad way, police is expected to play two roles in the society i.e. maintenance of law and maintenance of order. A Committee set up by Ministry of Home Affairs in September, 2005 submitted a draft Model Police Act on 30th October, 2006. The Model Act emphasized the need to have a professional police 'service' in a democratic society, which is efficient, effective, responsive to the needs of the people and accountable to the Rule of Law. The Act provided for social responsibilities of the police and emphasizes that the police would be governed by the principles of impartiality and human rights norms, with special attention to protection of weaker sections including minorities (preamble to the Act). (1)

Nagpur Police

The focus of this study, Nagpur Police is the law enforcement and investigation division of the country's police with jurisdiction over Nagpur district and Nagpur city in Maharashtra.. Nagpur police has five zones and operates from 28 police stations spread across the city. It also has the responsibility of traffic policing the city roads. main duty of controlling the growing crimes and violence.(2) Fighting crime, responding promptly to calls for assistance, treating people fairly and with courtesy, working with citizens to resolve conflicts, helping crime victims and regulating the traffic are some role demands of a police job. Currently Nagpur police top level include 1 Commissioner of Police (Additional Director General of police Rank) 1 Joint CP (Special Inspector General Rank) 4 Addl. CP (DIG Rank) 1 -ADMIN, 1-CRIME, 1-North Region, 1-South Region 8 Deputy Commissioners of Police - one for each zone(5 zones), 1 for D.C.P. Economic Cell & Cyber crime, 1 for special cases and 1 for traffic department. Criminal Investigation Department, 1 for admin Nagpur is also a part of Nagpur police. Lower level officers include constables, Head constables, Asst. PSI, Police Sub-Inspector (PSI) Police inspectors (PI), Sr. Police inspectors (SPI), (DCP), deputy Superintendent of Police)/Asst. Commissioner (ACP) Superintendent of Police (SP)/Dpt. Commissioner (DSP) (3)/

IMPORTANCE OF POLICE–PUBLIC RELATIONS



<http://nagpurpolice.gov.in/>

The Significance of Perception

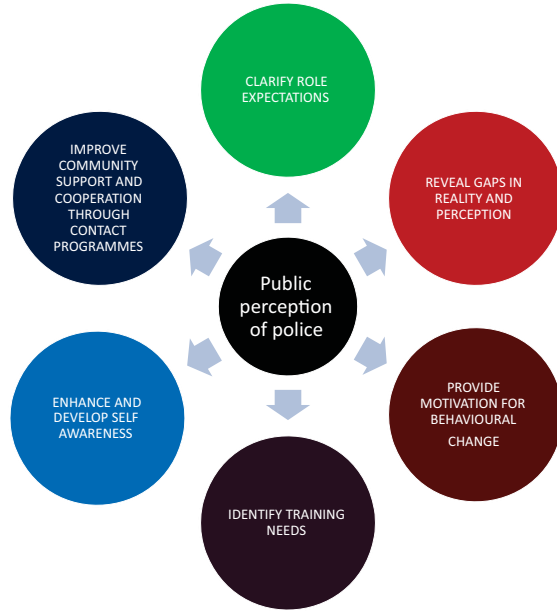
Robbins & Judge define perception as 'a process by which individuals organize and interpret their sensory impressions in order to give meaning to their environment'. People's behavior is often based on their perception of what reality is, not on reality itself. The world as it is perceived is the world that is behaviorally important. (4) Social perception is the study of how people form impressions of and make inferences about others (5). People learn about others' feelings and emotions by picking up information they gather from physical appearance, verbal, and non verbal communication such as facial expressions, tone of voice, hand gestures, and body position or movement.

The present study is an exploratory one. It seeks to identify the Perception of the Nagpur Police in the eyes of the residents of the city. Any social perception may be considered to have four basic components:

- (a) the perceiver,
- (b) the individual or group perceived,
- (c) the evidence or stimulus available to the perceiver ("input"), and
- (d) the judgment reported by the perceiver ("takeaway").

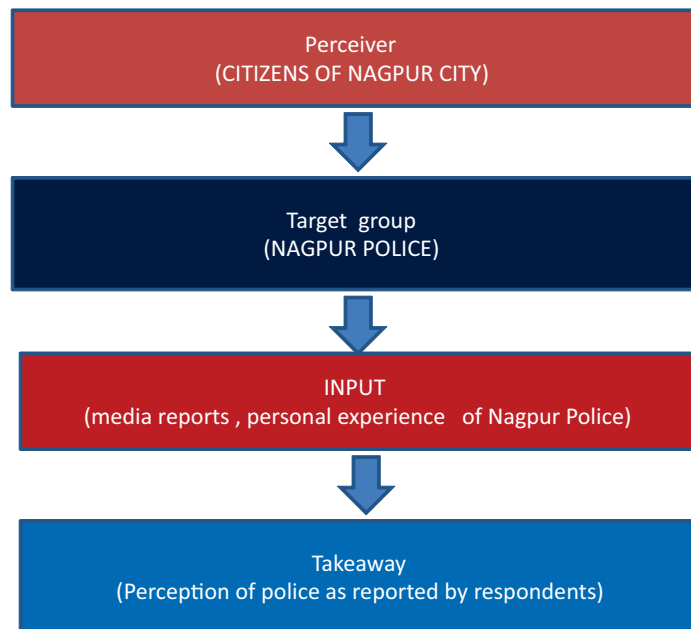
Perception is affected by various factors in the perceiver, in the object or target being perceived, and in the context or situation. There are several errors in perception such as shortcuts, attribution theory, selective perception, halo effect, contrast effects, projection, and stereotyping. It is possible that the perception of police by the public may be influenced by several "errors" in judgement and may not reflect the reality. Yet, there are several positive outcomes of exploring the public perception of police. Some of these are:

- ✓ Clarify Role Expectations
- ✓ Improve community support and cooperation through contact programmes
- ✓ Enhance and develop Self Awareness
- ✓ Identify training needs
- ✓ Provide motivation for behavioural Change
- ✓ Reveal gaps in reality and perception



HOW PUBLIC PERCEPTION CAN INFLUENCE THE POLICE

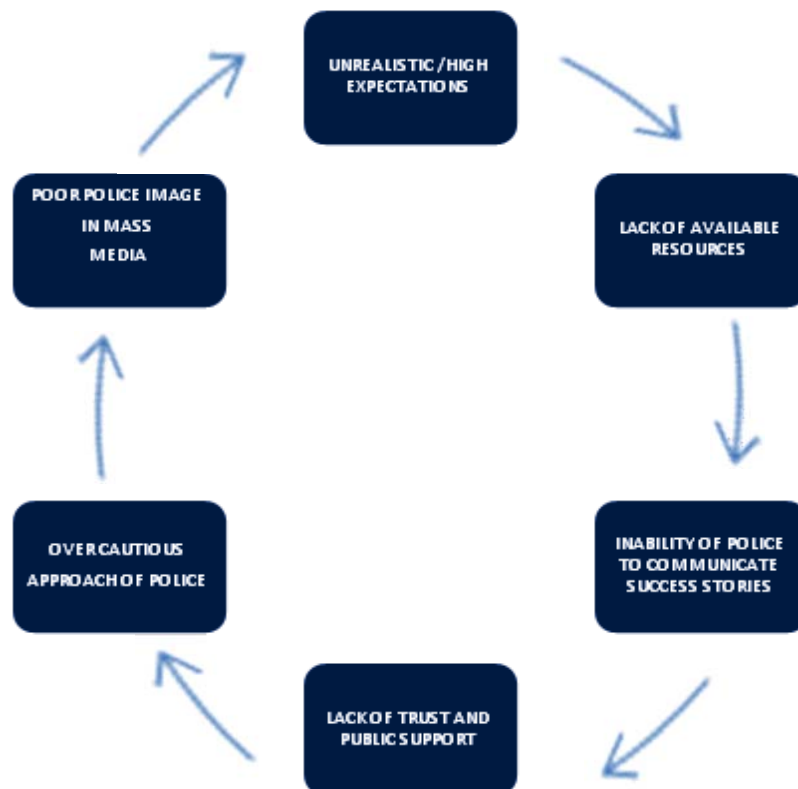
The following figure shows the components of social perception as relevant to the present study.



Components Of Public Perception of Nagpur Police

How police officers see their job and how they perform on their job may not match the public perception and could lead to a credibility crisis. There could be several influencing factors in public image of the police such as:

- Inability of police to communicate success stories
- Unrealistic /high expectations
- Lack of trust and public support
- Poor police image in mass media
- Over cautious approach of police
- Lack of available resources
- Media reports of police public conflict need to be looked at more closely. A gulf in perception between police performance and the public perception needs to be bridged by various interventions.

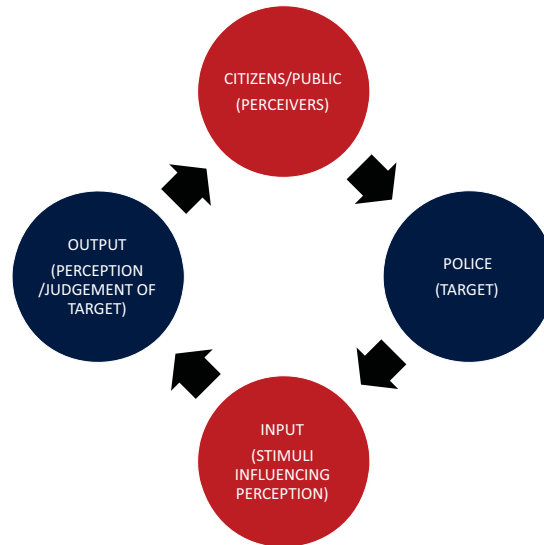


Preamble to this study

A study of the way in which citizens view their police often provides a revealing glimpse of a nation's commitment to democracy, and respect for authority.(7)

The frequent press reports of lackadaisical approach of police towards complaints of common citizens (such as refusal to record an FIR) only enhance the importance of understanding perception of the public toward the police and criminal justice system. The growth of social media and pressure from activists also creates a new found challenge for the police. There appears to be a stark disconnect between many rank-and-file officers and the public. While many lament the lack of police preparedness, it is often found that officers try not to be aggressive in day-to-day policing so as to avoid social or press media glare. While there is a lack of research in the subject in India, exploring the relationship between procedural justice and citizen perceptions of police is a well-trodden pathway in some of the western countries. Studies show that when citizens perceive the police acting in a procedurally just manner—by treating people with dignity and respect, and by being fair and neutral in their actions—they view the police as legitimate and are more likely to comply with directives and cooperate with police. (6)

Research focusing on citizens' perceptions of police has received little attention in India but is an important area that needs focus. With changes in role expectations, the training needs of the police personnel deserve more attention. Today's police finds itself occupied with matters not only of policing, but also political challenges such as budgeting, corruption, and in-fighting around legal frameworks surrounding decentralization. There is a need for developing research based interventions to improve the ability of police to deal with changing role expectations. A look at the list of list of completed and on-going research projects and GOI Fellowship sponsored by BPR&D (1970 – 2016) reveals some research studies about on Police-Public Interface. "Image of the Police in India" (1979) Indian Institute of Public Opinion was one of the earliest references to public perception available in the list. More recently, RC Agarwal and HS Balwaria (2000) worked on Professionalism in Indian Police at the Cutting Edge Level (SO/SHO Level) – Public Perception in Uttar Pradesh. (8) Another state level study was recorded on Police Performance and Public Perception in Rajasthan, India. Banerjee, Chattopadhyaya et al. Survey results reveal that the public views the police as corrupt, lazy, and unfair. The self-perception of police was also found to be negative, as they themselves felt overworked, unappreciated, and victims of political manipulation. (9) Regular surveys are essential for understanding these issues further. Such surveys should be conducted by independent organizations to avoid biased responses. (10)



THE PROCESS OF PUBLIC PERCEPTION OF THE POLICE

Perception of Police in other countries

Not only in India, but also in the US there appears to be a disconnect in perceptions of the police and public. Police officers in the U.S. think their job has gotten harder as of late, according to a new report by the Pew Research Center (Jan. 11, 2017). More than 8 in 10 officers say the public does not understand the risks and challenges of their jobs, and a similar number say their departments are understaffed. Half reported concerns about their safety. More than 7 in 10 say officers have become more timid about stopping to question suspicious people, roughly three-quarters say fellow officers report they are more reluctant to use force when necessary, and more than 9 in 10 say fellow officers have grown more worried about their safety. "I wish the community had a greater understanding of why the police do what we do, and sometimes we have to do a better job of putting ourselves in their shoes as well," said Don De Lucca, the chief of police in Doral, Florida, and president of the International Association of Chiefs of Police. "We're at a crossroads, and we both need to be willing to listen." More than half of the officers surveyed said they have become more callous since joining law enforcement.(11)

Aim of the Survey

The aim of the survey was to explore the "Public Perception of the Nagpur Police" by collecting primary data through a simple questionnaire from a section of the general public of the city. The exploratory survey about public perception of police will help to develop a better understanding of how the "rakshak" (protector) is viewed by those it serves to protect. A local level public perception survey will enable recognition of specific training needs. The goal is to develop an insight into public perception of police, positive or negative. The purpose it will serve is manifold. By identifying where trust and confidence was low, specific interventions can be implemented for action.

