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The views and opinions expressed in the articles are solely those of the author
and do not in any way represent the views of the National Crime Records
Bureau, or any other entity of the Government of India.
EDITORIAL

It gives me immense pleasure in bringing out the third issue of NCRB Journal. It is our continuous endeavour to enrich the readers through well researched articles on Police Science, Criminology, Forensic Science, Finger Print Science, Contemporary Legal Issues, Cybercrimes etc. Various technology oriented topics have been covered in this edition.

In the article on “Crime Multi Agency Centre”, the authors have given the background, objectives and salient features of Cri-MAC, viz. sharing of alerts on heinous crimes, jail breaks, etc. among disjointed police units on real time basis.

In the article “Forensic Aids to Crime Scene Investigation: An Exploration” the authors have examined the use of Forensic science, Forensic Psychology, Crime Scene Investigation, Drowning, Hanging, Suicides and Evidences with regard to investigation of such cases.

In the article “National Automated Fingerprint Identification System (NAFIS) – A step ahead for empowering Police with IT”, the author explains the differences between verification and identification of finger prints and different stages involved in the process of finger print enrolment, identification and verification using automated system.

In the article “Relevancy of Narco-Analysis Test in the Present Indian Scenario and Judicial Engineering: An Overview”, Crimes, Criminal behaviour and Narco-Analysis Test have been discussed which may immensely help in investigation of cases.

In the article “Reformation, Rehabilitation and Treatment”, the author has highlighted the different aspects of reformation, rehabilitation, treatment of offenders, objects of punishment and moral principles for the imposition of punishment along with after-care programmes.

In the article “Emerging Human Trafficking and Abduction in Guise of Surrogacy in India” some important legal, regulatory instruments on surrogacy issues and framework of permissible code of conduct for IVF have been discussed.

In the article “Use of Layered Voice Analysis (LVA) for Investigation with Social Distancing” the authors explain about voice analysis and voice signature, speech to text conversion followed by the analysis to put the voice delivery and analysis in the desired perspective. LVA deals only with the emotional analysis of voice. LVA includes many patented parameters, vocal parameters, methods of calculating baselines and emotions.

In the last article “Rights of the Prisoners during Pandemic”, the authors have highlighted the protection of prisoners from various threats from Corona Virus.

I thank all the esteemed authors who have submitted their papers for this issue of Journal. I also thank all the distinguished members of the Board of Referees for their valuable comments.

I am sure that readers will find these articles interesting. They may give their valuable feedbacks. Suggestions for improving the publication are also welcome.

Happy reading!

(Ram Phal Pawar)
Crime Multi Agency Centre (Cri-MAC)

(A Platform for Real Time Sharing of Information On Crime & Criminals)

Ram Phal Pawar, IPS+
Sanjay Mathur, IPS†
Dr. Prashun Gupta, Ph.D‡

ABSTRACT

The Cri-MAC application is designed and developed by an in-house team of NCRB to enable smooth online sharing of crime and criminal data in the form of real-time alerts among various disjointed police units across the country, keeping in mind the ease of use. The application has been integrated with the CCTNS application at the backend and it can be accessed securely through a link provided in the national Digital Police Portal.

Keywords Cri-MAC, crime alert, real-time alerts, crime prevention, Hue and Cry Notices, jail breaks, broadcast crime information, high alert, police communication

1. Introduction

Detection of crime is one of the important functions of the police. Criminals adopt new technology and techniques of committing crimes. Gathering clues from the scene of the crime without any delay and dissemination of relevant information to the neighboring police stations play a very important role in the detection and apprehension of criminals. Conveying information to other States in case of possible involvement of an interstate gang is also extremely important. Crime and Criminal Network & Systems (CCTNS) is a key e-governance project of the Government of India. It facilitates entry of data related to crime reported at police stations including details of the scene of the crime, accused involved, property seized, and the final report filed in the court. Under the CCTNS project, a search facility for searching persons of interest and property of interest has been provided at the State level as well as the national level. NCRB has played a very important role in the implementation of this project. As on 31st July 2020, out of 16074 Police stations, CCTNS has been implemented in 15238 Police stations in the country. CCTNS has created a backbone for sharing Crime and Criminal related information across the country.

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Taking one step forward, NCRB has recently launched Cri-MAC application for flashing alerts on important matters of crime and for facilitating inter-unit communication among disjointed police units across the country. The concept of Cri-MAC was coined during the DGsP/IGsP Conference held at Tekanpur (MP) in January, 2018 on the lines of Multi Agency Centre (MAC) of the Intelligence Bureau. It has been integrated with the CCTNS application at the backend so that related FIR details can be fetched directly from the system on the click of a button. The application can be accessed securely through a link provided in the national Digital Police Portal (https://digitalpolice.gov.in) by Police and Prison officials by using ICJS user credentials already existing with them.

There are seven scrolling windows for sharing information on important and critical crime events such as jail breaks, major heinous crimes, important seizure and recoveries, jail releases of notorious criminals, major human trafficking cases, information on wanted/arrested notorious criminals and High Alerts like Hue and Cry Notices (Screenshot 1). Police officers can upload information by selecting a crime category (window), simply by entering relevant information (gist) available with them (Screenshot 1). They can also upload attachments such as photographs and other documents.

There is a provision to make searches - FIR-based (Screenshot 3) and text-based (Screenshot 4) – in different windows over legacy data. Further, for operational or logistic communication needs, the application offers two modes of communication: E-mails (Screenshot 6) can be sent to any Police Station along with attachments after selecting the state, district and police station names from the drop-down menu; and SMSs (Screenshot 7) can be sent to any police personnel after selecting state, district and police station names from the drop-down menu.

2. Salient Features

Using the Cri-MAC application, a user can view alerts, generate new alerts, search for an alert and communicate with others through e-mail and SMS.

a) The application can be accessed by using ICJS user credentials already existing with the Police and Prison officers.

b) Police Stations are able to directly export and broadcast important information under various identified crime heads. The exported information is displayed on the application’s dashboard (Screenshot 1).

c) Alerts can be generated about a particular crime category, simply by entering relevant information in the upload data module (Screenshot 2). The gist of information to be uploaded can also be taken through copy from FIR text and paste here.

d) Two types of searches can be performed on legacy data under any/all the windows:
i. Search based on FIR number (Screenshot 3)

ii. Search based on any keyword (Screenshot 4)
In each alert, a link to the case details is given, clicking on which will fetch the related FIR details from the CCTNS/ICJS database (Screenshot 5).
Police officers can communicate with each other using any of the two modes of communication provided in the application:

i) E-mails can be sent to any Police Station along with attachments after selecting state, district and police station names from the drop-down menu (Screenshot 6).
ii) **SMS**: SMSs can be sent to any police personnel after selecting state, district and police station names from the drop-down menu (Screenshot 7).

![Screenshot 7. Communicating through SMS](image)

**Technologies Used**

NCRB has developed the Cri-MAC application as a web-application using the following technologies/tools:

i. Programming language: Java (Springboot Framework)

ii. Database: My SQL

iii. Other technologies/tools used: HTML, jQuery, Javascript, CSS, Bootstrap

iv. The application runs on browsers such as Google Chrome, Internet Explorer, Safari, Firefox, etc.

It has backend integration with CCTNS for the purpose of fetching FIR data.

**Secure Application**

Being a software application, thorough IT Security Audit for Vulnerability Testing and Certification was performed by CERT-In empanelled vendor and a certificate was
obtained therein. A built-in counter keeps track of the footfalls into the Application, emails/SMSs originated through the App and number of searches made as well as FIR button clicked for seeing the corresponding FIRs.

**Benefits to Police**

a) The Cri-MAC is a user friendly application which requires very little training for use.

b) The application utilizes the existing CCTNS network at police stations, without any extra infrastructural demands.

c) Being a web-based computer application, it puts minimal strain on logistics and finance.

d) Security of application and data remains a priority. Police Stations, Prison offices and other higher offices can securely access this portal by using already existing ICJS user credentials with them.

e) Using the alert generation feature for incidents like Jail Breaks and for Hue and Cry Notices, the sensitive and urgent information can be disseminated quickly.

f) Using the built-in communication module and pre-existing email IDs and Mobile Nos. of PSs in the application, the time required for operational and logistic communication would be minimized.

g) The application can also be used to refer to previous incidents of a particular type through search from the legacy data earlier uploaded on Cri-MAC portal.

**Adoptability and Scalability**

a) The Cri-MAC application is adopted and currently being used by 28 States/UTs.

b) Currently, the application is accessible to nearly 12000 police stations across the country.

c) At present, the application can be used for the following types of crimes:

i. Major Heinous Crime

ii. Major Human Trafficking

iii. Jail Breaks

iv. Jail Releases
v. Important Seizures and Recoveries  
vi. Notorious Criminals (Arrested / Wanted)  
vii. Hue & Cry Notices (PAN India)  

**Going Forward**

NCRB is open to suggestions and improvements and the same would be reviewed and incorporated in subsequent versions. The following features are being incorporated in the next version:

a) A User will, by default, see alerts related to his district alone. There will however, be an option to click the State or Country level filter as well. High Alert (Red Window) will however, show the entire country’s data at all times without any filter in order to show national level high alerts.

b) There would be a facility provided to the State itself to upload/update email addresses and phone numbers for the users, to reflect changes, if any, from time to time.

c) The application response time will be further reduced for enhanced user experience.

d) Report on the Usage of application will be developed.

e) Pre-formatted text for creating alerts will be provided for standardization and better readability.

**Expectations from the States|UTs**

a) Submission of updated email-ids and mobile numbers of police stations for communication.

b) Opening access of CriMAC application to its police stations. As of now, 29 States|UTs have provided access. Arunachal Pradesh, Bihar, DD&DNH, Manipur, Nagaland, Sikkim and Uttar Pradesh have to facilitate the CriMAC access to their police stations.

c) Issue of appropriate Police Orders by the State Police HQ to formalize its use by rank and file.

d) Providing feedback to enhance the usage experience of CriMAC application by sharing and viewing the alerts as well as communicating over Email/SMS.
Conclusion

Earlier, there was no formal system of sharing of alerts on crime and criminals in real time basis across various disjointed police/jails units across the country. It used to be shared through unsecure channels like PSTN lines, police wireless, or personal emails etc. Using Cri-MAC Application now, the generation of alerts and online sharing of information can be efficiently done. This would help in better and faster coordination leading to early detection and prevention of crime across the country.
Forensic Aids to Crime Scene Investigation: An Exploration

Deepak K Shukla, Vikram S Kushwaha, Priyanka Kacker, Prabhakar Sharma*

ABSTRACT

Crime scene is the place where the staged and actual crime happen. According to Locards principle of exchange every contact leaves traces which is the basis to know the correlation between victims, accused and evidences. Crime scene is of utmost importance as an evidence present at the crime scene that links with the victim and the accused. Preservation and collection of evidences from crime scene is always an important aspect for any investigation. Several times accused didn't get punishment due to lack of evidences as crime scene was ignored during the investigation. Even though after proper collection and preservation, disturbance in chain of custody also leads to disapproval of strong evidence making accused free from punishments. Also, the lack of involvement of forensic psychologist at crime scene investigation leads to loss of relevant information from the victim, family, suspects, neighborhood etc especially in equivocal deaths and its psychological autopsy. Therefore in this paper the focus is on the importance of crime scene identification; identification, collection and preservation of evidence; maintenance of chain of custody, crime scene information collection by forensic psychologist.

Keywords: Forensic Science, Forensic Psychology, Crime Scene Investigation, Drowning, Hanging, Suicide, Evidence, Psychological Autopsy.

Introduction

Forensic science is a science which uses the basic principle of pure science and applied science to solve or prove the crime in the favor of justice. The word forensic is taken from Latin word *Forensis* which means “related to judiciary”. As in forensic science we use various principles of other science which means that it is an interdisciplinary science. However, forensic psychology is the application of various aspects of psychology in relation to legal aspects of crime. Forensic psychology includes the exploration of causal factors of crime, counselling of victims, eye-witness, victim acquaintances and relatives at the crime scene if given an opportunity or during the later stage of investigation. Forensic psychology also includes standard forensic interviewing followed by Neuro-forensic psychological assessment in a closed set up, forensic psychological investigations like polygraph, Brain Electrical Oscillations Signature (BEOS) profiling, narco analysis etc. and rehabilitation of victims, juveniles, prisoners/offenders.
The scope and importance of forensic science and evidence has been increasing over the last recent years due to new types of crime which is a major challenge to the law enforcement agencies. Due to denial of major witness there is increasing demand and reliance of forensic evidence by courts and opinion makers.

Therefore law enforcement agencies must be aware of new and complex forensic evidences to convince the judiciary. Hence in the current scenario awareness regarding crime scene investigation and collection, preservation and forwarding of evidence is prime focus of nearly all law enforcement agencies. Also, there is a strong need of involvement of forensic psychologist at the crime scene to take a note of the psychological aspects of the evidences, victim, the cause and type of death, suicide note if any, initial information collection through forensic interview at crime scene with the victim (if alive), relatives, neighbours, and other available sources like eye-witness. Especially in case of psychological autopsy based investigation the need is strong which cannot be fulfilled by the police officer having charge of the case. A proper information collection by the Forensic psychologist at crime scene will also help in formation of probes for forensic psychological investigation techniques like polygraph and Brain Electrical Oscillations Signature (BEOS) Profiling. A separate report shall be submitted by the forensic psychologist and forensic science expert along with the report of the police officer of the case.

The objective of the crime scene investigation is to understand and prove the following aspects:

1. Is crime or incident true?
2. What was the time of incident or crime?
3. What was the modus operandi of crime or incident?
4. To differentiate and reveal the real victim and real accused in the crime.
5. To exclude the innocent from crime.

In the current scenario we can separate the work of forensic organization in India as two component system.

1. Crime scene investigation along with collection, preservation, and forwarding of evidence collected from crime scene or spot.
2. Examination and formation of conclusive report of the evidence collected at the crime scene.

**Crime Scene**

Crime scene is place of occurrence of crime or the place where evidence of occurrence of crime is present and can be of two types.

2.1 Primary Crime Scene: Actual spot where crime was happened.
2.2 Secondary Crime Scene: It is the place where evidence of crime is present.

The main purpose of crime scene investigation is to know the following things

1. Whether crime scene is original or created?
2. How many victims or accused involve in the crime.
3. Is there any weapon used in crime. If yes then where it is?
4. What are the series of incidents and modus operandi?
5. Is there any purpose for committing crime? If yes then what was the purpose?
6. Whether the crime was planned or not.
7. Whether crime is performed or not.

Once crime scene is reported in district crime scene expert should immediately be informed for the inspection of crime scene along with investigating officer (IO).

After getting the information regarding the crime scene IO or crime scene expert should reach as early as possible and try to search for following type evidences.

1. Finger print, footprint, tool marks etc on metals or solid objects.
2. Body fluids like blood, semen, saliva on different materials like cloth, floor, hair, chewing gum etc. These type of biological fluids can also be searched with the help of UV lamp.

3. Glass pieces in firearm case, accidents, ricochet marks etc.


5. Trace of explosive substances in case of explosion.

6. Trace of poison in utensils, rapper, bottles, pouch, vomit etc. in suspicious death or death due to food poisoning.

7. If unknown or unclaimed vehicle found at crime scene, chasis number or , engine number can be restored.

8. Check the presence of fossil fuel and their samples in death due to burn cases.

9. Cloth, fibre, tyre marks, skid marks in death due to accident related cases.

10. First forensic interview with the people concerned with case.

Each type of forensic evidence requires proper collection, handling, packing and forwarding for forensic examination. All samples should be sent with control sample or plain sample. The audio-visual recording of the forensic interview shall be submitted along with the forensic evidences.

How to search evidences at crime scene

Crime scene may be indoor, outdoor, primary or secondary. However the search of evidences may be as follows

Zone Method: In this method crime scene is separated in 4 different zone and then each zone is analysed separately.

Spiral Method: in this method a point in crime scene assumed its centre and search of evidence performed by moving spirally.

Preservation of Crime scene

Crime scene should be preserved for short time and long time both. Preservation of crime scene from outsiders or intruders for short time is called as short time preservation while sketching, photography are the methods of long term preservation of crime scene.

Long term preservation of crime scene is a part of case diary or investigation as at any point of investigation case may be transfer to other police personnel or higher investigating agencies (CID, CBI). Now photography or sketch of crime scene can easily give glimpse
of incident or crime to next police personnel or higher investigating agency. Several times it was found that on the basis of sketch or photography next police personnel or higher authority (CID, CBI) or more experienced medical officer or forensic medical officer can conclude more concrete conclusion regarding the case which was absent in previous investigation.

Short time preservation of crime scene is also an important aspect as it is directly concerns with preservation of whole crime scene and related evidences too. Crime scene should not be disturbed by any one (Civilian, Police personnel or others). It is very rare that crime occur in the front of investigating agency however victim, neighbours, or noted people of the society are the first responders of crime scene. Information regarding the crime is also sent by these type of people like gram kotwar, sarpanch, parshad, members of gram sabha etc. Hence it is necessary that such peoples must be aware that crime scene should not be disturb and how to preserve it, if found necessary.

Awareness on crime scene preservation shall be given to these people during the gram sabha meeting, gram rakshasamittee meeting, nagarsurakshasamitte meeting, shanty suraksha meeting taken by police personnel’s time to time. These peoples are aware of working of police administration and can help in crime scene preservation and in investigation too.

Madhya Pradesh Police administration also implemented the Student Police Cadet Scheme (SPC), in which students of selected school trained as friend of police and like law abiding citizens. These students help in working of police also.

However it must be always taken in to the account that crime scene preservation should always be done by police personnel or respective person of the society or neutral person as peoples with malafide intention can destroy or alter the crime scene deliberately creating a misguidance for investigating agency. Crime scene may be of different type but here we will try to discuss few type of cases found in India frequently.

**Hanging Cases**

Hanging (self-suspension) is form of asphyxia in which death is caused by suspension of the body by a ligature encircling the neck and the constricting force is the weight of the body.

There are mainly two basis of classification which is

Depending on degree of suspension: (a) complete hanging: Body is completely suspended in air without any part of the body touching the ground.

(b) 'Partial hanging': the bodies is partially suspended, the toes or feet or other body part is touching the ground with only the head and chest off the ground. In such cases the
constricting force is weight of the head (5 to 6 kg), chest and arms.

Depending on position of the knot:

(a) Typical hanging: The ligature runs above the thyroid cartilage symmetrically and go upward on both sides of the neck to the occipital region and the knot is behind the central region of the neck.

(b) Atypical Hanging: The knot is anywhere other than previous position. i.e. on the right side, left side, front side, back side of the neck.

In the cases of hanging body is hung by rope, cord, dhoti, chunri, saree, scarf, wire, or any other material which can be used as ligature material. The occurrence of such cases can be indoor or outdoor.

Hanging may be suicidal (most preferred method for suicide), accidental, homicidal (very rare but one should not ignore this during the investigation).

During crime scene investigation of hanging cases following points should be performed.

1. Check that victim is dead or alive; if alive send them immediately for medical treatment.
2. If the victim is dead, take photographs of the victim along with crime scene and bring the body down by cutting the ligature without disturbing the neck knot and the knot present at point of anchor.
3. Note down the type of knot. Whether it is slippery knot, simple loop knot or non-slipping knot
4. Note down the body position, appearance and other notable feature along with search of support used to reach the point of anchor used for hanging
5. Note down the height of person, support and point of anchor to find whether the point of anchor is within the reach of victim or not.
6. Check finger print and foot print of victim or deceased near the point of anchor and over support respectively.
7. Search suicide note and other circumstantial evidence.
8. Send body for PM or autopsy.

**Typical Symptoms of body**

In hanging cases usual signs are pale or congested face; open, closed or partially open - eye which is typical symptom of hanging (la facie Symphthaquie); tongue protruded or between the teeth; elongated neck; urine or faecal may be passed; seminal traces
from male genitals and blood mixed fluid in case of female genitals; post-mortem lividity; V shaped ligature mark or incomplete ligature mark going upward; minor periligature injuries; parchment like skin present below the ligature mark and impression of ligature itself on skin etc. Skin present just below the ligature mark becomes parchment like or dried and impression of ligature may also present in neck confirming the ligature material.

