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Sardar Vallabhbhai Patel  
National Police Academy  
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## Policing During Pandemic - An Internal war

Dr. B. Sandhya, IPS\*

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### 1. Introduction

Human Race has faced many pandemics, and millions of lives were lost in the historically recorded pandemics, such as the bubonic plague of Bombay (late 19th century), the Spanish Flu (1918-1919), etc.

Police was pushed to its limits during pandemics as they had to intervene risking their own lives, to arrest the violators of pandemic laws. Police faced many internal challenges during such times: Eg. 500 officers failed to report for duty (1918-19) in Chicago.

For the 21st century Police officers, management of a Pandemic is a new domain- as new as the Novel Corona Virus. We are caught unprepared, to face the most devastating challenge of the times, that too to lead from the front

### 2. The challenge

The challenge is huge. Officers from Intelligence, Operations, Human Resource Management, Training, all have to work in tandem with each other as if we are fighting a war. Yes, we are facing a very different kind of an internal security challenge; solutions to come out victorious have to be chalked out.

Again, this fight is not to be fought with the brutal power but with the soft and firm power, and this is no easy task. And this is a war where we need to emerge emerging victorious without losing warriors.

The Police is utilizing surveillance to enforce pandemic laws. How can we ensure data security of citizens? Any leak of data would be a matter of serious concern for the public. So data security is extremely important. Intelligence collection on various types

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## 2 Dr. B.Sandhya

of unrest, quarantine jumping with a view to destabilize internal security, etc also are of paramount importance.

It is the challenge of Police Leadership to identify core duties during such times. Access to a Police Building shall be given to any public only after screening and after following all hygiene protocols. Establishing logistics in place to keep Police premises clean, and ensuring personal hygiene and health of all Police personnel and their families would be among the most important mandates for the leaders at the cutting edge level.

Communicable Disease Management Programme has to be in place and training in protocols shall be of utmost priority.

Ensuring gender justice among the Police personnel becomes a challenge as over working and reduced strength would be the norm.

Keeping the morale of the Force high by providing all the required logistics and adequate rest is a challenge to the Police Leadership.

### 3. Role of Police

During the plague in the 1890s, the British Military and the Police imposed forced quarantine, seizure and destruction of contaminated property etc.. This had led to protest, violence and even murder of officer Rand by Hari brothers. This sparked nationalistic feelings against the British Government in India. Role of Police in a pandemic would be very different in a democratic welfare State.

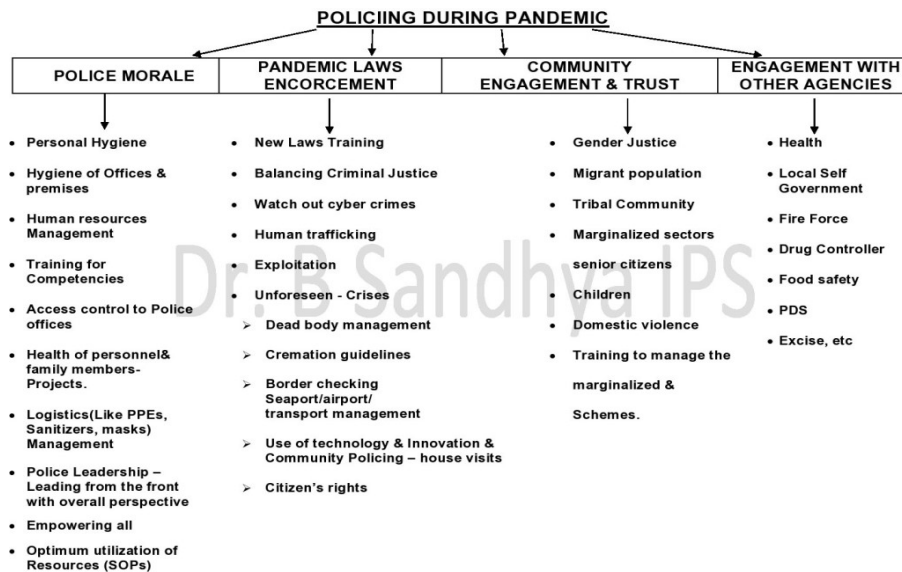
A study 'Police Planning for an influenza Pandemic Case Studies and Recommendations from the Field'(Luna&Sanberg,2007) shows that maintaining Interagency and Internal communications is the key to success in Pandemic situations as exemplified by the Fairfax County Police and City Administration. They highlight Public Health Emergency Training and use of technology.

Enforcement of Pandemic Laws is the most important duty of Police during a Pandemic. Another important function is coordination with other Departments.

Co-ordination of Migrant labourers camps, Community Kitchen, Civil Supplies (PDS) etc by the Janamaithri Beat Officers was an excellent example of Community Reach and Interagency Co-ordination in Kerala. Prevention of hoarding of food stuff, medicines and PPEs is also a major duty of the Police.

Public education and awareness through social media is to be done by the Police diligently. The tradition of Community Policing comes handy in doing such work.

Coordination with courts, Jails etc also need to be done so that the Criminal Justice responsibilities are intact. Development of innovative technologies to deal with summons, producing prisoners etc need to be done.



### 3.1 Leadership

Harvard Business Review article titled 'How a good Leader Reacts to a Crisis' (Baldoni, 2011) mentions Winston Churchill's famous quote, "You ask what our aim is? It is victory; at all costs; victory in spite of all terror. Victory however long and hard the way may be; for without victory there is no survival." This statement is very relevant while dealing with a pandemic. Victory over the virus must be the aim of a leader during pandemics.

A leader's ability to adapt rapidly would be tested during the crisis. Leaders who can engage directly but still maintain their sense of perspective would be the ones that will help the society survive, and would be considered effective.

The leader's first priority in a war situation shall be to ensure that none of his men is lost in the battle. This keeps the morale high. Health, mental and physical, of the team should hence be the top most priority during the pandemic.

In 'The Role of Law Enforcement in Public Health Emergencies'( Richards et al, 2006) underline the following points in this regard

- Preparing the Department
- Responding to and Managing Incidents
- Continuity of Operations
- Protecting Law Enforcement Officers and their families
- Protecting the Community
- Working with Public and Private Agencies
- Taking care of Special Populations
- Mass Casualty Planning

### **3.2 Planning**

Following aspects are important as far as planning is concerned.

1. Collection of Intelligence without risking the privacy of the citizens.
2. The migrant population and their movement /containment/welfare.
3. Large scale home coming of non-resident Keralites is the most demanding challenge faced by the Police. Innovative technologies with Humint support is required to tide over the situation.
4. Overwhelming of hospitals has to be envisaged. Advance planning and awareness regarding logistics and planning along with Health and Local Self Government Departments is required.
5. Mass Casualty planning also has to be done in advance. Management of inquest and autopsies with a view to avoid criminal element in any case is a challenge. Management of crematoriums, cemeterys etc as per WHO guidelines have to be planned well in advance. Law and order situations with respect to cremation places etc has to be envisaged and planned.
6. Gender Justice in the community has to be ensured. There is history of women/children being sexually exploited by various rackets and sometimes even by Law Enforcement Officers. Gender Justice within the Department also has to be ensured while the Organization is being pushed to it's limits. A genuine concern for the community is required as the marginalised, the women, the children and the senior citizens would be in need of compassionate attention.
7. Human trafficking will have to be carefully watched and special units handling such cases need to remain alert.
8. Children hailing from tribal areas need special attention as they are deprived of internet facilities etc. Bootleggers and human traffickers sneaking in to tribal hamlets will be of great concern. Such visitors may spread pandemic too which could cause genocide of vulnerable communities. Special preventive projects are required in such areas.
9. Emerging economic crises and resultant poverty and related issues have to be closely watched as these may lead to different types of crimes. Cyber patrolling to prevent criminalization of cyber world (financial frauds and crimes against women and children) has to be intensified.
10. Unemployment of repatriates and marginalized or even educated youth have to be closely watched to prevent social unrest.

### **4. The Kerala Model**

In Kerala the Police was very early to start training programmes in this regard, and these were professionally handled by State Health Research & Training Institute.

Reaching out to the Police Stations using video conferencing was of great use.

Police also started a Protecting the Protectors Programme to ensure health of Police personnel and their family members. The ten Police hospitals all over the State were roped in and paramedics / Health Inspector trained Police personnel were deployed.

They conducted awareness classes and distributed preventive medicines. Tele medicine and tele counseling facilities are also available.

Police undertook the most important duty of ensuring quarantine and social distancing. Digital applications became handy in ensuring quarantine. The triple lock down system used in Kasargod District (which had showed a spike in early days of pandemic) emerged as model to be emulated in similar situations. Senior officers were deputed to red zone Districts to lead from the front.

Establishing SOPs and Protocols for every type of pandemic duty, with the use of minimum number of personnel, without risking their health is a challenge to any Police Organization. Kerala Police has come out with an elaborate document covering all points of Police safety and Public safety giving due regard to all sections of the society.

## 5. Conclusion

Policing during pandemic is a challenge which has to be faced by the Police Leadership with meticulous planning, factoring in even the most unexpected outcomes. Keeping the morale, physical and mental health of the Force is extremely important to emerge victorious in this internal war on pandemic.

Involving every member of the organization with a sense of responsibility and belonging to the community is a major factor to ensure victory. Sustaining the spirit of service for a long duration is a challenge which has to be met with elaborate planning with vision.

## Appendix-1 Pandemic Laws:

1. Epidemic Diseases Act 1897 - Enacted to tackle bubonic plague in Mumbai (Section 3 of the Act says any person disobeying any regulation or order made under this Act shall be deemed to have committed an offence punishable under section 188 of IPC)
2. Section 51 - 60 of the Disaster Management Act 2005.
3. Kerala Police Act 118 E, Kerala Epidemic Diseases Ordinance 2020, Section 5

## Suggested readings:

1. Interpol: ([https://www.interpol.int/en/content/download/15014/file/COVID19\\_LE\\_Guidelines\\_PUBLIC\\_26mar2020.pdf](https://www.interpol.int/en/content/download/15014/file/COVID19_LE_Guidelines_PUBLIC_26mar2020.pdf))
2. CHRI: (<https://www.humanrightsinitiative.org/publication/chri-releases-guidelines-to-police-on-respecting-human-rights-while-enforcing-the-lockdown>)
3. Indian Police Foundation: ([https://www.policefoundationindia.org/images/resources/pdf/IPF\\_Pandemic\\_Preparedness\\_Plan1.pdf](https://www.policefoundationindia.org/images/resources/pdf/IPF_Pandemic_Preparedness_Plan1.pdf))
4. Epidemics in 1800s and how Kerala's princely state Travancore tackled them.

(<https://english.manoramaonline.com/lifestyle/health/2020/03/18/epidemics-in-1800s-how-travancore-tackled-them.html>)

5. Epidemics and Pandemics in India throughout History: A Review Article: ([https://www.researchgate.net/publication/336061202\\_Epidemics\\_and\\_Pandemics\\_in\\_India\\_throughout\\_History\\_A\\_Review\\_Article](https://www.researchgate.net/publication/336061202_Epidemics_and_Pandemics_in_India_throughout_History_A_Review_Article))
6. Spanish flu: Lessons from a pandemic that took 10 million lives in India: (<https://indianexpress.com/article/explained/lessons-from-a-pandemic-a-century-ago-coronavirus-spanish-flu-6313344/>)
7. WHO releases guidelines to help countries maintain essential health services during the COVID-19 pandemic: (<https://www.who.int/news-room/detail/30-03-2020-who-releases-guidelines-to-help-countries-maintain-essential-health-services-during-the-covid-19-pandemic>)
8. How the Spanish flu of 1918-20 was largely forgotten: (<https://www.economist.com/international/2020/04/18/how-the-spanish-flu-of-1918-20-was-largely-forgotten>).



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## A Tale of Two Judgments

Umesh Sharraf, IPS\*

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*“It was the best of times, it was the worst of times, it was the age of wisdom, it was the age of foolishness, it was the epoch of belief, and it was the epoch of incredulity...”*

Dickens’ immortal opening lines of ‘A Tale of Two Cities’ come to mind when reviewing the tragic Ayesha Meera case of Vijayawada and its aftermath in the Criminal Justice System.

In the trial court, both sides present evidence to show their version of what happened. The evidence presented in the trial court comes from witnesses and exhibits. However, in the appellate courts, there are no witnesses, and no exhibits are presented. In appellate courts, the lawyers are supposed to argue legal and policy issues before the judge or a bench of judges. In the trial courts, the lawyers present evidence and legal arguments to persuade the judge. Appellate courts are not in a good position to rehear the facts of the case and hence they are supposed to focus on questions of law, NOT on questions of facts like the trial courts. The appellate court is supposed to overrule a trial court decision only if an important legal error was made in the trial court. However, in India, our appellate Courts routinely go into questions of fact. Besides adding to judicial delays, this tendency to second-guess the trial court also leads to piquant situations, as the case study narrated here shows.

### **The story according to the Prosecution (as gleaned from the case diaries)**

Ayesha Meera, a 17 year old girl, was studying in first year Pharmacy in Nimra College and residing in Sri Durga ladies’ hostel at Ibrahimpatnam in Vijayawada since 24.10.2007. She went for Christmas vacation to her native place in Tenali on 20.12.2007 and returned to her hostel on 26.12.2007 at about 6p.m. along with her mother Syed

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\*Additional Director General of Police, Telangana

Shamshad Begum. Her mother dropped her at the hostel and went back to Tenali on the same day at about 7.30p.m. On the next day at about 6:00a.m. there was a phone call to her parents by the husband of the hostel warden, who informed them that Ayesha Meera was in a serious condition and they rushed to the hostel by 8:00 a.m. Preeti, studying in B.Tech. in Nimra College and residing in the same hostel for 4 years, revealed that she along with others had called Ayesha Meera to join them for dinner the previous night, but she had replied that she had already eaten and had gone to bed. They went for dinner and after returning, stayed awake talking till midnight in their rooms and then they too went to sleep.

That morning, at about 5:30a.m. Preeti got up to go to the toilet and she saw suitcases and other stuff spilled in the corridor on the second floor and found Ayesha Meera missing and blood stain on her bed. She took her colleagues Navya, Deepti and Radhika and went to the first floor where their warden stayed with her family and informed her. Immediately, the warden and her husband went to the second floor bathroom and found the naked dead body of Ayesha Meera lying in a pool of blood with her right leg tied to the water tap and blood oozing out from her nose and ears.

A case in crime No. 477/07 u/s 302 IPC was registered by the CI of police. The ACP took up further investigation and basing on the opinion given by the doctor, he filed a memo for inclusion of section 376 IPC.

Investigating officers seized a letter addressed by an unknown person to the hostellers that was found at the scene of offence. The doctor who conducted the autopsy collected the vaginal swabs and smears and sent it to FSL for chemical analysis. Experts developed DNA profile from the samples collected from the person of Ayesha Meera. Later, when the videograph of the scene of offence was scrutinized by the FSL, they found partial footprint of a left foot.

Police examined several witnesses, recorded their statements and also subjected them to polygraph test, DNA test and also sent their hand writings and footprint impressions for comparison with the samples collected by them at the scene of offence.

During the course of investigation, they 'suspected' one Guruvinder Singh @ Laddu @ Bobby, who had a criminal history and subjected him to polygraph test on 11.3.2008 and on 12.3.2008. It was held that he was withholding his responses and hence no conclusive inference could be drawn. His hair sample was collected, but it was not tallied due to dissimilar or phological characters. His DNA profile was also did not match the profile obtained at the scene of offence, though his foot prints tallied with the footprints available at the scene of offence. (His name was deleted as a suspect only on 12.11.2008.)

The ACP came to know on 17.8.2008 that one Pidathala Satyam Babu, who was arrested by P.S Nandigama of Krishna District in Cr.241/08U/Ss.450,457 and 380 IPC, had voluntarily confessed regarding the commission of offence against Ayesha Meera on the intervening night of 26/27-12-2007. Accordingly, the ACP obtained a Prison Transfer Warrant on 18.8.2008 and took him in to custody on 29.8.2008 and interrogated him. He confessed his guilt and in pursuance of the confession they seized a chutney



pounder used in the commission of the offence. With the permission of the Court they obtained his foot prints and handwritings and also blood and hair samples for DNA examination for comparison and they were found tallied with the samples collected at the scene of offence. A charge sheet was filed against him (Pidathala Satyam Babu) for offences U/s.302 and 376 IPC.

#### The story according to the victim's mother

The peculiarity of this case is that PW1, Ayesha Meera's mother, came up with a different version and claimed before the court that a party was organized in the ground-floor of the hostel on 26.12.2007. The husband of the hostel warden I.Siva Rama Krishna, K.Satish, B.Suresh, Ganesh, Ch.Praveen Kumar and Rajesh allegedly participated in the party. Two of them went to the second floor to meet their girlfriends in the same block in which her daughter was staying. When her daughter saw them and threatened to expose them, they allegedly did away with her.

She filed a postcard that was received by her on 30.1.2008 during her evidence which was not brought to the notice of police during the investigation. She also stated that she came to know regarding the above fact on 29.12.2007 at about 8 a.m. through some unknown person's call to her husband's cell phone.