Methodology

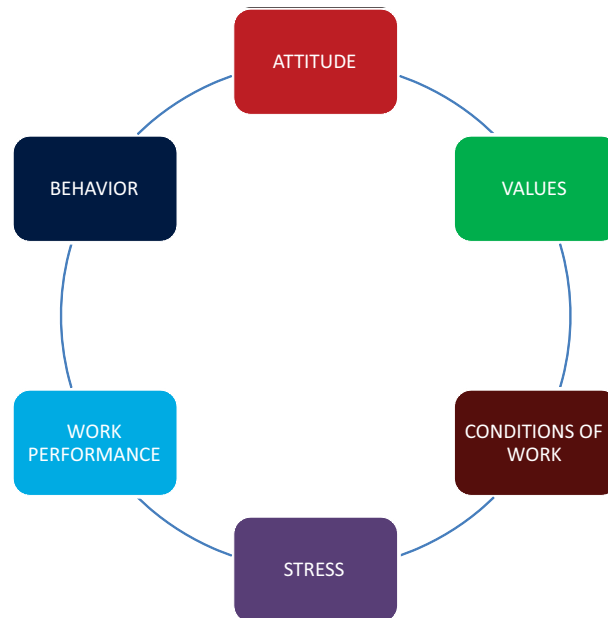
To explore the public perception of Nagpur Police, the researcher relied on a Questionnaire Survey. The respondents had to choose from Yes/No responses. The sample size was 50, of which 20 respondents were male and 30 are female. The sample consisted of common citizens of Nagpur City with whom the researcher interacted in person.

Profile of respondents

	MALE	FEMALE	TOTAL
AGE RANGE(YEARS)	22 --60	22--58	22-60
NUMBER	20	30	50

One of the limitations of this study is that the sample is not a random representative sample but a conveniently available one. The present study focused on the following factors with reference to Nagpur Police:

- Behaviour of police
- Attitude of police towards common citizens
- Stress in Police
- Job performance
- Conditions of work



FACTORS EXPLORED IN THE STUDY

A six item questionnaire focused on “perception “of the police in the Nagpur City in the eyes of the public,irrespective of having personal experience or contact with the Law enforcers.

Question	YES	NO
1. Do you think Nagpur Police is well behaved and courteous?		
2. Do you think Nagpur Police is citizen friendly?		
3. Do you think Nagpur Police has a positive and helpful attitude towards common citizens?		
4. Do you think police personnel are under stress?		
5. Do you think police personnel are doing a good job?		
6. Do you feel Nagpur policemen/women work in difficult conditions?		

(NOTE: Data in response to the following question which was also a part of the questionnaire ,will be analysed in a subsequent paper and is being omitted in this study. What are the three important qualities/skills police personnel should possess?)

Future studies in the area should examine closely factors which influence the public perception and also compare the Self Perception of police with the Public perception.

Findings

The data for this study was collected from 20 male and 30 female respondents. The percentage of responses was calculated for each category of respondents for each question .Since it is an exploratory study,even though the sample size is small,the findings will be of value to future researchers as well as police administrators. The responses of participants were tabulated and the main findings are discussed below:

QUESTIONS	MALE		FEMALE		TOTAL	
	YES	NO	YES	NO	YES	NO
1. Do you think Nagpur Police is well behaved and courteous?	45	55	50	50	48	52
2. Do you think Nagpur Police is citizen friendly?	30	70	47	53	40	60
3. Do you think Nagpur Police has a positive and helpful attitude towards common citizens?	35	65	47	53	42	58
4. Do you think police personnel are under stress?	85	15	77	23	80	20
5. Do you think police personnel are doing a good job?	45	55	47	53	46	54
6. Do you feel Nagpur policemen/women work in difficult conditions?	80	20	77	23	78	22

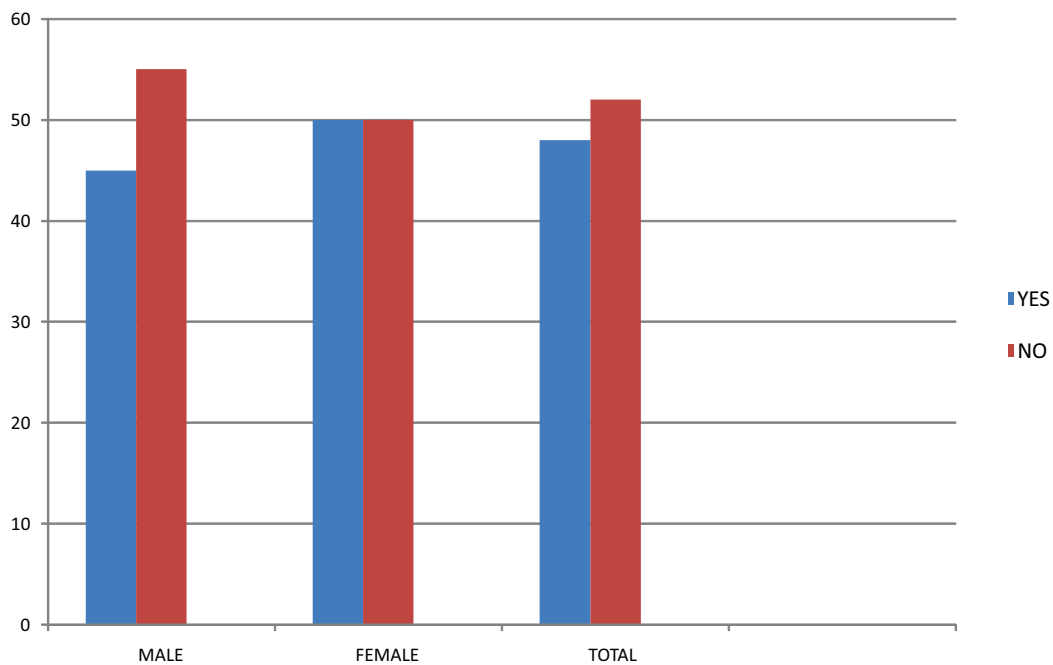
There is a consistent pattern wherein the public perception of the Nagpur Police appears to be negative .The people do not see the police as “well behaved and courteous”.The overall attitude of the police is not “citizen friendly” or very “positive and helpful” either. More than half the respondents felt the police are not doing a good job. Despite the negative image,a sense of empathy was visible and more than 70 percent respondents thought the police personnel are under stress. There is also a common perception that the police work in difficult conditions.

A brief analysis of responses to each question is given below:

1. Do you think Nagpur Police is well behaved and courteous?

The responses to this question revealed a gender bias. Women were equally divided between Yes/No but a greater number of male respondents answered this question in the negative. This perhaps has to do with the two factors:

- i. The behavior of police towards female citizens may be more polite and courteous compared to male respondents.
- ii. In comparison to men, fewer women in the survey reported any “real time” interaction with the police and most of them responded based on their perception as “non participant “observers.



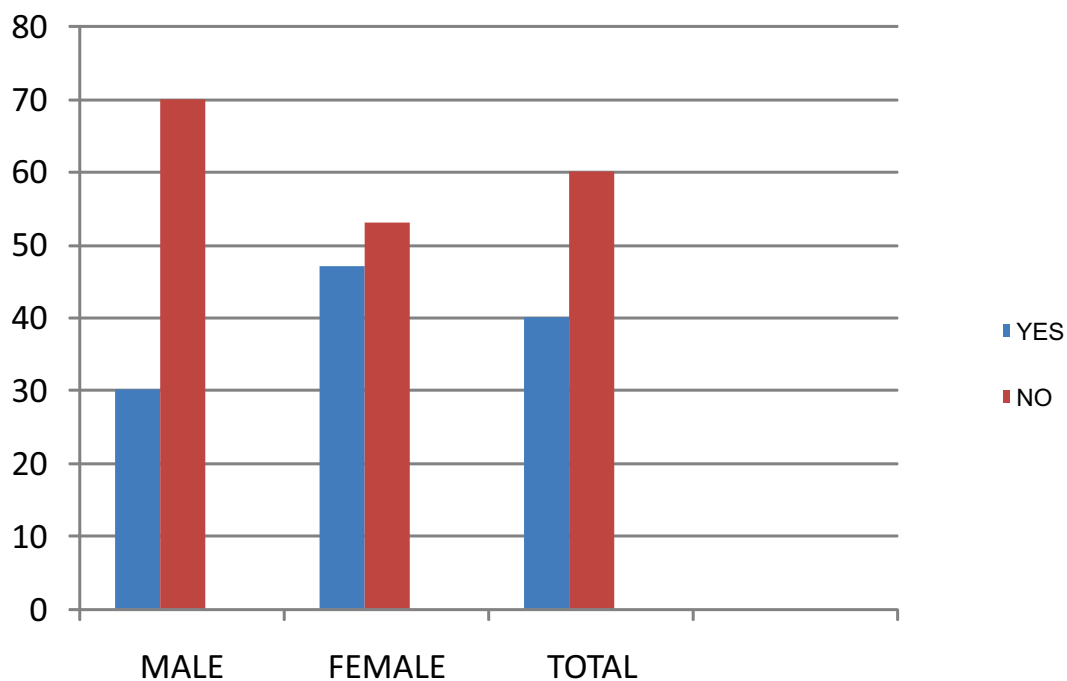
1. Do you think Nagpur police is well behaved and courteous?

The overall picture has revealed that 58% of the respondents are not satisfied with the “behavior” of the police and felt they are not “courteous”. It was interesting to note that most of the respondents who perceive Nagpur City Police to be well behaved and courteous, had reportedly lived in other states such as Delhi, Punjab, UP, Bihar earlier and specified that their responses were “in comparison to “ police in other cities. The perceptual error of “contrast effect” may be at play here. Training Programmes for police should include inculcating the basics of polite behavior. There is scope for investigating Training Needs at different levels as some respondents noted how it is the lower level staff which is more “rude” than senior level personnel. This perception could be a bias or it could be based on personal experience. The fact is that on a daily basis, it is the frontline staff that is

visible and in contact with citizens. This highlights even more the need for developing better communication skills and body language in the “visible” section of the police. The NPC (1976) stated that, “It is considered basic and fundamental... that every police officer develops an attitude of courtesy and consideration combined with sympathy and understanding towards any member of the public who comes to him seeking help” (41.09). Without any guidance about how this is to be achieved, and given police tradition, this injunction has remained in the realm of wishful thinking. The National Police Commission (NPC) 1976. (12)

2. Do you think Nagpur Police is citizen friendly?

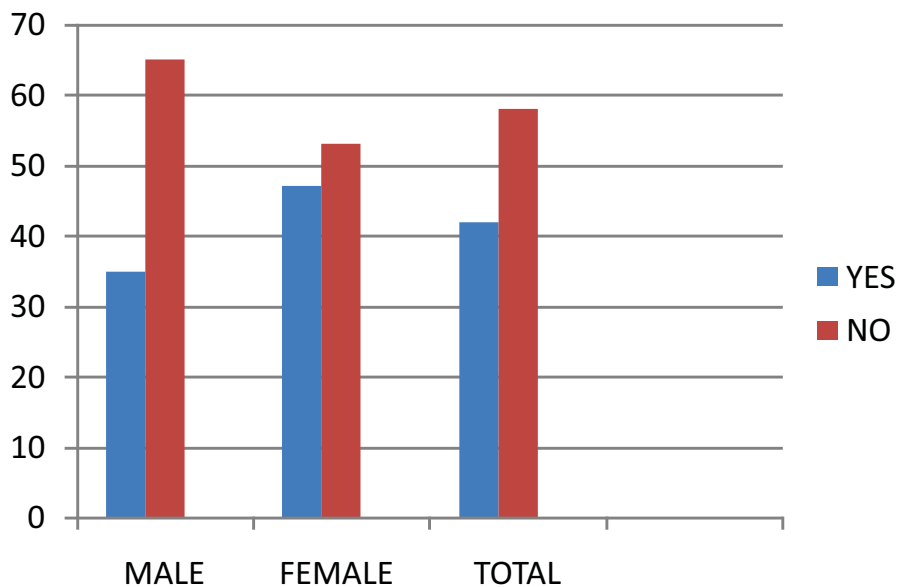
A clear gender bias is visible in response to this question and 70% of men answered in the negative. In a society where the police is supposed to “serve”, this is an important finding. Majority of the respondents supplemented their response by saying they have little hope of help from the police and avoid involving them for fear of harassment. The role of the police as a “friend in need” must be strengthened to improve public-police cooperation. It is when the common citizen can treat the “policeman on the beat” as a reliable and trustworthy friend that there will be information sharing, mutual caring and a strong rapport between the “arm of the law” and citizens who are “law abiding”. This bond would be very useful in reducing crime as the level of public cooperation and participation can play a vital role in maintaining law and order. Initiatives like a marathon for citizens organized by the police, exhibitions of police work, “Police Mitra”, media programmes like “Meet the Policeman on the beat” etc. could be useful in helping the police to become “friends” of the citizens.