In the Table -1 and Table-2 there are few points which should be notice during the investigation of hanging cases.

**Table -1**

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Ante mortem Hanging</th>
<th>Postmortem Hanging</th>
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<tbody>
<tr>
<td>01</td>
<td>V shaped ligature mark and incomplete ligature mark in the neck</td>
<td>Circular and complete usually in middle of the neck.</td>
</tr>
<tr>
<td>02</td>
<td>Echymosis near or below the ligature mark present</td>
<td>No such marks presents</td>
</tr>
<tr>
<td>03</td>
<td>Dried skin below the ligature mark in the neck</td>
<td>No such sign of dried skin in the neck</td>
</tr>
<tr>
<td>04</td>
<td>Usually knot present in the neck is one and slippery in nature.</td>
<td>Multiple knots, front side and non slippery in nature is a sign of homicidal hanging</td>
</tr>
<tr>
<td>05</td>
<td>Semen, blood, urine, faecal matter passed</td>
<td>No such sign found usually</td>
</tr>
<tr>
<td>06</td>
<td>Saliva present normally</td>
<td>Usually absence of saliva in such cases</td>
</tr>
</tbody>
</table>

**Table -1**

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Suicidal Hanging</th>
<th>Homicidal Hanging</th>
</tr>
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<tbody>
<tr>
<td>01</td>
<td>Tendency of suicidal hanging usually found at teen age.</td>
<td>No age limit</td>
</tr>
<tr>
<td>02</td>
<td>Ligature mark V shaped or oblique found in the neck.</td>
<td>Circular and in the middle of neck and may be encircling the neck also.</td>
</tr>
<tr>
<td>03</td>
<td>Single knot in ligature material</td>
<td>Multiple knot in the ligature material</td>
</tr>
<tr>
<td>04</td>
<td>No injury or minor injuries in the body.</td>
<td>Torn cloths with major injuries over the body.</td>
</tr>
</tbody>
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Drowning is another type of asphyxial death in which air passage like mouth and nose filled with liquid halting the respiratory system however *complete submersion* is not necessary condition for drowning. Lungs may be filled with liquid or not still drowning causing death is possible.

Drowning may be of following type

**Wet drowning**—Water is inhaled completely resulting in respiratory blockage causing death.

**Dry drowning**— In this condition, water or liquid intake by victim is low or nothing and death is due to cardiac arrest.

During crime scene investigation of drowning cases following points should be performed or noted.

1. Check whether victim is dead or alive if alive send immediately for medical treatment.
2. Note down the location and position of body.
3. Note down the clothing and appearance of the body.
4. Note down whether any objects like grass, wood, cloth or soil is present in hands of body suggesting antemortem drowning.

The typical feature of drowning or body submersion is washer man or washer women hands i.e. whiteness in the palm region. The same type of whiteness may be present in foot region also.

If death due to drowning couldn’t ascertained then medical officer should preserve the femur bone or piece of lungs for diatom analysis.
Diatom Test: Diatoms are unicellular organism found in water system. In the course of drowning, water enter in lungs and from here same water along with diatoms, it enters in circulatory system and reaching upto the femur bone and other system. During diatom test we test whether water sample and bone marrow of femur bone posses same type of diatoms, if yes then ante-mortem drowning is confirmed. However if diatom test is negative it never implies the post-mortem drowning because diatom may be absent, in case of death due to heart attack or dry drowning.

Many times it also found that hand and legs are tied via rope or other mean then there is possibility of homicidal drowning which can be sorted on the basis of circumstantial evidences.

Few important cases solved by crime scene investigation.

PS Kotwali Mandla: Sunita Singh w/o Rati Singh complain that his husband is missing since last two days and his phone is switched off. On the basis of given info charge of kidnapping was filed and investigation was started. Meanwhile an info received that victim was last seen with Mr.Rohankaushik as one of his friend. Upon investigation of his home blood stains were found which indicate that some unusual happens in his home. Upon interrogation he confirmed that he has performed the murder of victim Rati Singh and body was disposed off in various pieces at different locations. Blood samples were collected from his home (RohanKaushik) and sent for DNA examination which clearly match with DNA profile of victim Rati Singh and in court Mr.RohanKaushik found guilty and punished with life time imprisonment. (The name of victim and accused has been changed to hide their original identity.)

PS Adegaon Seoni: One day a body of person found in the river. On examination of body it was found that there is poly bag in which some stores are present tied with legs of victim. In prima facie the case considered as murder and case registered against unknown person. On further examination it was found that same poly bag present in the home of victim. Both poly bags sent for examination of matching and matched also. Hence it was proved that the bag belongs to person and man himself tied the bag so that didn’t come above water level after drowning, and case belongs to suicide.

PS Kotwali Seoni: A person body found suspended in a tree with tied hands in frontside. Initially case thought to be a murder. But on keen observation it was found that rope in hand was not tied properly and the fiber of rope also present in teeth of victim. Knot present in the neck is also sliding in nature. Hence it was concluded that rope in the neck tied first and then rope tied in the hand with help of teeth. Hence upon crime scene investigation a case solved to be type of suicide instead of murder.

Forensic Psychology and investigation of crime:

Apart from the above mentioned cases where crime scene investigation require forensic
science expert; it also demands the forensic psychologist for proper forensic psychological assessment, investigation and for psychological autopsy. Especially for suicide, drowning, accidents, mediclaims, staged murder, mass suicide (Delhi Burari Case 11 persons of same family commits the suicide by hanging themselves.), drug overdose especially in equivocal deaths where the crime scene gives different story. In such cases mostly the psychological autopsies are done by unprofessional untrained police officers who twist the case finding unknowingly as it was clearly seen in the Arushi murder case. Also, for on the spot counselling of victims (if alive) especially in case of rape victims, family members, relatives, friends the need of forensic psychologist is in much demand for easy, standard, quick and hassle free investigation of crime scene and its management.

There are softwares like Micro-expressions, statement analysis, AI based Human Behaviour Analysis and other investigation techniques like Polygraph, Voice Spectrography, Narco Analysis, Brain Electrical Oscillations Signature (BEOS) profiling present for forensic psychological investigation.

Hence if there is contradiction in statements of victim or even key witnesses were found then investigating agency must go for above psychological investigation techniques to reveal the truth. Now a days people are facing more stress, irregular sleeping patterns and other personal and professional constrains which can be revealed only through psychological aspects especially in cases of suicide or murder which can be taken in the account during the investigation. Hence forensic psychology is a superspecialized branch of psychology which is growing at higher pace and is a necessary component in the crime scene investigation too.

**Conclusion**

Crime scene is an important aspect of investigation and its various dimensions like; preservation, searching of evidences, type of evidences may present at crime scene discussed. Hanging and drowning cases were also taken into consideration. It can be concluded that though hanging and drowning cases are frequent mode of suicide in India but still it require proper attention of forensic experts as it could be a staged murder also. Even forensic evidence plays an important role in criminal investigation but one should not ignore the psychological aspects of any suicide or murder. Hence, a complete investigation of any crime, murder or suicide must include forensic evidences as well as forensic psychological evidences.

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National Automated Fingerprint Identification System (NAFIS) -
A step ahead for empowering Police with IT

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ABSTRACT
National Automated Fingerprint Identification System (NAFIS) has been conceptualized for establishing a central repository of criminal fingerprint data and is being implemented on the principles of cloud computing model. Fingerprint slips obtained in police stations and digital fingerprints enrolled at districts will be stored in NAFIS that is being established at NCRB Hqrs through hardware and software provided by NCRB. Data will be stored in a dedicated virtual partitions allotted to each State/UT in the server placed at NCRB Hqrs. Only authorized users from States/UTs can edit/modify/search the data stored in the exclusive space allotted and thereby ownership of data lies with the concerned State/UT only. If any State/UT wishes to continue to use their existing NIST compliant AFIS, then data of such State/UT will be replicated to the central server. A mobile application is also rolled out, which will enable the field officers to search the National database using the Single digit live scanners attached to mobile phones.

I. Standardization
The Unique Identity Authority of India (UIDAI) adopted ISO/IEC 19794-4:2005(E) as Fingerprint Image Standard, and ISO 19794-2:2005(E) as Minutiae Data Format Standard to meet specific needs of e-Governance applications in Indian context. Aadhaar, the world’s largest identity platform, is all set to transform how Government and Enterprises across various verticals identify and authenticate Indian citizens. On the other hand, most of the security organizations across the globe including Interpol have adopted ANSI-NIST ITL-1 ((Data Format for the Interchange of Fingerprint, Facial, & Other Biometric Information) Standards. Fortunately, many third party tools are available for converting data from one standard to another. After evaluating the pros and cons, NCRB decided to establish NAFIS solution based on ANSI NIST standards and accordingly bids were invited in November, 2018.

Compliance to ANSI NIST standards were specified in detail at page 49 of Request for Proposal (RFP) released by NCRB. ANSI 2015 standards were asked for Data Format for the Interchange of Fingerprint, Facial, Iris & other Biometric Information, JPEG2000
PNG/BMP for lossless compression for mug-shot images, encoding Minutiae of a finger or palm, 500/1000 ppi for ten print Type-14 Images, Type-13 Image standard for latent image. ANSI 2009 standard for Electronic Biometric Transmission Specification (EBTS) was specified. Specified Finger Image standard was ISO/ IEC 19794-4 whereas Minutiae Image standard was ISO/ IEC 19794-2:2005(E). There was a general clause in the bid document to maintain latest standards as released by ANSI.

II. Pre-bid meeting

The pre-bid meeting was held on 30/11/2018 which was attended by representatives from 21 prospective solution providers. Numerous queries were raised by vendors on the various clauses of RFP. Some of the common issues raised by most of the participants was an extension of time for submission of the bids keeping in view of the complexity of the tasks involved in preparation of bids, more clarity about the existing AFIS data for building data migration utility, allow consortium by relaxing the joint venture clause etc.

NCRB issued common clarification for the general queries whereas specific answers were provided to each bidder based on the query raised by them. However, all the clarifications were uploaded on the NCRB website to bring transparency. Some of the companies have requested to reduce the minimum turnover clause of Rs. 100 Crores but as per the provisions of GFR, it was not possible. They have also requested to accommodate consortium so that one of the partner can meet the requirement of turnover clause. NCRB did not permit consortium and adhered to the clause of joint venture as specified in the tender document. Further, tender document has a stringent clause of demonstrating the capability of the solution with 10 lakhs of FP slips provided by NCRB by establishing the solution at NCRB Hqrs. For testing palm prints, NCRB has provided the data of 50,000 palm prints. For small companies, it was a herculean task since they have to bring sufficiently large infrastructure to process 10 lakhs FP slips and 50,000 palm prints. Another difficult task was migration of AFIS data provided by NCRB which was a mixture of NIST and non-NIST.

In view of the above mentioned rigid criteria, most of the interested companies did not submit their bids and only three companies namely, M/s. NEC Technologies India Pvt. Ltd., M/s. Smart Chip Pvt. Ltd. and M/s. SafenetInfotech Pvt. Ltd. have submitted their bids before the last date.

III. Digitization and Migration

During the pre-bid meeting, most of the solution providers have sought clarification about migration of the existing digitized data available in various legacy AFIS. As per the NCRB bid document, six different types of AFIS Systems were maintained by different States and they are (a) Securemantra in 10 States (b) FACTS in 8 States (c) IBIOS, NEC, Papillion in 2 States each (d) Morpho, Sondain 1 State each. During pre-bid meeting,
both Securemantra Technologies Pvt Ltd and IBIOS have confirmed that their systems are ANSI-NIST compliant. Representative from M/s Tata Consultancy Services clarified that FACTS – 7 is NIST compliant where as earlier versions are not.

NCRB issued a pre-bid clarification informing that Maharashtra(Morpho), Andhra Pradesh &Telangana (Papillon), Tamilnadu, Gujarat and Goa(FACTS-7), Kerala (NEC) will continue to use their systems. Solution provider was asked to configure these systems for replication and clarified that the amount of data available in these systems was about 37,46,000 FP slips. An option was given to the bidders that one time data of these States can be migrated before configuring for replication or entire data can be transferred with replication method itself since NKN was capable of handling such large data transfer. Clarification from Secure Mantra and IBIOS about NIST compliance has helped the solution providers in estimating the cost for migrating 16,02,880 FP slips maintained in these AFIS’s. NCRB further clarified that remaining data of about 15 lakhs FP slips have to be digitized by engaging Data Entry Operators at the respective State Hqrs.

IV. Demonstration and evaluation of different solutions

Technical evaluation was divided into two parts, namely, general functionality with a weightage of 40% and demonstration of functionalities with a weightage of 60%. The criteria mentioned for general functionality were (a) Quality and superiority of the proposed solution (b) Team size proposed for execution of Project (c) Past experience of the vendor in executing similar assignments and size of assignments (d) performance in NIST-Evaluation of Latent Fingerprint Technologies (ELFT) test and (e) performance in NIST-Fingerprint Vendor Technology Evaluation (FpVTE) test. Since all three bidders have participated in ELFT and FPVTE, clauses (d) and (e) became infructuous. In addition to scrutiny of the bid documents, committee provided an opportunity to all the bidders to showcase the salient features of their solution. These presentations backed the committee in allocating scores to the remaining three parameters of general functionality.

For assessing the technical functionalities, bidders have established their solution in the specific rooms allotted at NCRB Hqrs. One million 10-digit fingerprint records were provided to all the bidders which were extracted as raw images from the CFPB FACTS and NIST compliant States. Executed Tests Cases include matching of ten-digit slips, chance prints, slap prints, single digit specified prints, single digit non-specified prints, palm prints and document cases. Evaluation was based on the biometric accuracy, speed and performance and details are tabulated below:

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Computation description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ten print</td>
<td>In this Test Case, both speed and accuracy are given equal weightage. 10 test cases of ten print slip were given. Score for speed was computed as ten minus time taken for matching and the total score for speed was calculated with the formula 50 *</td>
</tr>
</tbody>
</table>
(total score secured)/100. Score allotted for accuracy was 10, 5, 1 and nil for first hit, second hit, third hit and remaining hits respectively. Total score accuracy was calculated with the formula 50 * (total score secured) /100.

<table>
<thead>
<tr>
<th>Chance print</th>
<th>In this test case, speed was given 30% weightage and accuracy was given 70% weightage. 12 test cases of chance print were given for testing speed and accuracy of the solution. Speed score was computed as fifty minus time taken for matching. Accuracy score was computed as 10,9,8,......1,0 for first hit, second hit, third hit, ......tenth hit, remaining hits respectively. Total speed score was computed with the formula 30 * (score secured) / 600 whereas total accuracy score was computed with the formula 70* (score secured) /120.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Palm print</td>
<td>In this test case, speed was given 20% weightage and accuracy was given 80% weightage. Five test cases of palm print were given for testing speed and accuracy of the solution on 50,000 NIST format database. Speed score was computed as five minus time taken for matching. Score allotted for accuracy was 10, 5, 1 and nil for first hit, second hit, third hit and remaining hits respectively. Total speed score was computed with the formula 20 * (score secured) / 25 whereas total accuracy score was computed with the formula 80 * (score secured) /50.</td>
</tr>
<tr>
<td>Flat/slap print</td>
<td>In this test case, speed was given 40% weightage and accuracy was given 60% weightage. Five test cases of slap prints were given for testing speed and accuracy of the solution. Speed score was computed as ten minus time taken for matching. Accuracy score was computed as 10 and 0 for hit and no-hit respectively. Total speed score was computed with the formula 40 * (score secured) / 50 whereas total accuracy score was computed with the formula 60 * (score secured) /50.</td>
</tr>
<tr>
<td>Single digit specified print</td>
<td>In this test case, speed was given 40% weightage and accuracy was given 60% weightage. Five testcases, i.e., single digit fingerprints were taken using single digit live scanners and the fingers were specified for testing speed and accuracy of the solution. Speed score was computed as ten minus time taken for matching. Accuracy score was computed as 10 and 0 for hit and no-hit respectively. Total speed score was computed with the formula 40 * (score secured) / 50 whereas total accuracy score was computed with the formula 60 * (score secured) /50.</td>
</tr>
</tbody>
</table>
In this test case, speed was given 40% weightage and accuracy was given 60% weightage. Five testcases, i.e., single digit fingerprints were taken using single digit live scanners for testing speed and accuracy of the solution. Speed score was computed as thirty minus time taken for matching. Accuracy score was computed as 10 and 0 for hit and no-hit respectively. Total speed score was computed with the formula 40 * (score secured) / 150 whereas total accuracy score was computed with the formula 60 * (score secured) / 50.

In this test case, speed was given 10% weightage and accuracy was given 90% weightage. Four test cases were provided for testing speed and accuracy of the solution on a database of 10,000 fingerprints. Speed score was computed as five minus time taken for matching. Accuracy score was computed as 10 and 0 for hit and remaining hit respectively. Total speed score was computed with the formula 10*(score secured)/20 whereas total accuracy score was computed with the formula 90*(score secured)/40.

All the above mentioned all the evaluation criteria was specified in the tender document and bidders were fully aware as how NCRB will be selecting the solution. After the demonstration of the solution, representatives have given a letter stating their satisfaction about the manner of technical evaluation was made and test cases were executed. Hard copy was printed and the representative has signed on the hard copy for each test case to avoid future misunderstandings and these sheets have formed the basis for allotting technical scores. However, formally NCRB announced the scores before opening the financial bids.

V. Award of the contract

It was specified in tender document that 30% weightage will be given for financial proposal and remaining 70% will be for technical proposal including demonstration. As per the procedure prescribed in Central Public Procurement Portal (CPPP), financial proposals were opened in the presence of representative of the bidders and M/s Smart Chip Pvt Ltd was declared as winner for executing the NAFIS Project. Master Service Agreement between NCRB and Smart Chip was executed on 24th July 2019. In the quick off meeting held on 25/07/2019, tentative planning was made adhering to the timelines specified in the RFP. Solution provider has submitted the hardware specifications proposed to be deployed at various locations and NCRB has given approval with the condition that proposed equipment should meet the SLAs specified in the tender document. Originally, it was proposed that Pune will be disaster recovery centre but it was shifted to National Data Centre, Bhubaneshwar due to administrative reasons.
VI. Solution overview

Focus of NAFIS solution is on performance and an option of deciding suitable hardware and architecture in order to achieve the specified performance was left open to the solution provider. It is expected that solution should be designed to support 8 Million Fingerprint slips with a provision to upgrade up to 15 million in next 5 years. Moreover, designed solution should also support 500 concurrent users and if necessity arises, it may have to be upgraded to support 1000 concurrent users. Both these clauses are likely to ensure optimal utility of deployed infrastructure without wasting the resources. Bidders were also asked to do optimal hardware sizing so as to ensure compliance to performance and SLAs with their institutional knowledge. It was also informed that architecture proposed at NCRB Hqrs must take the all India load and no changes will be made at NCRB when Police Stations/Courts hardware is procured in the subsequent phase.

After multiple round of discussions and in depth study, NCRB and solution provider has finalized (a) High level System Design and Technical Architecture Document (b) Requirement Definition Document (c) System Overview Design Document (d) System Architecture Design Document. In nutshell, NAFIS solution has three-tier architecture; namely,

1) The first tier consists of the front-end layer, the Graphical User Interfaces (GUI), i.e., the workstations.

2) The second tier includes the workflow manager and various application services for storage and retrieval of data for the workstations and processing of the textual, demographic, and biometric data of the criminals, enrolled either from inked print cards or from live capture.

3) The third tier is the service layer for biometric matching, data storage and user rights.

Entire solution is built in a J2EE N-Tier open environment and data will be stored in XML open format in the Oracle database. All coding is done in Java. All server and workstation hardware is one hundred percent COTS. The system also facilitates generation of pre-defined set of reports for tracking and a complete and totally transparent audit trail for each transaction, including when operators log on and off the system. There is also a set of validation rules to prevent any invalid data entry, as well as messaging to manage routing of information to its appropriate destinations.