She also stated as the caller had requested her not to reveal his name, she didn't want to reveal his particular seven before the court on 10.8.2009. She said that she had not stated the same facts to the police till then as she had no faith in police. She stated that there was no proper investigation in this case and requested the court to order reinvestigation for tracing out the real culprits. She claimed before the Court that she had submitted memoranda to the Human Rights Commission, the Minorities Commission, the National Women Commission, MP Asaduddin Owaisi, the Chief Minister of AP and the Vice President of India but she did not file copies of the same in the court.

#### The two judgments

On 29.9.2010, the Sessions Judge of Mahila Court Vijayawada (in Sc No. 34/2009), convicted Pidathala Satyam Babu u/s 302 & 376 IPC and he was sentenced to life imprisonment and fine of Rs.1000/-, in default, to suffer S.I. for 6 months & further sentenced to undergo R.I. for ten years and also to pay fine of Rs.1000/- in default, to suffer R.I. for six months for the offence u/s 376 IPC.

On 28.10.2010 the accused preferred a criminal appeal in the AP High court which was allowed and numbered as CrI.A.No.1518 of 2010. On 31.3.2017, after nearly seven years, the High Court set-aside the conviction stating *'Referred to Apex committee for taking action against all the erring investigating/prosecuting officials/officers, for not identifying the real culprits and prosecuting an innocent Person and getting him convicted'* and suggested that public spirited persons may take it forward to identify the real culprit. APIL vide No.186/17 and writ petition, vide WP No 25434/ 17 were filed

in High Court soon after. On 1.8.2017, the High Court ordered the constitution of an SIT. On 19.1.2018, the High Court disposed the PIL no. 186/17 & gave directions to conduct a court monitored de-novo investigation with directions to the SIT to file periodical reports under WP No. 25434/2017. On 12.10.2018 the High court impleaded the CBI in the writ petition and asked CBI to conduct a fresh investigation and to register an FIR regarding destruction of material objects. However, till now, no progress appears to have been made by the CBI in the matter.

It would be instructive to compare how the two courts viewed the same evidence. Given below are their different views in the key questions of fact (the relevant portions have been extracted from the judgments *ab origine* and have not been corrected for syntax or grammar):

***Question of fact: about the first information received and registration of FIR***

Sessions Court: “A report is needed only to set the criminal law in motion. The hostellers have no necessity to dispose falsely against PW12 and they have clearly stated that she came to the scene of offence along with PWs-1 and 13 and moreover the inquest report was also sent to the Magistrate on the same day and he put his initials at the about 9:30 p.m. Therefore, court feels that there was no delay in registering the FIR and in fact there was some delay in receiving the FIR by the court. In view of the other investigation material documents, it cannot be said that FIR was registered at 8p.m. instead 9a.m.” [PW1: Syed Shamshad Begum, mother of the deceased; PW7: Inapuri Venkata Siva Rama Krishna, husband of the warden; PW12: Kakumanu Sandhya Rani, colleague of the father of deceased and scribe of the FIR; PW13: Syed Iqbal Basha., father of the deceased]

High Court: “Quite interestingly P.W.7 has not given written report. There is a serious dispute about the time at which the report was given.”

***Question of fact: presence of parents of deceased at the time of inquest***

Sessions Court: “PW1 stated that she found the dead body by the side of the next block in an arrow line at that time blood was oozing from her ear and nose and her body was covered with blanket. It clearly shows that inquest was conducted in their presence. PW30, Inspector of Police, stated that the entire scene of offence was photographed and videographed under Ex.P37 to P39. He stated that he recorded the statements of PWs 1 and 13 at the time of inquest he also examined PW12 on the same day. He clearly stated that all of them stated before him as in Ex.P5, P9 and P12 court pursued the C.D under Ex.P39 as per the request of the Addl. P.P and also conducted the local inspection of the scene of offence at the request of the learned senior counsel on 14.9.2010 for proper appreciation of evidence on record, therefore Court feels that version of PWs-1 and 13 is not believable in the above aspects. Surprisingly, PWs-1 and 13 also denied that the

inquest was not conducted in their presence at that time i.e., from 12 noon to 2.30 p.m. in the corridor of 5th block but PW13 admitted their signatures on the summons issued by the Police as Ex.P10 and P11. PW1 stated that she found the body of her daughter by the side of next block in a narrow lane. Moreover, their presence was mentioned under Ex.P16 and the co-hostellers also stated that the inquest was conducted in their presence.” [Ex.P5:161 Cr.P.C. statement of PW1, mother of deceased; Ex.P9:161 Cr.P.C. statement of PW-12, scribe of the FIR; Ex.P10: signature of PW-13 on the summons to conduct inquest, father of deceased; Ex.P1: signature of PW-1 on the summons to conduct inquest; Ex.P12:161 Cr.P.C. statement of PW-13, father of deceased; Ex.P15: scene observation report; Ex.P16: Inquest Report; Ex.P37: photograph of the scene of offence; Ex.P39: C.D. of the scene of offence; PW18: Vemuri Sai Mahesh Babu, mediator; PW19: Guntupalli Vasudeva Rao, mediator; PW30: S.Murali Mohan, I.O, inspector of police.]

High Court: “If we carefully analyze the evidence of PW-19, it could be deciphered there from that he did not specifically state that Ex.P-16 was drafted in the presence of the parents of the deceased. After he has stated that at the time of inquest panchanama, himself, PW-18 and Krishna Prasad were also present, he has deposed that the Police have examined the witnesses, the parents of the deceased and the co-hostellers. PW-19 was not categorical whether the examination of the parents of the deceased by the Police was at the time of preparation of the inquest report or subsequent thereto. The best person to speak about the preparation of Ex.P-16 inquest report and the presence or otherwise of the parents of the deceased at the time, is its scribe, Krishna Prasad. However, for the reasons best known to the Police, he was not examined. In the face of the categorical assertion by PW-1 and PW-13 that they were not permitted to see the dead body of the daughter till 3.30p.m. and that Ex.P-16 inquest report was prepared after the dead body of their daughter was handed over to them in the evening, any amount of suspicion arises on the version of the prosecution that Ex.P-16 was in fact prepared in the presence of PW-1 and PW-13 at the time as pleaded by the prosecution. Further, in the charge-sheet it is alleged that in all 18 items were seized from the scene of offence under Ex.P-15 in the presence of PW-18 and PW-19 only and there is no reference to the presence of PW-1 and PW-13, the parents of the deceased, at the time of its preparation. The preparation of Ex.P-15 in the absence of PW-1 and PW-13 strengthen the plea of these witnesses that they were not even permitted to see the dead body of their daughter on the in arrival. Hence there is any amount of doubt on the case of the prosecution that Ex.P-16 inquest report was prepared at the time as claimed by it and in the presence of the parents of the deceased. This aspect, in our opinion, assumes huge significance while examining every other aspect, because, it is the version of the defence as well as P.W.1 that investigation of the case was not held on proper lines due to political interference, that the offence has not taken place in the manner as pleaded by the persecutions”

*Question of fact: Submission of scene observation report to court along with charge sheet with delay.*

Sessions Court: “I.O. stated in his evidence that he retained the document, scene observation report, EX. P15. For the purpose of investigation. Defence further stressed upon that PW34 who laid charge sheet stated that he has seen Xerox copy of the non-judicial stamp paper at the time of filing of the charge sheet and he has noted closed the said document to the charge sheet and moreover, it was not signed by the Magistrate. He further stated that it was seized on 29.8.2008 and again stated that it was seized on 26.12.2007 and there is no record to show whether the document under Exs.P4 and P6 were filed in the court. PW34 filed charge sheet in a sensational case; he ought to have been more careful and attentive while facing cross-examination, taking advantage of his lapses defence counsel argued that it clearly establishes that this Exs.P4 and P6 were manufacture data later point of time and the accused might have made to write the letter Ex.P4 and P6 along with the sample handwriting and this is how the investigation indulged in implicating the accused in this case.” [Ex.P4: xerox copy of affidavit given by PW13 dt.21.07.2007; Ex.P6: Contents of letter on the reverse side of Ex.P4 affidavit; Ex.P15: scene observation report; Ex.P16: Inquest Report; PW.34: P.Prakasha Rao, subsequent I.O., ACP]

High Court: “The failure of the Police to send Ex.P.15 to the court along with Ex.P.16-inquest report or at least within a reasonable time thereafter, coupled with the various suspicious circumstances pointed out here in before, would certainly lend credibility to the version of the defense that Exs.P.4 and P.6 were brought into existence at a much later date and evidently after the appellant was apprehended to falsely implicate him.”

*Question of fact: absence of finger prints and foot prints (except a single partial foot print)*

Sessions Court: “Pool of blood drag marks were found in the photographs and also in the C.D if at all they really intended to screen the evidence, they might have done it totally without any sign of blood. Clue steam and finger prints also came to the scene of offence and they searched for foot prints and finger prints, but they were not found at the scene of offence. The learned Counsel stated when the Police found half footprint in the bath-room there is every chance for finding the foot prints in the corridor but several people walked in the Corridor till 9.30 p.m. and even if there were some footprints as stated by him they might have overlapped and not traced out by the clue steam.”

High Court: “While it is the case of the prosecution that the appellant has solely handled the deceased from the stage of his attacking her with the chutney ponder till heaped her twice, by lifting and dragging the body for a length of about 60 feet, tying her one leg to the tap, it is impossible to believe that no fingerprints were found on the body of the deceased. The prosecution has not even attempted to explain the reasons for the absence

of fingerprints and footprints, except an isolated footprint allegedly noticed and developed from the videograph of the scene of offence. The serious lacunae in the case of the prosecution stare at its face”

*Question of fact: capacity of the accused to climb and gain access into the second floor of the building*

Sessions Court: “The counsel of the accused argued that there is no scope for entering in to the hostel as they have taken all the steps to safeguard the hostel. Topography of the hostel is also well explained through oral and documentary evidence. The case of the prosecution is that accused entered into the hostel by climbing from the top of the bathroom to the first-floor and from there he entered into the second floor through the staircase. Admittedly, there was no watch-man at the hostel and there were no grills to the first and second-floors. The height of the top of the bath-room to the first-floor wall is 6 feet 5 inches. Addl.P. submitted that as per the evidence of PW15, the accused worked as mason and was also working as a lorry cleaner and argued that as a lorry cleaner he was accustomed to climb the lorry as the seating was more than the normal height. Accused in pursuance of his confession led the Police to the hostel and showed them how he entered in to the hostel, which is within his exclusive knowledge. Admittedly, he had not entered the hostel from the regular way but climbed from the top of the bath-room to the first-floor and then reached the second –floor. It clearly shows that it is not impossible to enter into the hostel. PW14 stated that accused beat on her head and when she raised cries he ran away by jumping over the wall. The dog handler also stated that dog climbed the parapet wall by the side of bathroom and barked and their evidence gives strength to the arguments of Addl.P.P.” [Ex.P26: potency certificate of accused dt:25.10.2008; PW14: Thota Rama Devi, residing in Nandigama; PW15: Kondapalli Veerabrahmam, lorry cleaner]

High Court: “Examining from the standpoint of an ordinary prudent man, it is impossible for one to believe that a person like the appellant, who, as per Ex.P.26-sexual offence report, was 165cms. (5feet5inches) tall and 50 kgs of weight would have the capacity to perform the a fore mentioned feat. It requires not less than a superman's effort to perform such a feat and it is a highly unlikely that an ordinary person like the appellant could accomplish such a task. The prosecution wants us to believe that the appellant has not only gained access to the second floor, but also sneaked into the hall, hit the deceased with chutney pounder, single-handedly lifted her up to the indoor of the block and dragged her for a distance of about 60 feet. That all the while till he has accomplished this task and left the building, not even a single inmate has noticed the offender committing a series of the alleged acts. Even in a surprise attack, the victim would raise alarm if she is attacked. The deceased has allegedly made only feeble sound “kue” and nothing else. It is impossible for anyone to believe that the appellant has gone about his

violent acts of murder and alleged rape in a silent and serene manner without attracting anyone's attention even if it has taken place during dead of the night.”

*Question of Fact: Regarding accused gaining entry into the room of deceased.*

Sessions Court: “He further submitted that prosecution introduced certain new facts in support of them that the hostellers were not in the habit of bolting the door of the hall from inside and they were not using the inside bath-room for any other purpose except for bathing purpose and so also there was a stand fan in the kitchen and it was giving a lot of sound. All the said facts were stated by the witness seven in their earlier statements. Therefore, it cannot be said that they were introduced newly only at the time of deposing before the court. It was laid down by the Apex Court time and again in various decisions that minor contradictions in statements under 161 CRPC and deposed I the court, without any material improvements made by him is not fatal for prosecution. It is well that every person who witnesses murder reacts in his own way. There is no set rule of natural reaction. Admittedly, PWs-2 to 5 are co-hostellers and Ayesha Meera was joined in their hostel about 2 or 3 months prior to the incident and they have no enmity against her and there is no reason for them to depose falsely.” [PW2: Shyam Pakaiya Raj Preethi, Co-hosteller and blockmate; PW3: Bolla Navya, Co-hosteller and blockmate; PW4: Vanama Sowmya, Co-hosteller and blockmate; PW5: Shaik Jawahar Sultana, Co-hosteller and blockmate]

High Court: “The theory of the prosecution that the hall door was kept unbolted paving the way for the offender to straight away enter the hall without the aid and assistance of the insiders is difficult to accept.”

*Question of Fact: Letter addressed to hostellers and left at scene of offence*

Sessions Court: “There were no external injuries either on the body or on the private parts and moreover if at all there is any request and refusal it might have alerted the inmates sleeping in the kitchen. Therefore, it appears that he cleverly written the letter only with an intention to mislead the Police.” [Ex.P4: Xerox copy of affidavit given by Pw13 dt.21.07.2007; Ex.P6: Contents of letter on the reverse side of Ex.P4 affidavit; Ex.P17: Admissible portion in the confessional statement (Mediators’ report)]

High Court: “It is written on the reverse of Ex. P.4 marked as Ex.P.6, that he went into the hostel not to kill the deceased but to say “ILU” and that after he entered the room the deceased refused to say “ILU” in spite of begging her many times and that therefore in anger he has given a strong blow on her head. Thus, there is a serious contradiction between Exs.P.6 and P.17. The contents of Ex.P.6 suggest that the appellant had previous acquaintance with the deceased while, if we go by Ex.P.17 he went into the hostel to satisfy his lust and he has accidentally chosen the deceased who was found sleeping alone in a hall while the other girls were sleeping in kitchen, next to the place

where the deceased was sleeping. The prosecution, far from giving up Ex.P.6, placed heavy reliance on it. In our opinion, the motive suggested by the prosecution is not only self-contradictory but also highly improbable suffering from inherent weakness. On a close scrutiny of this part of the prosecution case, we find the motive theory setup by the prosecution not only self-contradictory, but also too artificial to be accepted.”

***Question of fact: Place of recovery of letter addressed by offender to hostellers***

Sessions Court: “Even the contents were stated in their earlier statements merely because there are some contradictions in the evidence of the witnesses regarding the seizure of the letter near the coin box, from the belongings of the deceased in suit case will not go to the root of the case there may be slight variation in the exact place of recovery, but it clearly shows that the letter was recovered at the scene of offence so also PW3 stated that she came to know about the seizure of letter through PW2 and PW4 stated that Police informed about the letter after the inquest are also minor deviations in their evidence. PWs-5 and 6 came to know about the seizure of letter but PW7 husband and of the warden clearly stated that the said letter was searched from the belongings spread over and the contents were read over to the mat the time of inquest. PW18 is the scribe of the scene of observation report and PW19 is another mediator and both of them stated regarding the seizure of the letter at the time of scene of offence the evidence is also supported by Inspector of Police PW30. Basing on the above evidence, Court feels that prosecution is able to establish seizure of the letter addressed by the accused on the reverse side of the non-judicial stamp paper, which is marked as Exs.P4 and P6 was from the scene of offence at an earliest point of time.” [Ex.P4: Xerox copy of affidavit given by Pw.13 dt:21.07.2007; Ex.P15: Scene observation report; PW.2: Shyam Pakaiya Raj Preethi, co- hosteller and block mate; PW.3: Bolla Navya, co-hostellers and block mate; PW.4: Vanama Sowmya, co-hosteller and block mate; PW.5: Shaik Jawahar Sultana. Co- hosteller and blockmate; PW.6: Inapuri Padma, warden of hostel; PW.7: Inapuri Venkata Siva Rama Krishna, husband of the warden; PW.18: Vemuri Sai Mahesh Babu., mediator, scene of offence; PW.19: Guntupalli Vasudeva Rao, mediator; PW.30: S. Murali Mohan, inspector, SHO, I.O.]

High Court: “Significantly, the exact place at which Ex.P.4 was found is not mentioned in Ex.P.15.”

***Question of fact: Description of the letter in scene observation report and inquest report.***

Sessions Court: “The said document was seized in the presence of the mediators at the scene of offence and they signed on the document on 27.12.2017 itself. Therefore court feels that there is no other letter except the letter addressed on the reverse side of the non-

judicial stamp paper and there is no reason for the Police to get up this letter at the Earliest point of time only with an intention to apprehend the accused in future.” [Ex.P4: Xerox copy of affidavit given by Pw.13 dt.21.07.2007; Ex.P15: Scene observation report; Ex.P16: Inquest Report]

High Court: “It is of relevance to note in this context that in Ex.P.16-inquest report, Ex.P.4 was described as ‘letter’. Its contents were not refereed even in brief in this document. However in Ex.P15,Ex. P4 was describedas“ a Xerox copy of affidavit typed on N.J.stamp paper (of) worth Rs.10/-and signed by the father of Ayesha Meera..”The prosecution failed to explain this vital discrepancy in the description of Ex.P.4 between Ex.P.15 andEx.P.16.”