2. Do you think Nagpur Police is citizen friendly?

3. *Do you think Nagpur Police has a positive and helpful attitude towards common citizens?*

The responses regarding the attitude of the Nagpur Police towards the common citizen reinforced the urgent need for fine tuning the communication skills and inculcating a positive and helpful approach. Majority of male respondents answered in the negative. 42% of the total respondents felt the attitude of Nagpur Police is positive and helpful. Many respondents added that a strong bias operates and the “rich and influential” get much better treatment than the “common man”. Ignorance of the law and procedures was mentioned by many as a major hurdle for citizens and “a helpful attitude” would make the police “a friend in need” in the true sense. There appears to be a strong need for developing empathy and an attitude of service among the police. When a distressed complainant encounters a helpful and positive law enforcer, goodwill and faith in the system can be the by-products of delivering justice.



3. Do you think Nagpur Police has a positive and helpful attitude towards common citizens?

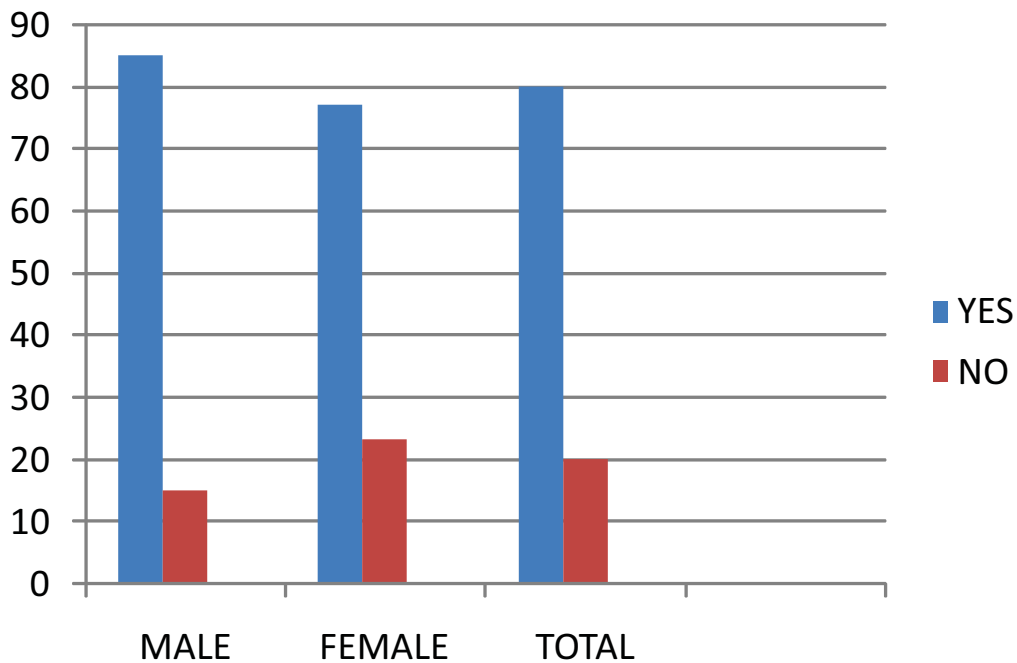
Attitudinal change is a challenging goal but the right kind of trainer and motivation can deliver successful results. The impact of police training—involving unique experiences, new skills, and potentially important new group influences—can have a powerful impact on attitudes. (13) “The goal of the guardian officer is to avoid causing unnecessary indignity,” said Seth Stoughton, a law professor at the University of South Carolina and a former police officer in Tallahassee. “Officers who treat people humanely, who show them respect, who explain their actions, can improve the

perceptions of officers, or their department, even when they are arresting someone.”(14)The challenge is truly great and needs use of a strategy. “It's important to not be 'all stick.' It's important to remember we are the voice to the people who don't have voices.”The police can make a difference on how the public views them since their behavior appears to determine the direction of citizens' attitudes.(15)There can be different approaches to policing such as ATM or LEED. The “Ask, Tell, Make,” or ATM, protocol: Ask a citizen to do something, such as providing identification. Upgrade the request to a command if they don't immediately comply. And use force if the command is not quickly followed. Many police academies tend to skip over “Ask,” emphasizing “Tell” and “Make.”“If someone doesn't listen to what you say, you turn them upside down,” Hicks said.Toreplace ATM, Rahr created LEED: “Listen and Explain with Equity and Dignity.” At the Washington State Academy, recruits practice LEED during mock training drills in which they are expected to handle antagonistic suspects without losing their cool.

4. Do you think police personnel are under stress?

The findings in response to this question are very significant from two perspectives:

Irrespective of gender, overwhelming number of respondents believe the police personnel are under stress. 85% of the male respondents and 77% of the female respondents were affirmative in response to the stress related question.

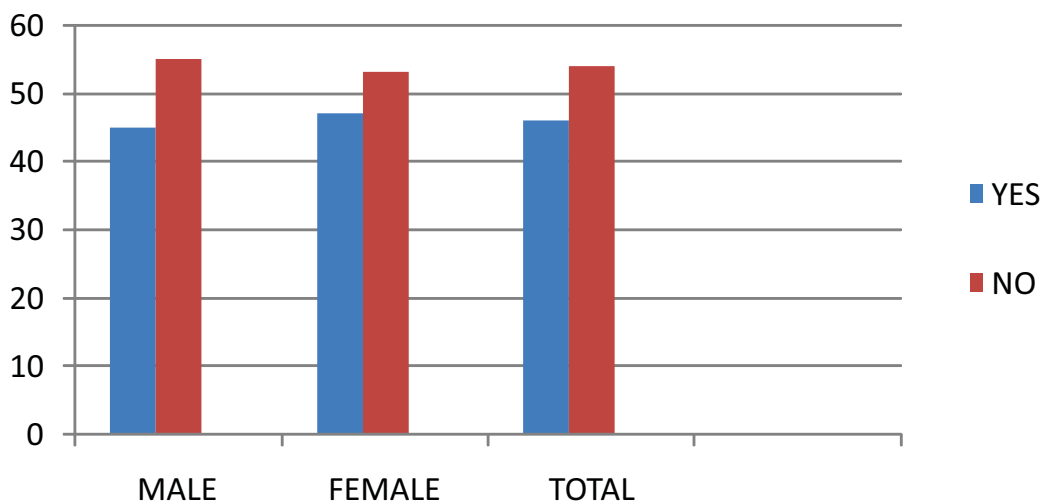


4. Do you think police personnel are under stress?

Despite the perception of police not being 'polite and courteous' or 'citizen friendly', there is a high degree of empathy among the citizens and the police personnel are seen as encountering stress in the line of duty. A good number of respondents sought to relate this factor as being the cause of the negative and unhelpful attitude displayed by police. Police personnel face variety of stressors or job pressures due to their role. The job pressure for police officer include the responsibility of protecting the public, constant exposure to other people's problems, emotional distancing from others, the inactivity/crisis see-saw, maintenance of macho defenses, bipolar thinking, negative public image of police, a web of personal puzzles and ceaseless on the job catastrophes (Mathur, 1999). (16) There is scope for future research in this area .

5. *Do you think police personnel are doing a good job?*

The verdict on this one seems fairly divided .Only a little more than half of the respondents do not think police personnel are doing a good job. Irrespective of gender, the respondents expect the police personnel to improve their job performance. It was interesting to note that a few respondents believe there are external factors responsible for the poor performance on the job. Political interference and pressure from 'influential citizens' which filtered through the hierarchy were most commonly mentioned as reasons for inability to do a good job.

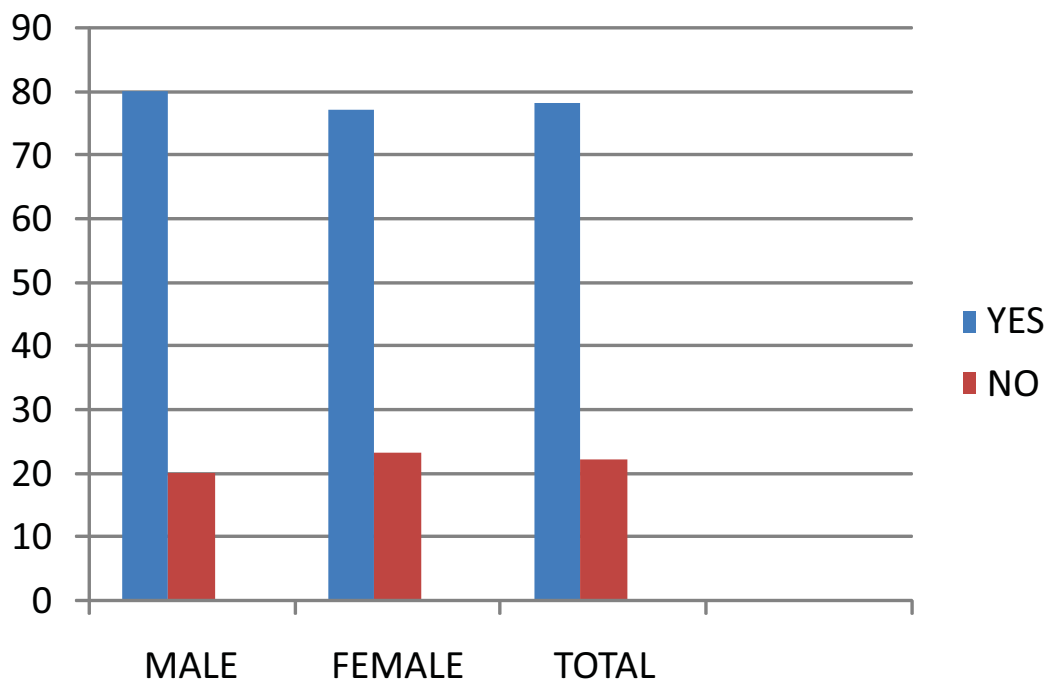


5. Do you think police personnel are doing a good job?

The changing role of police and new challenges such as dealing with cyber crime create an urgent need for training to fill the skill gap.

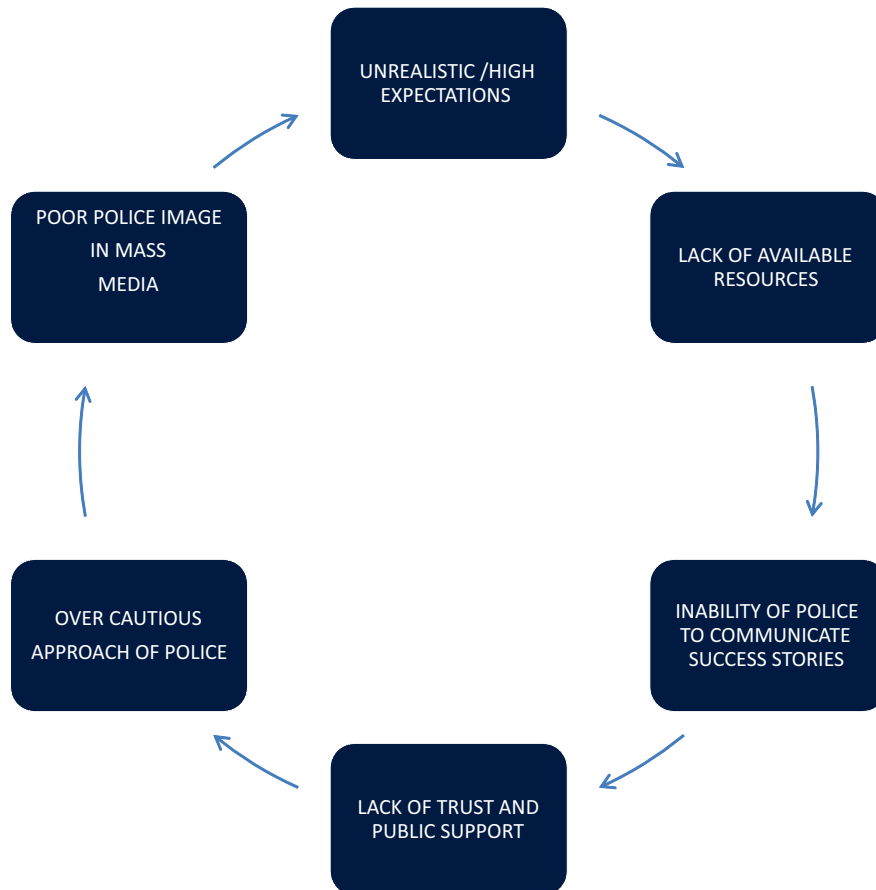
6. Do you feel Nagpur policemen/women work in difficult conditions?