The whole solution has five modules namely;

i. **Morpho Enrollment System Application (MESA)** – the live enrollment application which is used for the capture of fingerprints using live scanner
supplied with each workstation. This application works in offline mode also.

ii. **Morpho Biometric Identification System (MBIS)** - the chance print and slip capture application which enables scanning of fingerprint slips and chance prints using flat-bed scanners provided with each workstation. It also has numerous tools for enhancing the quality of chance prints so as to increase the probability of matching. They also have some advanced technologies for extraction of prints images from variety of backgrounds like curved surfaces, revenue stamps, etc and separation of overlapped fingerprints. This application enables fetching of previous antecedents using NFN, State PIN etc. The system supports an integrated palm print, fingerprint and portrait enrollment, storage and matching.

iii. **Document case module** - for the processing of document cases, i.e., cases on questioned documents, forgery, etc. The prints can be matched against each other using this application. We can also prepare charting, i.e., marking of identical points and generate reports.

iv. **Mobile App** - the android application is also known as Biosearch. It could be used in any android mobile phone whose IMEI number is registered under NAFIS by the field officers. The fingerprint taken using single digit live scanners attached to mobile phone can be searched against the national database.

v. **Document Management System (DMS)** - this is also known as ALFRESCO. It could be used as a drive for storing and sharing of documents and files.

Moreover, BI tool provides a much easier and authentic methodology for the generation of various statistical reports for crimes and criminals using various filters. The efficient data management system enables retrieval of desired records using NFN, States PIN etc.

The system is designed in such a way that the enrolment made using live scanners or scanning of fingerprint slips will be stored in the designated virtual partition for each State/UT. This database could be accessed using the NAFIS workstations as well as mobile application. In addition a unique National Fingerprint Number (NFN) will be allotted each criminal and all his antecedents will be added under this NFN. Thus, it ensures one criminal one ID for lifetime. The design document illustrating various functionalities was also submitted by the vendor, which was verified and approved by NCRB.

**VII. Hardware delivery and deployment**

Data centre equipment installed at NCRB Hqrs includes two Dell PowerEdge R540 for
DMZ, ten Dell PowerEdge R440 for high performance processing, two Dell PowerEdge R540 for database, one Dell PowerEdge R540 for PKI, three Dell PowerEdge R440 for training/preproduction, Dell EMC 404 and ME412 for storage and Dell Tape Library. Similar equipment is also installed for Disaster recovery at NDC, Bhubaneswar. With industry standard LINUX Operating System and Oracle database, NAFIS solution has been operationalized at DC and DR.

Further 1381 workstations have been supplied to Central and State Fingerprint Bureaux, Districts and Commissionerates. For performing the desired functionalities at all these locations, other hardware items such as Fingerprint Enrollment Device (FED) (Morpho Top 100R), Flatbed scanner (Epson V600), Single Digit Scanners to be used for mobile application (MSO 1300 E3 micro USB), Single Digit Scanners for biometric login (MSO 1300 E3 USB) and printers (HP Laserjet) were also provided.

VIII. User Acceptance Test (UAT)

UAT was conducted to verify various workflows and functionalities of the solution. A total of 77 testcases were performed on the solution. These test cases were executed successfully on MESA and MBIS. The solution was then tested extensively by enrolling slips, processing chance prints etc. A detailed report of these testcases was prepared along with remarks and feedbacks for improvement. The consolidated report was then shared with the vendor so that the same can be incorporated.

IX. Progress in data digitization, replication, CCTNS integration and migration

Defined scope of work includes digitization of about 15 lakhs physical slips available in different State Fingerprint Bureaux at their respective State capital. In this regard, infrastructure has been established at Bhopal, Lucknow and New Delhi. Out of 5 lakhs FP slips available at Lucknow, till now 37500 FP slips are digitized. Out of 2.5 lakhs FP slips available at Bhopal, till now 25000 FP slips are digitized. It is proposed to bring physical slips of other States/UTs to New Delhi for digitization and till now 21,464 FP slips are digitized belonging to Sikkim, Bihar, Uttarakhand and Rajasthan.

Seven States have about 37,46,000 FP slips and these States are supposed to be configured for data replication since they continue to use their own systems. NCRB has given approval for the Inter-AFIS document but these states are yet to be configured for replication. NAFIS is yet to be integrated with CCTNS for exchange of demographic details. Out of 12.8 lakhs of CFPB Fingerprint data maintained in FACTS, 6.90 lakhs has been migrated into NAFIS. IBiOS data of about 5.04 lakhs from Delhi and Haryana is also migrated into NAFIS.

X. Conclusion

Solution provider for implementation of National Automated Fingerprint Identification System was on-boarded and substantial progress has been made in its implementation.
Customized NAFIS solution has been made operational at NCRB Hqrs and expected functionalities were tested from CFPB, Delhi, Haryana and Rajasthan. User Acceptance Tests conducted on the customized NAFIS gives an impression that deployed solution largely meets the expectations of fingerprint fraternity. Further, this Project adheres to NIST standards and uses Appendix F certified scanners which makes the NAFIS solution inter-operable with other AFIS solutions installed across the globe. Barring configuring the advanced states for data replication and integrating with CCTNS, all other activities have been demonstrated. Solution provider has assured to complete all the remaining activities of third milestone (M3) by the end of October, 2020 and therefore, it is expected that NAFIS Go-Live will be declared in the current year itself.

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I would like to express my special gratitude and thanks to Sh. A Mohankrishna, Deputy Director, NCRB, New Delhi for giving me his support and advice which made this article a reality.
Relevancy of Narco-Analysis Test in present Indian scenario and judicial engineering: An overview

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ABSTRACT

‘Nothing is permanent other than change’ the concept is factually observed in the crime world as well. In fact every society now a days witnessing the high complicated cases where the criminal left nothing to accuse. This creates a big deal to the agencies responsible for prevention and investigation of crime and criminal behaviour. The principle of criminal justice system universally recommends that ‘it is better to let hundred guilty people to go free than falsely convict one innocent.’ It shows that for conviction there is dire need in the strategy of investigation. The one of the significant technique is ‘Narco-Analysis Test’ which now became rare these days. Through this paper the authors have tried to explore the procedure of Narco Analysis test with specific data, its significance for investigation agencies and judicial approaches in this reference.

Key words: Crime, Criminal behaviour, Investigation, Narco-Analysis Test.

Introduction

It is a prime concern of any state to protect the rights and liberties of its citizens, maintain the law and order and punish the guilty which ensures security of innocent and upholds rule of law. For achieving this prime objective, each civilized state establishes criminal justice system. The criminal justice system function with the aid and assistance of some major organs of the state namely, Investigation agencies, Prosecution officers and judiciary. The state cares for its functions and accountability. It also cares that the investigation of the crime and involvement of criminals should not look suspicious while going through the crime-scenes specially where there is no clue to get the evidences so far. While on the other side, the poor rate of conviction tells a different story. It makes the functioning of investigating agencies and overall duty of state in a suspicious status.
Renowned advocate Mr. Fali S. Nariman, while referring to two keynote judgments of apex Court that, “the Criminal Justice System in India is either collapsing or has already been collapsed. It was a time that this problem had to be tackled and tackled speedily unless it will go out from the hand.” As in India the criminal justice system follows adversarial system where the insistence of the court is in search of proof rather in the search of truth. This is the biggest dilemma of any criminal justice system where the court is mere spectator to look the evidences and all responsibility has to be settled with prosecution. The prosecution who depends upon the investigating agencies who lacks lethargic and uniform work culture. On the other hand the offenders go rapid and massive changes in committing crimes. They leave zero evidences in many crimes especially in high profile cases. In this situation even investigating agencies have to go through specific techniques concentrating with psycho-techniques so that those offences which are having single handsets could be recognized and accused himself may come within the clutch of investigating agencies. The Narco-analysis test is one of the psycho techniques which investigating agencies usually apply on criminals or proposed one (Now this test can only be apply when the consent of the person has given).

The blind use of the techniques raises many issues of relevancy and admissibility before the court of law of those evidences which have been extracted from the used technique. Apex court has given various judgments concluded with remarkable statement that, “the consensual test would be permitted.” It is still difficult to understand that, if a test which is against the law of land, how it could be legal with the consent of a particular individual. Here Judiciary have declined this fact that, if the Narco-analysis test is violatory in nature then consensual permission may not be a prevention towards its consequences. It seems supporting, “that the judiciary has closed the door but open the window.”

In the present era the traditional pattern of crimes has changed with the use of super technology. Criminals may goes beyond the boundaries of the thoughts of common person of committing crime. This leads the investigating agencies to come up with all modern techniques for maximum possibilities of resolving the cases and curtail the upcoming crimes. The hindrances of legislation may be seen while going through the entire analysis of the techniques and judicial approaches.

**Objectives**

- To elaborate investigation process in Indian criminal justice system and relatedprovisions.
- To highlight the nature of the Narco analysis test, its importance and acceptance by the Indian criminal justice system.
- To explore judicial engineering in this reference.

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Research issues

Justice delivery system like ours in India lacks dynamism. Provocation of system for inclusion of required changes is the dire necessity and in case of Indian inquisitorial it will prove as ‘Sanjeevni.’ The reason is prosecution must prove the case beyond reasonable doubt even for tiny things, makes entire system futile and it results non-conviction of an accused though it may be a heinous crime. Observing this the researcher has focused on the following issues:

A. What is the significance of Narco analysis Test in reference to criminal justice system for the country like India where the speedy justice is a dream? Where the crime rate is high and conviction rate is low, in such a situation whether the inclusion of test will build some trust and faith in the people on the investigating agencies.

B. How a technique which is otherwise not legal may be legal with the consent of subject sought to go through with the test. In this way collective interest and individual interest should be looked after through the judicial engineering in terms of criminal justice system, law and scientific techniques in trends.

Research methodology

Legal scholarship is torn between grasping as much as possible the expanding reality and relevancy of the Narco-analysis test and its context. In devising the research methodology the researcher had due regard that the research contains legal aspects therefore researcher adopted content analysis, qualitative and descriptive methods of research. Doctrinal method of research has been adopted for the study. These methods are concentrated on books, articles cases of different high courts and supreme court, ideas of different newspapers of India like The Hindu, The Times of India etc. While emphasizing the provisions of Constitution of India, Criminal Procedure Codes as well as Indian Evidence Act, 1872 and International Conventions, The legal propositions and doctrines are gathered through the judgments, Statute laws which include constitution, criminal laws, laws of evidence and conventions. The analysis is based on combined reading of judicial approaches which have been reflected through different judicial pronouncements by the different courts and apex court of country as well as the papers written and delivered by the members of bar and academicians on academic platforms. The research articles published in the journals, books, media reports has been taken as secondary source. While different legislations and various provisions have been used as primary sources for analyzing and preparing this research paper.

Analysis

In India a criminal justice system which is very well acquainted and equipped with the
modern technological advancements is the urgent need. These technologies are very much required for the effective prevention on crime and criminals and to bring the criminals in the strict arena of law. Now a days criminals are committing even traditional crimes in such new and technical ways that it has become a difficult task to the investigation agencies to trace out these criminals with traditional methods of investigation. Traditional evidences against accused persons such as eye witnesses, confessions and statement of approvers are proving insufficient to catch out these modern criminals. Eye witness has now become a rare species, the reason being due to the technological development modus operandi of committing crime has changed and crimes are now committed in a well planned manner. Even if the eye witness is available he changes his version of statement day by day and becomes hostile most of the times because of the fear of criminal elements or corruption therefore the investigation has become most fascinating act for the criminal justice system of any country on which whole justice delivery system is based or dependent. Investigation is a process which is utilized by the investigating agencies for the collection of evidences. The evidence which is used for the purpose of disclosing the story behind a crime and to declare a person accused or innocent. Conviction of an accused totally depends on investigation done by investigating agencies. It means the investigation does not mean merely searching something or someone or a formal or systematic examination or research with traditional concepts. Instead of it means all the systematic techniques which are advanced and effective for the collection of evidence by the investigating agencies. The purpose of the investigation should be that, it should be such way so that criminals should feel deterrence before committing any crime and society should be crime free. Which is also reflected from the statement of Allan Darshowitz:

“\textit{The days of the ‘perfect crime’ are numbered. New Technological breakthrough in crime detection may soon render current police method obsolete A careful criminal cover up obvious clues by wiping away his fingerprints or wearing shoes that make no distinctive marks. But nearly everyone leaves a small perhaps microscopic-part of themselves behind, especially following a crime of violence. And crime solving techniques now on drawing board or in the experimental phase hold good...}”\textsuperscript{4}

Investigation is an important part of criminal justice system that is why it is required to


\textsuperscript{3} Pradeep Singh, "DNA, Fingerprinting and Criminal Justice", googledoc.html, See also, \url{http://www.bhu.ac.in/lawfaculty/bj/2006-07/2006-08BLJ_2007/6_Pradeep_Singh.doc}.

\textsuperscript{4} Allan Darshowitz, Chicago sun Times, 12 Aug. 1987
be equipped with some advanced technological reformations which should not be based on violation of any right. Evidentiary clues are always available at the site of every crime.⁵ The science has progressed as much that it can identify, compare and link even tiniest clue found on the spot which connects to the occurrence. The correct identification of culprits, victims and mutilated, putrefied corpses has always been a legal, social and emotional problem before the public, police and courts.⁶

In Indian scenario as far as investigation is concerned Code of Criminal Procedure, 1973 and Indian Evidence Act 1872 are the parent procedural laws which govern criminal trials. 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 and 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. 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. As far as criminal jurisprudence in India is concerned doctrine of “onus probandi” is in the field and therefore “One shall be presumed innocent till his crime is proved” not only proved but proved beyond reasonable doubt. Some basic things like - what is Evidence as provided under section 3 of Indian Evidence Act⁷, when the statements of accused persons cannot be used as evidence as provided in section 25⁸ and 26⁹, when and to what extent it can be used as evidence. Privileges for the accused persons under Indian Evidence Act have been discussed deeply. Section 132 of Indian Evidence Act tells that a Witness is not excused from answering on the ground that answer will criminate provided that no such answer, which a witness shall be compelled to give, shall subject him to any arrest or prosecution or be proved against him in any criminal proceeding, except a prosecution for giving false evidence by such answer.”¹⁰ The most important aspect i.e. “Opinion of Experts”¹¹ and various provisions related to this has also been introduced and discussed. Expert opinion is quite relevant here because the reports of Narco-Analysis test are the reports of Experts in Scientific Investigations. The Criminal Procedure Code deals with the procedural aspects of investigation and arrest of an accused person and provides various rights to accused persons while Indian Evidence Act, 1872 guides the procedure of admission and confession of evidence and witness because the question of violation and protection of rights of accused persons arises with the process of investigation.

⁵ Prof. Edward Locard, (1877-1966, France) over two centuries ago, given observation that in every case of crime or for that matter in any type of interaction between people or between animate or inanimate objects there will be some form of exchange of materials between the two, even if in traces. This is known as ‘locard principle of exchange’. It is not possible that the criminal has not left the clues at the crime site. The clue may be on the corpus delicti or may be from modus operandi. The clue may be insignificant, invisible, left there unmindfully or scanty. Gathering bits and pieces of clues from the scene of crime or from the victim or from the accused and proper analysis thereof world clearly identify the criminal and crime problem may be tackled.

Important aspect of Investigation is that it becomes very relevant for the conviction of any criminal and for any fair trial.

The investigation is defined under criminal procedure code, 1973 in Section 2(h) which is inclusive in nature, that means no specific definition of investigation given under Indian law though it includes all the proceeding under the criminal procedure code for the collection of evidence by a police officer or by any person other than a magistrate who is authorized by a magistrate in this behalf. So the objective of investigation for an offence is to collect the evidence, and present before the court and on the basis of collected evidence court convict or acquit a person. Section 53, 53-A and 54 of Criminal Procedure Code permits the examination including examination of blood, blood-stains, semen swabs in case of sexual offence, sputum and sweat, hair samples and finger nail dipping by the use of modern and scientific techniques including DNA profiling. But the scientific tests such as Polygraph test, Narco-Analysis and BEAF do not come within the purview of said provisions. Section 161 tells about the examination of witness by police and Section 162 gives a privilege to the accused that statement to police not to be signed and use of statements in evidence. A provision directly related to scientific evidence is mentioned in Section 293 of the Cr.P.C, 1973 by which the report of a chemical Examiner may be used as evidence in any inquiry or trial. This is cognitive fact that the fate of investigation was always challenged; reason behind is the powers of investigation given to the agencies are unique one. No one including judiciary can interfere in the investigation but it should not to be like our systems where there is frequent violation of the rights of the accused. The past experience of police personnel which no one can deny is that the methods like punching with cane, metal rods, weight, butts of the gun, tender coconut after covering in towel, handcuff, beating the person with the hands tied behind or manacled, hanging by the wrists, hanging with the arms stretched out on a bar, hanging by using a pulley after his arms, hanging a person upside down, forced immersion of head in often contaminated water, covering the face with shopping bags stuffed with chillipowder, chilly essence, pepper essence, application of chilly essence, pepper essence etc. in the eyes or pennies, placing a goli between the finger

77 Evidence” means and includes—(1) all statements which the Court permits or requires to be made before it by witnesses, in relation to matters of fact under inquiry, such statements are called oral evidence. (2) all documents including electronic records produced for the inspection of the Court], such documents are called documentary evidence.

8 Confession to police officer not to be proved.—No confession made to a police officer, shall be proved as against a person accused of any offence.—No confession made to a police officer, shall be proved as against a person accused of any offence.”

9 Confession by accused while in custody of police not to be proved against him.—No confession made by any person whilst he is in the custody of a police officer, unless it be made in the immediate presence of a Magistrate, shall be proved as against such person.

10 Code of Criminal Procedure,1973

11 Section 45 of Indian Evidence Act, 1872
bones in the palm and inserting the same between the bones by applying hammer or by placing heavy articles like table chair etc. are very common. These methods to extract evidence have become past which is though not visible but are notorious crimes. If the case where sole person is the subject and is not willing to cooperate, then the modern technologies are the only hope, but it needs support from system.

One of the very debatable technique these days which investigating agencies used in high profile and most suspected cases as an alternative of third degree torture, that is Narco Analysis Test, which involves the intravenous administration of a drug that causes the subject to enter into a hypnotic trance and become less inhibited. The drug-induced hypnotic stage is useful for investigators because it makes the subject more likely to divulge information. The drug used for this test is sodium pentothal, higher quantity of which is routinely used for inducing general anesthesia in surgical procedures. Though relatively new in the field of criminal investigation in India the Narco Analysis has been used in the field of psychiatry since long. The drug like Barbiturates were used in the field of psychiatry since the revelations can enable the diagnosis of mental disorders. In this technique the substances like Scopolamine and Sodium amytal are also utilized. This results the hypnotic stage of suspected person. The Narco Analysis was hailed in the field of psychiatry as compared to other psycho-therapeutic procedures as it saved time by helping the patient overcome reluctance in talking freely about their inner most feelings and experiences. By means of Narco Analysis it was possible to achieve a state of ‘transference’ in many patients whose previous state was apathy, inaccessibility, or even negative transference. As compared to other scientific test such as lie detection test, Polygraph test and the Brain mapping, Narco Analysis is based on entirely different principle. Where the lie detection tests are based on the monitoring of physiological/autonomic responses while answering questions framed by the clinical psychologist, Narcoanalysis is based on how sodium pentothal handles GABA (gamma amino butyric acid), a neuro-transmitter inhibitor and thereby reduces the inhibitory character of the individual. The Arushi Talwar murder Case, Tandoor Murder Case, Godhara Carnage, Arun Bhatt Kidnapping Case, Malegaon Bomb Blast Case, Ajmer Dargah Blast Case and many other important cases in India, the techniques had been used. However the technique raises constitutional, legal and Ethical questions. The administration of drugs such as Scopolamine and Sodium amytal is not good for health.

Judicial interpretation

The Constitution and judiciary are acting as a paramount Guardian of common people

12 “Investigation” includes all the proceedings under this Code for the collection of evidence conducted by a police officer or by any person (other than a Magistrate) who is authorized by a Magistrate in this behalf.


by providing various rights to the citizen. Indian Constitution also provides some basic protections to accused persons in the shape of fundamental rights like - right to privacy, right to silence, right to life and personal liberty, protection from arrest and detention and so on. Right to silence, which is a cardinal principle of criminal law jurisprudence, is also known as “right against self-incrimination” or “privilege against testimonial compulsion”. The privilege against testimonial compulsion is based on the principle “Nemo Tenetur Seipsum Accusare. Article 20(3) of the Indian Constitution embodies the principle of protection against self-incrimination.