***Question of Fact: Contradiction in seizure of letter***

Sessions Court: “When the expert clearly stated that the questioned document under Q1 and Q2 was available with him for comparison on 16.1.2008 itself. The contention of PW.1 thatshe handed over the copy of the affidavit to theca Pon 24.1.2008 at about 5 p.m. and the argument of the counsel that the Satyam Babu was made to write the letter under Ex.P4 and P6 along with sample hand-writings is not acceptable. There is no scope for improper collection of samples or for tampering of the questioned document, therefore court feels that there is no reason to discredit the important piece of evidence of the Expert in this case.” [PW.1: Syed Shamshad Begum mother of deceased; PW.23: K.Vani Prasad Rao, Forensic Expert; PW.33:N.Ramachandra Murthy, subsequent I.O.; Ex.P4:Xerox copy of affidavit given byPW.13dt.21.07.2007; Ex.P6: Contents of letter on the reverse side of Ex.P4 affidavit]

High Court: “If the FSL has received and retained Q.1 and Q.2 hand writings with itself, as spoken to by P.W.23, it is not known how P.W.33 could have sent the said documents which continued to be in the custody of the FSL along with the letter of advice on 29.08.2008. This serious contradiction casts a dark cloud on the prosecution theory regarding the seizure of Ex.P.4 containing Ex.P.6-writings from the scene of offence on 27.12.2007.”

***Question of fact: Collection of samples from accused***

Sessions Court: “The accused was taken in to custody on P.Twarrant with a direction to remand him back within 5 days and as per the directions of the court, he was produced before the FSL not only for collection of hand-writings, but also for collection of foot impressions and the collection of hair and blood samples for DNA examination, As such they have felt that Joint Director of FSL is an authorized person for collection of the samples and he was examined by the ACP on 11.11.2008 and accordingly he deposed before the court as PW22 there is no reason for him to depose falsely. The learned counsel further stated that the specimen hand-writings have to be taken only before the



Magistrate, but not in the FSL. The hand-writings were collected in the FSL in pursuance of the orders of the court therefore it cannot be said that they were not collected in the presence of magistrate and the collection of samples is not proper.” [PW.22: A.Venkata Ramana Reddy, Joint Director of APFSL; PW.23: K.Vani Prasad Rao, Forensic Expert]

High Court: “The Police have not taken the permission of the court to send the admitted and questioned writings for the opinion of the FSL. P.W.23 admitted that he has not received any Court orders in this regard.”

*Question of fact: Authenticity of DNA report*

Sessions Court: “PW24 has not returned the vaginal swabs and smears and left over traces of the said samples were available in their department, as such it was suggested to him that they have taken the DNA profile from leftovers and matched with the DNA profile of Ayesha Meera and they have not collected blood and hair samples of Satyam Babu. He also suggested that they never prepared DNA profiles of Ayesha Meera and only after collecting the sample from Satyam Babu they have tampered his sample created DNA profile to show that it was matched with that of Ayesha Meera. Defence counsel gave two contradictory suggestions only to create doubt in the mind of Court and to get the benefit of doubt for the accused. The learned defence counsel further argued that positive DNA report can be of great significance, where there is supporting evidence, depending of course on the strength and quality of that evidence, even if it is positive, it cannot conclusively fix the identity of the miscreant, but if the report is negative, it would conclusively exonerate the accused from the involvement of change. He further stressed up on that it cannot be accepted by the trial court in isolation as a sole piece of evidence to record the conviction of the accused U/s.376 IPC. Therefore, court feels that the opinion of DNA expert conclusively proves the involvement of the accused in the commission of offence. No doubt that the evidence of DNA expert alone cannot be based for conviction unless there is corroboration.” [PW24:N.Venkanna, Forensic Expert, FSL; Ex.P30: DNA Report by PW.24 forensic expert with profiles.]

High Court: “Be that as it may the most crucial spect is whether P.W.24 has done the DNA profiling on item Nos 9 and 10, i.e., the alleged vaginal swabs and smears of the deceased on 13.02.2008, as disposed by him. On his own admission, P.W.24 has not sent the DNA profiling allegedly generated by him on 13.02.2008 to the Police. Thus, it is evident that till the blood and hair samples of the appellant were sent to him, the existence of the DNA profiling of the deceased was not in the know of any one, including the Police, and the court. In the absence of the standard DNA profile of the deceased made known to any one, it was not difficult for the FSL to manipulate the DNA report by comparing the DNA profile of the deceased, with her leftovers of items 9 and 10 belonging to the deceased and available with the FSL as suggested by the defence. The FSL as well as the investigating agency have not maintained transparency

right from the stage of collecting the samples from the body of the deceased and in properly preserving and sending them till the alleged DNA profiling was done. Thus, the whole procedure adopted by the investigation agency was susceptible to manipulation in preparing DNA profile to falsely implicate any one as they wish. When the DNA profiling was allegedly generated on 13.02.2008, the same, along with the leftovers of items 9 and 10 should have been sent by P.W.24 to the investigating agency which in turn should have produced the same before the Court for being preserved. This would have ruled out any possibility of manipulation of DNA report as suspected to have been done to falsely implicate the appellant. In the absence of such procedure being followed, it is not difficult for the Police and the FSL, a government agency, under the control of the Police Department, to manipulate the DNA results to suit their purposes and to falsely implicate the appellant. Thus, in our opinion, the procedure followed by the investigation agency and the FSL casts serious cloud of suspicion on the credibility of Ex.P.30, the DNA report.”

*Question of fact: Statement of tea stall owner about subsequent conduct and presence of accused, after offence*

Sessions Court: “Prosecution also examined that a tea-stall owner to establish the presence of accused around the tea-stall at that relevant point of time. Accused is resident of Anasagaram and there is no necessity for him to come to tea-stall in the early hours and stay till 11 a.m. and only out of his anxiety to know about the consequences of the offence loitering in the premises of tea-stall by watching T.V. Subsequent conduct immediately after the commission of offence is relevant fact. This is an additional link in the chain of circumstances.” [PW.11: Avula Dhana Raju, tea stall owner, opposite to scene premises]

High Court: “Tea stall owner at Ibrahimpatnam, deposed that at around 5.30 a.m. on 27.12.2007, a stranger (who was later identified as the appellant) came to his shop and was in the shop till 11.00 a.m. watching TV. The prosecution failed to explain as to whether the appellant has washed his clothes and removed the blood stains before entering the tea stall. Considering the short time gap between the alleged event and the appellant going to the tea stall, it would not have been possible for him to wash his clothes and make them appear dry and normal without blood stains being noticed by P.W.11. This part of the prosecution story appears to us to be farfetched.”

*Question of fact: contradiction on occurrence of offence, 376 IPC*

Sessions Court: “He noted down the external appearance of the body as there was no struggle marks over the body and private parts. He also observed bite marks present here and there over the body. He received chemical analysis report under Ex.P25 in which it

was clearly stated that human semen and spermatozoa are detected on item no. 1, 2 and 3.” [Ex.P25: Chemical analysis report Dt:17.01.2008]

High Court: “The absence of any struggle marks over the body or injurious to the private parts leads us to hold that there was no possibility of committing of rape on the deceased even once, leave alone twice, without causing injurious to her private parts. This, coupled with the highly suspicious DNA test completely negates the prosecution theory of rape. Dehors the rape, motive for the appellant to attack the deceased in non-existent. The circumstances would clearly suggest that the theory of rape is evidently floated by the investigating agency to divert the attention of the court from there a culprits and hide the truth.”

*Question of fact: Appreciation of evidence deposed by Scientific Expert.*

Sessions Court: “Merely because, it was tallied with footprints of two suspects the evidence of the expert cannot be doubted. It can be taken as additional link in the chain of circumstances.”

High Court: “After all the scientific evidence such as DNA Test, fingerprints and footprints expert’s opinions do not constitute conclusive evidence and assuming that the samples of the appellant got tallied, that by itself does not offer any excuse for the investigation agency to abandon the line of investigation undertaken by the monvarious suspects and eliminate them from the investigation. The attempt of the Police to project different persons as culprits one after the other indicates not only their vacillating attitude and their abject failure in conducting proper investigation, but also their anxiety to draw a curtain on the case by projecting somebody or the other as the culprit. In this process, they have come out with a theory which no person of ordinary prudence would accept. In other words, the entire case of the prosecution, far from being proved beyond reasonable doubt, raised too many doubts as enumerated above which did not find satisfactory answers.”

*Opinion of the Court on the Prosecution Version*

Sessions Court: “By keeping all these guidelines in mind and also considering the fact that most of the witnesses are disinterested and they have no motive to implicate the accused and others are public servants I am proceeding to appreciate the evidence on record... If at all it was really planted by the Police, they might not have sent it to the FSL to know whether there was any human blood or not. Admittedly the MO7 was seized only at the instance of the accused nearly 8 months after the offence as it was dried in the hot sun and also rinsed in the rain there was no blood stains found on the material object and there is every possibility that the blood stains might have been faded out. ...Merely because they acted as common mediators for two or three reports their evidence cannot be disbelieved and moreover, they are public servants and respectable

Persons of the locality and they have no motive to implicate the accused. All the links in the chain of circumstances may be strong or weak when taken separately but when hooked on to the next in criminated the accused inescapably. All the circumstances from which the conclusion is drawn is fully established and are conclusive in nature and also, they are consistent only with the hypothesis of guilt of the accused. Evidence shows that accused had strong motive and opportunity to commit the offence and then the explanation given by the accused should be considered.

Therefore his explanation is not convincing and acceptable the prosecution is able to establish the guilt of the accused within all human probability and the accused is found guilty for an offence U/s.302 IPC and also for an offence U/s.376 IPC.”

High Court: “Even if the appellant had resorted such daredevilry and was lucky enough to escape, it is not possible to believe that any person with whatever state of mind would ransack the baggage of the deceased, leisurely write on their body and address a letter without being panicky after committing the ghastly acts of the alleged murder and rape. Even if the appellant was psycho, (he was not declared as such by any Doctor). It is impossible for any person with the best of care and caution to do all these alleged acts without being noticed and caught by the inmates. But the prosecution attributed such incredible acts to the appellant and the court below has believed the same. We are, however, unable to endorse this extravagant version of the prosecution. There may not be perhaps a better case than the present one for being referred to the Apex Committee for taking action against all the erring investigating/ prosecuting officials/ officers, for not identifying the real culprits and prosecuting an innocent person and getting him convicted. The state is accordingly directed to refer the matter to the Apex Committee.”

### *Differing appreciation of evidence by the two courts and Confirmation bias*

It is striking as to how the trial court saw the evidence as proof of the guilt of the accused whereas the appellate court saw the same evidence as a conspiracy against an ‘innocent person’. Confirmation bias is our tendency to consistently seek out evidence that confirms our hypothesis and overvalue any confirmatory evidence and devalue the evidence against our pre-existing hypothesis. Keeping this in mind, we may get a glimpse of how the two courts could have seen the same picture in such dramatically different views.

### **What might have happened?**

With passage of time, any reconstruction of such events is a fraught exercise; especially with the inability or the unwillingness of police leaders to document, supervise the investigation beyond superficial orders to arrest/charge and monitor processing of evidence. This case was reported on 27.12.2007. As usual, the case was handled at the PS level with scant regard for preservation of the scene of offence, local media was

allowed free access and investigative processes were poorly supervised. Vijayawada is a politically hypersensitive place and the opposition party used this case to embarrass the Government by leveling allegations of involvement of ministers' kin in the crime. The grieving mother of the victim became the principal accuser of this allegation and the resultant political storm swept away the Police Commissioner. In March 2008, the Vijayawada police 'suspected' Guruvinder Singh @ Laddu, a history sheeter, and despite his DNA not matching the sample collected from the victim, determined to prosecute him.

Satyam Babu was NOT arrested by Vijayawada police. He was arrested in August 2008 in the neighbouring district of Krishna, in Nandigama PS, where he confessed to as many as eight cases of that PS and also, embarrassingly for Vijayawada police, this crime as well. This was not received well in Vijayawada police but in light of his detailed confession, ability to reconstruct the scene perfectly and matching of his DNA with the sample from the victim, they were forced to 'delete' the name of 'Laddu' from their charge sheet in November 2008 and prosecute Satyam Babu. Those who claim a conspiracy against him by the police, do not understand how the district police system functions. At a PS level, with all its pathologies, it would be totally out of character to insert case of murder of this sensational nature, that too of a neighbouring district, in the mouth of a confessor.

Having staked emotional capital in the opposition's narrative of the involvement of politically connected persons in the murder of her daughter and seen the shambolic efforts of Vijayawada police to implicate 'Laddu', it is not difficult to understand the unwillingness of the victim's mother to accept that the police might just have stumbled over the real killer of her daughter. After the arrest of Satyam Babu and his trial and his conviction in the Sessions Court in September 2010, the case wound up its way to the High Court by way of appeal where he was acquitted in March 2017. The party in opposition in 2008 was now in power and the Chief Minister refused entreaties of the top Police leadership to appeal to the Apex Court. The accused's dalit identity had become a cause to anoint him with victimhood. And, the victim's mother still did not believe that her daughter had received justice. In fact, this strident belief was echoed repeatedly in the High Court's judgment where apparently the belief of victim's mother in the innocence of the accused was the sole prism from which all evidence was viewed.

And, what about the eight cases of molestation, rape, murder and house trespass of Nandigama PS confessed by Satyam Babu? The five cases in Cr. Nos. 284/07 u/s 450, 379, 376 r/w 511, 307 IPC; 344/07 u/s 302, 307, 342, 452 IPC; 153/08 u/s 458, 324 IPC; 154/08 u/s 452, 354, 341, 342, 323, 379 IPC; and 224/08 u/s 450, 457 IPC wherein cases were charged against him and were in committal stage, were quashed by the High Court in September 2009 for having little evidence beyond his confession. Nandigama police's pathetic 'investigation' was shredded to pieces by the Court. The Court had quashed the committal proceedings but had not precluded the police from investigating the matter properly. Instead of re-investigating these cases properly, an SLP was filed in the Apex

court against the ‘quash’ orders. Not unexpectedly, the Apex Court dismissed the SLP. Unfortunately, till today, Krishna district police lists these cases as ‘quashed by the High Court’, having never re-investigated these cases. So, not only Ayesha Meera, but the victims of these cases also never got justice.

In Cr.No11/08u/s.457,324,354 IPC, Satyam Babu was convicted and sentenced to undergo one year SI on 2.2.2012. The case in Cr. No 152/2008 U/s 458, 509, 380 IPC was acquitted. In Cr no 241/08 U/s 450, 457, 380 IPC also, he was convicted and sentenced to undergo one year SI on 2.2.2012. (In 2012 a ‘rowdy sheet’ was opened on Satyam Babu in Nandigama PS as he is a resident of Anasagaram village in the jurisdiction of that PS. Perhaps this surveillance has deterred him from committing further crimes. He also filed a contempt petition in the AP High Court (1518/2018) in 2018 for non-payment of compensation!)

### **In Conclusion**

We have neglected investigation for far too long. Building capacity of our Investigating Officers, building domain expertise in the IPS and other ranks for various facets of crime and its investigation, management of case load by harnessing the power of IT, rationalizing police duties, installing systems for effective station house management, developing state CIDs’ competence (instead of treating them like dumping grounds)-are all doable by police leadership- and no litany of ‘political interference’ or ‘media pressure’ can hide this truth. Failures in following basic protocols in investigation are leading to cases every other day where public order gets disrupted, police image gets vitiated and the public faith in the rule of law gets fur the eroded.

Also, the urge of some police leaders to be in the limelight has little to do with the public’s right to know, the media’s right to information and the need to engage with the media as the fourth estate. It has much more to do with personal aggrandizement and publicity. The self evident pitfalls of this are firstly that our entire policing has become ‘arrest’ oriented. Because it is the ‘arrest’ that has the photo-op and because it is the ‘arrest’ that is proximate in time to the event, it makes much more sense for such glory seeking police leaders to harvest the entire publicity with the ‘arrest’. No one wants to invest time and effort in investigation and prosecution that are time consuming as the reward of conviction after trial is not only uncertain but also remote. This also has had as ubtle effect of subverting the process of ‘going from the crime to the criminal’ to ‘going from the criminal to the crime’ by placing ‘arrest’ at the beginning of the investigative process than at the end of it.

This case is also a prime example of failures in crime scene management and application of forensic technologies in evidence collection and documentation. Young IPS officers are advised to pay attention to this capacity building of themselves and their subordinates. Such cause célèbre cases come perhaps once in one’s career. They should not be found wanting at that time.