More than 70 % of the total respondents believe the police personnel work in difficult conditions. There is a good deal of understanding among the citizens of the tough job the men/women in uniform perform. Particularly with reference to the Traffic Police, there were several suggestions such as better technological equipment, improved traffic cabins and masks to protect them from pollution.



6. Do you feel Nagpur policemen/women work in difficult conditions?

The researcher found a mention of innovative ideas such as the “Oxygen cabins for traffic cops in Vadodara” on the internet (17). There is a great opportunity for the police –scientist/engineer partnership here. Having to deal with violations of law by the technologically well equipped offenders requires an upgradation of the resources available to the police. Collaboration with the scientific community can lead to better work environment and equipment for the law enforcers.



Factors Leading To Poor Perception Of Police

Discussion

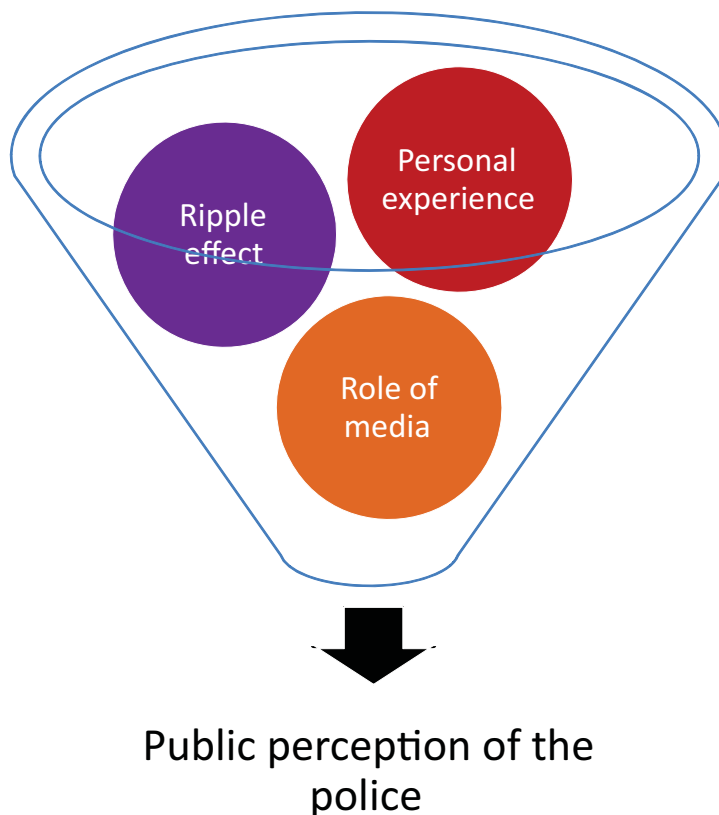
There is a strong need for the public perception to subject itself to a reality check.

In India, the policemen have to deal with being underpaid, overworked, demoralized, often inadequately trained, poorly equipped and are subjected to political interference. The perception created by the media is mostly negative. The policeman is portrayed as “bhakshak” (persecutor) rather than a “rakshak” (protector). The expectations from policemen are often unrealistic given the resources and skills available at their command. Most of the Indian movies have created an

image of the police officer as over weight paan chewing, discourteous, callous, corrupt, rude, aggressive and a bully figure in who is wearing a uniform but evokes little respect. In a recent incident of body shaming on social media, a false perception of an overweight cop as being inefficient/lazy was created. Policemen often become soft targets for such attacks. In this particular case however, the policeman who was being body shamed turned out to be suffering due to medical reasons and has been provided treatment by a doctor who truly deserves respect for doing so. Very often, citizens are unaware of the harsh reality of the policeman's world.

Direct interactions (through the community observer program), soft skill training, and more sustained relationships through longer postings are all interventions that appear to have the potential to reduce the fear of the police. (18) In addition to responding to the questionnaire, some people voluntarily shared personal experiences of contacts with the police, contacts with the police among family, friends, and acquaintances and reports in /media on television, the radio, and in newspapers. Video footage of police action against anti-social elements tends to create a Ripple Effect and may influence public perception sometimes.

Factors Influencing Public Perception Of Police



The researcher would like to put on record the extremely enthusiastic response of the citizens and willingness to participate in the survey. It appeared as if the public is very keen to partner with the police to improve the existent situation. A good deal of empathy and concern for the pressures police encounters was reflected among the respondents. It would only be fair to mention that the perception of the respondents in the survey may have been influenced by some of the typical barriers to perceptual accuracy such as :

- ❖ Selective Perception,
- ❖ Stereotyping
- ❖ Perceptual Set
- ❖ Expectancy.(19)

Limitations

The survey is only an exploratory one and the methodology needs to be refined in future studies to facilitate more accurate analyses. Although care was taken to survey citizens from a cross section of residents of Nagpur City, the respondents are not, nor were they intended to be, representative of the entire city. As compared to this study, a larger sample and more detailed questionnaire can be used in subsequent studies.

Discussion

Perceptions of police activities, crime, fear and the identification of neighborhood problems and strengths represent important aspects of the community context of policing(20) .Research suggests that positive perceptions of police trust and fairness promote engagement and compliance with the police(21) Also, if people do not believe that the local police are fair, the police may lose legitimacy and people's connections with the police can be eroded(22)The policeman has to develop social consciousness of his new role...by his courteous behavior, helpful behavior and democratic outlook.Social responsibilities of the police in democratic societies have to be performed in a spirit of public service.(23)Inculcation of appropriate attitudes is a continuous process but the best results can be achieved if this task is linked up with the basic and in service training of all ranks in all police training institutions in the country.

Schafer (2008) noted that his sample of middle managers at the FBI National Academy saw ineffective leaders as having poor communication skills, a lack of interpersonal skills or compassion for others, a rigid leadership style, no vision, and to not include others in decision making, spending their time managing and micromanaging

Conclusion

The present study has explored the Public Perception of Police in Nagpur City with the help of a questionnaire survey .The findings reveal that a majority of respondents have a poor perception of the police and do not feel the police is doing a good job.However, the findings also reveal an awareness among respondents that the police job is a stressful one and the work conditions are difficult.

Such data could provide a starting point for a Competency Framework ,feedback for the selection process training inputs as well as Training Need Identification. “Police behavior needs attitudinal change particularly towards the common man and weaker sections of the society..

The effect of the training might operate through two different mechanisms: first, training may affect public perception by changing what the police do, for instance by improving their investigation skills, allowing for faster resolution of the case. Alternatively, the effect of the training may be due to the soft-skills training, which would manifest itself through the way in which the police treat victims and not their investigation actions. There is growing evidence that public support depends on the public's perception that police treat people fairly and professionally .(25) Kumar and Kapoor(2016) observed that Madhya Pradesh Police has started certain initiatives...and various innovations.Content and methodological changes are incorporated in the pre existing syllabi to include *Soft Skills Components*-

- Emphasis on attitudinal and behavioral training
- Personality Development as full paper
- Communication and interpersonal Skills as a full paper
- Ethics Training, Democratic Values and Ethical Behavior as a fullpaper
- Emphasis on Gender Sensitization sensitization towards vulnerablegroups
- Management principles as an important ingredient.

Surveying and understanding the public's opinion of police performance is important for several reasons:

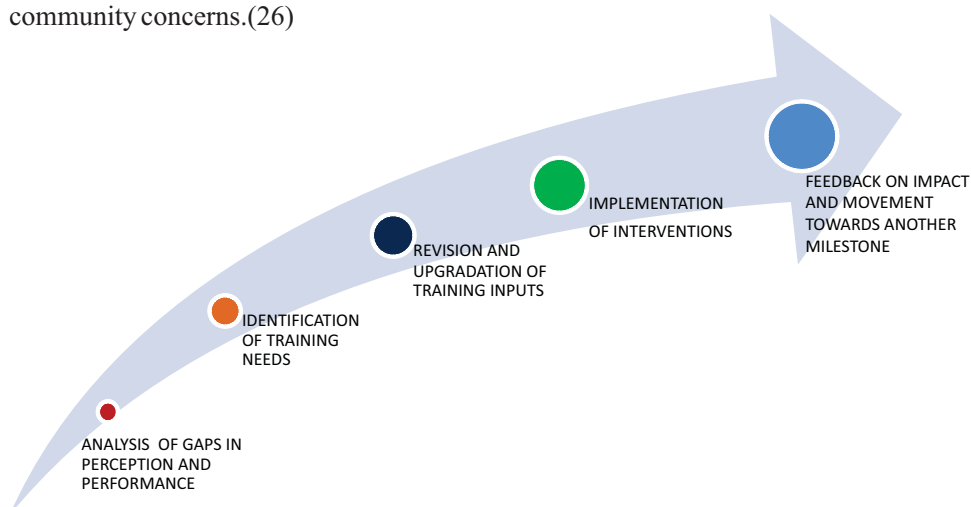
Public acceptance of police authority is essential to maintain public order.

Public confidence in police can lead to cooperation that is needed for effective policing.

Public support is crucial to maintaining and expanding police funding.

Sensitive measurement of public opinion is an important way to monitor local police activities.

Exchange of information fosters police-community partnerships that can be tailored to specific community concerns.(26)



Benefits of studying public perception of police

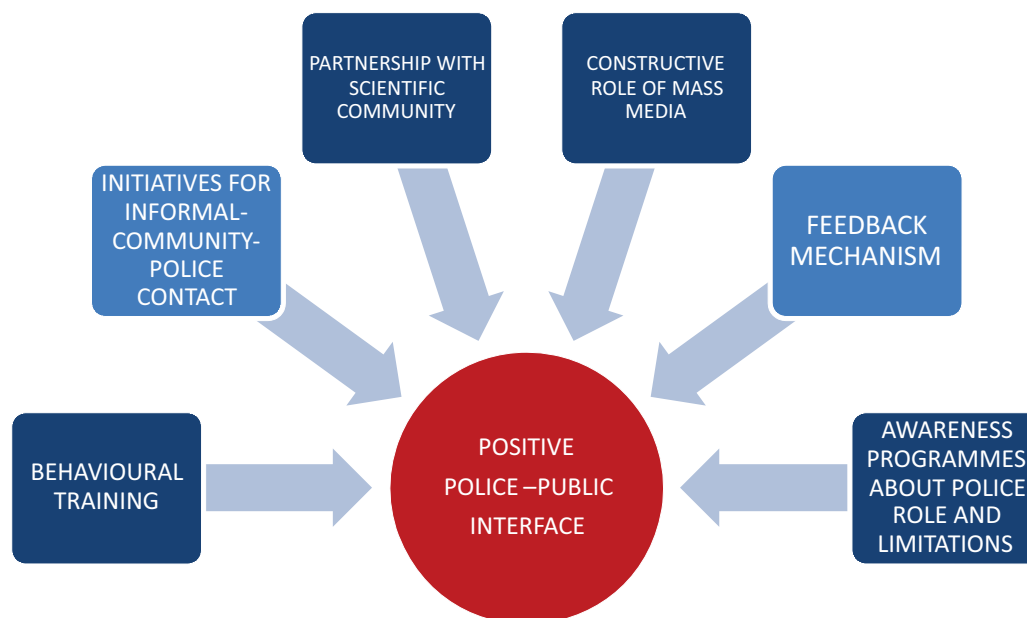
Need for change

The Prime Minister of India has called for making the police a 'SMART' force — Strict and Sensitive, Modern and Mobile, Alert and Accountable, Reliable and Responsive, Techno savvy and Trained. Addressing the 49th Annual Conference of Directors-General of Police/Inspectors-General of Police and heads of all Central Police Organisations, the Prime Minister said every police station should create its own website to upload every week a true story of good deeds done by the police to change the public perception and build a positive image among the people. He suggested hiring a PR firm to hold meetings with Bollywood producers to do films that project a positive image of the police. He said people had a negative image as the media as well as the films showed them in a poor light.(27)

There is a growing pitch for qualitative change in police through better training while underlining the importance of technology and human interface for the force to keep progressing. The Prime Minister of India pressed for development of soft skills in training and advocated that human psychology and behavioural psychology should be vital parts of training. He has called for a qualitative change in the police force through a collective training effort. Technology and human interface are both important for the police force to keep progressing and the development of soft skills is now essential, and should become a part of the training drill. The Prime Minister also said leadership skills are important, and the onus lies on senior officers to inculcate these skills in the police personnel.(28)

Interventions For Positive Change In Police-Public Relations

According to a survey of Los Angeles residents' opinions of police job performance and officers' demeanor, police can increase residents' approval of their job performance by participating in community meetings, increasing officers' visibility in neighborhoods, and talking with citizens. Such informal contacts had a positive impact on job approval ratings even when other factors associated with lower approval ratings—such as residents' perceptions that their neighborhoods are crime ridden, dangerous, and disorderly—were present. Informal contacts with police also lessened the negative impact of residents' formal contacts with police (such as being arrested or questioned by police). Surveying community residents can provide valuable information about the public's assessment of police activities. Such a survey can provide surprisingly rich information about the relationship between communities and the police. This information can direct police and community change and help monitor the effectiveness of intervention.(29) Police can improve public opinion by increasing their informal contacts with citizens.