In the famous case of Nandini Satpathy v. P.L. Dani which is a landmark in reference to usages of Narco Analysis Test the word “compelled testimony” was discussed as evidence procured not merely by physical threats or violence but by psychic torture, atmospheric pressure, environmental coercion tiring interrogative prolixity, over bearing and intimidatory methods and like not legal penalty for violation.

Art. 21 of Indian Constitution guarantee a fundamental right to life and personal liberty. The legal implications of applying these techniques as an investigative aid raises genuine apprehensions regarding infringement of individual’s rights, liberties and freedoms including the "Right to live with human dignity" as enshrined in Art. 21 of Indian Constitution. After Post Menka, the scope of Art.21 was enormouslyincreased so that this Article could include certain rights as fundamental rights. Right to Privacy is one of those rights which have been evolved by The Supreme Court of India and which is implicit in Art. 21. The Right to Privacy substantially as defined in Govind v. State of Madhya Pradesh & Another, by Mathew, J. who accepted that this right to privacy is an emanation from Art. 19(a), (d) and 21, but right to privacy is not absolute right. He stated as follows:

“The right to privacy in any event will necessarily have to go through a process of case-by-case development. Therefore, even assuming that the right to personal liberty, the right to move freely throughout the territory of India and the freedom of speech create an independent right of privacy as an emanation from them which one can characterize as a fundamental right, we do not think that the right is absolute.”

The cases concerning the validity of scientific tests present an opportunity for crystallizing the boundaries of the right to privacy in the light of scientific and technological advancements. The scientific tests have not been challenged on the ground of violation of the right to privacy. They have been challenged largely on the ground of violation of the protection against self-incrimination under Art. 20(3) and in some cases on the
ground of violation of Article 21, where the rights alleged to have been violated are the
Right to Liberty (in the context of a forced movement of the accused to different parts of
India to carry out the tests), and the Right to Health. It has been stated, however, that
the lie-detector does not directly invade the body, and that the brain-mapping test involves
no direct violation of the body in the real sense of the term, but merely touching the
physique of the person. However, the opinion was restricted to a contention that the
tests involve invasion of the body and are violative of Article 20(3) by being compulsive,
and not the right to privacy under Article 21. Nevertheless, courts have given their opinion
on whether the right to privacy would be violated by the administration of scientific tests
in cases where the challenge was not on that ground, which may be treated as obiter.
It has been opined that the right to privacy is not violated based on the ground that it is
not an absolute right, and it is the statutory duty of every witness who has knowledge of
the commission of the crime to assist the state in gathering evidence on it.

However, a citizen cannot be placed under statutory duty which results in the violation of
a fundamental right. Though the right to privacy is not absolute, it is possible that the
right may be violated by the unregulated administration of scientific tests in certain cases,
say, to extract personal information. Like in the case of right to life, a procedure
established by law in terms of Article 21 which is fair just and reasonable may curtail the
substantive exercise of the right.

In PUCL vs Union of India Supreme Court observed and reasonably conclude that,
“the brain-mapping and the lie detector do not infringe the right to privacy of an individual.
The right to privacy has been held to protect a “private space in which man may become
and remain himself”. Further Article 22[1] and 22[2] of the Indian constitution provide
some rights to the person arrested and detained in custody under the ordinary law of
crime. The words used in Art., 22 (1) are ‘as soon as may be’ which means nearly as is
reasonable in the circumstances of a particular case. This Right of being informed of
the grounds is not dispensed with by offering to make bail to the arrested persons.

In Joginder Kumar vs State of U.P. & D. K. Basu vs. State of W.B. Supreme Court provided detailed guidelines regarding arrest and treatment of accused persons.
“Right to consult and to be defended by a lawyer of his own choice” and “Right to be
produced before a magistrate within 24 hours” is also provided under this article.

The judgment of an eleven-judge bench in the case of State of Bombay vs Kathi Kalu
Oghad where it was observed that self-incrimination means “conveying information
based upon personal knowledge of the person and cannot include merely the mechanical
process of producing documents in court. It has been held in Ram JawayyaKapoor’s

21 Dr. Mrs. Nupur Talwar vs CBI Delhi And Anr., on 6 January, 2012.
22 State Vs. Sushil Sharma, 2007 SC.
23 AIR 1978 SC 1025
case that executive power cannot intrude on either constitutional rights and liberty, or for that matter any other rights of a person and it has also been observed that in absence of any law and intrusion in fundamental rights must be struck down as unconstitutional. Lie detection test comes under the general power of investigation (Sections 160-167, Cr.P.C.). But it must be realized that it is prerogative of the person to allow himself/herself to be put to polygraph test or not and it should not be left to the discretion of police. Unless it is allowed by law it must be seen as illegal and unconstitutional.36 But if it is conducted with free consent' of the person it may be permitted.

In **Yousuf Ali vs State of Maharastra** the supreme court decided that if the accused talks without any investigation, then he cannot claim constitutional safeguards under Article 20 (3) of the Constitution. In another case of **JeetuBhaiBabubhai Patel vs State of Gujarat**, the Supreme Court has taken the view that conducting a Narco analysis test on the accused at the stage of investigation does not violate the constitutional rights guaranteed under Article 20 (3) and Article 21 of the Constitution of India.

In this regard, the famous case of **Ramchandra Ram Reddy vs State of Maharastra**, also known as the fake stamp paper case or the **Telgi Stamp Paper Fraud case** needs special mention. In this case the question was that whether the subjection of six of the accused in the case to certain physical test involving bodily harm such as Narco analysis, Lie Detector Test etc. violated any constitutional right, specifically those guaranteed under Article 20 (3) of the Constitution. The Bombay high court while justifying the Narco analysis test observed that, “statement which is recorded during the course of Narco Analysis will attract the bar of Article 20 (3) only if it is inculpating or incriminating the person making it whether it is so or not can be ascertained only after the test is administered and not before. In our opinion, therefore, there is no reason to prevent administration of this test also because there are enough protections available under the Indian Evidence Act, 1872, code of criminal procedure, 1973 and the Constitution of India to prevent inclusion of any incriminating statement if one comes out after administration of test”.40

In **Gauri Lankesh Murder case** of 2017, a case of the murder of a journalist-cum-activist, initially the accused's counsel told that the accused, Naveen is ready for narcoanalysis test to prove his innocence. On the day of interrogation, the accused refused to go for the test as Special Investigation Team (SIT) forced him to agree for the test.

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24*Ramchandra Reddy V. State of Maharashtra,*
25*Selvi v. State,* also quoted with affirmation in *Santokben Sharmanbhai Jadeja v. State of Gujarat*
27*Ibid.* This observation was made after reliance on § 39 of the Criminal Procedure Code and the *State v. Dharmapal, AIR 2003 SC 3450.*
29*AIR 1997 SC 568*
In *Mohd. Akhtar vs State of Jammu and Kashmir* that happened in January 2018 where a 8 years old girl was gang raped, the eight accused pleading not guilty, wanted to undergo Narcoanalysis test to prove their innocence.

In *Tanushree - Nana sexual assault case* where the actress Tanusree filed sexual assault case on a producer, accepted to undergo Narcoanalysis test as there was no evidence for the same.

In *Niv Patel murder case* that happened in 2018 where the father killed his 2 years old son and threw his body into a river, asked for Narcoanalysis test and the court nodded for it.

Recently in *Re.- An Unfortunate Incident In Unnao Of Rape And Murder Published In Various Newspapers vs State Of U.P.* that happened in June 2018 where a girl accused certain person to have gang-raped her. To prove their innocence, the accused demanded Narco-analysis test. But the father of the girl asked the court to not allow narco-analysis. The High Court directed the father to petition for the inaction of the cops to arrest the accused.

However in India, the Judiciary has finally put some conditions for scientific method of Narco Analysis in criminal investigation after case of *Smt. Selvi and Others vs State of Karnataka*.

The Supreme Court in its wisdom has given long arm and scope for further interpretation while concluding with the voluntary administration of these techniques. The court permitted the test though the evidence extracted would not be admitted in the court and only material evidence which subsequently discovered that would be admitted before the court. It further raises an issue, that how a wrong becomes right if consented.

**Conclusion**

Witnessing the crime status of a country like India being increasing rampantly and on the basis of the judgments pronounced till today it is very clear that scientific methods are very useful when there is no evidence. Our investigating agencies have only option either to become mere audience of the commission of crime or they should go beyond that with the advancement of technology. The “Law must be the living law” and process must flow from changes of society, science and ethics.

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32 A.I.R. 1994 S.C. 1349
33 AIR 1997 S.C. 610
34 1961 AIR 1808, 1962 SCR (3) 10
35 1955(2) SCR 225
36 See Kharaksingh’s case, 1964(1)SCR 332
As Krishna Iyer J. said while delivering judgment that if any conflict found in the individual and collective interest, one can try for harmonious construction and try to fill the gap of society by avoiding the interest of particular individual. The reason is that the society has right to be protected from the criminals. There cannot be any alternative of sentences that the suspected is either innocent or guilty and no one knows the truth better than does the suspect knows. It is therefore stands to reason that where there is a safe and humane measure existing to evoke the truth from the consciousness of the suspect that society is entitled to have the truth.

Recommendations

The law is an instrument for the protection of innocent and intended against the acquittal of guilty person. It is to be kept in the mind that the criminal trial meant for doing speedy justice not to create apprehension in the society. In the criminal justice system it has become more important while looking towards the status of crime and convicted person in India as various reports show that the conviction rate is becoming low and crime rate is increasing rapidly day by day. The status created fear in the mind of individual and has given birth of distrust in the criminal justice system. Though the scientific technology is not to be given frequent hand use to the investigation agencies but it can’t be restricted absolutely because both the situation leads injustice. Looking all aspects following recommendation may be made:

- There is urgent need of policy on criminal justice system which is lacking in India though various committees have been constituted, recommendations have been given but because of absence of government’s will, implementation is still missing.
- All the necessary amendment must be incorporated in the Criminal Procedure Code, 1973 Indian Evidence Act, 1872 Civil Procedure Code, 1908 family law and even Indian Constitution and other major laws so that the use of the test can be made effective and the court may appreciate the evidence collected through scientific approaches without any ambiguity.
- As in the criminal Justice system everyone has specific work and same
must be considered as their duty and it is suggested that the examination of criminal in Narco Analysis Test based on the convincing approach which must not be seen as a part of policing which is lacking in Criminal Justice System in India.

- There is urgent need of policy on use Narco Analysis Test in a criminal justice system as apex court also suggest the same, which clearly laid about the procedure and condition and the person on whom such test can be used.

- Law must be living one which changes according to the needs of society so the law must be amended to give effect to the use of scientific techniques in case of grievous crimes.

- There is need to establish well equipped forensic science laboratory in each state and at the district level for immediate use whenever needed, sometime because of delay the investigation gets effected and ultimately leads destruction of evidence.
Reformation, Rehabilitation and Treatment

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ABSTRACT

Punishment is defined as the harm of suffering that occurs for the harm of deed. It appears to be a well-developed social institution in the most primitive societies and at the dawn of known history. There have been a number of views recommending punishment or some other practice dealing with crime on the ground that it will reform, correct, rehabilitate, treat, improve or cure offenders — and thereby reduce the number of offences (Honderich, 2006). This article argues on different aspects of reformation, rehabilitation and treatment of offenders. Apart from this it also deals with the object of punishment, moral principles for imposition of punishment and after-care programmes. At the end of this article the author has concluded with a recommendation for the practice of treatment.

Keywords: Punishment, Reformation, Rehabilitation, Treatment, Prison.

Introduction

It is impossible to trace the origin of punishment. It appears to be a well-developed social institution in the most primitive societies and at the dawn of known history. Much speculation has been made as to its origin, but in the main rather narrow definitions have tended to justify special concepts. The following is an example: “Punishment is an evil inflicted upon a wrongdoer, as a wrongdoer, on behalf, and at the discretion of society in its corporate capacity, of which he is a permanent, or temporary, member.” This would be a good deal like limiting the concept of sex to its expression in the married state. It would exclude the punishment of captured enemies and animals. The theory that punishment is the outgrowth of private vengeance is supported by overwhelming authority. MacDougal defines it as “the binary compound of anger and positive self-feeling” (Stearns, 1937). There was no criminal law in uncivilized society. Every man was liable to be attacked in his person or property at any time by any one. The person attacked either succumbed or over-powered his opponent. “A tooth for a tooth, an eye for an eye, a life for a life” was the forerunner of criminal justice. Herbert LA Hart has noticed in his book, “Punishment and Responsibility: Essays in the Philosophy of Law”, that the doctrinally evolution of “punishment” never been greater the interest but this topic of punishment also created confusion, as today.

Punishing the offenders is a primary function of all civil states. The incidence of crime and its retribution has always been an unending fascination for human mind. However,
during the last two hundred years, the practice of punishment and public opinion concerning it have been profoundly modified due to the rapidly changing social values and sentiments of the people. The crucial problem today is whether a criminal is to be regarded by society as a nuisance to be abated or an enemy to be crushed or a patient to be treated or a refractory child to be disciplined? Or should he be regarded as none of these things but simply be punished to show to others that anti-social conduct does not finally pay.

It is in this perspective that the problem of crime, criminal and punishment is engaging the attention of criminologist and penologists all around the world. A ‘crime’ has been defined by Salmond as an act deemed by law to be harmful for society as a whole although its immediate victim may be an individual. Thus “a murderer injures primarily a particular victim, but its blatant disregard of human life puts it beyond a matter of mere compensation between the murderer and the victim’s family” (Fitzgerald, 2010). Those who commit such acts, if convicted, are punished by the State. It is therefore, evident that the object of criminal justice is to protect the society against criminals by punishing them under the existing penal law. Thus, punishment can be used as a method of reducing the incidence of criminal behaviour either by deterring the potential offenders or by incapacitating and preventing them from repeating the offence or by reforming them into law-abiding citizens. It is this principle which underlies the doctrines concerning the desirability policies regarding handling of crime and criminals (Paranjape, 2018).

Of the pure or single-reason reform theories to be mentioned here the first two kinds recommend the practice of punishment. The other kinds, which conceive of criminality as something like personal disorder or disability, recommend some practice of treatment (Honderich, 2006).

Reformation

Taking up the theory of punishment, namely, reformative, one finds that movement in that direction began originally as a protest. It was a protest both against the physical conditions in prison and against the moral spiritual degeneration which took place in those conditions. And for a long time the twin object of the reformers remained the erection of clean prisons, decently and fairly administered together with efforts directed at the prisoner to get him abandon his evil ways with the aid of religious and moral exhortation. At bottom the offender was regarded as a free agent able to control his conduct by making a straight-forward moral choice between good and evil. Provided he was decently treated, and shown the errors of his way, it was expected that he would reform. Unfortunately, the results proved disappointing.

Today, it is in fact with the prisoner’s social and psychological readjustment that modern penal reformers are concerned as Grunhut says: This conception of readjustment makes no presumptuous claims to produce a religious conversion or moral rebirth nor does it
pretend to make a man a law abiding citizen by a wise handling of his economic and social problems alone. The efforts are to be focused on the man himself ... penal reformative treatment has taken over this outlook from social work. Constructive methods owe much to the experience of social case work and to psychological insight into man’s personal conflicts (Grunhut, 1948).

The reformative theory aims at doing this by stressing that the offender should, while punished by detection, be put to educative and healthy or ameliorating (but never degrading) influences. He should be re-educated and his character traits be reshaped and put once again in the furnace for being moulded.

In (Narotam Singh v. State of Punjab, AIR 1978), the Supreme Court has taken the following view: “Reformative approach to punishment should be the object of criminal law, in order to promote rehabilitation without offending community conscience and to secure social justice”(Tanu, 2014).

Rehabilitation

A programme of reformation or rehabilitation must contain both positive and negative elements, both pleasure and pain, and both persuasion and authority, and to be most effective it must be based on intensive study of the individual. It must include treatment of physical defects, the reduction of personality maladjustment, and the reduction of influences detrimental to organized society and inculcation of the principles of good citizenship. Such a programme inevitably involves some suffering, if for no other reason than that is, as already pointed out, and requires the restriction of liberty. And yet, if suffering is blindly used for the purposes of control, pain and fear, it may make reformation impossible. The reformative procedure must not be so pleasant either as may encourage further criminal activities; it must be so designed as to produce desirable change in the personalities of the offenders. The resolution of this apparent contradiction is one of the major problems confronting believers in the reformative theory. Further, there are certain individuals, for example, the professionals who are very intelligent and skilful, in whose case there is not much scope for their reformation. Reformative theory looks dubious in its operation in such cases. These difficulties detract from reformative theory being made sole basis for punishment (Chabra, 2002).

Rehabilitation seeks to bring about fundamental changes in offenders and their behaviour. As in the case of deterrence, the ultimate goal of rehabilitation is a reduction in the number of criminal offences. Whereas deterrence depends upon a fear of the law and the consequences of violating it, rehabilitation generally works through education and psychological treatment to reduce the likelihood of future criminality. This theory argues that too much alternation was given for crime, and little was given to the criminals.

This theory rests upon the belief that human behaviour is the product of antecedent causes that these causes can be identified, and that on these basis therapeutic
measures can be employed to effect changes in the behaviour of the person treated.

This requires modification of attitudes and behavioural problem through education and other skill training. The belief is that these might enable offenders to find occupation other than crime.

If a dangerous offender needs to be located until he/she is no longer dangerous, it is the duty of the state to rehabilitate the offenders so that they can be released. That is why rehabilitation is termed as the other side of restrain coin.

This theory is closely related with forms of positivist criminology which locates the causes of criminality in individual pathology or individual maladjustment whether psychiatric, psychological or social.

This theory tends to regard the offender as a person in need of help and support. It says that criminals are socially sick people who need some kinds of treatment (Girma & Feleke, 2013).

**Treatment**

Those who break the law, we have often been told, in one way or another, do so as a consequence of illness, disorder, disability or the like and so we should treat them rather than punish them. These judgements have been expressed or implied in books and articles but not, I think, satisfactorily explained or defended (Honderich, 2006).

In this context of reformative treatment, it is sometimes suggested that in it there is no aspect of punishment in the sense of some sort of pain and, therefore, reformatory treatment, it is argued, cannot be regarded as punishment. It needs, however, being kept in view that it is highly dubious even from a purely theoretical point of view whether any interference with normal living can ever be completely non-punitive; punishment and treatment are so integrated as to be inseparable. Even the most kindly treatment imaginable, confinement in Ashoka Hotel, Delhi, with very solicitous attentions on the part of the jailer has its punitive element; the normal person would oppose it. Though reformatory treatment involves benevolent justice, yet the detention of the offender for a sufficient period of time to bring about realization, repentance and readjustment is in itself a punishment. It is the mental pain received from the deprivation of liberty that is punishment. Man wants and likes liberty. To him it counts even more than comfort and he will bear pain if his liberty is not taken away. A school boy, for example, will prefer caning to detention in task class in the evening when he will like to play game. We can, therefore, validly describe the detention for reformation as a form of punishment. In fact, the notion that it is possible to administer medical and psychological treatment without at the same time applying punishment would disappear on any acquaintance with even the best asylum for mentally diseased offenders. Confinement and close supervision are punitive regardless of the attitudes of the attendants.
Just as treatment is to some extent punitive, so punishment in itself, if wisely administered can also rehabilitate. According to Hegel punishment as such tends to reform (Ewing, 1929). Of course, mere infliction of useless and unnecessary pain leads to no results. At the same time, the prisoner needs being convinced about justification of punishment before he can be reformed. In his study of Ethical Principles, Dr. James Seth observed: In virtue of his manhood or personality the criminal must be convinced of the righteousness of the punishment before it can work out in him its peaceable fruits of righteousness. Here in the force of this appeal, in such an awakening of the man’s slumbering conscience lies the ethical value of punishment. Without this we have only superficial view of it as an external force operating upon the man. A man may be restrained from a particular act of crime on a particular occasion, but if the criminal nature in him is not touched, the criminal instincts are not extirpated – they will bloom again in some other deed of crime. The deepest warrant for the effectiveness of punishment as a reformative agent is found in its ethical basis as an act of justice. True reformation comes only with the acceptance of punishment by mind and heart, as the inevitable fruit of the act … The judgment of the society upon man must become judgment of the man upon himself, if it is to be effective as an agent in his reformation. Punishment is in its essence, a rectification of the moral order of which crime is a notorious breach. Yet it is not a mere barren vindication of that order (Seth, 1921).