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## Police officers should see themselves as Public Managers

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### *Abstract*

*Powerful forces are transforming society which are acting as challenges for governments around the world. Citizens today expect more transparent, accessible, and responsive services from the public sector. And those expectations are rising. Citizens, now accustomed to the ease of buying products from Amazon or hailing rides from Uber, have greater expectations about the way their government should deliver services. Public entities are most effective when they are headed by leaders who can navigate complex, highly visible positions while prioritizing long-term initiatives over short-term politics. These leaders motivate people and sustain performance without the benefit of measures widely used in the private sector. There is hardly any guide for the new entrants to the civil services or to the experienced practitioners to the question of what the administrators and public managers should think and do to exploit the particular circumstances they find themselves in to create public value. The conventional wisdom most new entrants to civil services obtain in the form of anecdotes falls under this category as they receive stories on 'how to tackle a political situation by a street-smart administrative solution'. Most of the wisdom offered to the civil servants in these academies and institutions is from the political science literature which deals with the political and legislative setting in which the government institutions work and how this context affects the public policy making and implementation. Another source of administrative wisdom is the economics literature which proposes some important methods of evaluating proposed and ongoing governmental activities.*

*The traditional focus for the civil servants was effective implementation of policies (formulated by the political executive) rather than managing the public organization as a whole. However, with changing external environment, the focus gradually shifted to seeing the public organizations as flexible instruments to achieve changing public*

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*purposes. Mark Moore, a professor at the Harvard Kennedy School of Government, is one of the leaders of an academic movement that studies and advocates for the concept of “Public Value.” Moore argues that while several management concepts from the private sector found their way into public management (for instance customer orientation and the increased use of performance measurement), the crucial concept of corporate strategy has not been translated adequately. Moore advocates an active, entrepreneurial, and value-creating role for public managers that goes beyond the mere administrative implementation of policies produced in the (democratic) political process. This approach argues that such a strategic conception of public management requires public managers to align three perspectives: substance, politics, and administration. Accordingly, he presents the “strategic triangle”, a management framework that is supposed to support public managers in evaluating their strategies for the creation of public value from all three perspectives.*

## 1. Introduction

Delivering services to citizens is at the heart of what most government agencies do. Tasks like paying taxes, renewing driving licenses, getting streets cleaned, and applying for benefits like pensions or scholarships are often the most tangible interactions citizens have with their government. Services are therefore critical in shaping trust in and perceptions of the public sector. Powerful forces are transforming society which are acting as challenges for governments around the world. Citizens today expect more transparent, accessible, and responsive services from the public sector. And those expectations are rising. Citizens, now accustomed to the ease of buying products from Amazon or hailing rides from Uber, have greater expectations about the way their government should deliver services. Many governments have made efforts to improve service delivery but find they are still unable to meet the public’s expectations. Citizens tell public-sector officials that they continue to feel frustrated by cumbersome or confusing service delivery. As a result, governments face not only declining citizen satisfaction and eroding public trust but also increasing costs associated with delivering services across multiple channels.

The impact of today’s rapidly changing economic and technological landscape-combined with the long-term implications of an aging population, climate change, and globalization- implicates everything from how education and health care systems need to evolve to how governments of the future need to be structured to deliver to citizens.

When I joined the Indian Police Service in the year 1989, the common theme during discussions at the police academy in various class discussions, conferences and seminars was the so called negative image of Indian Police. Most of the discussion revolved around the main theme of Police Image and its corollaries like “Police Public relations”, ‘How to manage media for better image’, or “soft-skill training for police officers especially those at the Police station level’ etc. We may call it the failure of Police leadership or the society as a whole that the narrative regarding police has hardly changed in these 30 years. However, in these years’ police leaders across the world have



experimented with many models or paradigms, most prominent of them being ‘Neighbourhood Watch or Community Policing’, “problem orient-ed Policing”, ‘Intelligence-led policing’, and “Evidence based Policing”. Despite experimentation with these models of policing, the ultimate customer of policing, the citizen, seems very dissatisfied.

Expectations of ordinary citizens are simple: 1) Police must not evade the registration of a crime as that means committing a breach of law under the Penal Code. Such evasions embolden the criminal, to say the least; 2) Police must not misbehave with the citizens; 3) Police must not implicate innocent persons in criminal cases and must not fabricate evidence with a view to securing conviction; 4) Police must not resort to third-degree methods in the investigation of cases. Such practices only tend to alienate the police from the public, and are not permitted by the law either; 5) Police must not extort confessions from the accused by adopting tortuous methods of investigation; 6) Police must be apolitical in their professional capacity and impartial in their application of law; 7) Police shall not indulge in excesses like violation of the principle of the minimum use of force; and 8) Police officials must not show any proclivity to please the political bosses for their personal and professional gains.

Along with theses simplistic and basic expectations from the police, citizens have expectations regarding delivery of police services. Citizens now expect a customer-centric approach for all services, and policing is no exception. With 24-hour news channels, the availability of social media, and the explosion of apps there is an “always on, always aware” culture that is creating a new dynamic. Citizens are no longer passive recipients of information. Globally, they are actively engaging in conversations with and about the police, in-person, online and around the clock. A survey undertaken by Accenture showed that citizens want the police to be just as actively engaged-they expect to receive relevant, up- to-date, and complete information instantly and through a variety of mediums. Citizens also expect to be engaged in proactive and yet anonymous crime-fighting. Citizens expect a more “joined up” and focused police service that mirrors the approach in the private sector; banks, retailers, and telecommunications providers are all using customer data to gain deeper customer insights and enable them to address individual customer needs. Above all, citizens want to know who they can speak to, not only when they are a victim of crime but also when they need to air their more general safety concerns-and how they can, if necessary, hold their police service to account.

*It is time for police officers to see their role in a much broader paradigm, more as a public manager managing the public assets for creating value for the citizens*

## **2. Importance of Public Managers**

Public entities are most effective when they are headed by leaders who can navigate complex, highly visible positions while prioritizing long-term initiatives over short-term politics. These leaders motivate people and sustain performance without the benefit of

measures widely used in the private sector. Public servants are the people with the power to change the world for the better. But they don't always get access to the most transformational ideas in leadership. As governments worldwide deal with the powerful forces transforming society, it has never been more important to consider what constitutes effective public-sector leadership and how to equip leaders with the needed skills. To produce such leaders, the public sector must make leader development a key pillar of its overall strategy for the future.

The future is shaped by the quality of leadership. No complaint about public administration gets repeated more often than that it's inefficient and that we'd be better off running government more like a business. In 2013, Microsoft cofounder Bill Gates complained about government's dysfunction and argued, "You don't run a business like this." Government, he said, was on "a non-optimal path." Gates concluded, "a business that is maximizing its output would proceed along a different path."

### **3. The dilemma of bright young Police Officers**

When the bright young men and women achieve the glory of passing through one of the most difficult examinations of the world, and enter the gates of the National Police Academy with pride, hope and optimism, the professional course content they are offered after the foundation course aims at developing professional skills in handling a large range of responsibilities that an officer shoulders within the first ten years of service. While there is an undue emphasis on policing subjects like the IPC, CrPC etc, some emphasis is laid on understanding public systems and their management, together with a grounding in Public Administration, Law, Economics, Management. They are taught the history, theory and current trends of public administration, but rarely are they offered a structure of practical reasoning to guide them. There is hardly any guide to the question of what the police officers should think and do to exploit the particular circumstances they find themselves in to create public value.

I recognize that institutional structures and processes shape what managers think and influence what they do, the theory of public management is still undecided on whether "institutional reform" or "Improved management" is the best way to go in for improving government performance. My focus in this article is on what police officers as public managers should think and do, as my own experience is that improving managerial performance is one of the best ways of improving police performance. Practically speaking, both in the academies of administration, institutes of social sciences and during lunch-room discussions of Government departments, while we do find senior civil servants eager for general knowledge about government institutions but we find them particular hungry for ideas about how to do better in their jobs. Also, I sincerely believe that improving managerial thought and practice continues to be one of the most important route for improving the performance of government organizations. Even in the case of institutional reforms like decentralization or total quality management, only the responsibilities and positions of public managers are redefined, and success of such reforms actually depends on what these public managers actually do with their redefined responsibilities and processes. To be very precise, one of the biggest institutional reform

we need in government is to change our conventional view about what public managers should and can do on behalf of the common man. Indeed, many existing institutions will start performing better, only if our attention is focussed on improving the managerial performance.

#### 4. Unique Challenges of the Government Sector

In addition to dealing with many of the same problems encountered by their private-sector counterparts, public-sector leaders must cope with circumstances that are unique to public entities. These include:

- *Complex Ecosystems.* The public sector practically invented bureaucracy. Leaders who run public entities must provide essential services while juggling politics, projects that are often national in scope, and relationships with other agencies and the private sector. If they cannot cut through this complexity, they cannot be effective. They may lose power, see initiatives slow down or die, and have potential alliances fall apart.
- *Long-Term Goals.* In industry, companies introduce new products or services all the time. Public-sector leaders oversee mandates and public projects that can take years to complete, with benefits that may not be apparent right away or even in the near term. Focusing too much on short-term issues or immediate political demands can impede progress toward long-term goals
- *High-Profile Public Personas.* Public servants live in the spotlight, their activities scrutinized by constituents, media, and rival political parties. What they say or do reflects not just on them but on the country or agency that they represent. Any communications misstep can expose them to criticism from the public and to legal action by adversaries, to the point of having to leave their post.
- *Ethical Responsibilities.* The decisions that public-sector leaders make can affect an entire country. Because the potential impacts and risks are so great, leaders must continually consider the ethical outcomes of their decisions on their constituencies. If they are tempted to cut corners or use their standing for personal gain, they risk damaging not only their own reputation and that of the entity they represent, but the reputation of the entire country.
- *Ill-Defined Accountabilities.* Public-sector projects can be massive and complex. Getting things done requires teamwork and cooperation across multiple entities. In such circumstances, an individual's responsibilities can be unclear and the consequences of his or her actions diluted. If leaders feel that they lack authority, they may not be willing or able to inspire and lead their teams. And if they cannot inspire people to follow through, they will not be able to bring projects to the finish line.

Economists and political scientists have begun to apply to government agencies the same analytical methods that once were used to explain the behavior of business firms. Just as entrepreneurs are thought to be maximizing their "utility," bureaucrats are now thought to be maximizing theirs.

Citizens and taxpayers have their own global view of bureaucracy. To them, bureaucrats are lethargic, incompetent hacks who spend their days spinning out reels of red tape and reams of paperwork, all the while going to great lengths to avoid doing the job they were hired to do. Their agencies chiefly produce waste, fraud, abuse, and mismanagement. That this view is an exaggeration is readily shown by public-opinion surveys in which people are asked about their personal experiences with government agencies. The great majority of the respondents say that these experiences were good, that the agency personnel were helpful, friendly, and competent.

## **5. Source of Our Wisdom**

Most of the wisdom offered to the civil servants in these academies and institutions is from the political science literature which deals with the political and legislative setting in which the government institutions work and how this context affects the public policy making and implementation. How this political context motivates and shapes the behaviours of elected chief executives and their civil service functionaries, is dealt by this literature. The conventional wisdom most new entrants to civil services obtain in the form of anecdotes falls under this category as they receive stories on 'how to tackle a political situation by a street-smart administrative solution'. Another source of administrative wisdom is the economics literature which proposes some important methods of evaluating proposed and ongoing governmental activities. This literature has also given some important insights on structuring of incentives and how complex negotiations might be analyzed and carried out.

Another perspective to public governance has been offered by organizational theory literature which provides different images of organizations that clarified why public and private organizations behave the way they do. This literature also focussed on why government organizations face difficulties and obstacles in adopting and sustaining innovations and why managers face obstacles as they seek to improve their performance. On the other hand, achievement of consistency and effectiveness in government operations with a goal of ensuring effective democratic control was underlined by the literature on public administration. They also produced several case studies on what many successful public managers actually did to produce effectiveness and consistency in their operations. Literature on administrative law emphasized on equity and due process of the decisions taken by the public managers. The most important, however least pervasive, influence on public managers' thinking has been from the literature of private sector management which offered context, philosophy and instruments of

management and organizational leadership. This literature focused on the market dynamics rather than political mandates.

The young bright minds joining the Indian Civil services come from a diverse academic backgrounds like engineering, social sciences, languages, pure sciences, and administration academy is the first place where most of them get exposed to the ideas on public administration, public management, administrative law and theories of private sector management. The time certainly is too little here to understand and comprehend the special analytical tools drawn from economics, operations research statistics, and behavioural sciences to analyze the substantive value of proposed and implemented public policies. While the depth of coverage of these topics at the training institute is always debatable due to the competing syllabus content, they never get a structured guidance on two important questions:

1. How should Government managers (to be read as young civil servants) cope with inconsistent, fickle political mandates?
2. How can they best experiment, innovate and reposition the government organizations in their changing environments?

In the existing scenario, most young civil servants search answers to these questions from the practicing executives they encounter in their training institutes and probation days. It is unfortunate that, we have not been able to develop a rich repository of administrative case studies clearly depicting various managerial problems and interventions, written by practicing government executives. Though the endeavour of such training academies and institutes has always been to invite distinguished practitioners whose accomplishments have demonstrated distinctive competence in sizing up and exploiting opportunities to create public value, yet a comprehensive effort to compile such 'best practices' or 'managerial interventions' and the prospects of these interventions succeeding in other settings has never been attempted.

The traditional focus for the civil servants was effective implementation of policies (formulated by the political executive) rather than managing the public organization as a whole. However, with changing external environment, the focus gradually shifted to seeing the public organizations as flexible instruments to achieve changing public purposes.

## **6. The Lure of Easyanswers**

People often think that the best way to predict the future is by collecting as much data as possible before making a decision. But this is like driving a car looking only at the rear-view mirror—because data is only available about the past. Indeed, while experiences and information can be good teachers, there are many times in life where we simply cannot afford to learn on the job. You don't want to have to go through multiple marriages to learn how to be a good spouse. Or wait until your last child has grown to

master parenthood. Therefore, theory can be so valuable: it can explain what will happen, even before you experience it. Consider, for example, the history of mankind's attempts to fly. Early researchers observed strong correlations between being able to fly and having feathers and wings. Stories of men attempting to fly by strapping on wings date back hundreds of years. They were replicating what they believed allowed birds to soar: wings and feathers. Possessing these attributes had a high correlation—a connection between two things—with the ability to fly, but when humans attempted to follow what they believed were “best practices” of the most successful fliers by strapping on wings, then jumping off cathedrals and flapping hard... they failed. The mistake was that although feathers and wings were correlated with flying, the would-be aviators did not understand the fundamental causal mechanism—what causes something to happen—that enabled certain creatures to fly.

The real breakthrough in human flight didn't come from crafting better wings or using more feathers. It was brought about by Dutch-Swiss mathematician Daniel Bernoulli and his book *Hydrodynamics*, a study of fluid mechanics. In 1738, he outlined what was to become known as Bernoulli's principle, a theory that, when applied to flight, explained the concept of lift. We had gone from correlation (wings and feathers) to causality (lift). Modern flight can be traced directly back to the development and adoption of this theory. But even the breakthrough understanding of the cause of flight still wasn't enough to make flight perfectly reliable. When an airplane crashed, researchers then had to ask, “What was it about the circumstances of that particular attempt to fly that led to failure? Wind? Fog? The angle of the aircraft?” Researchers could then define what rules pilots needed to follow in order to succeed in each different circumstance.

The appeal of easy answers—of strapping on wings and feathers—is incredibly alluring. Whether these answers come from writers who are hawking guaranteed steps for making millions, or the four things you have to do to be happy in marriage, we want to believe they will work. But so much of what's become popular thinking isn't grounded in anything more than a series of anecdotes. Solving the challenges in your life requires a deep understanding of what causes what to happen. The theories that I will discuss with you will help you do exactly that.

Just as these theories have explained behavior in a wide range of circumstances, so, too, do they apply across a wide range of questions? With most complex problems it's rarely as simple as identifying the one and only theory that helps solve the problem. There can be multiple theories that provide insight. For example, though Bernoulli's thinking was a significant breakthrough, it took other work—such as understanding gravity and resistance—to fully explain flight.

You might be tempted to try to make decisions in your life based on what you know has happened in the past or what has happened to other people. You should learn all that you can from the past; from scholars who have studied it, and from people who have gone through problems of the sort that you are likely to face. But this doesn't solve the

fundamental challenge of what information and what advice you should accept, and which you should ignore as you embark into the future. Instead, using robust theory to predict what will happen has a much greater chance of success.

## **7. How to measure success for civil servants?**

How will a civil servant measure his professional success?

One definition of success emphasizes the personal success of the civil servant himself: a public manager is considered successful if he or she is able to enhance his/her personal reputation and advance their careers. It is reasonable to assume that if a manager's reputation for success is properly earned, individual success would be a good operational measure of his/ her managerial success. However, we cannot be sure that the tests used to establish reputations reliably indicate real managerial performance. In the age of social media dominance, we all are too familiar with public managers who are more skilled in burnishing their reputations than in achieving the real substantial results that should be the basis of their reputation.

Another definition of success may be whether the civil servant, as public managers succeed in building strong, durable and large public organizations. This definition gives priority to managerial accomplishment rather than personal reputation and is also consistent with the notion of success in the private sector. Yet a deep reflection would remind us of examples of notorious public sector empire builders and would suggest inappropriateness of this definition. Durability and survival of public sector organizations is all too easy to achieve (in fact, most public organizations not only survive but outlive long past their utility). The challenge, instead, is to make them efficient, to reduce costs, make them innovate and to adapt to changing political demands or new substantive tasks. It is particularly difficult to be able to reclaim resources from these organizations even when they seem to have outlived their need. So, increased size and strength of the public organization also do not indicate towards a real accomplishment.