Interventions for Positive change in Police–Public Relations

Willing community support is a policeman's most precious resource and its absence, a serious handicap. (30). Society views the police not only as a law enforcing agency but also as an instrument of social service, an agent of social change and the protector of people's rights. (31) There is growing evidence that public support depends on the public's perception that police treat people fairly and professionally. (32) Short films on police success stories in the social media and other innovative strategies can be a good medium for creating a bridge between the Police and the Public. Various interventions discussed earlier and effective police leaders can become Change Agents in creating a more positive perception of policemen the society. A positive perception of the police will benefit both –the people and the police. Strong dynamic leadership, innovative training programmes and closer connect with the people can change the perception of police and make it positive; thereby leading to better participation and cooperation from the public.

References

1. <http://pib.nic.in/newsite/PrintRelease.aspx?relid=123494> (1)
2. https://en.wikipedia.org/wiki/Nagpur_Police
3. <http://nagpurpolice.gov.in/>

4. Robbins & Judge Organizational Behavior 13th Edition
4. .wps.prenhall.com/wps/media/objects/5610/5745291/ppt/ob13_05.ppt(3)
https://en.wikipedia.org/wiki/Social_perception
5. https://en.wikipedia.org/wiki/Social_perception
6. <http://onlinelibrary.wiley.com/doi/10.1111/j.1745-9125.2012.00289.x/full>
7. http://www.aic.gov.au/media_library/publications/tandi_pdf/tandi011.pdf
8. [http://www.bprd.nic.in/WriteReadData/userfiles/file/201607270231459378982 List of Completedand On-GoingResearchStudies-Projects.pdf](http://www.bprd.nic.in/WriteReadData/userfiles/file/201607270231459378982_List_of_Completedand_On-GoingResearchStudies-Projects.pdf)
9. <https://povertyactionlab.org/evaluation/police-performance-and-public-perception-rajasthan-india>
10. Office of Justice Programs National Institute of Justice <http://www.ojp.usdoj.gov/nij>
11. <http://www.chicagotribune.com/news/nationworld/ct-police-public-perception-poll-pew-20170110-story.html>. Scott Clement, Wesley LoweryThe Washington Post
12. The National Police Commission (NPC) 1976.
13. Police Attitudes: The Impact Of Experience After Training. Randy Garner Sam Houston State University ©Applied Psychology in Criminal Justice, 2005, 1(1)
http://www.apcj.org/documents/1_1_police.
14. http://www.washingtonpost.com/sf/investigative/2015/12/10/new-style-of-police-training-aims-to-produce-guardians-not-warriors/?utm_term=.a50dc04fc6c9
15. The Role Of Police Behavior In Predicting Citizens' Attitudes Toward The Police Avdi S. Avdija, Ph.D. Indiana State University . Applied Psychology in Criminal Justice, 2010 6(2)
http://www.apcj.org/documents/6_2_AvdijaArticle.pdf
16. Stress in Police in India: Recognition, Diagnosis and Coping Strategies (1999)published by Gyan Publishing House,5 Ansari Road New Delhi
17. <http://timesofindia.indiatimes.com/city/vadodara/Oxygen-cabins-for-traffic-cops-in-vadodara/articleshow/7197852.cms>.
18. Can Institutions be Reformed from Within? Evidence from a Randomized Experiment with the Rajasthan Police Abhijit Banerjee[^], Raghavendra Chattopadhyay^{*}, Esther Duflo[^], Daniel Keniston[†], Nina Singh[‡] <https://economics.mit.edu/files/7783>
19. <http://www.yourarticlelibrary.com/organization/perception/major-barriers-to-perceptual-accuracy-8-barriers/63798>
20. <http://www.ojp.usdoj.gov/nij>
21. Myhill and Bradford, 2012.Myhill A and Bradford B (2012) “Can police enhance public confidence by improving quality of service? Results from two surveys in England and Wales”, Policing and Society 22, pp 397 to 425).

22. Jackson et al. 2013 .Just Authority? Trust in the Police in England and Wales, Routledge: Abingdon
23. Dr.K.M.Mathur,(Problems Of Police In A Democratic Society,Pg xii, RBSA Publishers,Jaipur(1987).
24. Schafer, J. (2008). Effective police leadership: Experiences and perspectives of law enforcement leaders, FBI Law Enforcement Bulletin, July, 13-19.
25. Tyler, T.R., "Trust and Law Abidingness: A Proactive Model of Social Regulation," Boston University Law Review, 81 no. 2 (2001): 361-406.
26. Training Needs Based Police Training Innovations in Madhya Pradesh Rajendra Kumar¹, Vineet Kapoor²The Indian Police Journal October-December, 2016 .Vol. 63 .No. 4.
27. <http://www.thehindu.com/news/national/portray-police-positively-modi/article6649115.ece>
28. <http://indianexpress.com/article/india/india-news-india/pm-narendra-modi-pitches-for-qualitative-change-in-police-4397060>
29. (Office of Justice Programs National Institute of Justice <http://www.ojp.usdoj.gov/nij>) (29)
30. MamtaJafa,Police Image-A Ringside view.Police Research and Development Journal.October-December,1997.
31. Mathur,Pragya 1997.The Invisible Challenge to Police Personnel In India.Police Research and Development Journal,December 1997.
32. Tyler, T.R., "Trust and Law Abidingness: A Proactive Model of Social Regulation," Boston University Law Review, 81 no. 2 (2001): 361-406.

Accidents due to Drunken Driving in Tribal Culture and Predictive Deployment of Police



The Indian Police Journal
©BPRD, MHA
BPRD Publication
www.bprd.gov.in

Rohit Malpani, IPS*

Abstract:

India is a signatory to Brasilia Declaration and is committed to reduce the number of road accidents and fatalities by 50 per cent by 2020. The task of reducing fatalities in accidents in tougher in mountainous terrain compared to the plains due to risky terrain, structural faults in road engineering, difficult annual maintenance, traffic congestion on hilly roads, ignorance of hilly people and drinking habits i.e. drunken driving habits among the tribals. This paper deals with specific issues related to high fatality rate in accidents in extreme hilly district of Kinnaur (H.P.) and possible solutions using technology i.e. Google Maps and Road Accident Database Management System (RADMS) which can be replicated in other districts too.

Key Words:

Drunken Driving, RADMS, Google Maps, Traffic Black Spots and Mountainous Terrain

Introduction :

KINNAUR surrounded by the Tibet to the east, in the northeast corner of Himachal Pradesh, about 235 kms \ from Shimla encloses valleys of Sutlej, Spiti, Baspa and their tributaries. The old Hindustan-Tibet road passes through the Kinnaur valley along the bank of river Sutlej and enters Tibet at Shipki La Pass (Indo – China Border). At many places link roads are carved out of sheer precipice and the valley is hundreds of feet steep vertical drop down. Most of the villages of Kinnaur lie at quite a high altitude, some close to 4000m. At such great heights, most of the accidents result in high fatalities as chances of survival go down due to steep gorges.

Out of the total road accidents which happen in the country, 28.4 per cent happened on National Highways whereas it was 45.9% in the Kinnaur district in the year 2015[1]. Ratio of fatal

Author Introduction

* Superintendent of Police, District Kinnaur at Reckong Peo (H.P.)

accidents has been far higher in Kinnaur district than compared to the whole state. Amongst the major issues which lead to high fatality rate in accidents in District Kinnaur are primarily high incidence of drunken driving during the annual marriage season (Sep – Nov), poor structural engineering of the hilly roads, traffic indiscipline and lack of traffic staff for strict Motor Vehicle Act enforcement. Predictive policing with the help of Road Accident Database Management System (RADMS) and Google Maps was done in District Kinnaur to place the 'Cops-on-the-Dots' and intelligently target the causes of accidents on specific traffic black spots at a particular time of the day. With intelligent deployment Kinnaur Police was vastly able to reduce the accidental fatalities in the year 2016 and save many precious lives which was widely appreciated by the public all over the district.

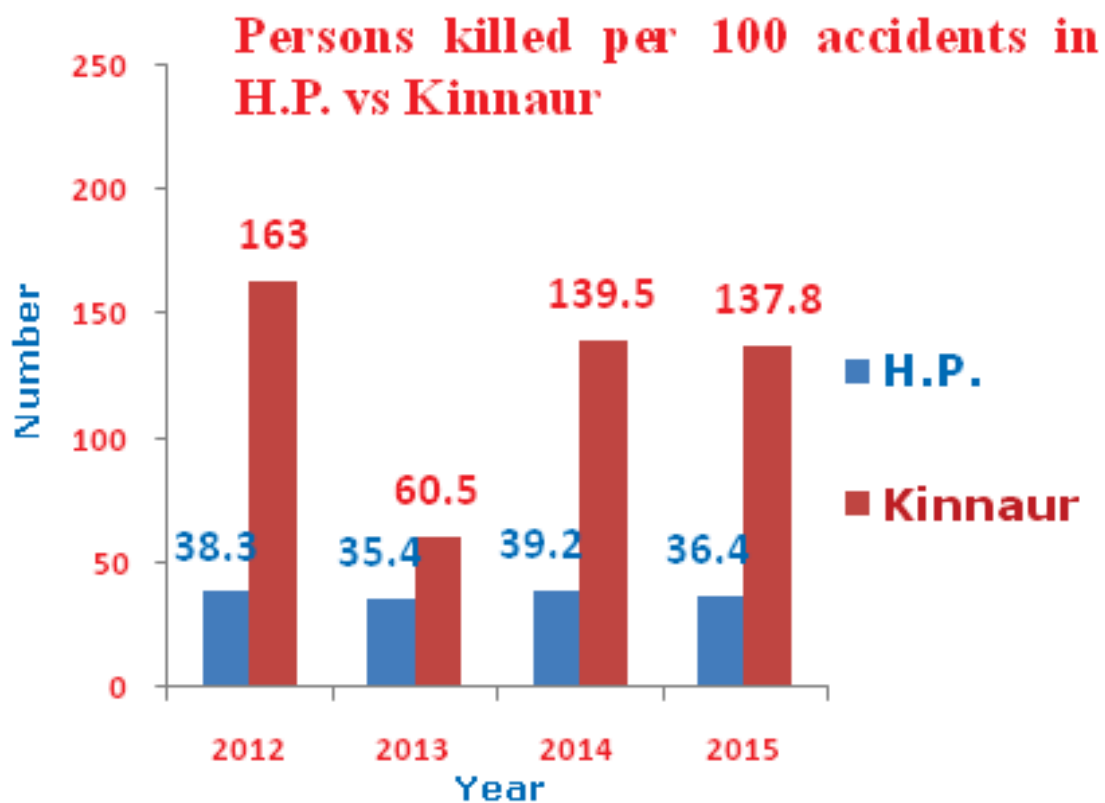


Fig. 1. Fatal accidents in Kinnaur District vs State of H.P.

II. SITUATION BEFORE THE DRIVE

Persons killed per hundred accidents in District Kinnaur have been far higher than the whole state of Himachal Pradesh due to very less survival chances after the accident. As the deep gorges

are often inaccessible timely first aid to the injured is very difficult which further leads to increase in the accidental fatality tally every year.

Alcoholism has been a social evil among the tribals of Kinnaur District. Alcohol plays such an important role in their life that even the worship of a deity is considered as incomplete without offering of liquor. [2]

Acceptance of drunken driving in the name of tribal culture has been the prime cause of heavy casualty during driving over the past many decades.

Close family ties among the policemen within the district, VVIP culture due to proximity to power and extremely dangerous roads (National Highway 05 (Ferozpur, Punjab to Shipki La, Kinnaur which has been termed as the World's Most Treacherous Roads in the World by the BRO), lack of crash barriers on the roads running parallel to the river valleys, single lane link roads, ever increasing LMVs, unauthorized driving by the minors are the other reasons on ground.