It being no easy task to convince the offender of justification of punishment so that he willingly accepts it and in the process is reformed, the trend these days is not to use the punishment as a means but as a media for applying reformative treatment. Its existence is all the same very necessary because without it reformatory programme cannot ordinarily be enforced. It provides necessary framework for carrying out rehabilitative schemes.

**Object of punishment**

The present criminal law, has its roots in the medieval view of human nature. Yet it has not remained altogether unaffected by the more recent insights into the influences which shape people’s lives. The criminal law has been modified by the altered views of human nature in the acceptance of juvenile delinquency laws, the juvenile delinquent court, and the devices of probation and parole. In these cases the primary object is not punishment but reformation and rehabilitation. It must be emphasized again and again that these devices are not premised upon mushy sentimentality for the unfortunate victim of circumstances but are calculated to *protect society* through preventing a recurrence of future criminal conduct (Cantor, 1940).

The immediate principal end of punishment is to control action. This action is either that of the offender, or of others; that of the offender it controls by its influence, either on his will, in which case it is said to operate in the way of *reformation*; or on his physical power, in which case it is said to operate by *disablement*; that of others it can influence...
otherwise than by its influence over their wills, in which case it is said to operate in the way of an example. A kind of collateral end, which it has a natural tendency to answer, is that of affording a pleasure or satisfaction to the party injured, where there is one, and, in general, to parties whose ill-will whether on a self-regarding account, or on the account of sympathy or antipathy, has been excited by the offence. This purpose, as far as it can be answered gratis, is a beneficial one. But no punishment ought to be allotted merely to this purpose, because (setting aside its effects in the way of control) no such pleasure is ever produced by punishment as can be equivalent to the pain. The punishment, however, which is allotted to the other purpose, ought, as far as it can be done without expense, to be accommodated to this (Bentham, 1907).

**Prevention of Crime and Protection of the Society**

Different theories of punishment and the literature has till recently been characterized by the advocacy of particularistic justification of punishment – retribution or deterrence or correction. If correction is espoused, retribution is damned as a vestige of man’s instinctual past, while deterrence is excluded as ineffective, irrationalistic and even as a cause of crime. In official circles, on the other hand, deterrence is generally vigorously supported as necessary and potent defence of social values and there is generally summary dismissal of correction. The theory of retribution which emphasizes the justice of punishment has also been surviving though noticed infrequently. However, realizing good points and drawbacks of different theories as pointed out above, there is now emerging the integrative view and this is receiving increasingly wide support. In this, all types of valid justifications - justice, deterrence and reformation, with legality, of course, always presupposed - are combined. He, who contributes to this view, when he adversely criticizes deterrence or correction or retribution, does not oppose those objectives. If he is consistent, he criticizes only exclusive or excessive claims in their behalf.

**Inclusive Theory of Punishment**

It is now recognized that the prevention of crime and the protection of the society are ends accepted by every-one. It has been well said that: The principle of punishment has been confused by atavistic ideas of retribution, revenge and exploitation, whereas the only proper consideration for the state in inflicting punishments is the well-being of society (McIver).

It seems also to be widely agreed that involuntary incarceration is punishment regardless of the kindness of the administrators or the unexceptionable quality of the treatment programme. And although there are unfortunate relapses, only infrequently does one find the punitive sanctions of the civilized laws equated with vengeance or other merely emotional reactions or the cruel imposition of suffering as an end in itself. In view of this realization, generally the inclusive theory of punishment has been gaining ground in
recent years, thereby trying to make best use of different modes of execution of
punishment in respective situations suited to individual offenders. Some forms of
punishments achieve at least in part all the three principal objectives of punishment,
namely, retribution, deterrence and reformation- reasonably long-term of imprisonment.
Its deterrent effect appears to be great in case of persons with no previous experience
of prison, a large proportion of whom do not commit crime again but this effect diminishes
in proportion to the number of times a person is sentenced. These sentences of
imprisonment provide framework for enforcing treatment programme. It also meets
retributive demands by virtue of its length comparing comfortably with the crime. Very
often on the other hand, a particular form of punishment may achieve only one or two of
the objectives, e.g. fine, probation.

Thus, it is clear that no theory of punishment can achieve the real purpose of punishment
singly. Caldwell observes in this regard: Punishment is an art which involves the balancing
of retribution, deterrence and reformation in terms not only of the court and the offender
but also of the values in which it takes place and in the balancing of these purposes of
punishments, first one and then the other, receives emphasis as the accompanying
conditions change (Caldwell, 1956).

Belief in particular 'isms' in exclusiveness is accordingly dwindling on account of their
failure to meet all types of cases. These have been felt to be not providing an efficient
basis of appropriate punishment for the purposes of protecting society from the onslaught
of crime. It is being realized that proper punishment shall have to take into account the
various approaches in proper perspective and make use of, not the same in every case
dogmatically but any one or more as considered best suited to a situation. If, for example,
first offender is to be tackled, provisions of law and quantum and manner of punishment
administered to them shall have to be different from one for those who have spent their
years in the wretched life of crime. Former may be dealt with by probation and the latter
may require confinement for security reasons, in prison, or even admission to prison
colony. Reformation has occupied somewhat more important position and severity in
punishment as refrained from. As such while dealing with latter class of cases, there is
tempering of the different objectives while chalkling out programme for them (Chabra,
2002).

After-care Programmes

Theoretically, the difficulties of a prisoner are over after his release since not only is his
personal freedom recovered but his prison training makes him a fit person to start a
new life on a clean slate. In practice, this is rarely the case. As the Central After-care
Association of England put it succinctly, "many a prisoner approaches at the end of a
long sentence in a state of bewilderment and fear as to what the future will hold for him"
(Central After-Care Association Report, 1959). This is evident in view of the stigma, loss
of job, loss of family ties and alienation from friends which may directly flow from the
imprisonment. The Maxwell Committee on Discharged Prisoners’ Aid Societies described the plight of many persistent offenders thus: Such offenders often have no home or family ties, or no such home or family ties as will supply the support and stimulus they need; no trustworthy friends; no niche in society to buttress any legitimate self-esteem: there is merely a bewildered and frustrated malcontent floundering in a sort of social limbo between prison and a world with which he cannot come to terms; a man not confirmed in criminality but with no strength or standard upon which to build a useful and honest life (McClean & Wood, 1969).

After-care has two connotations. In its narrow sense, it is somewhat like probation, i.e. the released person is put under the care of a probation officer performing the role of a social worker. In its wider sense, after-care implies all efforts to enable the prisoner to overcome all the various social, economic and psychological problems after his release. Under the treatment philosophy, the after-care work, in a way, should commence as soon as the convict begins his prison life. In its very rudimentary form, it simply means that at the time of departure the prisoner is given some money by the state or his savings, made out of the wages earned in the prison, and a set of clothes to equip him for the “new life”.

All-India Jail Manual Committee, 1957

In India, the after-care work as done for a very long time by philanthropic organizations which, in spite of some good work done by them had all the limitations which such private organizations tend to have in this country. Various Jail Committees in their reports emphasized the need for having effective after-care programmes but hardly anything was achieved. The All-India Jail Manual Committee, 1957 observed: After-care is the released person’s convalescence. It is the process which carries him from artificial and restricted environment of institutional custody to satisfactory citizenship, resettlement and to ultimate rehabilitation in the free community... Institutional training, treatment and post-release assistance are a continuous process. After-care service, therefore, should form an integral part of correctional work.

As a consequence of the Gorey Committee’s report on the subject, a comprehensive after-care programme was envisaged in the second and third Five-Year Plans at the instance of the Central Government. A few after-care homes and shelters were set-up in some states but because of lack of sustained interest and paucity of funds, most of them were either closed or became defunct. As could be expected, the Jail Committee, 1980-1983 has pleaded for the revival and re-strengthening of these programmes and several recommendations have been made for the development and functioning of after-care programmes (All-India Jail Reforms Committee Draft, 1983).

Besides emphasizing the role of voluntary agencies and the need for proper counselling and adequate financial assistance to prisoners at the time of their release, some other recommendations have also been made:
1. After-care programmes should be a statutory function of the Department of Prisons and Correctional Services. At district level, the probation officer is to be in charge of these programmes.

2. After-care and follow-up units should be created for the assessment of the needs of the released prisoner.

3. Legal assistance to be provided to those whose lands have been grabbed.

4. Material assistance in the form of food, clothing and journey expense for reaching their destination to be provided to the prisoners on their release.

**After-care Programmes in India**

The Indian Jail Conference of 1877 for the first time in India discussed the question of helping ex-convicts but did not take any positive steps to implement it. However a Discharged Prisoners Aid Society was organized as a non-official agency in U. P. in 1894. Similar societies were organized in Bengal in 1907 and in Bombay in 1914, but these societies could not continue to function for want of government support and public sympathy. Like U. P. Jail Reforms Committee 1946, some committees were established in few states in order to help the prisoners on their release. Simultaneously, steps were taken by the provincial governments to help the discharged prisoners and the Discharged Prisoner’s Aid Societies were formed in many provinces in the country. Mainly the object of such societies was to help the released prisoners in their social and economic rehabilitation in the community (Barik, 2008).

**The role of crime statistics in after-care and rehabilitation of offenders**

The major purpose underlying crime statistics is to explain and predict the phenomenon of criminality and focus attention on causes of different crimes in different locations. The reliability of such statistics, however, depends on the validity of data collected for the purpose. Analysis of data involves the ordering or breaking down of relevant figures into constituent parts in order to find out the cause for increase or decrease in the rate of various crimes. Thus, statistical methodology serves as a useful technique for formulating strategies to combat crimes and criminality. It must, however, be pointed out that collection and collation of statistics is really a specialised subject which requires presentation of information in the form of tables, charts, graphs etc. Therefore, this work should be handled only by well trained and qualified professionals who have real aptitude for this work. Besides crime statistics, the periodical statistics regarding juvenile delinquency, probation, parole, reformatories, etc., have helped immensely in working out effective programmes and strategies for after-care and rehabilitation of offenders (Paranjape, 2018).
Moral principles for imposition of punishment

Although punishment has been a crucial feature of every legal system, a widespread disagreement exists over the moral principles that can justify its imposition. One fundamental question is why and whether the social institution of punishment is warranted. The second question concerns the necessary conditions for punishment in particular cases. The third relates to the degree of severity that is appropriate for particular offences and offenders.

Since punishment involves pain or deprivation that people wish to avoid, its intentional imposition by the state requires justification. The difficulties of justification cannot be avoided by the view that punishment is an inevitable adjunct of a system of criminal law.

The question: “What are the rationales behind punishment?” remains unanswered. This question relates to the theories of punishment. Generally, punishment contributes to the preservation of public order through inflicting the wrong doer who is expected to behave in the future to become a good citizen and to inspire fear in any one “who witness the punishment to wrong doer, and to make them prudent.” This is the primary rational of punishment. Incapacitation as a theory of punishment is generally been regarded as the most important.

Incapacitation

Incapacitation is the use of imprisonment or other means to reduce the likelihood that an offender will be capable of committing future offences.

It makes the offender incapable of offending for substantial period of time. It is popular form of “public protection” and sometimes advanced as general aim. This pragmatic theory argues that offenders need to be separated from the rest of the society in order to protect ordinary citizens from their committing other offences. The implicit premise is that, if not incarcerated, offender will continue in their criminal way.

In ancient times, mutilation and amputation of the extremities were sometimes used to prevent offenders from repeating their crimes. Modern incapacitation strategies separate offenders from the community to reduce opportunities for further criminality. Incapacitation is sometimes called the “lock’em up approach” and forms the basis for the movement forward prison “warehousing.” It is confined to particular group, such as “dangerous” offenders, career criminals or other persistent offenders.

Capital punishments and severing of limbs could be included as incapacitation punishment. But there are formidable humanitarian arguments against such irreversible measures.

What has been claimed for incapacitating sentencing is the imposition of long, incapacitating custodial sentence on the offender deemed to be dangerous. The
proponents of this theory argue that one can identify certain offenders as dangerous who are likely to commit serious offence if released into community in the near future and the risk of victims are so great that it is justifiable to detain such offender for long period.

Opponents of this theory have chief objection: over prediction. They say that incapacitating sentencing draws into its net more non dangerous than dangerous offenders. For instance, in the UK, study indicates that only 9 of 48 offenders predicted as dangerous, committed dangerous offences, within five years of release from prison. An equal number of dangerous offences were committed by offenders not classified as dangerous.

This indicates that there are hundreds of offenders serving discretionary sentence of life imprisonment in the UK and Wales, imposed on the ground of predicted dangerousness, and there is no way of telling, whether the predictions on which these sentences rest are not over caution in ratio of two-to-one(Girma&Feleke, 2013).

Conflict among Different Theories

For many years, most of the literatures on the subject of punishment were devoted to advocacy of a particular theory to the exclusion of others.

Those who espoused the rehabilitation theory condemned the other theories, while, those who favoured the deterrence theory denied the validity of all the others, and so on.

For instance, if criminals are sent to prison in order to be transformed to good citizen by physical, intellectual, and moral training, prison must be turning into dwelling house far too comfortable to serve as any effective deterrent to those classes from which criminals are chiefly drawn.

In the cases of incorrigible offenders, there are people incurably bad, or some men who by some vice of nature, are even in their youth beyond the reach of reformatory influence.

The application of purely reformatory theory therefore, would lead to astonishing and inadmissible result. The perfect system of criminal justice is based on neither the reformatory nor the deterrent principle exclusively, but the result of compromise between them.

In this compromise, it is the deterrent principle which would possess predominate influence, and its advocates who have the last word. This is the primary and essential end of punishment. All others are merely secondary and accidental.

It is necessary, then, in view of modern theories and tendencies, to insist on the primary importance of deterrent element in criminal justice. The reformatory element must not be overlooked. For instance, in case of youth criminals and first offenders, chances of
effective reformation are greater than that of adults who have fallen into offences (Girma & Feleke, 2013).

**Conclusion**

The purpose of punishment is to prevent the criminal from doing fresh harm to fellow citizens and to deter others from doing the same. Punishment is now acknowledged to be an inherently retributive practice. A liberal justification of punishment shows that society needs the threat and the practice of punishment. It is also seen that the public is unlikely to abandon the notion of punishment.

There is a yet larger truth that must be kept in mind in connection with the general theories that all criminality is disorder, illness or something of the sort, not at all a matter of offences freely committed. This large truth involves no wide or extended idea at all of disorder, illness or the like. It has to do only with disorder, illness or the like that is now accepted to be such by ordinary and conventional medical judgement (Honderich, 2006). Therefore the practice of treatment is recommended in place of practice of punishment to improve the behaviour of the offenders and to reduce the number of offences.

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Emerging Human Trafficking & Abduction in Guise of Surrogacy in India

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Introduction & Meaning Surrogacy

The word surrogacy is derived from the Latin term ‘surrogatus’ meaning a substitute, that is, “a person appointed to act in the place of another”. According to the Black’s law dictionary, surrogacy means the process of carrying and delivering a child for another person. In a simple terms, Surrogacy is an assisted reproductive technique in which a woman namely the surrogate mother is implanted with embryo conceived of gametes of either or both of the intending couples, or gametes from donors but wherein none of the gametes belong to surrogate mother thereby there is no genetic connection with the child she gives birth to, she undertakes to hand over the custody of child to the couples for whom she carries the child either in return for monetary payment in lieu of medical, health expenses or otherwise usually under a surrogacy agreement to this effect.

Apart from the general definition, there are statutory definition of surrogacy under the Indian draft Bills Surrogacy (Regulations) Bill 2016 as surrogacy” means “a practice whereby one woman bears and gives birth to a child for an intending couple with the intention of handing over such child to the intending couple after the birth”.

Indian Legal Framework on Surrogacy

There are series of draft bills towards statutory enactment namely the Assisted Reproductive Technologies Bill, 2010, 2014 and Surrogacy (Regulations) Bill 2016. The former ART bill is replaced with the latter 2016 bill but there is no gazette notification of the same hence presently there is no binding Act on Surrogacy in India. There are medical guidelines and circulars issued by concerned Ministry, Government of India. There are inconsistencies among these regulatory instruments as well in prescribing conduct of surrogacy and there are limitation in these instruments as these have many oversight and unaddressed issues leading to inadequate protection of right and interests of stakeholders and also leading to conflict among their rights, interests.

Though in India, surrogacy is offered by the fertility clinics in compliance with Indian Council of Medical Research (ICMR) National medical guidelines for Indian nationals involving monetary compensation under an agreement between the couples and
surrogate mother usually endorsed by the fertility clinics finally culminating with handing over of custody of child by the surrogate to couple on the delivery. However, Surrogacy for foreign nationals which was earlier largely practiced, this is restricted in India.

**Significant Legal & Regulatory Instruments on Surrogacy**

In the absence of a binding national level Act, some of the important legal, regulatory instruments on surrogacy laying down the permissible code of conduct for IVF, surrogacy are discussed as following:

a. **The ICMR National Guidelines for Accreditation, Supervision and Regulation of Assisted Reproductive Technologies Clinics in India or the ICMR Guidelines 2005**

   This is the first ever national level guideline on surrogacy issued by Indian Council of Medical Research (ICMR), nodal agency of Ministry of Health & Family Welfare Government of India enumerating permissible medical procedures, bio medical ethical concerns related to practice of surrogacy.

b. **The Assisted Reproductive Technologies (Regulations) Bill 2008**

   This is the first ever legislative draft on surrogacy formulated by the Indian Council of Medical Research (ICMR) under the aegis of Ministry of Health and Family welfare Government of India taken after ICMR Guidelines seeking to regulate surrogacy in India. This bill was revised in the year 2010 and then in the year 2014. This bill proposed for commercial, international or overseas surrogacy to be practiced in India.

c. **The Law Commission Report No. 228 titled as Need For Legislation to Regulate Assisted Reproductive Technology Clinic as well as Rights & Obligations of Parties to a Surrogacy, year 2009**

   The Law Commission Report has suomotu taken up the ART Bill 2008 for consideration concerning the large scale practice of ART and contesting issues involved in the same. This Commission report supported legalization of altruistic surrogacy but at the same time providing for reimbursement of all reasonable expenses for carrying child to full term and prohibition on commercial surrogacy. This Commission report did not prohibit overseas or foreign surrogacy rather directed for an enactment on the same.

d. **The Surrogacy (Regulations) Bill 2016**

   The Surrogacy (Regulation) Bill 2016 is drafted by the Group of Ministers (GoM) constituted at the behest of the Prime Minister’s Office including Health Minister, Commerce Minister and Food Processing Minister. The surrogacy Bill under its statement of objects states the need for controlling misuse of ART technology, illicit and unethical practices, to prohibit exploitation of surrogate mother and child born of...

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*Emerging Human Trafficking & Abduction in Guise of Surrogacy in India*
surrogacy yet the surrogacy bill is silent on ethical guiding principles for regulating conduct of surrogacy in India.

The preamble under surrogacy bill merely provides for “regulation of practice and process of surrogacy”. The main provision of the bill is this bans commercial and overseas or foreign surrogacy in India this bill allows altruistic surrogacy with the surrogate mother being the family relative of the intending couple commissioning surrogacy. The bill allows only Indian heterosexual married couples married over five years and above to commission surrogacy on prescribed medical grounds and after satisfying other procedural consideration. Though this bill is subject to critic on grounds of host of lacunas. One of such major lacuna is the complete oversight of emerging issues of trafficking, abduction of surrogate mother, child born of surrogacy under this Bill.