Another way, we measure success for public managers is their efficacy in achieving preferred policy outcomes: managers succeed if they have their preferred policy objectives adopted and implemented. On one side this definition rewards managerial effort that goes beyond building or maintaining an organization and focuses on achievement of some substantive purpose. But this definition is flawed too, in the sense that it is not sure to what extent the public manager's preferred policy objectives incorporates what the society really wants and to what extent it is the idiosyncratic views of public interest

The most accepted definition by public management thought leaders is that equates managerial success in the public sector with initiating and reshaping the public sector organizations in ways that increase their value to the public both in short and the long run. Sometime this will mean increasing efficiency, effectiveness, or fairness in currently defined missions. Other times it means initiating new programs that respond to a new



political (public) aspiration or meet a new need in the organization's task environment. Still other times it means

## 8. The Public Value Paradigm

Mark Moore, a professor at the Harvard Kennedy School of Government, is one of the leaders of an academic movement that studies and advocates for the concept of "Public Value." Public value asks public officials to consider the benefits and costs of public services not only in terms of dollars and cents, but also in terms of how government actions affect important civic and democratic principles such as equity, liberty, responsiveness, transparency, participation, and citizenship. Public value seeks to provide public officials with the ability to talk about the net benefit of government actions, while overcoming the limitations inherent in attempting to create a "bottom line" that is analogous to that of the private sector.

Moore first started writing about public value in 1997 with *Creating Public Value: Strategic Management in Government*. In the book, Moore argues that while several management concepts from the private sector found their way into public management (for instance customer orientation and the increased use of performance measurement), the crucial concept of corporate strategy has not been translated adequately. Moore advocates an active, entrepreneurial, and value-creating role for public managers that goes beyond the mere administrative implementation of policies produced in the (democratic) political process. Moore (1995) argues that such a strategic conception of public management requires public managers to align three perspectives: substance, politics, and administration. Accordingly, he presents the "strategic triangle", a management framework that is supposed to support public managers in evaluating their strategies for the creation of public value from all three perspectives:

- **Public Value:** Any appropriate strategy must be substantively valuable, meaning that it aims at producing something that is considered valuable by overseers, citizens, and recipients. Such public value to be created might for example be defined as "cleaning up streets", "closing the racial achievement gap in schools" or "making applying for a passport easier for citizens".
- **Legitimacy and Support:** Any strategy must be considered legitimate and must find political support in the organization's authorizing environment. This consists primarily of those individuals and groups involved in formal decision-making structures (superiors, politicians, higher-level public administration, and the electorate) which directly control the flow of resources (authority and money) to the organization.
- **Operational Capacity:** Any strategy in public management has to be feasible in the sense that the organization has the operational and administrative means to implement it. This means that the organization is actually capable of delivering to its publicly valuable objectives.



This framework is at the core of Moore's public value approach. In this view, the strategic and entrepreneurial public manager is tasked with envisioning strategies that are appropriate from all three perspectives simultaneously. These perspectives are clearly not independent from one another: It is much easier to garner political support for some public values than for others and a high level of political support can make it easier to acquire additional resources and build operational capacity. Crafting and implementing a strategy requires the manager to seek to maximize the degree of alignment among these three elements. Each of them is strategically important. Of course, they are rarely in alignment in their natural state, and public managers strive constantly to fashion workable trade-offs among them. Thus, if the most valuable thing to do is out of alignment with what the key players in the authorizing environment will find acceptable, the manager can either seek to persuade the key players to move their position, or revise the value-proposition so that it is more in line with their wishes, or some combination of the two.

Similarly, if a more valuable purpose is not achievable with the currently available operational capabilities, then the manager has to tailor the purpose accordingly. This entails more than just a resigned acceptance of political or operational constraints. The manager's task, Moore urges, is to seek to identify and press for the most valuable purposes, drawing on a "value-seeking imagination." The public manager is both obliged and uniquely able to do so by the position s/he occupies, at the intersection of purposes, politics and operational means. S/he has knowledge and expertise about each of these three factors which s/he is duty bound to place at the disposal of the citizenry and their elected representatives.

## 9. The Strategic Triangle

A good place to start understanding public value in greater detail is what Moore refers to as the "strategic triangle". The strategic triangle shows that public value is created when a given strategy or action has democratic legitimacy (e.g., the community supports it) and the support of the authorizing environment (e.g., a governing board), and when the government has the operational capacity to implement the strategy or action effectively. Figure also shows that there is a feedback system in place- when public value is created, so is greater legitimacy and support (e.g., citizens and elected officials have greater trust in the government), and operational capacity is increased (e.g., financial and other resources could be easier to obtain). In short, success begets success.



Moore's strategic triangle is designed to help public sector leaders develop strong value propositions (what they can deliver, from their position, in a given situation). It focuses their attention on three issues that have to be resolved individually and aligned:

- what is the public value I think I can produce?
- what legitimacy and support can I leverage?
- what operational capacity can I deploy to produce the desired results?

The analytic and practical challenge is to ensure that the three circles in the triangle are aligned and mutually reinforcing: we create public value when the goals we seek can be supported by normative and empirical arguments, when the goals attract financial, legal and social support from those in a position to authorise and support the planned action, and when we know how to deploy the available resources to achieve the desired results. That is, we are clear about what we are trying to achieve, we have support for it (legitimacy/ authorising environment) and we can make it happen (we have the capabilities and resources to do it). Problems arise when the circles are not in alignment. For example: what if we have legitimacy and support, but no operational capability? We have a 'big hat and no cattle' scenario (we can't make things happen). And what if we have legitimacy and support and operational capability but we haven't got the value chain right? We can end up with no value (e.g., 'dead donors'- we keep allocating resources to activities that no longer have value).

Government managers are inclined to limit their thinking to the 'what to do' (public value circle of the triangle) and look for a perfect solution. But what would it look like if we started the process from different part of the triangle?

- We could start from legitimacy & support and 'go with a learner's mind', capturing a sense of what is garnering support and what can be leveraged

(tapping into the views and needs of citizens and being proactive rather than waiting for a commission from ministers)

- We could start from operational capability looking for what we are doing now and how that capability could be used better, reused or put to new ends (continuous improvement or innovation based on evaluation of what does and doesn't work).

In his highly influential book *Recognizing Public Value* (2013), Prof Moore explored how, once created, value can be recognised in an accounting sense. He outlined a philosophy of qualitative assessment that will help public sector managers name, observe and measure the value they produce - or rather, what they should be doing to improve performance within their public sector agency.

## 10. Implications for the Police Leaders

The essential argument of the Public Value paradigm is that public value can be envisioned by police officers if they integrate:

- substantive judgement of what would be valuable and effective;
- a diagnosis of political expectations; and
- hard-headed calculations of what is operationally feasible.

In envisioning public value police officers must find a way to integrate politics, substance and administration by focussing attention on the three key questions that must be answered in testing the adequacy of their vision of organisational purpose: whether the purpose is publicly valuable; whether it will be politically and legally supported; and whether it is administratively and operationally feasible. Specifically, the approach highlights three different aspects of police officer's job:

- Judging the value of their imagined purpose they must test out the value of the proposed new service or initiative is it in line with the mission and purpose of the service;
- Managing upward, towards politics, to invest their purpose with legitimacy and support; in some circumstances it may be more accurate to say they need to manage outwards too in order to get legitimacy and support from customers and stakeholders as well as from government; and
- Managing downward, toward assessing and improving the organisation's capabilities for achieving the desired purposes.

So the three elements have to line up – or line up sufficiently – in order to provide the police officer with the necessary authority to proceed with a particular course of action.

The approach sketches the operating space for the police leader. It can provide a potentially powerful tool to judge how to secure authority to act, knowing that what we are aiming to do is worthwhile; that we have political authority from above and the endorsement of our stakeholders and customers; and have the capacity within to take a course of action. The approach spells out an essentially pro-active role for the police

leader –it helps us to get away from the victim mentality that sometimes characterizes leaders in our sector or the sense of being constantly buffeted by new ideas and initiatives. The approach described puts a significant premium on political acumen but developed effectively it could help to define a legitimate space within which public sector managers can operate, which promotes innovation while managing risk. Greater emphasis needs to be placed on finding a fit between the organization and the external environment in which that organization operates. Hence, diagnosing the external environment and then positioning the organization accordingly is an essential part of strategic management that is often under-emphasized in public-sector organizations. Public managers often view performance management as a technical challenge rather than a political or philosophical one. Moore contends that the political and philosophical aspects of public performance management are at least as important as the technical aspect. To produce value, public officials must consider the entire “value chain.” The value chain starts within puts and moves to the production processes (e.g., policies, programs, activities) used to transform the inputs into outputs, which then affect a client (e.g., citizen, beneficiary, etc.), which leads to the social outcome that was the intended aim of the activity.



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## Application of Human Factors in Cyber Crime Investigation

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There is no international definition of cybercrime or cyber-attacks. Offences typically cluster around the following categories:

- (i) Offences against the confidentiality, integrity and availability of computer data and systems - (hacking, cracking), illegal data acquisition (data espionage), illegal interception, data interference, system interference, computer worms, and denial-of-service (DoS) attacks
- (ii) Computer-related offences - On-line Frauds, Computer-related forgery, Identity theft, Misuse of devices.
- (iii) Content-related offences - Erotic or pornographic material, racism, hate speech, glorification of violence, religious offences, illegal gambling and online games, libel and false information, spam and related threats, other forms of illegal content
- (iv) Offences related to infringements of copyright and related rights.

Broadly, cybercrime can be described as having cyber-dependent offences, cyber-enabled offences and, as a specific crime-type, e.g. online child sexual exploitation and abuse. Cyber-dependent crime requires an information and communications technology infrastructure and is often typified as the creation, dissemination and deployment of malware, ransom-ware, attacks on critical national infrastructure (e.g. the cyber-takeover of a power-plant by an organised crime group) and taking a website offline by overloading it with data (a DDOS attack). Cyber-enabled crime is that which can occur in the offline world but can also be facilitated by Information and Communications Technology. This typically includes online frauds, purchases of drugs online and online money laundering (UNODC). Criminal activity on the internet is much broader than

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\*Tamil Nadu Cadre, 1994 Batch

cybercrime is essentially all elements of human criminal activity that have moved into cyberspace.

The term “cybercrime” is narrower than computer-related crimes as it has to involve a computer network. Computer-related crimes cover even those offences that bear no relation to a network, but only affect stand-alone computer systems. Cybercrime in a narrow sense (computer crime) covers any illegal behaviour directed by means of electronic operations that target the security of computer systems and the data processed by them. Cybercrime in a broader sense (computer-related crimes) covers any illegal behaviour committed by means of, or in relation to, a computer system or network.

National security agencies around the world have developed and/or are currently developing their cyber-defensive capabilities (i.e., measures that are designed to detect and prevent cybercrimes, and mitigate the impact of these cybercrimes should they occur) and cyber-offensive capabilities (i.e., measures that are "designed to penetrate enemy systems and cause harm or damage" and/or respond to a cyber-attack). It is the recognition of cyberspace as another domain of warfare (the fifth domain, following land, sea, air, and space) that led to national security agencies' increased involvement in cyberspace. For example, in the United States, this identification of a fifth domain of warfare led to the creation of the United States Cyber Command (USCYBERCOM) (2016).

### **Human Factors of Individuals – Victims:**

Cyber Crimes mainly thrive on the failures, errors, or weaknesses, viz., Human Factors of the individuals, who use the Computer Systems and Networks either as a custodian of the same or as a user of it as a medium. As individuals, they become victims of Cyber Crimes.

#### **(i) Social Engineering and Online Trickery:**

Phishing is a specific type of social engineering crime that occurs using electronic communications, such as an e-mail or a website. In it, criminals send an email, or create a website, that appears to be from a legitimate entity with the intention of conning individuals into divulging some sensitive information or performing a particular action. There are many different variants of phishing, including spear-phishing, vishing, smishing (or SmShing), online scams, cat fishing and whaling. In all these cyber-crimes, criminals seek to exploit many human psychological traits. These include a willingness to trust others and to be kind, the impact of anxiety and stress on decision-making, personal needs and wants, and in some regards, the naivety in decision-making. It is also important to consider the reasons why people continuously fall for on-line scams in spite of large amounts of publicity to educate and warn individuals. Although fear, trickery, and the targeting of vulnerable individuals, all play large parts, other research has extended consideration of these issues. Studies have also identified some factors that

include, the diversity of scams and frauds (i.e., criminals may find areas where individuals may be less wary of being defrauded), small amounts of money sought by criminals (if small amounts of money are lost, this may worry individuals less), authority and legitimacy displayed by scammers (this touches on the previous point of trickery and impersonation), as well as visceral appeals (i.e., criminals devising scams that appeal to human needs/feelings such as romance, love, sex, and sorrow). These cut across the various scams and provide some insight, into the diverse ways, by which criminals use trickery and social engineering to achieve their nefarious goals, and thus why scams continue to be successful.

#### **(ii) Cyber- bullying:**

Cyber-bullying is one of the various types of online harassment, and one of many that are online manifestations of offline malevolent actions. It affects children, teenagers, and adults alike. It, like bullying, essentially involves repeated aggression (direct or indirect) levied by a group or individual against a victim that is (often) unable to easily defend himself/herself. As compared to social engineering, the perpetrators are usually not conventional criminals. Instead, they tend to be individuals who do not recognize the full extent of the psychologically detrimental impact of their actions. This is especially the case with young people, where there may be a lack of awareness of others' feelings compounded by the inherent immaturity present in this age group. Cyber-bullying is, however, also prevalent in adults (e.g., in social media and in the workplace) even though the expectation exists for adults to be better informed and more cognitively aware of their actions than are young people. Internet trolling and cyber-stalking are two other forms of online harassment that both share a few similarities with cyber-bullying.

#### **(iii) Trolling:**

Trolling is the action of posting inflammatory messages deliberately with the intention of being disruptive, starting arguments, and upsetting individuals. The motives for such actions have been empirically studied and relate, attention-seeking and revenge, fun and entertainment, and damage to the community and other people. (Bishop, 2014)

#### **(iv) Cyber-stalking:**

Cyber-stalking is the use of electronic means (e.g., Internet, e-mail) by criminals to repeatedly harass, threaten, prey on, or otherwise track an individual. The peculiarities exclusive to cyber-stalking are: cyber-stalkers use electronic means to instantly harass victims and have opportunities for wide dissemination; they can be physically /geographically far away from their victims; criminals operate under a cloak of (perceived) anonymity online; they can easily impersonate their victims to aggravate situations; and they often encourage third parties in their harassment. The challenge is that the Internet and social media have become so embedded in the modern lifestyle that these technologies and individuals' tendency to over-share provides cyber-stalkers and other criminals with copious amounts of personal information they need.

There are two information-gathering techniques preferred by cyber-criminals: the monitoring of individuals on social media as they post and interact online, and the gathering and use of personal data from previous online security breaches. Previous research has considered this issue of over-sharing and modelled how social media data could be used to place individuals at great risk, both online and offline (Creese, 2012). There are also greater impacts on security and privacy as this data is combined with that from Internet of Things (IoT) devices such as fitness trackers and smart watches.

### **Human Factors that impact online behaviour:**

There are six factors which explain such behaviour and create what has been deemed the “online disinhibition effect”: dissociative anonymity (separation of online actions from offline identities); invisibility (opportunity to be physically invisible and unseen); asynchronicity (lack of immediate and real-time reactions); solipsistic introjection (or, merging of minds with other online individuals); dissociative imagination (impression of the online world as make believe and not connected to reality); and minimization of status and authority (based on the perspective that everyone online is equal). These factors, including their interactions, are widely considered to impact online behaviour, and thus may also potentially be linked to exposure to risks (such as identity theft and fraud). (Suler, 2004).

### **Exploitation of Human Virtues:**

A salient point is that cybercriminals exploit many human psychological needs and weaknesses. Such facets include our innate desire to trust and help each other, the human need for love and affection (e.g., romance scams), the host of biases that affect decision-making and a perfect knowledge of what people consider most important, i.e., the willingness to pay for the return of something valuable (e.g., instances of ransom- ware).

### **Human Factors in Cyber Security Management:**

A lack of understanding on behalf of employees about the importance of the data, software and systems within an organization; Ignorance about the level of risk attached to the assets for which they have direct responsibility for and a lack of understanding about how their behaviour could be putting the same assets at risk. The human factors of cyber security represent the actions or events when human error results in a successful hack or data breach. One may have the impression that hackers are simply looking for a weak entry point that naturally exists within a system. However, more often than not, they find a weak link that was caused by human hands. According to Baker Hostetler's Data Security Incident Report, human error accounted for 24% of cyber security incidents, finishing only second to Phishing/Malware at 31% (which still requires a human error to activate). Sharing of passwords, poor patch management, double-



clicking on unsafe URLs, and organizational access through a personal device are just a few human errors that lead to a security threat. There are many ways by which one can break into a computer system through social engineering. Social engineering is the use of media to manipulate people into giving up confidential information. Spear Phishing is a variation of phishing that reaches fewer victims but tends to be much more successful. Highly customized emails are typically sent to identified victims to make him part with his passwords and other details. Reverse Social Engineering may be similar to a movie heist. For this particular strategy, a hacker will attack a company's network and will claim to have found the source of the hack in order to offer help in repairing it. If the help is accepted, the hacker will then have access to the system. The Friendly Hacker is a more recent style of social engineering that focuses on e-mail or social media accounts (Nurse). All the above cyber-security breaches resulting in crimes occur because of human errors.