III. STRATEGIC PLANNING

A. Mapping of Accidents

Accident mapping of past seven years was done to understand the spatial pattern of accidents and identify the black spots using Google Maps, RADMS Project and GVK Ambulance Data. It was thus revealed that approx 50% of the accidents happened during 6:00 to 10:00 P.M.



Fig. 2. Time mapping of accidents in Kinnaur District (Year 2011-16).

B. Identifying Black Spots: Plotting of coordinates

There were visible clusters i.e. 'Black Spots' of accidents when the GPS coordinates of all the accidents of past seven years were plotted in RADMS and Google Maps

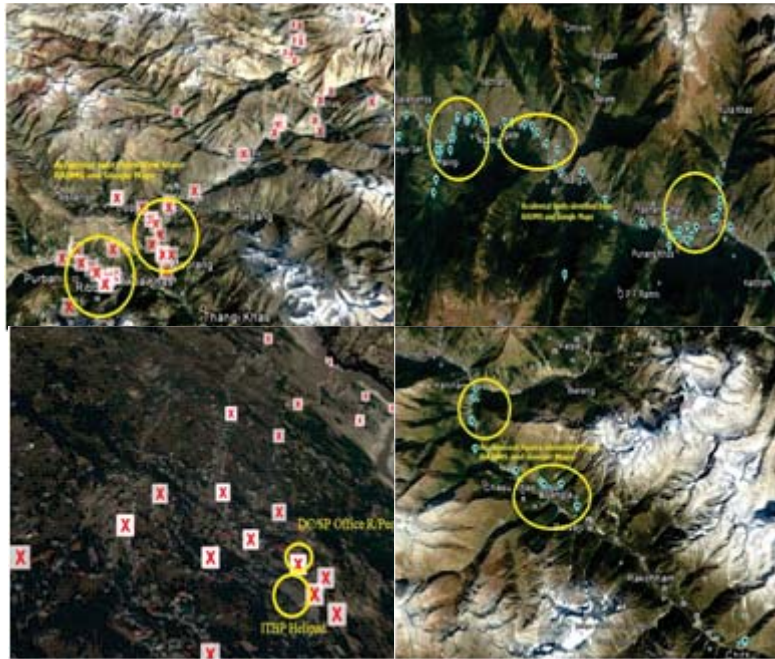


Fig. 3. Accident clusters (Black Spots) in RADMS/Google Maps in all Police Stations of Kinnaur.

- Major accidents in PS Reckong Peo : Within the town radius of 5km
- Major accidents in PS B/Nagar: NH – 05 at Choling, Wangtu, Palingi and Nathpa
- Major accidents in PS Sangla: Sangla Bazaar and Satluj – Baspa intersection
- Major accidents in the PS Pooh : Moorang – Spillo, Ribba area

C. Cops On The Dots

Complete mapping of NH – 05 was done and daily nakas were setup between 4:00 P.M. to 10 P.M. based on roaster by various Police Posts/Police Stations to strictly check for drunken driving. These traffic checking nakas were setup on the Black Spots identified in RADMS and through analysis of GPS coordinates in Google Maps.

In this effort, more than 400 Drunken Driving Challans were done in a short duration of four months, request for suspension of 362 Driving Licenses sent to various RLAs for three months[3] as

per Honorable Supreme Court Guidelines[4] and nearly 158 Licenses suspended by various RLAs. Suspension of Licenses by various RLAs and subsequent uploading of judgments on Kinnaur Police Website (www.kinnaurpolice.com/traffic-unit/) created a huge deterrent among the hooligans/offenders.



Fig. 4. Glimpse of Traffic Nakas being setup with special focus on drunken driving even during the snow season.

Highway Patrol was started with help from Hydro Electric Projects (HEPs) in the accidental Clusters of P.S. Bhavanagar i.e. Tranda, Cholling & Nathpa, etc.

D. Preventive Policing

50,000 pamphlets were distributed to people to discourage drunken driving in the weekly Community Policing meetings by all the Police Stations/ Police Posts/ Check Posts door to door.



Fig.5. Glimpse of Community Policing Meetings in snow bound PS Sangla and PP Tapri

IV. FINANCIAL IMPLICATIONS

Twelve Tayal Tech AlcoKing Breath analysers were purchased from the Materials & Supplies funds of District Police for approx Rs 4.5 Lakhs.

Total money invested in the purchase of New Breath Analyzers was recovered in a short span of four months i.e. Sep – Dec 2016 as fine on drunken driving. Total Fine realized in the MV Act enforcement drive is presented in the table below:

Sr. No.	Month	Total Challan under Drunken driving	Total Fine in all challan made by Police	Total Fine in all challan made by Court	Grand Total
1.	Sept 2016	84	5,27,400/-	1,56,050/-	6,83,450/-
2.	Oct 2016	153	5,52,100/-	1,64,800/-	7,16,900/-
3.	Nov 2016	104	4,78,200/-	1,66,300/-	6,44,500/-
4.	Dec 2016	59	4,07,900/-	1,80,300/-	5,88,200/-
5.	Jan 2017	37	3,11,400/-	-----	-----
	Total	437	22,77,000/-	6,67,450/-	29,44,450/-

Table 1. MV Act enforcement fine realized during four months in Kinnaur District.

V. IMPACT

With predictive deployment of police on the identified Black Spots there was nearly 40% drop in the fatalities in road accidents in year 2016 compared to 2015 and 67.5 % drop in the fatalities during the Wedding season 2016 (Aug – Dec) in the tribal district Kinnaur in which majority of the community men drink and drive rampantly. It is pertinent to mention that in year 2013 accidents dropped vastly because almost all the roads including NH – 05 were badly damaged due to flash floods/Uttarakhand cloud bursts 2013 tragedy which impacted bordering Kinnaur district too.



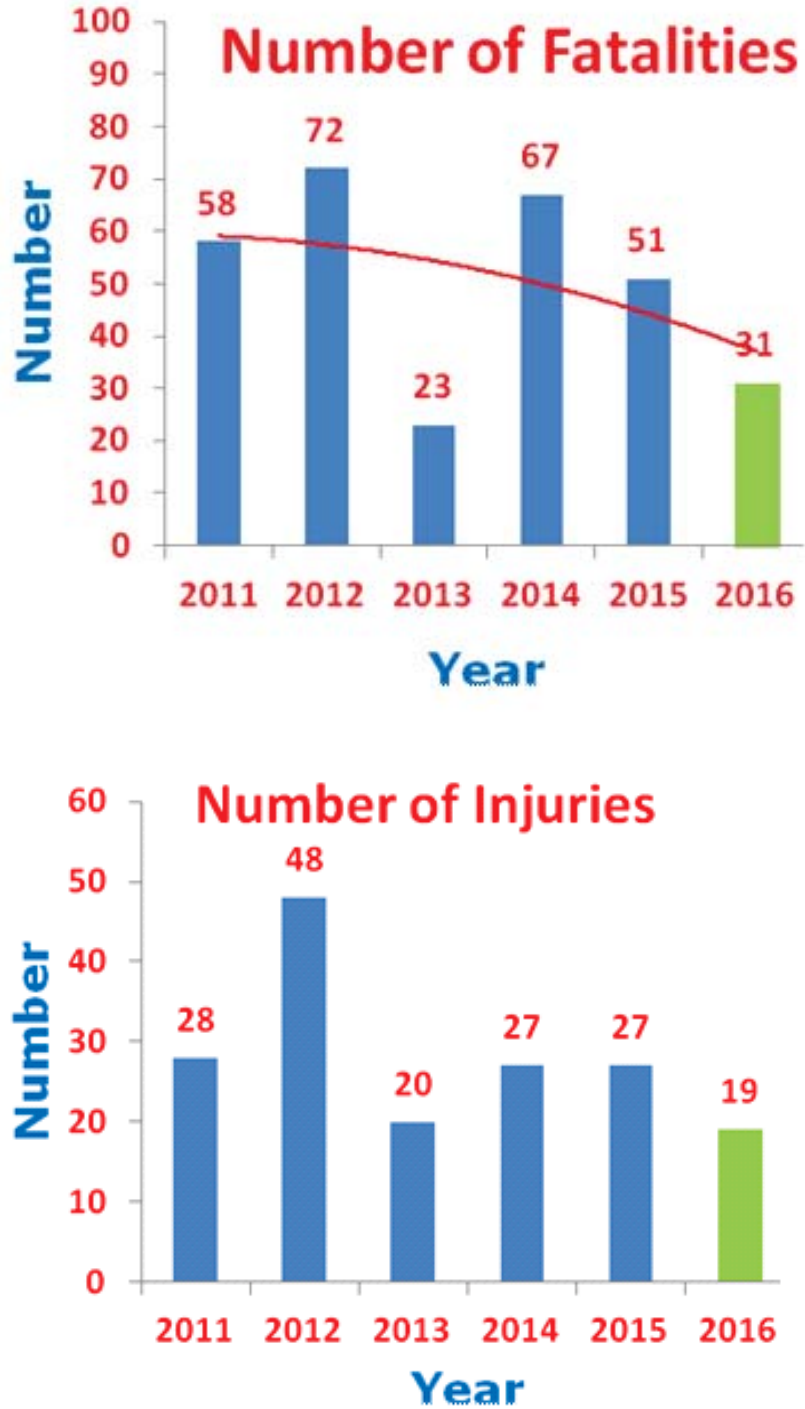


Fig. 6. Results achieved in year 2016 with drop in accidental fatalities, injuries and fatal accidents.

VI. CONCLUSION

It has been concluded from the Drive against drunken driving that with predictive deployment of traffic police on Black spots identified through use of technology in RADMS and Google Maps it is pretty much possible to reduce accidental fatalities in mountainous terrain like Kinnaur esp. where police force is much scarce in numbers. Practice of drunken driving can be very much reduced, in public interest, if targeted both with a strict enforcement on traffic indiscipline on road and reformative door to door community policing

REFERENCES

- [1] "Road Accidents in India - 2015": Transport Research Wing, Ministry of Road Transport & Highways, Government of India, New Delhi
- [2] Alcoholism – A social evil among the tribals of Kinnaur District of Himachal Pradesh, Journal of Farm Sciences 1(1): 137-144, 2011
- [3] Section 19(1)(f) of Motor Vehicles Act 1988 read with Rule 21 of the Central Motor Vehicle Rules, 1989.
- [4] Hon'ble Supreme Court Committee on Road Safety to implement Road Safety Laws 2015.

Psychosocial Determinants of Criminal Psyche: An Exploration

Deepa Mary Thomas*

C. Jayan**



The Indian Police Journal
©BPRD, MHA
BPRD Publication
www.bprd.gov.in

Abstract:

The aim of the paper is to explore the psychosocial determinants of criminal psyche. The data were collected from four groups of participants (professionals, adult offenders, juvenile offenders, family members of offenders) from various districts of Kerala. Information were collected through semi structured interviews. The collected data were analyzed using interpretive phenomenological analysis. The identified psychosocial determinants were clustered into six theme clusters.

Key words:

psycho social determinants, criminal psyche

Psychosocial determinants of criminal psyche: an exploration

A'crime' can be defined for legal purposes simply as an offence against the criminal law. In terms of practical interpretation, this definition evaluates behavior on the basis of intention, knowledge and freedom to act. (Maguire & Radosh, 1999). Criminal psyche here defined as the underlying psychological mechanisms that determines one's criminal behavior. The causes of criminality are often attributed to a wide variety of psycho social factors. Apart from the biological causal factors, these psycho social factors have gained considerable research attention within the current psychological frame work. Such psychosocial factors include family environment, school environment and neighborhood risk factors. Many theoretical orientations like Trait perspectives, Psychodynamic perspectives, Socio cultural perspectives, Radical behavioral

Author Introduction

* Assistant Professor, Department of Psychology St. Joseph's College, Devagiri Calicut-673008, Email: deepaamarythomas@gmail.com

** Rtd. Professor & Head, Department of Psychology, University of Calicut, Email: drcjayan@gmail.com

perspectives, Humanistic and existential perspectives, and Social learning/cognitive behavioral/social cognition/ general personality perspectives explained criminality. This study is an attempt to explore these theoretically stated psychosocial factors and their role in the development of a criminal psyche.