**Issues of human trafficking of women to be surrogate mother, child born of surrogacy at national & international level**

The commercial form of surrogacy involves monetary payments in lieu of medical expenses related to surrogate pregnancy to surrogate mother. Commercial surrogacy involves exchange of monetary payment between the couples and surrogate mother for exchange of custody right over child and payment of monetary returns to surrogate mother for her gestational services. Such form of commercial surrogacy may constitute misuse of medical technology leading to illicit practices as forced, disguised abduction, movement of women and children across borders and within the territorial jurisdiction for monetary vested interest leading to human trafficking. For this reason, commercial surrogacy is found to be associated with human trafficking involving sale of child born of surrogacy, abduction, sale of women to be surrogate mother under series of judicial pronouncements.

Such form of trafficking in connection with surrogacy is one of the worst forms of “reproductive health exploitation” either in the course of being egg donors, surrogate owing to medical mal practices, medical misuses of technology, illicit cross border movement or trafficking of women for removal and sale of reproductive gametes to serve as egg donors or hiring or availing gestational carrier as surrogate mother in promise for monetary payment for commercial vested interests by brokers or agents who act as middle men between the couples and the clinics to procure potential surrogate mothers, egg donors. Similarly the children born of surrogacy are also made part of trafficking for human life.

**Trafficking of Women & Children born of Surrogacy – Case Studies from States across India & Neighbouring Areas**

There have been reports of growing trafficking of women under the guise of surrogacy from the south Asian nations namely Nepal, China to foreign nations for the same. Women from bordering nations are abducted into India and women from rural areas as
Bihar, Uttar Pradesh are moved to hubs of surrogacy as Gujarat in India for surrogate motherhood

Such case of sale or trafficking of child born of surrogacy is reported from Gujarat, a doctor named Bharat Atit running infertility clinic had sold two children for eight lakhs posing as surrogate children belonging to two different intending couples respectively in Porabander, Gujarat in the year 2009. The doctor was charged with criminal charges of human trafficking or illegally selling of babies, fraud, forgery and conspiracy under relevant section of the Indian Penal Code (IPC).

At inter country level, there has been a unprecedented rise in cases of women trafficking, abduction, illegal inter country transportation of poor, uneducated Nepali women to be commercial surrogate mother into India from porous bordering areas with India namely Nepal gunj, Biratnagar and Jhapawhich have become regular destinations for commercial surrogacy. Women from rural areas as Bihar, UP are moved to hubs of surrogacy as Gujarat in India for surrogate motherhood. Similar such reports surfaced from the southern regions of India as Telangana and other regions. This causes trafficking of women for removal and sale of reproductive gametes to serve as egg donors or gestational carrier as surrogate mother for profiteering and vested interests.

It is reported that there is widespread inter country movement or transportation of Chinese women to be surrogate mothers for monetary returns into other foreign nations. Though surrogacy is illegal in China. At international level, there is an infamous case of the internationally renowned reproductive law attorneys namely Hilary Neiman and Theresa Erickson, who pleaded guilty to the charges running a human trafficking surrogacy ring, conspiracy to sell surrogate babies and these attorneys are subject to five years in prison along with fine by the federal court in San Diego.

Such practice are gross violation of right of child, women under India’s constitutional and statutory enactments, International Convention. Such cases indicate abject commoditization, devaluation of the human life as both women and child’s life. This besides being a legal violation, it is also ethical violation of life. This constitutes grave violation of rights of child including right to life, survival under the relevant provisions of statutes, conventions.

**Indian Legal Framework against Human trafficking under Indian Constitution & Statutes -**

Under the Indian constitution India has a legal mandate, international treaty obligation following provisions of Directive Principles of State Policy (Art. 39(f), 45) providing for “early childhood care” and “protection of child against material and moral abandonment” under Indian constitution and the Commissions for Protection of Child Rights (CPCR) Act, 2006.
This is also international treaty obligation following ratification of UN Convention on the Rights of the Child, 1989 on the States to take all appropriate national, bilateral and multilateral measures to prevent “sale of or traffic in children for any purpose or in any form” and to protect the child from all forms of violence, injury or abuse, maltreatment or exploitation. The UNCRC Optional Protocol to the Convention on the Rights of the Child on the Sale of Children prohibits sale of child through any act or transaction for remuneration or any other consideration.

The Indian Penal Code under relevant provision mentions the offense of human trafficking including Importation of girls, minor girls from foreign country (Section. 366A, 366B IPC), also under Section 370 of IPC dealing with human trafficking following criminal law amendment. The Immoral Traffic (Prevention) Act 1956 also criminalizes human trafficking and imposes criminal sanctions.

**Issues & Challenges in Existing Human Trafficking Legal Provisions at National level**

**i. Limited Scope of Existing Legal Provisions on Human Trafficking**

Though there are legal provisions under Indian constitution as well as Indian Penal Code under relevant provision against human trafficking and description of offense of trafficking including imprisonment, fine. But such description of offense of trafficking is confined to prostitution based on sexual generally. Where as in the modern day with the advent of assisted reproductive technology including surrogacy, the offense of trafficking may be for non sexual motives as using of woman’s body for gestation, extracting gametes which may not fall under the existing definition of human trafficking provided under Indian Penal Code (IPC) drafted way back in the year 1860, Therefore, this offense needs to be specifically addressed. This will ensure sufficient safeguard for both surrogate mother, children born of surrogacy against exploitation.

**ii. No record keeping on Trafficking in guise of Surrogacy -**

There is no data collection, record keeping on the total number of women registering as surrogate mothers, woman registering as egg donors, children born of surrogacy annually in India. There is nil record on the total number of surrogate mothers incurring maternal mortality or organ loss or serious health risks during the course of surrogate pregnancy annually in India, there is nil record on the total number of children born of surrogacy incurring infant mortality, the total sex ratio of children born of surrogacy, the total number of birth certificates issued to child or children born of surrogacy annually in India.

Though the data on trafficking of women and children are compiled by NCRB but there is nil record on the on offences of human trafficking in connection with ART, Surrogacy. Hence there is a dearth of data on the same.
Limitations in recent Surrogacy Bill 2016 on Human Trafficking

There are serious gaps under the provisions of the Bill in addressing issues of human trafficking in guise of surrogacy,

**Limitation of Indian Penal Code (IPC) on traffickling in connection with surrogacy-**

The Surrogacy Bill in its statement of objectives prohibits and penalizes “exploitation of surrogate mother,” with imprisonment for a term which shall not be less than ten years and with fine which may extend to ten lakh rupees. But the term “exploitation of surrogate mother” is not defined in the Surrogacy Bill. There is no provision in the surrogacy bill to address such cases of sale or trafficking of child in the guise of surrogacy, there is no offense no punishment set out in surrogacy bill for the same.

It is suggested that the surrogacy Bill may provide for “exploitation of surrogate mother”, child born of Surrogacy to “include trafficking or sale, abduction or inter country movement of surrogate mother for forced gestation, extracting gametes or oocytes” without their consent under force or coercion or threat or under deception for commercial purposes or vested interest and the same may be termed a punishable offense under the Surrogacy bill with strict criminal sanction against the same.

**Prior screening background check of commissioning couples before commencing surrogacy –**

The intending couples seeking to commission surrogacy in India should be undergo a prior background check including their socio economic educational, familial background including their criminal background check by appropriate government authority in order to be considered eligible for commissioning surrogacy. A similar mechanism as done in case of adoption through home study report by social worker ought to be followed in case of surrogacy as well. A written declaration to this effect following such background check may be ensured. Such back ground check of the concerned couples checks any misuse of surrogacy for any illicit purposes as human trafficking, this secures better parental responsibility and custody care arrangements for the child.

**Written Undertaking from Intending couples on illicit practices against surrogate child-**

The Intending couples are required to submit a legal undertaking to the concerned appropriate government authority stating that they will not involve the child or children in any kind of pornography or paedophilia before commissioning surrogacy and the couple should provide another legal undertaking in writing to take care of the child/children born through surrogacy before commissioning surrogacy by intending couples before commissioning surrogacy. Similar provisions were provided under the earlier Assisted Reproductive Technologies (ART) Bill 2014. This safeguards interest of child born of surrogacy.
No Restraint on inter country movement of surrogate mothers across borders by clinics—

It is suggested that the surrogacy bill may impose prohibition on "receive or send an Indian citizen surrogate mother for surrogacy abroad by ART clinics and ART banks" as provided under the earlier ART Bill 2010. Such prohibition on cross border movement of surrogate mother against the due consent of surrogate mother or under deception, falsehood, fraud, co coercion is a control against misuse of surrogacy for illicit purposes as human abduction, trafficking across border of surrogate mother and necessary to check exploitation of surrogate mother under the guise of surrogacy.

The provision checks cross border abduction or trafficking and exploitation of Indian women to be surrogate for illicit purposes.

Contemporary Landmark Indian Cases against trafficking in guise of surrogacy –

Baby Manji Yamada vs. Union of India (UOI) and Another, 2008

This is the first ever case where in the Supreme Court pronounced on the legality of surrogacy in India in the absence of any legislation on the same. The Supreme Court defined surrogacy and described various aspects including the reasons, practiced forms, the related stakeholders related to surrogacy. However, this judicial pronouncement leaves several unresolved issues with regard to legality, conduct of surrogacy in India and fails to set a precedent.

In this case, the supreme court (SC) adjudicates writ petition filed under Article 32 of the Constitution of India filed by the grandmother (petitioner) of the child born of surrogacy to challenge the directions ( habeas corpus) issued by the Rajasthan High Court relating to production of child born of surrogacy namely Manji Yamada, The petitioner requests issue of passport for the child so that the chid may be taken to Japan to be with its biological parent.

Previously a NGO has filed a PIL in the Rajasthan high court alleging inter country baby trafficking racket in the guise of unregulated commercial surrogacy in India and seeking issue of writ of habeas corpus for production of the Japanese child born of surrogacy in India in public interest contending that Japanese child is subject to inter country trafficking and sought for stringent laws relating to surrogacy in India. Pertaining to these issues of trafficking of surrogate child Jayashree Wad vs Union of India, 2015, a public interest litigation (PIL) is filed in Supreme Court (SC) with primary objective of seeking necessary action from the SC for prohibition on commercial, transnational, foreigners or overseas surrogacy in India, to check human trafficking in guise of surrogacy, to prohibit export or import of gametes, embryos in India to control exploitation of Indian surrogates, to control trafficking in human life to check import or export of gametes, embryos, and to seek enactment of stringent law controlling the same.
Comparative Foreign Legislations & Cases against trafficking in guise of surrogacy-

It may be pertinent to enumerate some of the progressive foreign legal instruments on these lines which have identified issues of human trafficking under the garb of surrogacy. The Thailand Surrogacy Act 2014 prohibits commercial surrogacy and penalizes the same as being akin or amounting to human trafficking. The South Africa Surrogacy legislation Children Act 2005 integrates anti human trafficking measures and surrogate Motherhood in tandem by incorporating relevant provision of UN protocol to prevent trafficking in persons and also includes certain safeguards to prevent trafficking of surrogate mother under any overseas surrogacy arrangement. The Australian Government Department of Immigration lays down certain preventive checks under its Fact Sheet 36 – a- International Surrogacy Arrangements for controlling human trafficking, abduction other crimes under garb of transnational or overseas surrogacy.

The Czech Republic criminal code prohibits commercial violative of criminal human trafficking law. The Netherlands laws under the Artificial Insemination (Donor Data) Act 2004 prohibits commercial surrogacy arrangements, commercial supply of surrogate mothers egg or donation amounting to trafficking of human beings. Bureau of the Dutch National Rapporteur on Trafficking in Human Beings, National Rapporteur on Trafficking in Human Beings (2012) and the Dutch criminal code include and prohibit coerced or forced surrogacy as a form of human trafficking.

Finding upon similar reasons, in the landmark case of Re Baby M New Jersey, 1988 the New Jersey supreme court held that commercial surrogacy contract involving monetary payment constitutes disguised form of baby selling.

International Human Right Convention against Human Trafficking in lieu of Surrogacy-

The United Nations Office on Drugs and Crime (UNODC) “Model Law against Trafficking in Persons”, seeking the implementation of the UN Protocol to Prevent, Suppress and Punish Trafficking in Persons, Especially Women and Children specifically mentions “forced pregnancy” and the “use of women as surrogate mothers” forcibly under commercial surrogacy, in certain circumstances, as possible examples of “exploitation” which States may wish to consider when legislating to criminalize “trafficking”. This provision may be incorporated by respective states under their criminal legislations and under their surrogacy legislations to put a direct end to criminalize human trafficking associated with surrogacy.

Conclusion

In consideration of these cases, it is suggested that the present Indian Surrogacy (Regulations) Bill under its list of offences may identify such offences as trafficking,
abduction of surrogate mothers, gamete donors under the guise of surrogacy as a punishable offense, sale of human life in form of children born of surrogacy and impose severe criminal sanctions against the same. In light of this, the Indian Surrogacy Bill needs stringent measures to control abandonment, rejection of surrogate child by relevant stakeholders including intending couples, middle men or agent, clinics accordingly a comprehensive provision imposing absolute prohibition on rejection, abandonment of child excluding any scope for abuse and stringent penalty must be imposed on these concerned stakeholders for violation of the statutes under the Surrogacy Bill for better protection of life of child, women as potential surrogate mother, egg donor.

The Surrogacy Bill 2016 does not address the legal criminal sanctions related to bearing upon human trafficking either for surrogate mother, children born of surrogacy, this is very minimally addressed in this Bill. Many bio medical, ethical misuses and mal practices as handling of gametes, embryos trafficking or stealth of such gametes within India or cross border, purchase or sale of gametes or outsourcing of gametes among others. Many inadequacies in the bill are enumerated and discussed briefly under the present surrogacy bill which necessitate reconsideration, these issues need to be addressed with stringent criminal sanctions by constituting specific offences under the Bill in keeping with progressive comparative foreign legislations and international human right conventions and Indian constitutional mandate. These measures are also necessary in order to better regulate surrogacy.

Hence, these crimes of human trafficking in view of surrogacy needs further deeper consideration from the law makers as well as law enforcement agencies.

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6. V.N. Shukla, Constitution of India 131 (M.P. Singh ed., 2008), art. 39(f), Art. 43.


Use of Layered Voice Analysis (LVA) for Investigation with Social Distancing

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Introduction about Layered Voice Analysis (LVA)

Voice analysis is working on three different disciplines are voice signature, speech to text, and emotional analysis. LVA deals only with emotional analysis. LVA includes many patented parameters, vocal parameters, methods of calculating baselines and emotions. LVA technology is helpful in various fields like psychology, criminology, psychophysiology, phonetics, nervous system, and brain sciences (Technology, LVA 6.50 Layered Voice Analysis, 2013). Technology is not following any known classical theories. It is a tool for detecting deceptions and majorly used for screening purposes. Giving information to someone or making up information that is opposite to actual information or very different from truth called a lie. People lie to serve many different purposes e.g. small kid speaks lie because he has fear of punishment like wisely. LVA technology uses “psychological patterns” detection as well as three different and independent analysis equations. These patterns distinguish between stress resulting from excitement or any other emotional stress, confusion, or any other cognitive or global stress resulting from the circumstances and deceptive stress. LVA detects different levels of emotions like tension, rejection, fear, embarrassment, answer cynically or even the subject’s level of thinking. It is also measuring the willingness of the subject to giving answer using Stop or Say (S.O.S) parameter. Using Deception Patterns, LVA can get the greatest accuracy rate in detecting deceptions. Different lies carry different emotions. Defensive lie carries stress or embarrassment, offensive lie carries high excitement, anticipation and concentration. White lies will trigger mostly a conflict reaction and careful choice of words. Jokes are also considered as a lie although not triggering the mind into the deceptive mode and not carrying any intent to change the future. During ancient times several ways to find the truths were the Chinese cup of rice method, the Bedouin burning sword, pull the donkey’s tail, floating in the pools, and tricks into confession using spells and religion, torchers and so on. In the middle of the nineteenth-century psychologist, Cesare Lombroso first designed a scientific instrument to measure psychological responses called lie detector, and after that voice stress analysis invented and US army investigates
prisoners of war. The main aim behind the invention of LVA was to serve Israeli border crossings.

LVA is an innovative, highly advanced, computerized system that is specially designed to provide you with easy access to truth verification (Technology, LVA 6.50 Layered Voice Analysis, 2013). It uses the standard of a professional investigation focus tool in a highly discreet manner. Conversations can be analysed in real-time or offline from recorded files. Providing timely data for quick and reliable decision-making, the relevant issues and subjects are revealed faster, saving resources and precious time. LVA is based on the new technology of emotion vocal analysis calculated from a series of sophisticated algorithms that detect changes in the speech patterns to identify different types of stress and other emotional and logical processes. Those are then measured and graded. LVA technology pinpoints the cause of stress and reports with an analysis as to whether a speaker’s stress is caused by a lie, excitement, exaggeration, or cognitive conflict. LVA makes no use of the physical lipoid tremors it monitors the entire provided voice spectrum that ranges drastically between different audio channels. These tests do not require any consent. It identifies internal patterns and patterns changes over time to recognize different emotional reactions. Techniques of lie detection are about identifying elevated reactions and body alertness in proper psychological settings following a relevant stimulus. Combining together and mental preparation and the measurements of the body reactions, whatever they may be are crucial factors in any investigative procedure. Lying is all about motivations and lie detection techniques are about identifying the subject’s internal reaction to their lie, not the lie itself.

LVA following the speaking mechanism, speaking mechanism is one of the complex body systems. It is closely controlled and monitored by the brain. It is easily affected by cortical events and cognitive processes. The bail frequency is affected by the process and gains modulations and harmonies based on speech organ positions. Additionally, the voice mechanism controlling the facial expressions, body gestures and quality control on the emitted voices. The physical condition of humans and the fall on partial blockage of the air path affected the sound generation. External stimuli may be visual or physical leads to internal stimuli in forms of thought, conflict, and arousal and internal stimuli may sensation, memories, imagination and exceptions be leads to reaction and when external stimuli, internal stimuli and the body reaction together leads to disruption of the synchronization between the speech organs.

**LVA On-line and Offline mode Procedure**

LVA technology is a combination of two different investigation focus tool.

**LVA on-line mode** is mainly use for quick and immediate analysis during interviews. This mode is used for various purposes like when the investigator wants an initial analysis of the subject, suspect, witness, or anyone. Another importance of this mode is when real-time investigation analysis of the subject is required and when certain pieces of
information are missing or during the interview, the investigator finds weak links in the subject’s verbal account of what occurred. This mode is also helpful when you find yourself at a dead-end and needed to look for new leads in your investigation. Online mode is the easiest mode to use and it is fully automated. The basic analysis is displayed in simple terms like truth, high stress, inaccuracy and etc. It will give a clear indication as to the subject’s integrity and range of emotions every sentence is analyzed in real-time. Another facility of this mode is the telephonic interview. When a subject is far from your location and not physically present for an interview investigators can use this facility. LVA during a telephone conversation, you need to have the phone adapter connected to a regular phone that has a handset connected with a removable cord to the receiver unit. Using this feature system will give the same results and it is also considered a real-time interview. Online mode is using seven different parameters for analyzing the interviewer’s voice. Lie Stress displays the result of the specially created lies stress algorithm. It takes into account all the psychological parameters. Global Stress reflects a state of fear and negative arousal that the question or issue raised to fight or flight syndrome (Technology, LVA 6.50 Layered Voice Analysis, 2013). This reaction is expected when the subject speaks of a problem, a fight or a bad memory. Emotional Stress reflects all emotional content that the question or issue evoked. This reaction is expected when the subject speaks of a close friend or family member, where sexually-oriented questions are asked, or merely when the person is excited. Cognitive Stress reflects a situation where two or more non-complimentary logical processes are processed in the brain. The thinking level reflects the mental effort the subject puts into what he/she says. Anticipation level is indicated by the subject’s anxiety to reach a certain phrase or question, or the subject expectation for feedback. So these are the basic parameters that are used for on-line analysis. They are following their own algorithm and based on voice frequency it will give real-time results.