#### **Internet Addiction:**

Internet addiction was a significant predictor for risky cyber-security behaviours. Young people, people who spend a lot of time online people are more at risk of falling victim to cybercrime. It also appears that openness, extroversion, lack of self-control, sensation seeking, impulsiveness, and neuroticism are related to the risk of becoming a cybercrime victim. A positive attitude towards cyber-security in business was negatively related to risky cyber-security behaviours. The measure of impulsivity revealed that both attentional and motor impulsivity were significant positive predictors of risky cyber-security behaviours, with non-planning being a significant negative predictor. (Hadlington, Human factors in cybersecurity; examining the link between Internet addiction, impulsivity, attitudes towards cybersecurity, and risky cybersecurity behaviours, 2017).

#### **Human Factors of a malicious insider:**

The malicious Insider is a current or former employee, contractor, or business partner who has or had authorized access to an organization's network, system, or data and intentionally exceeded or misused that access in a manner that negatively affected the confidentiality, integrity, or availability of the organization's information or information systems. Insider threat has been defined as 'a person who exploits, or has the intention to exploit, their legitimate access to an organisation's assets for unauthorised purposes'. Studies have found a number of key predictors, based on aspects of the individual's life experiences and psychological factors, viewed as being of critical importance in the development of a potential insider threat. They include demonstrating poor work attitude, showing signs of being stressed, exploitable or vulnerable lifestyle, exploitable or vulnerable work profile, recent negative life events, etc. (Hadlington, The "Human Factor" in Cybersecurity: Exploring the Accidental Insider, 2018)

### **Human Factors of an unintentional (accidental) Insider:**

An unintentional insider threat is a current or former employee, contractor, or business partner who has or had authorized access to an organization's network, system, or data and who, through action or inaction without malicious intent, causes harm or substantially increases the probability of future serious harm to the confidentiality, integrity, or availability of the organization's information or information systems. Key components of this type of threat are elements of human failure or limitations related to human performance. This includes mistakes made through time pressures exerted as a result of a job, the level of task difficulty, a lack of knowledge and cognitive factors, cyber-loafing (individuals actively using official internet access during working hours for non-work purposes leading to inattention to the work), etc. (Hadlington, The "Human Factor" in Cybersecurity: Exploring the Accidental Insider, 2018)

### **Trust as a Human Factor:**

Trust and confidence may be distinguished by using "trust" only for human factors and "confidence" for all non-human factors (e.g. hardware and software). In this use of the terminology, then, there is confidence that a system or resource is functioning as expected, and there is trust placed in a person that they are performing their expected tasks and duties in a timely manner. Trust in the human factors is contributed by two main categories of factors: inherent characteristics, which are a part of the individual or "given" to the individual by the trust-giver, and situational characteristics, which are external to the individual. Inherent characteristics are further separated into two categories: behavioural - which captures rationality, benevolence/malevolence and integrity, and knowledge, which captures expertise and attention-related factors. Situational characteristics capture the degree of insider access which is determined by access level determined by user policy, software, and hardware. Trust itself is captured by reputation, based on public reputation and personal interactions, which can be broken down into credibility, perceived honesty, and predictability. (D. Henshel, 2015)

### **Measuring Human Errors:**

The Cyber Human Error Assessment Tool (CHEAT) was developed to capture and mitigate human-related risks (unintentional and malicious) in cyber security, and human-related causes/contributory factors in post incident investigations. The tool was developed by drawing on applied experience of Human Reliability Analysis (HRA); existing principles of cognitive, organisational and social psychology; and analysis of human error as part of rail safety investigations. Physical environment vulnerabilities include entering premises by impersonation and 'tailgating', by exploiting the politeness and social compliance norms of the people, who hesitate to question a stranger. Organisational vulnerabilities include policy and procedures; cyber security awareness

training; personality screening; and general organisational culture. People vulnerabilities include indicators such as password design and cognitive biases. Lengthy, complicated passwords challenge human memory capacity. Users may be tempted to write passwords down, store them in their mobile phone, and/or use the same, easy-to-guess password for multiple work and personal applications. Vulnerabilities in the use of technology considerations in CHEAT include the use of social media and trust in technology. (WIDDOWSON, 2017)

### **Human Errors in Organisational Context:**

Human errors occur among both IT professionals and the broader workforce. The clear lesson is that people matter as much as, if not more than, technology. Technology, in fact, can create a false sense of security. The six interconnected principles which helped the U S Navy weed out and contain the impact of human errors are:

- (i) Integrity - a deeply internalized ideal that leads people, without exception, to eliminate “sins of commission” (deliberate departures from protocol)
- (ii) Depth of knowledge - If people thoroughly understand all aspects of a system - including the way it’s engineered, its vulnerabilities, and the procedures required to operate it, they’ll more readily recognize when something is wrong and handle any anomaly more effectively.
- (iii) Procedural compliance in carrying out the works.
- (iv) Forceful back-up in terms of personnel
- (v) A questioning attitude wherein employees do not hesitate to question when they feel something is wrong.
- (i) Formality in communication for clarity.

The basic rules of network hygiene, those meant to prevent users from introducing potentially tainted hardware, downloading unauthorized software, accessing a website that could compromise networks, or falling prey to phishing e-mails. Regularly reminding employees that their adherence to security rules is monitored will reinforce a culture of high reliability. Leaders must treat unintentional, occasional errors as opportunities to correct the processes that allowed them to occur. However, those who intentionally violate standards and procedures should be dealt with firmly. There is a need to eliminate the fear of honesty and increase the consequences of dishonesty. (James A. (Sandy) Winnefeld Jr., September 2015)

### **The Role of the Private Sector in preventing Cyber-crime:**

The private sector plays an essential role in the detection, prevention, mitigation, and investigation of cyber-crime because it predominantly owns and manages the critical infrastructure (i.e., considered essential to the functioning of society) in almost all the

countries and is one of the primary targets of many cyber-dependent (i.e., those cybercrimes that seek to compromise the confidentiality, integrity, and availability of systems, networks, services, and data, such as hacking, malware distribution, and distributed denial of service or DDoS attacks) and cyber-enabled crimes (e.g., online financial fraud, identity-related crime, and theft of data and trade secrets, to name a few). The private sector also conducts private investigations of cyber-crime. The private sector is vulnerable to both internal threats (e.g. cybercrimes committed by employees or executives of the business or organization) and external threats (e.g., cybercrimes committed by those with some connection to the business or organization).

### **Human Factors in Cybercrime Investigations:**

The fight against cybercrime needs a comprehensive approach. Given that technical measures alone cannot prevent any crime, it is critical that law-enforcement agencies are allowed to investigate and prosecute cybercrime effectively. All cyber investigators must “keep an open mind” and remember that it is better to gather as much information as possible before placing too much reliance on any speculative theory. Progressing in cyber investigations is a collaborative effort and police officers must consult, listen and consider the advice and guidance provided by specialist hi-tech investigators. People might get confused of being anonymous means just hiding the identity. It can also be about hiding what one is doing and what one want to be. Despite the fact that cyber-crime investigations deal with computer systems, technology, and computing devices, the core elements are analogous to other investigations focusing on the physical world. These core elements include the concepts of evidence, crime scenes, and Locard’s principle of exchange. Just as in physical investigations, investigators are interested in evidence. This holds true for cyber investigations as well, with the caveat that evidence now includes the digital as well as the physical. Locard’s principle of exchange is at the core of all criminal investigation. Briefly summarized, this principle states that the suspect, victim, and crime scene will exchange physical elements that link these to the criminal act. Locard’s principle of exchange extends into the realm of the behavioural and psychological as well. This is why behavioural analysis is an important investigative tool. Suspects also leave traces of their personality in the crime scenes; whether they be physical or digital crime scenes. It is therefore logical that we can extend behavioural analysis to cyber investigations (Staniforth, 2014).

### **Importance of First Responders:**

First responders in cybercrime investigations are responsible for "securing" digital evidence at the "scene" (the location) of a cybercrime (e.g., this could be the target or targets of the cybercrime and/or the information and communication technology used to commit cyber-dependent and/or cyber-enabled crime). A first responder can be a law

enforcement agent, digital forensics expert, military police officer, private investigator, an information technology specialist, or any other person (e.g., an employee in the workforce) who is tasked with responding to incidents of cybercrime. Irrespective of who the first responder is, search and seizure practices for information and communications technologies (ICT) must be in accordance with national law, and the methods used to obtain digital evidence from ICT must be valid and reliable to ensure its admissibility in a court of law.

### **Human Factors required of Cybercrime Investigators:**

Cybercrime investigators, as part of their work, are required to perform a number of 'Tasks' which require specialized 'Knowledge' (i.e., information relating to the subject matter area), 'Skills' (i.e., expertise in the subject matter area), and 'Abilities' (i.e., use of knowledge and skills to perform the task) beyond those required to investigate, prosecute, and/or adjudicate (offline) criminal cases. For example, law enforcement officers should be able to investigate cybercrimes and/or other crimes incidentally involving information and communication technology (e.g., smartphone used to store evidence of the crime) and properly handle ICT during the investigation (i.e., identify, obtain, preserve, and analyse digital evidence in a manner that ensures its admissibility in court)

The United States' National Institute of Standards and Technology has brought out the National Initiative of Cyber-security Education's Cyber-security Workforce Framework ((NICE), 2017), which has made a comprehensive list of the Human Factors (Tasks and their related Knowledge, Skills and Abilities) required for a cybercrime investigator and they are as follows:

#### **Tasks:**

- (i) Conduct interviews of victims and witnesses and conduct interviews or interrogations of suspects.
- (ii) Develop a plan to investigate alleged crime, violation, or suspicious activity utilizing computers and the Internet.
- (iii) Establish relationships, if applicable, between the incident response team and other groups, both internal (e.g., legal department) and external (e.g., law enforcement agencies, vendors, public relations professionals).
- (iv) Examine recovered data for information of relevance to the issue at hand.
- (v) Fuse computer network attack analyses with criminal and counter-intelligence investigations and operations
- (vi) Identify and/or determine whether a security incident is indicative of a violation of law that requires specific legal action.
- (vii) Identify data or intelligence of evidentiary value to support counter-intelligence and criminal investigations.

- (viii) Identify digital evidence for examination and analysis in such a way as to avoid unintentional alteration.
- (ix) Identify elements of proof of the crime.
- (x) Identify, collect, and seize documentary or physical evidence, to include digital media and logs associated with cyber intrusion incidents, investigations, and operations
- (xi) Process crime scenes.
- (xii) Secure the electronic device or information source
- (xiii) Use specialized equipment and techniques to catalog, document, extract, collect, package, and preserve digital evidence.
- (xiv) Analyse the crisis to ensure public, personal, and resource protection
- (xv) Assess the behaviour of the individual victim, witness, or suspect as it relates to the investigation.
- (xvi) Determine the extent of threats and recommend courses of action or counter-measures to mitigate risks.
- (xvii) Provide criminal investigative support to trial counsel during the judicial process.
- (xviii) Analyse computer-generated threats for counter intelligence or criminal activity.
- (xix) Gather and preserve evidence used on the prosecution of computer crimes
- (xx) Conduct analysis of log files, evidence, and other information to determine best methods for identifying the perpetrator(s) of a network intrusion or other crimes.
- (xxi) Determine and develop leads and identify sources of information to identify and/ or prosecute the responsible parties to an intrusion or other crimes.
- (xxii) Document original condition of digital and/or associated evidence (e.g., via digital photographs, written reports, hash function checking).
- (xxiii) Employ information technology (IT) systems and digital storage media to solve, investigate, and/or prosecute cybercrimes and fraud committed against people and property.
- (xxiv) Prepare reports to document the investigation following legal standards and requirements.

#### **Knowledge:**

- (i) Knowledge of computer networking concepts and protocols, and network security methodologies.
- (ii) Knowledge of risk management processes (e.g., methods for assessing and mitigating risk).
- (iii) Knowledge of laws, regulations, policies, and ethics as they relate to cyber security and privacy.

- (iv) Knowledge of cyber security and privacy principles.
- (v) Knowledge of cyber threats and vulnerabilities.
- (vi) Knowledge of specific operational impacts of cyber security lapses.
- (vii) Knowledge of intrusion detection methodologies and techniques for detecting host and network-based intrusions.
- (viii) Knowledge of system and application security threats and vulnerabilities (e.g., buffer overflow, mobile code, cross-site scripting, Procedural Language/Structured Query Language [PL/SQL] and injections, race conditions, covert channel, replay, return- oriented attacks, malicious code).
- (ix) Knowledge of Insider Threat investigations, reporting, investigative tools and laws/regulations.
- (x) Knowledge of adversarial tactics, techniques, and procedures.
- (xi) Knowledge of electronic devices (e.g., computer systems/components, access control devices, digital cameras, digital scanners, electronic organizers, hard drives, memory cards, modems, network components, networked appliances, networked home control devices, printers, removable storage devices, telephones, copiers, facsimile machines, etc.)
- (xii) Knowledge of processes for seizing and preserving digital evidence.
- (xiii) Knowledge of legal governance related to admissibility (e.g. Rules of Evidence).
- (xiv) Knowledge of processes for collecting, packaging, transporting, and storing electronic evidence while maintaining chain of custody.
- (xv) Knowledge of types and collection of persistent data.
- (xvi) Knowledge of social dynamics of computer attackers in a global context.
- (xvii) Knowledge of electronic evidence law.
- (xviii) Knowledge of legal rules of evidence and court procedure.
- (xix) Knowledge of applicable laws statutes.
- (xx) Knowledge of covert communication techniques.
- (xxi) Knowledge of crisis management protocols, processes, and techniques.
- (xxii) Knowledge of physical and physiological behaviors that may indicate suspicious or abnormal activity.
- (xxiii) Knowledge of the judicial process, including the presentation of facts and evidence.
- (xxiv) Knowledge of applicable statutes, laws, regulations and policies governing cyber targeting and exploitation.
- (xxv) Knowledge of Application Security Risks (e.g. Open Web Application Security Project Top 10 list)

**Skills:**

- (i) Skill in preserving evidence integrity according to standard operating procedures or national standards.

- (ii) Skill in collecting, processing, packaging, transporting, and storing electronic evidence to avoid alteration, loss, physical damage, or destruction of data.
- (iii) Skill in using scientific rules and methods to solve problems.
- (iv) Skill in evaluating the trustworthiness of the supplier and/or product.

**Abilities:**

- (i) Ability to find and navigate the dark web using the TOR network markets and forums.
- (ii) Ability to examine digital media on multiple operating system platforms.

**Scope for further research:**

Though a significant amount of literature is available touching upon the Human Factors involved in Cybercrimes, there is a vast scope to conduct further research to develop a deeper understanding of various Human Factors that contribute to commission of cybercrimes and the Human Factors that are essential to prevent, detect, investigate and prosecute such offences. Some identified potential areas in this regard are listed below:

- (i) Identifying the characteristics of cybercrime offenders; whether cybercriminals have different characteristics than traditional offenders;
- (ii) The interaction of the cybercrime offenders' characteristics with the motives for commission of
- (iii) Psychological characteristics of cybercrime offenders engaged in the various types of offenses (cyber-dependent crimes as well as cyber-enabled crimes).
- (iv) Social contacts and their selection process having a bearing on the commission of cybercrimes, as on-line ties may appear to be of relevance.
- (v) The knowledge levels and their differences among the offenders committing various types of cybercrimes.
- (vi) Understanding whether the offenders make a conscious effort to commit the cybercrimes or whether such cybercrimes are committed when they accidentally come across opportunities for the same and whether such a distinction could be made to suit the prevention strategies.
- (vii) Understanding the moral perceptions and neutralization techniques of cybercriminals; whether there is a sub-culture of adjustment and tolerance to the same, especially amongst the youth.
- (viii) Understanding the shift of 'offline' crimes to 'online' crimes; whether the traditional crimes are getting merged with cybercrimes.
- (ix) Ensuring in-built processes, which are convenient and easy to adopt, to 'nudge' and 'persuade' the end-users to higher level of safety.



## Conclusion:

There is an alarming increase in the number of cybercrimes, though many of them may not be reported for a variety of reasons. Similarly, the nature of cybercrimes is also fast evolving, becoming more and more complicated, with the advancements in the Information Communication Technologies. Also, with the technology and internet becoming 'omnipresent' and 'inevitable' even for the daily chores of a common man, the convergence of traditional offline crimes with the online crimes are a logical consequence. This poses the evolving challenges wherein even an ordinary citizen needs to be reasonably educated on cyber-safety and an investigator of a traditional crime needs to be fully empowered to deal with an increasing 'cyber' component.