Many researchers asserted that family related factors are very crucial in the development of criminal psyche. The important family related factors include family structure (Ikaheimo, Laukkanen, Hakko & Rasanen (2012); Cashwell & Vacc (1996); Loeber & Loeber (1986)), parenting style (Ishoy (2015); Mowen & Schroeder (2015)), poor parent-child relationship (Savage (2014); Ogilvie, Newman, Todd & Peck (2014)), lack of parental support and monitoring (Walters (2013)), childhood maltreatment (You & Lim (2015); Zakopoulou et al (2013); Saunders et al (2011)), parental criminality (Besemer (2014);), and parental psychopathology (Makia et al (2003); Huan, Ang & Lim (2010)). The findings from these researches concluded that, single parent family, neglectful parenting style, childhood victimization, parental criminality, especially that of mother and parental psychopathology are the important predictors of both juvenile and adult violent behaviours. Similarly, researchers also explored the role of various school related factors like deviant peer associations and gang affiliations (Katsiyannis, Thompson, Barrett, & Klingree (2013)), and neighborhood related factors like antisocial neighborhood and gang affiliations etc (Haynie, Silver & Teasdale (2006)) on the development of criminality. In the light of large body of existing research on criminality, we are trying to explore the important psychosocial determinants of criminal psyche. Exploring such psychosocial determinants will be helpful in understanding and preventing crime. Furthermore, this will be helpful to design a correctional setting which addresses the psychosocial issues of the offenders and prevents re-offending.

Method

Aim

To explore the psychosocial determinants of criminal psyche.

Procedure

The present study entitled as 'Psychosocial Determinants of Criminal Psyche' was conducted in four phases and four groups of participants were involved.

Participants

Four groups of participants (N=16) were selected from various districts of Kerala.

Group 1: The participants of this group include four professionals from various fields.
(Two police officers, advocate and prison welfare officer)

Group 2: four adult offenders

Group 3: four juvenile delinquents

Group 4: family members of the participants of group 1 and 2. 5

Method of data collection

The primary method of data collection was the semi structured interview. The four groups of participants were interviewed for getting information on various dimensions of psychosocial causal factors of criminality.

Phase 1: four legal professionals (the group 1 participants) were interviewed in order to explore the psychosocial determinants of criminality.

Phase 2: four adult offenders were interviewed to gather information about the causes of their own offending behaviour

Phase 3: four juvenile offenders were interviewed to explore the causes of their deviant behaviour.

Phase 4: the family members of group 2 and 2 participants to explore the psychosocial determinants of criminality.

Analysis

Interpretive phenomenological analysis was used to analyze the collected information. The final themes extracted from the responses of participants and the interconnections of the themes are detailed below.

Phase 1

During the first phase of the study, two police officers, an advocate and a prison welfare officer were interviewed. The interpretive phenomenological analysis of their responses revealed the following themes.

1. Antisocial family history
2. Parental substance abuse
3. Delinquent peer association
4. Substance abuse
5. Rejection at school

6. Broken family
7. Maternal moral issues
8. Inadequacy of the correctional system
9. Victimization

The themes reflects the psychosocial causal factors identified by experienced professionals of legal and correctional system.

Phase 2

The interpretive phenomenological analysis of the response of group 2 participants (adult offenders) revealed the following themes:

1. Father's alcoholism
2. Financial crisis
3. School failure
4. Antisocial friends
5. Workplace violence
6. Labeling
7. Legal unawareness
8. Substance abuse
9. Broken family
10. Parental neglect
11. Antisocial family member (parent/sibling)

The psychosocial factors are found to be common for the all the participants of this group. Their criminality is the result of the interaction of these factors. The pattern of development of criminal behavior can be illustrated in figure 3.1

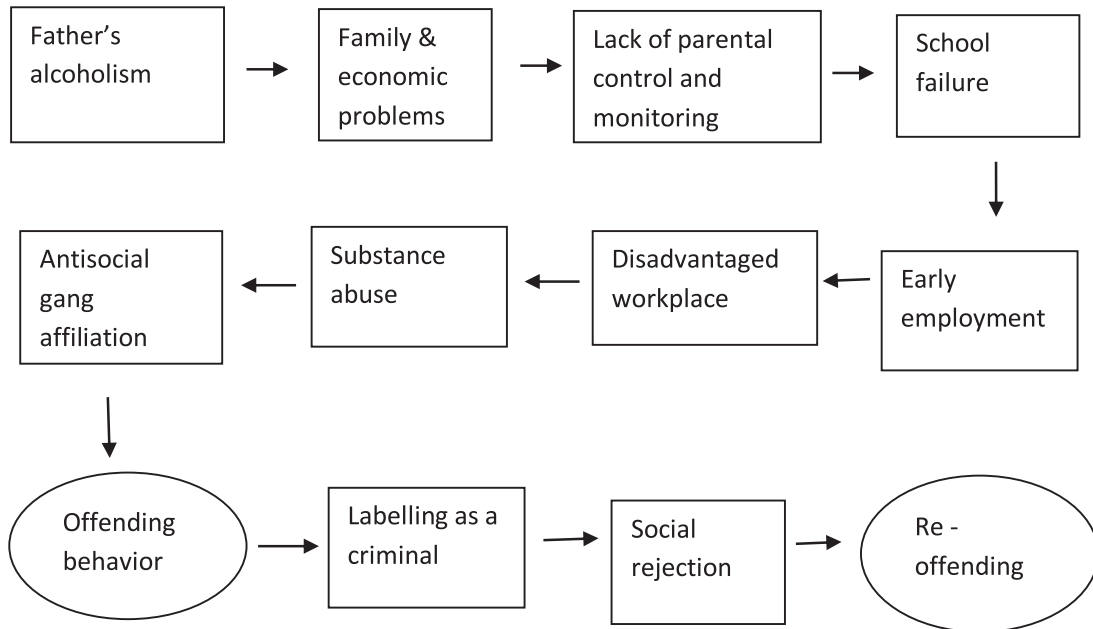


Figure 3.1

Phase 3

The final themes identified using interpretive phenomenological analysis of the responses of group 3 participants are as follows:

1. School failure
2. Substance abuse and alcoholism
3. Emotional un stability
4. Lack of parental control
5. Impulsivity
6. Antisocial gang affiliation
7. Disadvantaged neighborhood
8. Father's alcoholism
9. Poor attachment with parents and siblings

The causal factors of juvenile offending is deep rooted in the family and school environment. The interaction of negative factors like family, school failure, lack of parental control and support increases the chances of antisocial gang affiliation. The antisocial peer association leads to substance abuse and this enhances the vulnerability of offending.

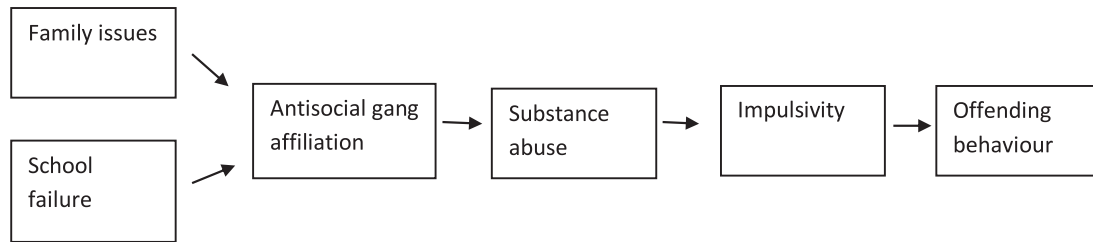


Figure 3.2

Phase 4

The final themes identified from the responses of group 4 participants were:

1. Family issues
2. Father's alcoholism
3. Parental criminality
4. Disadvantaged neighborhood
5. Antisocial gang affiliation
6. Aggression
7. Impulsivity
8. Poor attachment with parents
9. Substance abuse

The final themes extracted from the responses reflects the role of familial, neighborhood, school related factors in the development of criminality.

Discussion

The themes identified using interpretive phenomenological from the responses of the sixteen participants were clustered together. The final theme clusters formulated are:

1. Disadvantaged family environment

2. Disadvantaged neighborhood
3. Disadvantaged school environment
4. Antisocial gang affiliation
5. Childhood trauma
6. Other social factors

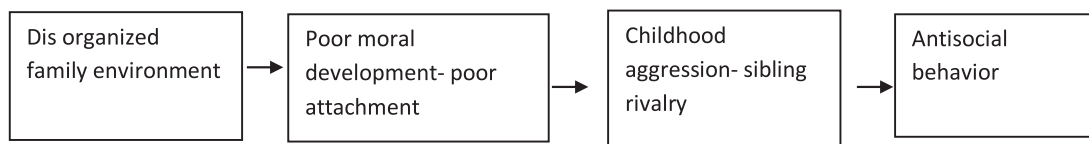
Disadvantaged family environment

This cluster includes the factors like inappropriate parenting styles, antisocial history of parents and other family members, parental substance abuse, sibling rivalry, lack of attachment with family members, maternal risk factors like moral issues and criminal and substance abuse history, single headed family and broken family. Many researchers like Loeber and Loeber (1986), Childhood aggression Lack of emotional attachment with family members

Lack of social bonds, antisocial gang affiliation (neighborhood), Substance abuse, antisocial behavior. Nagin , Pogarsky and Farrington (1997), and Walters (2013) pointed the importance of these factors on determining the development of criminal psyche. Researchers like

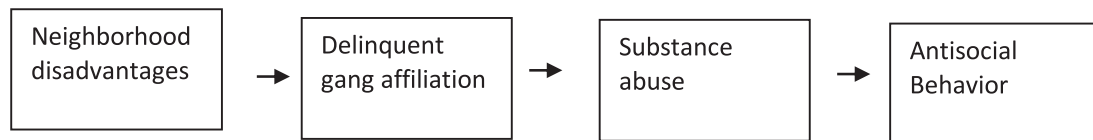
Nijhof, Kemp, & Engels (2009) explored the links between parental criminality. All these prior literature helps to conclude that disadvantaged family environment as a cluster of factors, is very crucial in the development of criminal psyche. In general, the disadvantaged family environment adversely affect the development of self concept of the child. The conflicts in the parent child relationship will hinder the normal psycho social development, moral development and in turn lead to the development of inappropriate coping strategies towards frustration. All these factors along with certain social conditions lead to antisocial behavior.

The role of disadvantaged family environment in determining the development of criminal psyche can be diagrammed as follows:



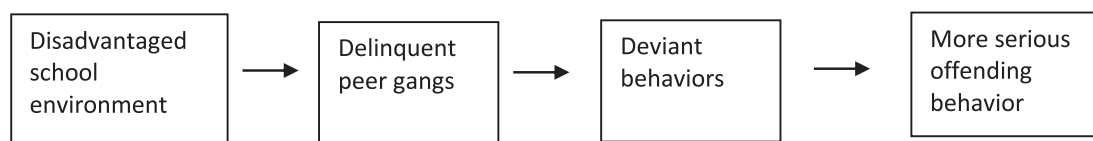
Disadvantaged neighborhood

This cluster of themes includes neighborhood criminality, antisocial peer association, economic disadvantage of neighborhood etc. many researchers like Ingoldsby and Shaw (2002) concluded that neighborhood factors such as economic disadvantage, violence and danger, and exposure to deviant peer groups may actually "trigger," or at least heighten the risk for the childhood onset of serious delinquency. Reed and Rountree (1997) stated that disadvantaged neighborhood is an important determinant of adolescent's substance abuse. Disadvantaged neighborhood increases the chances of delinquent gang affiliation, and violent behavior. Economic disadvantage acts as the triggering factor in this relationship. Neighborhood disadvantage also foster the chances for substance abuse. The peer influences, and the substance abuse jointly contributes to the antisocial acts. The disadvantaged neighborhood can influence the development of criminal psyche in many ways. The potential risk factor associated with the disadvantaged neighborhood is the antisocial gang formation and affiliation to it. In many cases this antisocial gangs played a significant role in developing antisocial behavior. Often these gang affiliation lead to substance abuse and then to antisocial behavior.



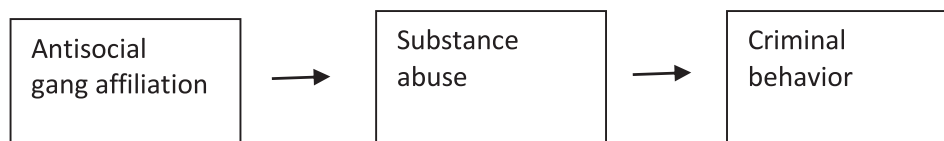
Disadvantaged school environment

The third cluster of themes extracted from the responses of the participants of the study is the disadvantaged school environment. The themes of this cluster are rejection by teachers, peers, school dropout, academic failure etc. Katsiyannis, Thompson, Barrett, and Klingree (2013) examined the school related predictors of violent criminality in adulthood and reported that school related problems like, poor academic performance; truancy, frequent suspensions, and grade repeating are significant in predicting violent behavior. They also stated that repeating a grade is the most significant factor in this. The disadvantaged school environment leads to the formation of delinquent peer gangs in the school with delinquent peers. This deviant behavior in turn lead to more risky behaviors such as substance abuse and then lead to more serious offending behaviors. This delinquent peer associations then lead to more deviant behaviors like substance abuse, alcoholism, smoking, stealing etc and then to more antisocial behaviors.