**LVA Offline mode** is widely used for in-depth analysis of pre-recorded audio material from almost any source such as tape recorder, digital audio of tape recorder (DTA), live subjects or phone call in computer or any devices. This mode is helpful to pre-recorded material to produce in-depth psychological structure view or more. Offline mode includes recording service utilities that can be used as an ordinary digital tape recorder. With this, investigator able to store and retrieve recorded sessions can later be analyse using offline mode. LVA offline also provided a technique of analysis in this mode called “Rich Psychological Analysis” (RPA). In this, when investigator requires specific analysis results provided on display with graph bar and converted in manual analysis. This technique will give user friendly approach towards users of LVA technology. In Offline mode various deceptive pattern use for analysing the result that patterns are namely global deception pattern, offensive lie in different condition, lie due to embarrassment and many more. Global deception patterns reflect the situation when high statistical lie value and extreme lie stress detected in subject (Technology, LVA 6.50 investigation focus tool training level-1, day 1 -module 2, 2013). Offensive lie detects in various situation
like when extreme stress and concentration is present. This pattern must see when investigator use pick-of-tension method for determining subjects involvement or knowledge regarding that issue. Another pattern in offensive lie pattern detected when extreme logical conflict and excitement indicate deceptive. This pattern helpful in non-scripted conversation. For the same offensive lie when high stress of SOS (say or stop) present. This pattern only for direct questioning. Offline mode using more than 16 parameters for analysis. In which different algorithm and its raw values calculated namely SPT for emotional level, SPJ for cognitive level, JQ indicates global stress value, and AVJ indicates thinking level, SOS value, anticipation level and so on.

**Case investigation using LVA**

Layered voice Analysis Technology is not so popular like other forensic psychological investigation tool so ratio of investigation using LVA is low comparing to other tools like Polygraph, Narco analysis, Brain Electrical Oscillations Signature (BEOS) profiling. May 2012,” MERI AWAAZ HI PEHCHAAN HAIN” DFS, Gujarat gets India’s first voice analysis technology developed in Israel offers non-intrusive mechanism for suspect identification (Parth, 2012). The cops are now using tests like suspect detection system and layered voice analysis which not only speak about lie but also tell about hidden criminals’ intent which could help investigator for their future plans. The number of Hardcore criminals are more to being subjected, Which is helpful for more advanced Technology and system acquire more reliable and accurate. Lashkar-e-Toiba operative Abdul QarimTunda was asked to keep his palms on a sensor cradle; he had little idea about what was going to happen. He is a hardened terrorist, he was prepared for usual tests. But the special cell made him undergo the two new tests. And, they claim, that he began singing about his training, intentions, skills, handlers and associates. The special cell is once again preparing to have another of their prized catches undergo these two tests. Indian Mujahideen’s technology expert, Ajaz Shaikh, who was arrested early last month, will be giving his voice samples and undergoing a suspect detection examination, says S N Shrivastava, special commissioner of police (cell). AjazShaikh who took over the logistics, computer and internet-related works for IM from his senior, it is proving to be hard and difficult said by Source. The tests may unlock his mind for the investigators. In the Layered Voice Analysis (LVA) examination, when investigator using online mode voice samples are recorded during whole conversation and analysed it later. Special Commissioner of Police Cell S N Shrivastava says, LVA analysed the deviation in pitch, tone and change in frequency while giving answers to a particular question. It helps experts ascertain if the accused is lying or hiding facts. He adds that at times a mock interrogation is carried out during the tests(Jha, 2014).

In the year of November 2014, Mumbai police investigated five accused of Mumbai gang rape case admitted to having earlier committed two gang rape and molestation inside the Shakti mills compound using LVA technology. Siraj Rehman Khan admitted to having
raped a rag picker and a sex worker on separate occasions a few months back and also here appears to be a molestation of a woman, who had come to the defunct mill with her partner the official said, adding that such incidents as could have occurred over the last six months were being verified (PTI, 2013). In the year of 2015, Mumbai Crime Investigation Department using LVA technology in Govind Pansare murder case. Suspect Samir Gayakwad interrogated using LVA technology. Device records his voice, whose fluctuations are mapped on a monitor and helping interrogators with information about the truthfulness of his replies (Singh, CID uses software on Gaikwad ‘to nail lies’, 2015). In the year June, 2015 in case of Bank fraud, private firm was booked in a Rs 231-crore cheating case, a senior CBI officer has suggested that bankers make use of voice analysis technology to identify such fraudsters and prevent such offences. Keshav Kumar, CBI’s Joint Director in Mumbai, had an interactive session with senior executives of several private and government banks at a workshop organized by the Centre for Advanced Financial Research and Learning (CAFRAL), affiliated with Reserve Bank of India (RBI) last month. He told them that use of layered voice analysis (LVA) can be a helpful tool to prevent fraud cases (Singh, Use voice analysis technology to check fraud: CBI to banks, 2015). Layered Voice Analysis Technology is helpful when investigator needs instant responses from suspect. This investigation tool will be helpful in financial fraud and corruption related cases. This test does not require any consent so we can conduct it like normal interview. During this investigator identify on which area officer need to investigation. LVA gives real time analysis so it will easy to detect voice modulation, identify stress and mind stability.

**Distance mode of LVA**

In India, Police officials are busy with their duty and many pending case. During this time we all are suffering from COVID-19 virus and police officials are busy in management duty. With the help of distance mode Police inspector does not need to come for test. LVA gives feature called telephonic interview. Telephonic interview is also considered as online mode. Investigation should be done on telephone. Before starting interview all the information regarding suspect and case provided to investigator. Interviewer starts questioning and system gives real time results, on some points if interviewer find any deception or important information interviewer can asked more question until find satisfied response. After completing interview, if any truthful information find or investigator wants to know about it, he suggest inspector to focus on these particular area and reports will send to police inspector in any digital form. Another option for distance mode is video conferencing, in this police officer not require to physically presented via video conferencing investigation gets completed. For this mode process would be same like telephonic interview. Investigator must know all the information related case, accused and questioning is start until investigator not satisfied. Distance mode of LVA is helpful for police personal as they need not required to be present physically. Investigation will proceed very smoothly also conviction rate also increases.
Case Study with Layered voice Analysis.

In the year February of 2020 one case was registered at ACB, Gujarat. In this the suspect Mr. ABC who is senior citizen and by occupation he is lawyer and got trapped. He demanded for bribe of 6 lakh rupees for clearing income tax file in Vadodara district. In this case when audio-video recording was doing based on the questions asked by the Police Inspector it was observed that there are so many points related to the crime which is was not cleared and could have been better investigated using LVA. An offline analysis of various case studies at Institute of Behavioural Sciences, Gujarat Forensic Sciences University, has shown deception in those cases which underwent Audio-Video based interrogate at IBS, GFSU.

The thumb rule of LVA is that when interrogator receive the answers it necessary to explain the answers in details so LVA give more accurate results in term of deception. During this whole conversation investigation officer asked case related and on point questions and suspect Mr. ABC gave detailed answer. The online recording based analysis mostly generated level 2 and level 3 related messages that is High Stress, Say or Stop (SOS), extreme stress and also the colour coding segments showed deception in relevant questions.

In the above mentioned Vadodara case, certain questions required to be more specifications like; one of the questions asked was regarding the suspect’s mobile phone that was new so asked about his old phone. There were possibilities to found a link or something important related to the case. The telephonic conversation between suspect and the complaint, the suspect used some typical Gujarati language words, and investigator failed to ask the in depth questions. So there were many lacunae which were observed during an interrogation which need to be improved if LVA investigation is required to be done.

LVA Investigation through Social Distancing

The procedure of online and offline LVA are discussed above. The benefit of using LVA for investigation is more in this pandemic where social distancing is one of the concerning factors and major aspects of the investigation. Since LVA is based on audio recording either live or recorded data. So, the LVA investigation can be done by sharing the audio-video recording of the interrogation done at the Police station, and later the analysis can be done at the Forensic Laboratory. Similarly, for online mode LVA analysis of the interrogation can be done through live conferencing and the data can be analyzed keeping all the precautionary measures and guidelines of the social distancing in this Covid - 19 as well as for the safety of the investigative officers and the Forensic experts. The audio-video recorded CD and the LVA analysis report can be directly submitted to the court by the forensic laboratory to avoid any type of manipulation. The further benefit of such practice is that the statements recorded during the audio-video and LVA interrogation
Use of Layered Voice Analysis (LVA) for Investigation with Social Distancing

will be less questionable as the entire process will be done under audio-video recording with the consent of the suspect or the eye-witness/victim/complainant without being under pressure of anyone. It will also reduce the number of trails in the court due to the unavailability of the individual to be physically present in front of the honourable court.

Conclusion

LVA is a screening tool and Deception detecting technique so, it is necessary that the questions asked should be are related to the case and to the point. As an interrogator, it is their responsibility that the subject should give detailed answers and if anything relevant is found which is important and related to the case then the interrogator should focus and probe more on that point. With online LVA care shall be taken about the indication by the system which continuously displayed High risk, High Stress, Extreme Stress, Deep information, SOS than continue the pattern questions. So, a hands-on experience with LVA for both modes is required. Also, the interrogation shall be done by a Forensic Psychologist or a Criminologist to do better probing and ask relevant questions due to which the statements can then be utilized on online as well as offline modes. With this the guidelines and measures of social distancing can be followed easily keeping the safety of the investigation officer, forensic expert, and the suspect, and it will also save time and resources for the government.

References

RIGHTS OF THE PRISONERS DURING PANDEMIC

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ABSTRACT

With the whole world hustling to survive the pandemic of coronavirus, prisons are detected to be ticking time bombs. Extreme overcrowding, lack of institutional staff, medical facilities and poor standards of hygiene of Indian prisons not only depict a frightful sight for inmates and prison staff but also has a potential to make the whole society vulnerable to spread of the virus. While several international documents flesh out human rights of prisoners, the apex court of India has also recognised fundamental rights of prisoners including their Right to life with human dignity and Right to health and medical treatment which obliges the state to take measures in protection of prisoners from threat of coronavirus. While state response on the crisis ranged from strategic action to decongest prisons to other precautionary measures including maintenance of hygiene and sanitation, screening and segregating of new inmates within prison premises, the authors in this article critically analyse the intricacies and effectiveness of the same.

Keywords: Prisoners’ Rights, Pandemic, Prisons, Decongestion.

Introduction

“It is said that no one truly knows a nation until one has been inside its jails. A nation should not be judged by how it treats its highest citizens, but its lowest ones.”

The above quote by Nelson Mandela captures and rightly so, the glimpse of attention life behind bars deserve. It was in the honour of legacy of the late President of South Africa, who spent 27 years in prison in the course of his struggle for global human rights, equality, democracy and the promotion of a culture of peace rightly, that United Nations in its resolution of adopting revised UN Standard Minimum Rules for Treatment of Prisoners approved them to be known as “Mandela Rules.” On one hand, when the world witnessed 11th Nelson Mandela International Day on 18th July, 2020 on the other it has normalised state’s apathy in sentencing people to die from a virus in the name of justice on the other, presenting a paradoxical conundrum to all this great man stood for.

While the world heard the name of Corona virus for the first time in late November last year to have been identified in city of Wuhan in China, this small novel virus which is caused by severe acute respiratory syndrome has happened to dictate our lives at this point of time. Its enormous amplification to more than 13 folds in other countries has not only earned it the status of a pandemic by World Health Organisation but has also
dismantled our ways of conduct necessitating innovative mechanisms.¹

According to the World Health Organisation Coronavirus Disease (COVID-19) Dashboard the virus has sickened more than 54 million people worldwide and has killed at least 1,324,249 people.² With its vaccine at the stage of trial, social distancing and quarantining forming our ammunitions and sanitizers and masks our armour the world is still continuing its fight with this century’s greatest annihilator. Even though these are seen as minimal armoury required to survive this battle the penologist question: Are 10 million people of the world cramped in detention facilities equipped enough for the unforeseeable?

**Indian prisons as potential hotbeds**

The Global Prison Trends 2019 revealed that there are more than 10 million men, women and children in prisons worldwide and jails are overcrowded in at least 121 countries.³ According to the database of World Prison Brief, at least 20 of these have more than two times the number of inmates they’re equipped to secure.⁴ In India alone, there are 1350 prisons inhibiting approximately 4,78,600 prisoners against the official capacity of 4,03,739, taking the occupancy rate to 118.5%.⁵ According to the Prison Statistics of India 2019, Delhi has the highest occupancy rate of 174.9% followed by Uttar Pradesh and Uttarakhand whose occupancy rate is as high as 167.9% and 159.0% respectively. Overcrowded prisons across India have high chances of becoming breeding grounds for coronavirus because social distancing is impossible to maintain. In some prisons where there is not enough space for the prisoners to sit or sleep comfortably, achieving social distancing is no less than a farce.

The virus’s ease of spreading behind bars became visible in February itself, when at least 555 inmates in China were infected at facilities of several provinces.⁶ The United States with more than 2.3 million people in prison, has the highest number of

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⁵Prison Statistics in India 2019.

incarcerated individuals worldwide. The cases of infections in US prisons rose sharply killing hundreds of prisoners. According to the Marshal Project, at least 182,776 prisoners have tested positive for the virus and 1,412 inmates in prisons have died due to COVID-19. As Indian prisons are overcrowded, the risk of spreading COVID-19 in case of any prisoner getting infected with virus is extremely high. It has been stated by The National Campaign Against Torture (NCAT) in their report that out of the 1,350 jails in India, COVID-19 infections have been reported from at least 351 jails in 25 out of total 36 States/UTs of the country as of 31.08 2020. The Commonwealth Human Rights Initiative (CHRI) reported that about 18,157 cases of COVID-19 infections were detected in prisons while about 17 prisoners died in prisons due to the virus.

In addition to over-crowding, high rate of ingress and egress of people including accused, convicts, correctional officers, visitors like lawyer and family and friends of detainees makes it like living on a railway platform transporting vulnerability into the society on the whole and making the contagion in prisons impractical to be restricted within four walls of its premises. Since March, several initiatives by organs of government have made progress in restricting this flow however, were these releases of prisoners to temporarily ease congestion in jails enough of answer to ills that plague of our prison system remains a daunting question.

Furthermore, working conditions of the institutional staff in prisons depicts a cry for help. Poor state of healthcare facilities in prisons across the nation further aggravated by an acute shortage of trained medical professionals presents a gloomy picture. According to the Prison Statistics of India, 2019 only 1962 medical professionals are found to be posted against the requirement of 3320. This means that only one medical worker is available to cater the needs of 243 inmates. A meagre 4 per cent of the total daily expenditure on a prisoner spent on medical facilities, and an overall staff vacancy of 31 per cent, is causing the lived reality of this pandemic into becoming ‘death sentence’ for many incarcerated. So far, more than 25 States and Union territories have reported COVID-19 cases in prisons. With over 500 prisoners and staff members testing positive,

the risk of further spread among the nearly 4.6 lakh prisoners and 60,000 staff members remains high. Witnessing lack of adequate measures in place, terror of contagion amongst fearful prisoners has even triggered deadly riots inside some detention facilities.12

State’s obligations towards rights of prisoners

Obligations under International law

The principal International Human Rights documents lay down the human rights of prisoners and state’s obligation to protect them in most unabashed form. UDH Rstates that all human beings are born free and equal in dignity and rights13 and it ensures everyone’s entitlement to all the rights and freedoms set forth in the Declaration14. This signifies that human rights are equally available to all either prisoners or freemen. Like freemen prisoners are equally entitled to right to life, liberty and security and should not be subject to torture, cruel and inhuman treatment.

International Covenant on Civil and Political Rights (ICCPR) is also an essential instrument in the context. It lies down that states are under an obligation to ensure the health and life of all persons deprived of their liberty and to take positive steps to prevent the spread of contagious diseases in prison, the failure of which may constitute a violation of Articles 6, 9 and 10 of the International Covenant on Civil and Political Rights.15 Article 10 clearly mandates that “all persons deprived of their liberty shall be treated with humanity and with respect for the inherent dignity of the human person.” It further requires the “essential aim” of punishment to be “reform and social re-adaptation of prisoners.” The European Court of Human Rights has also indicated that the failure to prevent the spread of diseases in prisons may amount to a violation of the prohibition against torture under Article 3 of the European Convention on Human Rights which prohibit any inhuman or degrading treatment or punishment to anyone.

Several additional international documents flesh out the human rights of persons deprived of liberty, providing guidance as to how governments may comply with their international legal obligations.16 However, so far, the most comprehensive guidelines on

13Article 1, Universal Declaration on Human Rights 1948.
14Article 2, Universal Declaration on Human Rights 1948.
the cause are the United Nations Standard Minimum Rules for the Treatment of Prisoners (known as the Mandela Rules), first adopted in 1955 they became the key international standard governing the treatment of prisoners and began to be used as “blueprint” for national prison rules in many countries. In 2015, the UN General Assembly unanimously adopted the Revised Standard Minimum Rules for the Treatment of Prisoners after carrying out a targeted revision and publicised them to be known as “Mandela Rules”. Even though these rules are not a binding treaty, their consistent use has earned them the status of an authoritative guide to binding treaty standards.

Rule 24, 25, 27, 30 and 33 are relevant to health-care and provide that every human being has a right to the highest attainable standard of physical and mental health and, when a state deprives someone of their liberty, it takes on the duty of care to provide medical treatment and to protect and promote their physical and mental health and wellbeing. Authorities must, therefore, devote sufficient resources to ensure that prison health-care is adequate in relation to the size and needs of the prison population. Those in prison are entitled to receive the same standard of health-care as is provided in the community outside of prison. In case of prisoners suspected of having contagious diseases, rules mandate to pay attention to providing for clinical isolation and adequate treatment to those in need.17

All these international instruments reaffirm the tenet that prisoners retain fundamental human rights the enforcement of which falls on states. Significantly, the Human Rights Committee has also stressed that the obligation to treat persons deprived of their liberty with dignity and humanity is a fundamental and universally applicable rule, not dependent even on the material resources available to the state party.

**Obligations under National Law**

India being signatory to several International Instruments of Human rights which guarantee basic human rights to all, including the often-forgotten incarcerated population of the country obliges it to uphold and ensure observance of these rights to all men and women behind bars as well. The Constitution of India under Article 14, 19, 20, 21 and 22 encapsulate the idea of sacred liberties in honour of human dignity in the name of fundamental rights. These include a variety of rights including right to equality, right to freedom, right to life and personal liberty, protection against arrest and detention as well as in respect of conviction. While majority of the fundamental rights are available to “persons” it must be seen that how these rights and liberties are interpreted in the context of prisoners. “Being a prisoner, one does not cease to be a human being, natural person or legal person. Conviction for a crime does not reduce the person into a non-person, whose

Rights of the Prisoners During Pandemic

rights are subject to the whim of the prison administration,” exclaimed the Apex court of the land. In case of Charles Sobraj v. The Superintendent, Central Jail, Tihar, New Delhi, Krishna Iyer J. held, “imprisonment does not spell farewell to fundamental rights although, by a realistic re-appraisal, Courts will refuse to recognise the full panoply of Part III enjoyed by a free citizen”. He further observed, “Social defence is the raison d’etre of the Penal Code and bears upon judicial control over prison administration. If medical facilities and basic elements of care and comfort necessary to sustain life are refused, then also the humane jurisdiction of the Court will become operational based on Article 19.” Furthermore, in the case of T.V. Vatheeswaran v. State of Tamil Nadu, it was held that “Prison walls do not keep out fundamental rights. Fundamental rights are available to prisoners as well as freemen.”

Hence, in absence of any express rights of prisoners in the groundnorm, the guardian of the constitution has stepped in time and again to infuse constitutional ethos into incarceratory strategy to ensure prison justice and by a series of cases Courts have developed human rights jurisprudence for the preservation and protection of prisoners’ rights and their human dignity. It has been thereby established that prisoners retain all rights enjoyed by free citizens except those lost necessarily as an incident of confinement. However, in context of current situation following rights of prisoner’s demand prompt responsiveness specifically.

Right to Live with Human Dignity

Adopting broader connotation of ‘life’, the Hon’ble Supreme Court infused unprecedented muscle into Article 21 when in Kharak Singh v State of U.P. it noted that “life means more than mere animal existence. The inhibition against its deprivation extends to all those limbs and faculties by which life is enjoyed. The provision equally prohibits the mutilation of the body by the amputation of an arm or leg, or the putting out of an eye or the destruction, of any other organ of the body through which the soul communicates with the other world.” This implied that Right to live was no more restricted to mere animal existence and meant something beyond physical survival.