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## **Corruption measurements: Caught between Conceptualising the Phenomenon and Promoting New Governance Agenda?**

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### **Abstract**

*This work, 'Corruption measurements: Caught between conceptualising the phenomenon and promoting new governance agenda?' is essentially a qualitative study based on reviewing various literature available on the subject. It starts with introduction that explains the evolution of the idea of measuring corruption; its relevance to governance and associated theoretical issues. "Evolution of corruption measurements" gives an overview about different corruption indices, whereas the topic "challenges to corruption measurements" briefly explains the challenges faced by corruption measurements. Topics "conceptualising corruption" and "methodological issues" give deep insight into the shortcomings of as well as the arguments against corruption measurements. Also explained in these sections are how have corruption measurements conceptualised the corruption phenomenon; and how do the measurements keep evolving in order to become more relevant in corruption control efforts. Issues associated with data aggregation also are explained in this part. This work demonstrates that though continuous methodological evolution and empirical research on corruption have helped to increase the acceptance of corruption measurements, the gap that exist between corruption measurements and anti- corruption practices in the developing world will continue to be a challenge if corruption measurements do not account contextual realities into consideration.*

### **Key words**

*Indices, corruption measurements, conceptualising corruption, contextualization, new governance agenda, neo-liberalism, incidence of corruption, proxy data)*

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### 1. Introduction:

#### ***Corruption; Politics of Corruption Control and Quantification:***

Corruption is a complex problem affecting all the societies; and it has many different causes and consequences, according to Rodriguez-Sanchez (2018). Nevertheless, there is no single agreed definition of corruption as the term corruption is too broad and vague (Zaman & Rahim, 2008). Though corruption is universal and exists from time immemorial, societies do not exhibit similar degrees of corruption (Gould & Reyes, 1983); and there are differences in the level of incidence and forms of corruption across jurisdictions. Due to its complex; evolving and unpredictable nature (UNDP, 2015) arriving at a commonly agreed definition on corruption remains a challenge in academia. Further, the factors that determine or drive corruption and their multiple impacts make defining corruption more complex. Studies show that corruption affects social; political; and economic aspects of human life. Dimant (2016) argues that corruption has negative correlation also with brain drain and human capital. There are studies that link environmental degradation as well as human rights with corruption. Thus, there is a common understanding about the impacts of corruption on various aspects of governance. The new corruption control campaign that emerged in the late 1990s consciously built the narrative that corruption undermines governance.

A vast majority of countries supports the new anti-corruption campaign in their appetite for development as this movement presents the idea of corruption control as an inevitable means of achieving economic growth. This campaign further claims that incidence of corruption comes down with increasing level of development (Enste, 2017); and that developing countries face the problem of systemic corruption (Wigwe, 2016). The idea of good governance asserts that corruption needs to be controlled for improving economic growth (Chimezie, 2016). The neo-liberalism driven multinational initiatives like OECD<sup>1</sup>, UNCAC<sup>2</sup> etc. do attempt to harmonise anti-graft practices across jurisdictions for better corruption control. The United Nations, World Bank and donor agencies talk about global programme against corruption covering institution building; enforcement; international legal cooperation etc. (UNODC<sup>3</sup>, 2004). As a result, many countries have taken measures to incorporate the provisions of global initiatives like, the UNCAC; and made revisions in their regulations wherever their provisions were overlapping. Measuring corruption is one of the prominent outcomes of the new corruption control campaign.

It is widely believed that the current global campaign against corruption understands corruption in a very narrow sense of mutual demand and supply between two corrupt actors; and is driven by the concerns of market competition. Still, the aggressive anti-

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<sup>1</sup> Organisation for Economic Development and Cooperation.

<sup>2</sup> United Nations Convention Against Corruption and UNCAC is the only legally binding international anti-graft instrument.

<sup>3</sup> United Nations Office on Drugs and Crime has corruption control through research, guidance and support to governments as one of its objectives.



corruption research and its growing relevance to governance demonstrate the importance of objectively understanding corruption and the factors that cause and sustain the phenomenon. With this claim, the neo-liberalism<sup>4</sup> driven anti-corruption movement encouraged quantifying corruption with the to study; counter and monitor it (Hodess & Heinrich, n.d). Consequently, many multinational and educational institutions evolved corruption measurements applying different methodologies over three distinct phases from the 1990s. Quantifying corruption through surveys; public opinion; ratings etc. was the approach followed in the first phase. Overcoming the shortcomings of first generation measurements, subsequent efforts attempted to measure corruption with more methodological and conceptual precision though the measurements still are based on perceptions. In the absence of primary data, due mainly to the very nature of corrupt deals, corruption measurements attempt to measure corruption through perceptions; and to establish the presence of those factors that prevent corruption from occurring (Hodess & Heinrich, n.d).

But, the indices used for measuring corruption like, rule of law, transparency, information rights etc., are essentially the tools of new governance agenda<sup>5</sup>; and different institutions like the World Bank, International Monetary Fund, United Nations Development Programme etc. have developed these indices applying specific statistical tools. This creates apprehensions about the vary purpose of measuring corruption; and it is believed that corruption measurements burden governance particularly in developing countries where institutions have still not matured. Thus, the possible inherent bias in corruption measurements against developing countries has not been ruled out so far. Evidence suggests that developing countries score poorly on various corruption and governance indicators. According to Malito (2013) demand for corruption indicators is closely linked to the promotion of anti-corruption strategies considered crucial for establishing and consolidating new governance practices. Also the corruption measurements are not comprehensive as they could not capture all aspects of corruption. In this context, this work attempts to study if the corruption measurements stumble between conceptualising corruption and promoting the new governance agenda. This review work addresses evolution of corruption measurements through various phases; tools used for measuring corruption; and the issues associated with corruption measurements in-depth by reviewing the existing literature.

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<sup>4</sup> *Neo-liberalism is a policy model that favours market oriented reform policies and propagates minimal state control for fair market operations.*

<sup>5</sup> *It's a governance model evolved from policy documents of various donor agencies, including the World Bank and is practiced in many liberal democracies in the west. New governance agenda advocates competitive democratic politics primarily in administrative/managerial terms.*

## **2. Evolution of Corruption Measurements**

The oldest corruption indices was given by the Business International Corporation<sup>6</sup> (BIC) based on inputs received from their network of correspondents and analysts (Kumar, 2011) for the period 1981-83. But, the Political Risk Services Group presented the first systematic cross-country measurements about the level of corruption across 146 countries in the early 1990s (Shukhova & Nisnevich, 2017). The International Institute for Management Development also started estimating competitiveness index using data on corruption. Nonetheless, serious efforts to measure corruption started in the mid-1990s when there emerged a general understanding that corruption was impeding growth and that corruption needed to be controlled. This period signified the end of cold war and the multinational agencies promoting good governance agenda based on the principles of rule of law; transparency; accountable governance etc. Over the period of past three decades, there are many initiatives like, the Global Programme on Anti- Corruption for Development Effectiveness; the Global Anti-Corruption Initiatives; the United Nations Convention against Corruption (UNCAC) aiming at spreading awareness and controlling corruption across jurisdictions.

In their efforts to quantify corruption, Transparency International and the World Bank developed their indices in 1995 and 1996 respectively. With the end of cold war and spread of neo-liberalism, the idea of good governance gained momentum and corruption control emerged as an important tool of governance as the new governance agenda touted that corruption control was a pre-condition for economic growth. This necessitated measuring corruption to advance the knowledge on corruption and its impacts on various aspects of governance.

### **2.1 Approach of Corruption Measurements:**

The first generation measurements, known as composite indicators, measured corruption by aggregating data from various indices (Hodess & Heinrich, n.d). These measures collected data from cross-national sources and surveys about democracy; women empowerment; safety; peace etc. Simultaneously, indicators related with broader aspects of governance of which corruption was one of the key dimensions were also measured (Malito, 2013) by various institutions. In this phase, the level of aggregation was very high. But, the second and third generation measurements evolved more sophisticated tools by bring-in more objectivity. Thus, there are marked differences in the measurements over the period of three decades in the methodologies applied for measuring corruption. This too some extent has helped to have better conceptualisation of the problem. Current measurement efforts, in other words the third generation

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<sup>6</sup> BIC is a business advisory firm assisting the multinational companies.

measurements, try to make the measurements actionable and context based for better appreciation of corruption and its causes. Review of anti-corruption literature shows that there are three distinct approaches of corruption measurements, namely; 1. Survey based; 2. Governance indicators based and 3. State capacity indices based. While survey and governance indicators based approaches attempt to capture primarily the outcomes of governance, state capacity based indices attempt to estimate the performance of various countries in a set of spheres considered critical for safeguarding the government responsibilities (Malito, 2013).

Corruption measurements have developed their methodology based on both objective and as well as subjective parameters and there are efforts to bring more precision to the subject. Now, corruption measurements are provided by institutions like, the World Bank; Transparency International; the World Economic Forum; Colombia University; Michigan State University; George Mason University; Md. Ibrahim Institute of African Governance, etc. These institutions endorse the prescriptions of new governance agenda. Also there are regional measures of corruption like, African Integrity Indicator; Afro-barometer; Euro barometer; Asia- barometer. Some non-governmental organizations and private organizations are also engaged in developing corruption measurements. Some of the popular indices of corruption are: Corruption Perception Index; Control of Corruption Indicator; Global Governance Index; the Control of Corruption Governance Metric; the Global Corruption Barometer etc. Corruption measurements show a steady evolution in their purpose from awareness creation to policy advocacy.

Another significant aspect of corruption measurements is that they attempt to measure various aspects of governance ranging from extent to the institutional arrangements that sustain corruption. The first generation indices were aimed at creating awareness about democracy; women empowerment; peace; stability of governments' etc. The second generation measurements attempted to move beyond perception based analysis by collecting data on actual experience of people exposed to corruption (Hodess & Heinrich, n.d). Crime victim surveys; Global Corruption Barometer etc. were the outcomes of second generation measurements. The recent or third generation measurements have developed set of tools focusing on transparency; integrity and accountability that assess anti-corruption systems; standards and anti- corruption practices etc. These measures try to assess the extent to which the anti- corruption provisions and practices in place prevent corruption and how the existing legal framework is implemented in practice (Malida, 2013).

While the first and second generation measurements were largely owned by institutions operating at international level, the third generation measurements focus on capturing corruption related data at contextual level, making corruption measurements more evidence based and actionable. Further, in the third generation measurements aggregation has become low; and institutions, policies, and sectors have become primary units of analysis (Malida, 2013). Ownership has also shifted in the third generation measurements to countries and stakeholders, making the measurements context specific.

Still, there is no uniformity in the existing corruption measurements regarding the aspects of corruption that need to be measured. Similarly, questions like what aspect of the phenomenon used for measuring corruption is relevant; how to measure the incentive structure that facilitate corruption in public institutions etc. are subjective as they cannot produce objective data for measuring corruption. Thus, the corruption measurements still understand and define corruption in the context of governance and remain subjective data centric.

### **3. Challenges to Corruption Measurements:**

Challenges to corruption measurements are two-fold. There are issues related with both conceptualization and quantification of the phenomenon. Efforts to measure corruption are criticized on the ground that corruption cannot be quantified due to its secret and unpredictable nature. But, Reinikka & Svensson (2012) argue that with appropriate survey methods and interview techniques, it is possible to collect quantitative data on corruption. Studies show that quantitative measurement of corruption is not easy; but not impossible. Lambsdorff (2007) argues that in spite of conceptual and methodological challenges corruption measurement indicators are on a steady rise; and there are marked differences in the quality of the outputs produced over the period of three decades by corruption measurements. The new public policy approach aims at quantifying the efficiency of institutions; and many aspects of governance are now being measured through quantifiable parameters. Such parameters also can help to diagnose and quantify corruption with more precision. Tools to track public delivery; government response in providing services etc. can provide objective data about the capacity of state while measuring corruption. Institutions that measure corruption have evolved many such indices for aggregating the data.

Still, corruption measurements are not comprehensive; and as observed by Malito (2014), there are ontological and methodological concerns in quantifying the corruption phenomenon. Conceptualization remains a strongly contested area in corruption measurements. There is criticism against the new corruption control campaign for approaching corruption as purely a technical problem in the context of governance. It is true that there are multiple determinants of corruption; and degree of political stability, economic freedom, and religion, culture etc. have also been found to be drivers of corruption. (Ghaniy & Hastiadi, 2017). Evidently, current efforts to measure corruption centre on the issues of governance. But, Rohwer (2009) rightly argues that it is not possible for one indicator to capture the multi-dimensional aspects of corruption in an objective manner. Thus, any attempt to define corruption ignoring the varied aspects of the problem, including normative aspects, may not provide comprehensive understanding of the problem.

Similarly, there are concerns about the methodology adopted for measuring corruption. Contestability of subjective data; bias in data collection and risks associated with the techniques deployed for aggregating multiple data have faced sharp criticism

(Malito, 2014). While studying corruption measurements, Kobis (2018) argues that there are challenges in aggregating data to quantify corruption. He questions about the type of corruption that is being measured; comparing a country with another country; and about the quality of data with regards to social desirability concerns & fraudulent data collection procedures. Also there are reservations about the ability of corruption measurements to identify the drivers of corruption; and about their utility in devising policies for corruption control. Similarly, there are criticisms about using the corruption measurements over time and across countries.

There are evidences that show different results produced by corruption measurements in different settings. Pelizzo and Baris (2017) have demonstrated that corruption estimates which are quite precise in high income countries often have validity and reliability problems in developing countries. It is also criticized that corruption measurements do not attend grand corruption and transnational corruption as the approach of corruption measurements is very narrow.

### ***3.1 Conceptualising Corruption and the Dominance of Universalism***

The term corruption is often seen loaded with condemnable or society harmful behaviours and is not value free. Thus, the definition of corruption depends upon the perspective and purpose of the study undertaken. OECD (2006) went to the extent of equating corruption with cancer. Evidently, there is agreement about the harmful effects of corruption (Brooketal, 2013) in the international community. But, in governance literature, definition of corruption is mostly bribery centric and focuses on abuse functions; bribery; accumulating disproportionate assets; embezzlement; cheating etc. that impact various aspects of governance including economic growth and fair market operations.

But, as argued by Brooks et al., (2013) factors related with governance that are impacted by corruption are dispersed forms of victimisation and there is no specificity of victimisation in corruption as corruption is the result of an illicit agreement. They further argue that focusing only on bribery while trying to understand corruption will overlook the complexity of the problem. There are studies showing divergent views in conceptualising corruption. Rationalist; culturist; anthropologist; systemic approaches etc. try to understand corruption in their own perspectives. This divergence among various approaches in understanding corruption makes arriving at an agreed definition near impossible. Functionalism sees corruption as a way of distributing resources in the society and generating economic growth for welfare. One of the famous functionalists Samuel Huntington (1968) saw corruption as the way to grease the wheels to get things done. Neo-functionalism sees corruption as a form of problem solving arrangement in the society. Essentially, functionalist approach sees corruption functional to society. Taking the view contrary to functionalist perspective, rationalist approach sees corruption as dysfunctional to society; and corrupt individuals as rational actors who tend to maximize their benefits (Prtiwi, 2017). Rational choice theory sees corruption as

abuse of entrusted authority for personal or private gain (Svensson, 2005). Economic models of bureaucratic corruption like the Principal- Agent model, Rational Choice theory etc. see corruption as the result of information asymmetry and profit maximisation behaviour of rational actors. These approaches see corruption as the problem of political economy. While emphasizing the need to understand corruption through the function of institutions, Schwickerath, A.K., (2017) argues that corruption must be conceptualised as a phenomenon nested within institutions because institutions can help to understand the key components of corruption.

The neo- institutional approach emphasizes to consider also the mechanisms which allow internal regulation of social interactions within corrupt networks, and their effects on individuals' beliefs and preferences (Vannucci, 2015).

At the same time, the behaviouralist approach emphasizes to understand corruption from human behaviours. For Rose-Ackerman and Palifka (2016) corruption is a particular form of unethical behavior that harms the organization and society as a whole. Cross- disciplinary approach which attempts to apply insights derived from other disciplines focuses on understanding corruption by looking at what it means to individuals implicated by the phenomenon while engaging in social relations and situated in different contexts (Prtiwi, 2017). For Brubaker & Rogers (1998) corruption is a meaningful, culturally constructed, discursively mediated, symbolically saturated, and ritually regulated social phenomenon. Seleim & Bontis (2009) see corruption in institutional collectivism. Thus, variations in cultural norms; internalized values and social traditions cannot be ignored while understanding and defining corruption. There are views that attempt to define corruption also in the context of relationships. Palmer (2008) argues that relationships lead to corruption when there is a felt obligation to reciprocate others treatment. Anthropological approach, following social constructivism, prefers multiple views of ethics and morality rather than moral evaluations (Prtiwi, 2017) for understanding corruption.

But, the universalistic approach that dominates the global anti-corruption movement sees corruption as abuse of office for personal gain. In defining corruption, there is uniformity among the institutions that promote the prescriptions of universalistic approach for controlling corruption. For example, the World Bank defines corruption as abuse of public office for private gain (Worldwide Governance Indicators, 2013). Transparency International relates corruption with abuse of entrusted power (Transparency International, 2013). According to the United Nations, corruption is the abuse of power for private gain (UN, 2004). Definitions provided by Transparency International and Lambsdorff refer to the misuse of public power for private benefit; but for Lambsdorff (2007), corruption may also encompass increases in power or status. The World Bank recognizes petty and grand corruption as well as state capture by elites and private interests. (Worldwide Governance Indicators, 2013). Still, the new governance agenda centric anti-corruption initiatives limit their focus to those governance factors that cause or are affected by corruption. They tend to identify and quantify those behaviours

that need to be criminalized instead of getting into the issue of defining corruption comprehensively (Perumal, 2019).

Apart from conceptualisation, also there is the problem of contextualizing corruption. The current international efforts to fight corruption are essentially based on universalistic approach applying same impersonal rules and practices on everyone (Dixit, 2016) irrespective of specific contextual realities. Thus, the international anti- corruption campaign; and its underlying concepts and theoretical assumptions are being contested (Gephart, 2009) as they undermine contextual issues.