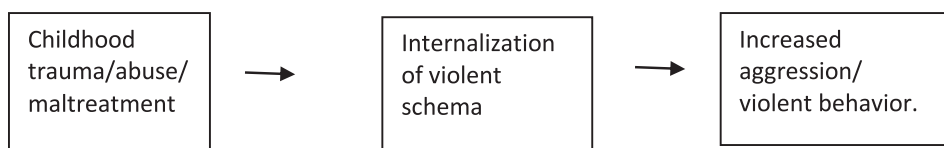
Antisocial gang affiliation

Antisocial gang affiliation is found to be as a significant determinant of criminal psyche. The analysis of the responses of participants revealed the strong link between antisocial gang affiliation, substance abuse and criminal behavior. Researchers like Reed and Rountree (1997) explored the link between peer pressure, substance abuse and antisocial acts. Similarly the works of Obrien, Daffern, Chu, and Thomas (2013) identified the link between antisocial gang affiliation and violent behavior.



Childhood trauma.

This theme cluster includes the themes like victimization, physical and emotional abuse during childhood, separation from home/ biological parents and other childhood risk factors like childhood psychopathology and aggression. Analysis of the responses of the participants revealed that childhood trauma is an important determinant of future delinquent behavior. This relationship is more evident in the case of sexual offending. Many of the case reports that are mentioned by the participants showed this relationship. Similarly, the research of Saunders, Rittner, Wieczorek, Hartinger, Nochajski, Rine and Welte (2011) explored the links of childhood victimization and future offending behavior. DeGue and Widom (2009) also reported the role of childhood maltreatment in determining future criminality. The research of Haapasalo and Pokela (1999) revealed that the problems associated with child rearing and child abuse are very critical in future violence. The analysis of responses of juvenile offenders and their family members revealed the role of childhood aggression in developing criminality. These factors along with disadvantaged family and neighborhood are the strong predictors of criminality. The childhood trauma, due to the physical/sexual abuse or any kind of maltreatment leads to the internalization of a violent schema. This internalization then leads to the belief that being aggressive or violent is the appropriate response to frustration. This kind of deviant behavior causes antisocial outcomes.



Other social factors

This theme cluster includes work place disadvantages, low socio economic status and social labeling. The phenomenological analysis of the responses by the participants suggested the role of these factors in developing criminal psyche. In many cases, the participants responded that the primary reason for their antisocial behavior is the low socio economic status. Similarly in some cases the workplace disadvantages like antisocial co-workers, work place disputes etc are the determinants of their antisocial behavior. Social labeling is another risk factor that determines the chances of re offending. The most crucial determinant of repeating a criminal offending is the labeling by the society. As stated by the labeling theory, the labeling leads to the creation of a new identity. Then the person starts to accept the label on them and act according to their new identity. This in turn amplifies the criminal conduct. Another important social determinant of criminality is the legal unawareness. Another social factor which is more important in developing criminal behavior is the inadequacy of punishment. The crime is the result of perceiving the gains of the act as more beneficial than the consequences of the act. This inadequacy of punishment is also contributing to the development of criminal behavior. Inappropriate correctional procedures are also significant in increasing the chances of re offending. The negative conditions in the jail such as association with more serious offenders, their help for release etc. are very crucial.

Impressions

The impressions made on the basis of the phenomenological analysis are

1. The psychosocial determinants of criminal psyche belong to six clusters. The clusters are:
 - Disadvantaged family environment
 - Disadvantaged neighborhood
 - Disadvantaged school environment
 - Antisocial gang affiliation
 - Childhood trauma
 - Other social factor
2. All the six clusters contains interconnected psychosocial factors and in many cases criminality is the combined effect of all these psychosocial determinants
3. Disadvantaged family environment characterized with insecure attachment, inadequate parenting, single parenthood, early separation of the child from biological parents etc are very important determinants of child's future criminality

4. Substance abuse, that of parents and own; is also a strong determinant of criminality. 15
5. Disadvantaged neighborhoods and schools with antisocial peers and rejection also very critical in development of criminality.
6. Childhood aggression, sibling rivalry, problem behaviors in school and home are the early warning signs of future criminality
7. Maternal risk factors such as maternal age and morality are found to be critical in determining the criminality of the offspring. Maternal moral issues are a key factor associated with intimate partner violence and sex offending.
8. Lack of legal awareness, inadequacy of punishment and social labeling etc are also important determinants in the development of criminality.

Implications of the study

In the light of the interactions with offenders, their family members and the legal and mental health professionals, the following suggestions are made in order to reduce the crime rate.

1. Legal education must be given as part of the formal education system.
2. The punishment should be consistent with the intensity of the crime.
3. The police officers must be trained or appropriate professionals should be appointed within the correctional system for providing adequate psycho social care and guidance to the prison inmates.
4. A separate correctional system should be implemented for the management of offenders who are remanded for the first time. This will help to reduce the chances of reoffending.
5. In case of juvenile offenders, the reason for the criminal conduct should be identified and parents and teachers must be properly informed so as to avoid discrimination and rejection.
6. Parents and teachers should take initiation to understand the issues of their child/student and should give proper attention
7. Parents should get informed about how their family environment foster criminality in their children.

References

- Besemer, S. (2014). The impact of timing and frequency of parental criminal behaviour and risk factors on offspring offending, *Psychology, Crime & Law*, 20(1), 78-99.
- Cashwell, C.S., & Vacc, N.A. (1996). Family Functioning and Risk Behaviors: Influences on Adolescent Delinquency, *School Counselor*, 44(2), 105-114.
- DeGue, S., & Widom, C.S. (2009). Does Out-of-Home Placement Mediate the Relationship Between Child Maltreatment and Adult Criminality, *Child Maltreatment*, 14(4), 344-355.
- Haapasalo, J., & Pokela, E.(1999). Child-rearing and child abuse antecedents of criminality Aggression and Violent Behavior, 4(1), 107-27.
- Haynie, D. L., Silver,E., & Teasdale, B. (2006). Neighborhood Characteristics, Peer Networks, and Adolescent Violence, *Journal of Quantitative Criminology*, 22(2), 147-169.
- Huan,V.S., Ang, R.P., & Nie Lim, H.Y. (2010). The Influence of Father Criminality on Juvenile Recidivism Testing for Delinquent Behaviors as a Mediator, *International Journal of Offender Therapy and Comparative Criminology*, 54(4), 566-580.
- Ika`heimo, O. , Laukkanen, M., Hakko, H., & Rasanen, P. (2012) . Child Association of Family Structure to Later Criminality: A Population-Based Follow-up Study of Adolescent Psychiatric Inpatients in Northern Finland, *Journal of Psychiatry and Human Development*, 44(3), 233-246.
- Ingoldsby, E.M., & Shaw, S.D. (2002). Neighborhood Contextual Factors and Early-Starting Antisocial Pathways, *Clinical Child and Family Psychology Review*, 5(1), 134-153.
- Ishoy, G. A. (2015). Exploring Morality as a Mediator of the Association Between Parenting Practices and Violent and Property Offending Among a Sample of Juvenile Delinquents,*Crime & Delinquency*, 15(3), 208-235. 18
- Katsiyannis, A., Thompson, M. P., Barrett, D. E., &Kingree, J. B. (2013). School Predictors of Violent Criminality in Adulthood Findings from a Nationally Representative Longitudinal Study, *Remedial and Special Education*, 34 (4), 205-214.
- Loeber, R., & Loeber, M.S.(1986). Family Factors as Correlates and Predictors of Juvenile Conduct Problems and Delinquency, *Crime and Justice*, 7 (1), pp. 29-149.
- Maguire, B., & Radosh, P.F. (1999). *Introduction to Criminology*. USA: Wardsworth publishing company.
- Makia, P., Veijolaa, J., Rasanena, P., Joukama, M., Valonenc, P., Jokelainen, A., & Isohanni, M. (2003). Criminality in the Offspring of Antinatally Depressed Mothers: A 33-Year Follow-up of the Northern Finland 1966 Birth Cohort, *Journal of Affective Disorders*, 74 (3), 273-278.
- Mowen, T.J., & Schroder, R.D. (2015). Maternal Parenting Style and Delinquency by Race and the

Moderating Effect of Structural Disadvantage, *Journal of Adolescent Research*, 46(2), 228-254.

Nagin, S.D., Pogarsky, G., & Farrington, D.P. (1997). Adolescent Mothers and the Criminal Behavior of Their Children, *Law & Society Review*, 31(1), 137-162.

Nijhof, K. S., Raymond, A.T., de Kemp., Rutger, C.M.E., & Engels, K. (2009). Frequency and seriousness of parental offending and their impact on juvenile offending, *Journal of Adolescence* 32 (2), 893-908.

O'Brien, K., Daffern, M., Chu, M. C., & Thomas, S.D.M. (2013). Youth gang affiliation, violence, and criminal activities: A review of motivational, risk, and protective factors, *Aggression and Violent Behavior*, 18(2), 417-425. 19

Ogilvie, A.C., Newman, E., Todd, L., & Peck, D. (2014). Attachment & violent offending: A meta analysis, *Aggression and Violent Behavior* 19 (2), 322-339.

Reed, M. D., & Rountree, P. W. (1997). Peer Pressure and Adolescent Substance Use, *Journal of Quantitative Criminology*, 13(2), 143-180.

Rittner, B., Wieczorek, W., Nochajski, T., Rine, C. M., & Welte, J. (2011). Victimization, psychological distress and subsequent offending among youth, *Children and Youth Services Review*, 33 (1), 2375-2385.

Saunders R. M., Rittner, B., Wieczorek, W., Nochajski, T., Rine, C. M., & Welte, J. (2011). Victimization, psychological distress and subsequent offending among youth, *Children and Youth Services Review*, 33 (1), 2375-2385.

Savage, J. (2014). The association between attachment, parental bonds and physically aggressive and violent behavior: A comprehensive review, *Aggression and Violent Behavior*, 19(2), 164-178.

Walters, G. D. (2013). Delinquency, parental involvement, Early Adult Criminality, and Sex: Evidence of moderated mediation, *Journal of Adolescence*, 36(5), 777-785.

Walters, G. D. (2015). Neighborhood Context, Youthful Offending, and Peer Selection Does It Take a Village to Raise a Non delinquent?, *Criminal Justice Review*, 40 (4), 123-145.

You, S., & Lim, S.A. (2015). Development pathways from abusive parenting to Delinquency: The Mediating Role of Depression and Aggression, *Child Abuse & Neglect*, 30 (3), 230-242.

Zakopoulou, V., Pashou, T., Tzavelas, P., Christodoulides, P., Anna, M., & Iliana, K. (2013). Learning difficulties: A retrospective study of their co morbidity and continuity as indicators.

The Indian Police Journal

Vol. 64 No. 2 & 3 April-September 2017

Note for Contributions

The Indian Police Journal (IPJ) is the oldest police journal of the country. It is being published since 1954. It is the flagship journal of Bureau of Police Research and Development (BPRD), MHA, which is published every quarter of the year. It has circulation of 4500 and through web it is circulated to Interpol countries and other parts of the world. IPJ is peer reviewed journal featuring various matters and subjects relating to policing, internal security and allied subjects. Over the years it has evolved as academic journal of the Indian Police providing critical inputs to the stakeholders of policing and internal security.

How to submit Article/Paper

The paper/article on crime, criminology, general policing, internal security, forensic science, forensic medicine, police organization, law and order, cyber crime, organized crime, white collar crime, crime against women, gender policing, juvenile delinquency, human resource development, police reforms, organizational restructuring, performance appraisal and service delivery, social defence, police family, police housing, police training, human rights, intelligence, corruption, terrorism and counter terrorism, community policing and allied subjects can be submitted.

The paper/article with keywords and abstract should be between 2000-4000 words. The paper/article should be original and has not been published in any journal. A brief detail about author should be also submitted. The paper can be submitted through email: editoripj@bprd.nic.in.

The paper/article can be submitted via post with hard copy in duplicate and a CD on following address: **The Editor, The Indian Police Journal, BPRD, MHA**, New Building, National Highway-8, Mahipalpur, New Delhi-

RNI No. 4607/57

Published By: **The Bureau of Police Research & Development, Ministry of Home Affairs, Govt. of India,**

New Building, National Highway-8, Mahipalpur, New Delhi

Printed at:- **Mittal Enterprises**, 485, Patparganj Industrial Area, New Delhi-92 # 9811340726