Further in Maneka Gandhi v Union of India the court held that “Right to live includes within its ambit the right to live with human dignity.” This meant that ‘to live’ includes “necessaries of the life such as adequate nutrition, clothing and shelter over

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19Charles Sobraj v The Superintendent, Central Jail, Tihar, New Delhi, 1978 AIR (SC) 1514.
20T.V. Vatheeswaran v State of Tamil Nadu, AIR 1983 SC 361.
22Maneka Gandhi v Union of India, AIR 1978 SC 597.
the head and facilities for reading, writing expressing oneself in diverse forms, freely moving about and mixing and mingling with fellow human beings” even inside four walls of prison.\textsuperscript{23} It was this rationale that led to judicial process of humanisation of prisons by prohibiting torture, cruel and degrading treatment and assertion to safe and healthy environment.

\textbf{Right to Health and Medical treatment}

Although one cannot find right to health expressly provided anywhere in the Constitution but judicial interpretation of scope of Article 21 has led to passage of establishing state’s obligation to provide medical treatment and other adequate conditions to enjoy one’s right to life. “No law or State action can intervene to avoid/delay the discharge of the paramount obligation cast upon members of the medical profession. The obligation being total, absolute and paramount, law of procedure whether in statutes or otherwise which should interfere therefore with the discharge his obligation cannot be sustained and must therefore give way.”\textsuperscript{24}

As per the judgment of the Supreme Court of India in \textit{Paschim Bangal Khet Mazdoor Samity & Others v. State of West Bengal & Others}\textsuperscript{25}, the right to healthcare facilities forms an essential part of the right to life under Article 21 of the Constitution of India. And this is held to be so because Preservation of human life is of paramount importance. The Honourable Gujarat High Court when confronted with a case wherein prisoners of Central Prison, Vadodara even though seriously ailing were deprived of proper and immediate medical treatment for want of jail escorts required to carry them to hospital reprimanded the prison administration and held that negligent Officers were to be held personally liable.\textsuperscript{26} In the case of \textit{L X v. Union of India}\textsuperscript{27} the court resorted to holding state liable to pay for medical treatment of prisoner inspite of his eventual release on the ground that the applicant contracted the concerned illness during his time in prison.

Apart from the Constitutional rights certain statutory rights are also available to the prisoners under Prisons Act, 1894 enacted for the functioning of the prisons. Section 4 of the Act provides for accommodation and sanitary conditions for prisoners. Section


\textsuperscript{24}Parmannd Katara v Union of India, AIR 1989 SC 2039; Consumer Education and Research Center v Union of India, (1995) 3 SCC 42; Kishore Brothers Ltd v Employee’s State Insurance Corporation, (1996) 2 SCC 682.

\textsuperscript{25}Paschim Bangal Khet Mazdoor Samity & Others v State of West Bengal & Others, AIR 1996 SC 2426.

\textsuperscript{26}Rasikbhai Ramsing Rana v State of Gujarat, (DB) 1997 Cr LR (Guj) 442.

\textsuperscript{27}L X v. Union of India, Cr.W.P – 7330/2004 (Delhi High Court, 5 May 2004).
7 provides for shelter and safe custody of the excess number of prisoners who cannot be safely kept in any prison. Section 24(2) provides for examination of prisoners by qualified medical officers. Section 33 provides that every civil and under-trial prisoner, unable to provide himself with sufficient clothing and bedding, shall be supplied with so. Section 35 provides for treatment of under trials, civil prisoners, parole and temporary release of prisoners. Section 37 provides that a prisoner must be provided with a medical officer if he is in need or if he appears out of health in mind or body.

A look at Model Prison Manual, 2016 will also be constructive as contemplates extensive guidelines for prisons in case of epidemics. In event of outbreak of any epidemic inside the prison the manual provides for permanent segregation sheds for each infected prisoner. It envisages prevention of communication between the staff and the infected inmates group with special care and arrangements in place. Avoiding overcrowding must also be strictly followed not just in cells and wards of prison but also in hospitals where infected inmates are being treated as per the Manual. The restrictions on transfer of prisoners and treatment of clothing and infected barracks of inmates must also be adhered to. In addition, the manual provides for hiring of additional staff on temporary basis when need arises.

Measures taken to safeguard prisoner’s rights

In the wake of dooming threat that Coronavirus holds over prison population the organs of Government has been witnessed to take many steps to protect the prisoners right to life and health.

Attempt to decongest prisons

Releases by Executive

The Honorable Supreme Court on 16th March, 2020 took suo motto cognizance of the risk of COVID-19 infection spreading within and from overcrowded prisons across the country. The bench headed by Chief Justice of India Sharad A. Bobde, directed all the States and the Union territories to constitute a High Powered Committee “to determine which class of prisoners can be released on parole or an interim bail for such period as may be considered appropriate.” Although the Apex Court delegated the responsibility of release to the Committees, it suggested that “the State/ Union territory could consider the release of prisoners who have been convicted or are under trial for offences for which prescribed punishment is up to 7 years or less.” Worrying the devastating potential of prisons to become hot spots of the infection, the Court directed this decongestion with the objective to reduce overcrowding so that spread of cases coronavirus in the prisons remains manageable.

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28 *In Re: Contagion of Covid 19 Virus In Prisons*, SuoMotu Writ Petition (C) NO. 1/2020 (Supreme Court, 16 March 2020).

29 *In Re: Contagion of Covid 19 Virus In Prisons*, SuoMotu Writ Petition (C) NO. 1/2020 (Supreme Court, 23 March 2020).
This impetus from the Apex Court got States into action and almost all states formed High Powered Committee to address the issue at hand. The Committees formed by the States, identified the categories of prisoners to be released on bail or parole taking into consideration the nature of offence charged or convicted for, number of years the convict has been sentenced for, severity of the offence the under trial has been facing the trial for, age of the prisoners, previous criminal record, medical history of the prisoner and any other factor that it found to be relevant. However, data of released prisoners reveals that offence based criteria remains the most powerful consideration of selection. Most States/UT are seen to have accepted the seven-year threshold limit suggested by the Court instinctively as a result of which most States have not released the prisoners who are in jail for the crimes that are considered serious and heinous. Prisoners accused for offences including that of rape, acid attack, money laundering, drug trafficking, terrorism, unlawful activities, anti-corruption, rioting and waging war against state, counterfeit currency and offences under NDPS Act, POCSO Act etc. have so been excluded from the directions of the Committees. The move nonetheless is praise worthy for number of inmates it has aided in release of, however saying the same about the offence-centric approach which sidelined the conditions of the inmates who face the highest risk from COVID-19 due to their existing medical conditions and age etc. remains questionable.

It is notable that aspect of vulnerability of old age prisoners against the virus has been considered by the States of Haryana\textsuperscript{30} and Odisha\textsuperscript{31} while directing the release. Committees of these States recommended that all the prisoners above the age of 65 years shall be released on bail if they do not fall under the exempted categories.

Contrarily some States were of the opinion that releasing inmates will push them into the threat of COVID-19, instead, the visitors must be prohibited except in case of the emergency along with establishing separate staying areas for the new prisoners.\textsuperscript{32} In Chhattisgarh, only the prisoners who were in jail for a period of 3 months or more and


\textsuperscript{32}The State of Bihar has banned the entry of the visitors in prisons.

who are the resident of Chhattisgarh were released\(^{33}\) while in Jammu and Kashmir, only the prisoners who were convicted and has spent more than ten years (eight years in case of woman) in jail were set free.\(^{34}\)

Based upon such guidelines, good number of prisoners was expected to be released by the States as reported in the news. The State of Maharashtra\(^{35}\), Madhya Pradesh\(^{36}\), Uttar Pradesh\(^{37}\) and Punjab\(^{38}\) anticipated release of thousands of prisoners from their jails and detention facilities. On the other hand, Bihar has chosen not to release any of the prisoners as jails in the state are relatively less congested and there has been no reported case of corona virus therefrom. However, the fact that the high numbers announced by officials of states in news reports were only planned ones rather than reality cannot be lost sight of. The data on number of prisoners released by States/UT's as reported by the Commonwealth Human Rights Initiative highlight major variations


\(^{35}\) The Maharashtra government has decided to temporarily release 17,000 inmates, 50 per cent of the pre-lockdown population in jails across the state.


\(^{36}\) The Madhya Pradesh Government has released 6500 prisoners since COVID-19 outbreak.


\(^{37}\) The Uttar Pradesh government has decided to temporarily release 17,000 inmates.


\(^{38}\) The Punjab government has decided to temporarily release 17,000 inmates.

between goals and attainments. For instance, Maharashtra loaded with occupancy rate of 148.9% reported an estimate of 17,619 prisoners to be released from its prisons, which in turn could reduce the occupancy rate to an estimate of 50% but the State has only released 10,518 prisoners which is not even close to the estimated numbers. Similarly, difference in the number of prisoners released in contrast to the number of prisoners estimated to be released can be seen in the states of Andhra Pradesh, Assam, Madhya Pradesh, Tamil Naidu and Uttarakhand.

The Commonwealth Human Rights Initiative reported that over 66,661 prisoners were released which had about 17.2% overall reduction in occupancy rate of the prisons in India as of 10.10.2020. As per the report, some of the states have even been able to release more inmates than their estimated numbers and have significantly reduced overcrowding in prisons. In Punjab, around 7717 prisoners have been released getting the occupancy rate down by 30.6% against the estimated 25.5%. Likewise, Uttar Pradesh having one of the highest occupancy rate in India, released 12,055 prisoners and hence managed to reduce the same by 20.5% achieving more than its planned goal. The home of South Asia’s largest prison, State of Delhi released 3573 inmates resulting into taking down its occupancy rate exponentially by 35.6%.

Releases by Judiciary

The outbreak of the coronavirus pandemic has imposed an enormous challenge for all public functionaries even beyond India’s healthcare system to not just thrive but also to remain relevant. Indian judiciary has also been under immense pressure to innovate during this unprecedented time so as to balance public health concerns with access to justice. Access to justice and protection of individual liberty being fundamental to India’s democratic framework the judiciary took note of violations and intervened with appropriate directions. Even when the entire nation was under lockdown, the Supreme

40 Ibid.
41 The State of Andhra Pradesh estimates 1350 prisoners to be released but till 10 October 2020, actual number of prisoners released is 467.
42 The State of Assam estimates 3550 prisoners to be released but till 10 October 2020, actual number of prisoners released is 722.
43 The State of Madhya Pradesh estimates 12000 prisoners to be released but till 10 October 2020, actual number of prisoners released is 6589.
44 The State of Tamil Naidu estimates 6000 prisoners to be released but till 10 October 2020, actual number of prisoners released is 4573.
45 The State of Uttarakhand estimates 855 prisoners to be released but till 10 October 2020, actual number of prisoners released is 667.
Court and High Courts ensured that process of justice delivery doesn’t come to a standstill by hearing urgent matters in anew mode of online hearings. However, in absence of any parameters of what constitutes ‘urgent matters’ there appeared lack of consistency amongst the approach of several High Courts.

While all states attempting to decongest prisons, the paradoxical situation was brought to light when bail matters or habeas corpus petitions were refused to be treated with urgency by the courts of some states. For instance, Bombay High Court and Rajasthan High Court refused to treat bail applications as urgent matter ordered that they can be heard once the lockdown period is over. However, such order of the Court was stayed by the Supreme Court immediately realizing that bail matters are of utmost importance in this time not only because it involves loss of liberty but also because it is the responsibility of the State to ensure the health and safety of the prisoners. Filling of bail application remains the only remedy available to the prisoners who have not been given any relief by the guidelines of the High Powered Committees on release the prisoners amid pandemic.

Courts were seen to be flooded with large number of bail applications where the applicants were seeking bail on the ground of COVID-19. By rejecting and refusing bail the Courts made it clear that only on the ground of COVID-19 bail shall not be granted mechanically. Bail will be granted only after considering the nature and gravity of offence and position of the prisoner. Bail can be refused if the jail already stands decongested and there is no reported case of COVID-19 within its premises. The Bombay High Court refused to grant bail to the 43 year old person remarking that no imminent health impediment is reflected in his case and there are inmates in the prison who are more than 60 years of age and more prone to virus than him. The inmates who didn’t qualify

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50 Rajinder Bassi and Ors. v State of Punjab, MANU/PH/0347/2020.

the criteria laid down by the High Powered Committees were also denied bail.52

Even the grant of bails in the times of COVID-19 has led to some interesting orders from various Courts across the country which were marked by adoption of technology friendly avenues rather than conventional ones for imposing conditions, as recently Delhi High Court asked the applicant to mark their attendance at the police station in unique ways of either WhatsApp video call or by sending their Google location to the Investigating Officer.53 Imposing the conditions likedownloading of ‘AarogyaSettu App’ by High Courts of Madhya Pradesh54, Patna55 and Jharkhand56 while granting interim bail, to registering as ‘COVID-19 warriors’57 by volunteering to assist the nation at the time of crises or donating to the PM-Cares Fund or State’s CM Relief Fund58 were also observed.

However, certain contradictory stands of Courts also came to light on the point of such modes of conditions when Kerala High Court relying on precedents59 held that the condition of depositing any amount for grant of bail in PM CARES Fund do not serve the purpose of bail bond and is nothing more than an additional financial burden on applicant making it improper and unjust in the eyes of law.60

Fortunately, when the Madras High Court decided61 that the order of Supreme Court on extension of the limitation period62 also adversely affects the right of accused

52Reminder Singh v Union of India, 2020 SCC Online Del 533; Shivender Mohan Singh v State of NCT of Delhi 2020 SCC Online Del 545.
56Raushan Kumar v State of Bihar, Cr.M.C10426/2020 (Patna High Court, 29.05.2020).
57Badal Singh & Others v State of M.P. Cr.A.No.2929/2020 (MP High Court, 18.05.2019).
61S. Kasi v. State, Through the Inspector of Police, Crl.OP(MD) No. 5296 of 2020 (Madras High Court, 11.05.2020).
62In Re: Cognizance for extension of Limitation, Suo Moto W.P(C) No.3 of 2020 (Supreme Court, 23.03.2020).
to move for default bail alongside contrary decisions by several High Courts the Hon'ble Court was prompt to further the cause of personal liberty of people and held that default bail of accused is an indefeasible right by exclaiming that “the order of this Court dated 23.03.2020 never meant to curtail any provision of Code of Criminal Procedure or any other statute which was enacted to protect the Personal Liberty of a person.”

Other Measures

Besides steps for decongestion of prisons, it is equally important to review the response of state about measures opted to mitigate dangers of pandemic for custodial population still living behind the bars. State governments and courts are repeatedly directing the prison authorities to take several precautionary measures including maintenance of hygiene and sanitation, screening new inmates and segregating them from existing ones. Following are some noteworthy steps taken by prisons:

Screening, Segregating and Social Distancing

On the lines of Model Prison Manual, 2016 several prison Rules including that of Delhi and Kerala provide for segregating the infected prisoners by detaining them in separate buildings either within or outside the prison premises. This has resulted into steps taken by states to temporarily shift the prisoners from one prison to another primarily in congested centres so that social distancing can be ensured amongst prisoners. In Uttar Pradesh, 56 temporary jails were setup were mainly the offenders of lockdown rules were lodged in. Likewise, in Delhi, after a reported COVID-19 death of a prisoner inside Tihar jail, authorities were quick enough to respond by converting a vacant Delhi police colony into a temporary lock-up facility wherein only criminals of petty offences were to be jailed.

Ministry of Human Affairs notified a checklist of all the steps that prison administration need to adhere to while handling inmates which provided for creation of isolation wards in each jail for suspected cases, medical screening of everyone entering the jails including inmates, jail staff, security and medical staff. Repeated screening of all the existing inmates for any symptoms of COVID-19 is to be carried out regularly. Movement of inmates outside the ward in all jails has been restricted and sanitization and disinfection of the lodgement areas of the inmates and residential complexes of staff is done on regular basis. All new inmates are pre-screened before lodging in jail and regular awareness drives are being held among inmates as well as jail staff including security forces and other agencies in the jail through briefings and public announcements about the infection. Restricting on outside social activities are also put in place so as to follow norms of social distancing as much as possible.

Hygiene and Sanitation facilities

Sanitation facilities in Indian prisons are infamous for being horrible. States are continuously trying to sensitize the general staff and inmates about general and personal hygiene and precautions regarding coronavirus. Steps are being taken to provide adequate number of toilets with running flush, bathrooms and wash basins with arrangements for constant supply of water. Not only this, the jail authorities are reported to be distributing Personal Protective Equipment kits, masks, gloves and alcohol-based hand rubs and soaps for its front line staff and workers at many jails. In Delhi and Kerala, the prison department has started manufacturing masks to provide those to the inmates and healthcare workers and additional quantity of phenyl and hand wash to ensure hygiene and sanitation.

Numerous States including Uttar Pradesh, Kerala, Maharashtra, Punjab and Delhi are reported to be paying special attention towards providing clean bedding and clothing to prisoners, ensuring nutritional food to boost their immunity, availability of medical staff in the prisons, communication of prisoners with the family and friends and effective legal representation.

Mental health

Another problem encountered by prison administrations is regarding deteriorating mental health of inmates in light of reduced to negligible outside contact and abstention of social activities inside the premises. Identifying prisoners who are showing signs of mental disorders, some commendable work is seen to be done by prisons of states like Punjab and Rajasthan by making use of electronic media in their e-Mulaqat program wherein prisoners can talk to their families on a video call. Besides this, prisons ventured into several engaging initiatives like Maharashtra Government’s 24x7 free mental health helpline extending to prisoners as well,70 Uttar Pradesh jails’ use of ‘jail radios’ which...

has been a success in not only keeping prisoners occupied but also connecting them to happenings of the world outside to fight the stress and anxiety amongst them.71

Conclusion

COVID-19 once again brought to the fore the inhuman and degrading treatment of the prisoners in India. The UN Secretary General for Human Rights had called on states to reduce their prison population, especially by releasing those who are vulnerable to virus or are low risk offenders. However, India’s approach has seen to constitute severity of offence as major determinant factor for release, resulting in category of vulnerable individuals of advanced age, those with existing ailments or pregnant females to be treated as second class citizens. In addition, the decision to release the prisoners was not acted upon immediately and it was only after several prisoners tested positive that the authorities decided to expedite the process of release. Also, the policy to regulate the release of inmates on bail or parole varied from state to state depicting lack of uniformity. Another thing to be noted is that these releases without testing prisoners the prisoners may result in intensifying the spread of infection even further to the local areas.

Furthermore, for inmates of Indian prisons which are commonly remarked as “living hells on earth”, gross inadequacies of preparedness to deal with pandemic situation in terms of inadequacy of staff, lack of efforts to improve sanitation and hygiene conditions along with negligible efforts towards providing inmates with medical facilities only make it worse. Basic healthcare provided in Indian prisons is often seen as substandard and cheap but since the inmates are entirely reliant upon the state for the provision of health care, it is recommended there is imminent need to raise them to the level of essential primary health care services that are provided to the citizens outside.

The COVID-19 outbreak is just one of the deadly pandemics that we have witnessed, but it will, in all probability, not be the last one. The prison system in the country needs a massive overhaul at its roots to protect the lives behind bars from any other crisis in the future. The pandemic has highlighted the overcrowding factor of Indian prisons which time and again has attracted public attention in discourse of rights of prisoners. We recommend that States/UT’s must provide monthly update on prison-wise occupancy against sanctioned capacity; evaluate the overcrowding and recommend transfer of prisoners from overcrowded prisons to other prisons with low number of prisoners vis-a-vis sanctioned capacity; and regularly assess which prisoners can be released on parole or an interim bail.

NCRB ACTIVITIES AND ACHIEVEMENTS

1. Data Sharing Natgrid Meeting

2. Independence Day Celebration in the NCRB premises
35th Inception Day celebration at NCRB Auditorium
4. Plantation Campaign

5. Trg Cyber Crime & Digital Forensics
6. 21st All India Fingerprint Conference of Directors

7. Ideathon
8. UNODC
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