Bratis (2003) argues that the universalistic approach of defining and understanding corruption overlooks historical, cultural and social specificities that cannot be ignored while trying to understand corruption. He further says that the frequently asserted consensus on corruption is problematic because the cultural and historical specificities of corruption remain hidden.

There are contentions about the spread of anti-corruption norms in global governance, promoted by various international institutions. There are questions as to how and with what interests global governance structures in the anti-corruption domain emerged (Gephart, 2009). The grounds for current universalistic movement against corruption like, increasing evidences about corruption and the convergence of views about fighting corruption are also under severe criticism (Malida, 2013). While arguing in favour of universalistic principles in public policy domain, Naila Kabeer (2014) argues that the case for universalism needs to be framed in ways that do not set up false dichotomies or unrealistic expectations in various countries. There are views that the universalistic approach of measuring corruption and making prescriptions ignoring context specificities creates governance pressure in developing countries and that the universalistic approach of corruption control undermines the anti-corruption initiatives already in place in different contextual settings. Besides, developing countries invariably score poorly on corruption measurements due to their weak institutions, the aspect that the corruption measurements depend heavily upon while quantifying corruption. These views present challenge to conceptualising corruption in a very narrow approach of governance and contest the validity of corruption measurements.

### **3.2 Methodological Issues**

#### ***Data Aggregation***

It is evident that current methods of corruption measurements are not based on objective data. In its absence, the corruption measurements use perception based subjective data derived from various indices. There are criticisms that perception based data used by corruption measurements change from time to time; and that they measure corruption only from public sector perspective. Also there are concerns about survey & methodology adopted; and validation of results in the existing corruption measurements. Most of the corruption measurements aggregate data from various sources in different

forms and these composite indices form the basis in all the three generations of corruption measurements.

Actually, the new indices based on aggregating data from various sources emerged in the mid-1990s. It is claimed that the aggregate indicators attempt to look beyond subjective factors while measuring corruption (UNDP, 2008). These measures are called second generation measures (Johnston, 2000); composite indicators (Arndt and Oman, 2006); and aggregate indicators (Kaufmann, 1999). Though the third generation measurements try to limit the level of data aggregation, composite measures remain unavoidable and they dominated the world of corruption measurements (Malida, 2013).

Criticisms faced by composite indices for aggregating data are varied. According to UNDP (2008), aggregating the data from many sources may lead to lose of conceptual clarity while measuring corruption. Knack (2006) argues that aggregation of data may not be based on independent judgments and thus, the measurements based on data aggregation lack conceptual precision.

According to Arndt and Oman (2006) aggregate indicators are susceptible to misuse due to their selection bias; poor methodology; and scoring criteria. There are issues related with comparisons over time and across countries; and correlation errors in sources while aggregating the data from various sources. Also there are apprehensions with respect to comprehension and utilization of composite indicators. Rohwer (2009) has reservations about transparency in collecting information for aggregating the data. Since the composite indices simply reassemble data from different units of measure, rescaling them into a single unit is also a problem (Rohwer, 2009). As a result, as observed by Kaufmann & Kraay (2007) there are difficulties in interpreting the statistical results and changes in methodology and data sources. Kaufmann & Kraay (2007) further argue that there is absence of clear link between reforms implemented in specific areas and changes in indicator values and rankings for a particular country. Composite data have not been found effective for comparison over time and among countries.

While studying the performance of various corruption indices in various countries, Shukhova & Nisnevich (2017) found that there were statistically significant differences between indicators with respect to the countries with high and low incidences of corruption. They argue that Corruption Perceptions Index and Control of Corruption Index tend to estimate the level of corruption in highly corrupt groups of countries in different ways. The UNDP (2015) admits that the aggregation of many points may fail to reflect successful reform in particular areas. The missing values also have their statistical implications in reducing the validity of data aggregation. Knack (2006) says that the weight given to various data sources can change over time; but given the absence of information, the aggregate indicator may present asymmetries that reduce the validity of the aggregate indicator. For Malito (2013) missing data for some indicators may induce researchers to derive information from other sources without considering whether the information can be adequately aggregated with other indices. As a result, aggregate measures limit the potential of measuring error and bias in any of the indicators.



***Subjectivity of Data:***

It is true that perception impacts decisions. Business and political decisions are largely impacted by perceptions. Perceived level of corruption has also been cited as one of the reasons for less effective anti-corruption interventions. Objective data about corruption can give precise understanding about corruption and its causes. But, objective measurement in corruption is extremely rare and thus most of the corruption indicators rely on subjective measurements (Francisco & Javier, 2007).

Still, there are attempts to build objective corruption measurements through innovative tools (Duncan, 2006). Subjective data have their inherent shortcomings like, lack of precision; potential interdependence of sources; problems in validating the underlying data sources etc. You & Khagram (2005) argue that perception based data for measuring corruption may be imprecise and biased as perceptions may not be able to capture actual occurrence of corruption. As argued by Andvig et al., (2000) perceptions about corruption may not reflect the actual instances of corruption as they depend upon perspectives of specific groups or business and political orientations.

Donchev & Ujhelyi (2007) warn that using corruption perception indices as a measure of corruption may be more problematic than suggested by the existing literature due to lacking objectivity. Subjective data also brings difficulties of measuring error in the models developed for measuring corruption. It is also true that since corruption, by nature remains hidden, it cannot be measured through objective data. Still, perceptions based data can be of use when data are not available with formal government institutions. Similarly, perceptions based data can be used to capture information about the topics that are difficult to conceptualise for collecting objective data such as, public trust; grand corruption; political corruption etc. (UNDP, 2008).

***4. What do the Corruption Measurements Measure?***

Though there are conceptual; contextual and methodological apprehensions about measuring corruption, corruption measurements cover various aspects of governance and thus, they provide a broad understanding about the causes and effect of corruption in governance. In spite of all challenges the level of acceptance of corruption measurements is growing and these measurements attempt to become more precise both in contextualizing and measuring corruption. Particularly, the recent or third generation corruption measurements attempt to provide context specific outputs and this could be a step forward to understand corruption better. Efforts to contextualize corruption measurements may help policy makers with more actionable inputs.

The United Nations Development Programme (2008) classifies the exiting indices of corruption measurements on the basis of 1. The scale and scope of indicators; 2. What is actually being measured; 3. The methodology employed and 4. The role that internal and/or external stakeholders plays in generating the assessments. According to UNDP (2015) corruption measurements involve measuring what should exist to prevent or combat corruption. Thus, measurements include legal and policy frameworks;

institutional arrangements; processes; mechanisms; practices; outputs; and outcomes associated with governance.

Kaufmann & Kraay (2007) argue that measuring corruption includes not only the intensity of corruption in general, but also a precise quantification of the intensity of particular types of corruption; the analysis of the mechanisms of corruption; and determining the costs of corruption.

These explain the wide applications of corruption measurements. For example, the Political Risk Survey Group (2014) captures data on the following aspects of illegal activity: actual or potential corruption in the form of excessive patronage; nepotism; job reservations; favour for favours; secret party funding and suspiciously close ties between politics and business (Shukhova & Nisnevich, 2017). The Transparency International which has been publishing Corruption Perception Index from 1995 ranks countries in terms of the degree to which corruption is perceived to exist among public officials and politicians (Transparency International, 2011). They assess the level of corruption by questions related with bribe and kick-backs to public officials in procurement; embezzlement of public funds etc., Transparency International attempts to measure the strength of anti-corruption efforts in public sector too (Transparency International, 2011). The World Bank's Control of Corruption Index measures perceptions of the extent to which public power is exercised for private gain, including both petty & grand forms of corruption as well as capture of the state by elites and private interests (Kaufmann, 2011). This measures the level of corruption for every country. The World Justice Project is working on the rule of law index from 2010. This measures bribery; improper influence by public or private interests and misappropriation of public funds or other sources (Botero & Ponce, 2011). The world Justice Projects measures corruption on the basis of following factors: Constraints on governments power; Open government; Absence of corruption; Fundamental rights; Order and security; Regulatory enforcement; Civil justice; Criminal justice; and Informal justice (World Justice Project, 2019). Thus, the attempts to measure corruption also consciously address the critical issues relevant for better governance.

## **5. Conclusion**

It is obvious that the efforts to measure corruption are contested on conceptual and methodological grounds. But, these challenges have not substantively discouraged the efforts to understand corruption in the context of governance mainly because corruption measurements are governance centric; and they do provide better understanding about the impacts of corruption on the issues of governance. In effect, corruption measurements help in better policy formulation. Similarly, many procedural evolutions in corruption measurements, like, contextualization; bringing down the scale of aggregation etc. have helped to improve the credibility of corruption measurements. Continuous research on corruption measurements also has helped to make the measurements more precise.

Now, corruption measurements tend to provide objective and actionable outputs to the policy makers. Given the level of acceptance of the measurements and their impact on governance, the issue of conceptualization of the corruption phenomenon does not seem to be a formidable challenge that can impair the acceptance level of corruption measurements.

Corruption measurements address context specific issues too. This may help to appreciate the anti-corruption practices evolved and practiced in specific settings better. Corruption measurements also attempt to bring academia and practitioners together for narrowing down the gap between theory and practice through various initiatives. However, as observed by Francisco & Javier (2007) the relationship between corruption studies and practitioners has not been translated into policy- oriented measurements as the policies need to be followed by implementation. Apprehensions about the purpose and utility of corruption measurements in developing countries still remain a challenge that needs to be addressed. Still, it is inevitable that corruption measurements understand corruption objectively by comforting the aspirations of the developing world for better governance.

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## **Athi Varadhar Vaibhavam – A social media phenomenon; A strong case for reorienting policing strategies for future**

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### **Abstract**

*Social media induced phenomenon called Athi Varadhar Vaibhavam at Kanchipuram in TamilNadu attracted hundreds of thousands of people from different walks of life, and it has warranted a rethinking in crowd management strategies with the use of science and technology and socio-psychological methods. The massive gathering was due to multiplicity of factors-rarity of the event as it happens once in forty years, fear of missing out (fomo) and high initial emotional capital involved in the event. This enormous crowd warranted a statewide mobilization of policing resources to ensure safety and security of the crowd, and it has offered an opportunity to rethink and reorient the policing strategies for the future on the basis of evolving technologies and tools like social media analytics, machine learning and Artificial Intelligence. In addition, the need for a paradigmatic change in the approach to tackle similar situations has also been discussed in this paper.*

### **Keywords:**

Athi Varadhar phenomenon, fomo, social media, force multiplier, technology, Jallikattu

### **Introduction**

Athi Varadhar- Athi means fig and Varadhar is a form of Hindu God Vishnu, and the twelve feet idol was carved out of a fig tree circa 300 years ago (Prabhakar, 2019). It had been the statue of worship for several decades at Kanchipuram before the idol was

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replaced by a new idol. The celebrated Vaishnavite Scholar of eleventh century, Shri Ramanujar is believed to have worshipped here (En.wikipedia.org,2019).

Athi Varadhar became a phenomenon by itself (Vijayaraghavan, 2019) as almost 20 million devotees have visited this small town of Kanchipuram in a matter of just 48 days starting from July-1,2019 and number of footfalls exceeded the most popular Vaishnavite temple – Thirupathy on many days. Kanchipuram is also known by the name of Kanchi Mutt head -Shankaracharya and it is a site of a composite culture wherein Saivism and Vaishnavism had intertwined to form a ‘uniquely blended religious tradition’ which has now become the nature of faith and worship for majority of the theists in the state of TamilNadu.

### ***Athi Varadhar Vaibhavam***

‘Athi Varadhar Vaibhavam’ started on July 1, 2019 and for an initial few days it attracted the attention of only local population and vernacular media, and then ‘tsunami waves’ of information about Athi Varadhar spread by visual media and social media which swept off the entire South India. This explosion of news in the media generated an unprecedented interest among people of all walks of life to see the ‘Return of Athi Varadhar’ after 40 years of submergence under water. A lot of memes were created, selfies were posted, groups were formed on Athi Varadhar in social media in addition to massive presence of news items in visual and print media from day one (Vijayaraghavan,2019).

Though there is a difference of opinion as to whether Adhi Varadhar is only to be seen as an idol or to be worshipped as a symbol of faith, by a mere look at the sheer size of the crowd one would wonder what this phenomenon is and how to explain it? It definitely needs research from various perspectives. What propelled people including thousands of Non-Resident Indians (NRIs) to go crazy about Athi Varadhar? Whether the district administration and the police anticipated the possible, impossible, probable and improbable aspects of problems and corresponding policing requirements to ensure the safety and security of the crowd?

I was in the thick of the action for several days like many other senior and junior officers, and observed the crowd mood, behaviour, dynamics, administrative successes and deficiencies to understand the phenomenon in order to reorient the policing strategies for crowd management particularly under the influence of media including social media. As an officer who was in the fore front in the Jallikattu protest on Marina in January, 2017 as Deputy Commissioner of Police, Mylapore, a comparison of both the events happens spontaneously to me as in both events Tamil Nadu has seen waves of people gathering voluntarily, though for different reasons, in large numbers phenomenalized by visual and social media.



### **Methodology:**

I used the qualitative methodology and a semi-structured interview method. Random sampling method was used to select the interviewees from various sectors of the queue. Interviewees were selected from different categories viz., VIP pass holders, general queue, special queues for less-abled people, and to impart spatial dimension, the devotees waiting in general queue from the tail end, middle and the front- both from entering and exiting crowd were also selected. The study was conducted over a period of ten days in different times of the day, like morning to represent the crowd which landed and waited overnight in the barricaded spaces, mid-day from the crowd which had to undergo the hot weather and in the night from the crowd which was waiting patiently but with an uncertainty of whether they would get to see the deity in the night itself or only next day morning. The survey included policemen and the field staff on duty from other services as well.

### **Similar Events:**

I remember two events which happened during my life time in relation to religion for which I could not find any literature. The first one was the occasion in which it was believed that a small wooden Ayyappan idol worshipped by a small boy in Eraniel village in Kanyakumari district in the eighties was secreting ghee, and I remember standing in the queue for 4 hours to see the idol and boy. This happened almost 35 years ago. The second one is Mel Maruvathur, a village 90 k.ms from Chennai, a phenomenon where the belief that milk was oozing out of a Neem tree in a temple had spread like wild fire and hundreds of thousands of people thronged to see it for themselves. It has now become a kind of cult movement in Tamil Nadu in the name of Mel Maruvathur Adhi Parasakthi Mandram.

A similar event, but with different dynamics, I have noticed this time. Visitors from different parts of the globe came on a destination tour to this town to witness this event, in addition to the crowd from south Indian states. Many of the visitors from abroad said they had combined their annual visit to India to witness this event. The trains leading to Kanchipuram and surrounding towns were running full with zero space, even to stand and travel. People were ready to stand for hours together to travel to Kanchipuram, and then to wait for another long spell to have a glimpse of the deity for a few seconds. On an average, there had been one to two hundred thousand foot falls recorded each day at Vasantha Mandapam where the idol of the deity was kept initially in lying position and later in standing position.

I argue that this phenomenon is mainly the outcome of media influence, particularly social media. With all forms of media bombarding the people with information about Athi Varadhar, it played on the feeling of insecurity in the minds of masses about the uncertainty over their lifespan for the next forty years and fear of missing out (fomo) until Athi Varadhar is taken out next time in 2059. Similar emotions were at play in a

different way during the ‘Jallikattu’ agitation on Marina beach, Chennai in 2017 also, as the protestors used the emotive energy of the crowd grounded on the feeling of insecurity over the survival of Tamil culture. The contribution of media towards mass mobilizations has been studied by many and noted the positive connection between the size of gathering and presence of media under similar circumstances (SandPeter, 2017; Raj.N, 2018; Mary.S, 2018; Sathish.R, 2018; Boyle.M,Schmier bach.M 2009). In the current study, there was almost a unanimous response especially among people who were 40 years of age that this could be their last opportunity to see Athi Varadhar, and some of them even said that even if they die at Kanchipuram in the process, they would happily embrace death as they believed death here would take them straight to Vaikuntam, the heavenly abode of Vaishnavites. However, it was surprising to hear from a 26 year- old physically fit man that his reason not to miss this opportunity to see Athi Varadhar was the fear that he was not sure whether he would be alive after forty years to come to Kanchipuram, considering the belief that the incidence of cancer, diseases like heart ailments and diabetics are on the rise, though the interviewee was found healthy and not diagnosed for any such ailments. This factor was found to be indirectly playing out in the minds of almost all the respondents irrespective of their age.

For the question on the source of information about the event, the uniform answer from all the interviewees was that they came to know through news channels and social media, especially, WhatsApp and FaceBook as the friends and relatives who visited Athi Varadhar posted pictures in the social media. A similar trend was noticed in the Jallikattu protest as well. “I have seen it and when are you going to see” type of questions posed by early visitors evoked temptations in the minds of others as well. “Have you been to see the Athi Varadhar?” was a common topic of discussion” in many WhatsApp groups and informal forums (Asiaville, 2019). As a result, the crowd touched more than one hundred thousand on normal days and on holidays it reached its peak of two hundred thousand, a sizeable number were from Andhra, Telengana, Karnataka states too.

### **Explanation to the Phenomenon:**

Enormous growth of social and other media forms backed by the penetration of smart phones with cheap data has been an important reason for the logarithmic scale of turnout. Similar kind of phenomenon was noticed for the second time in Tamil Nadu within a period of three years ever since Jallikattu proved that social media can be more powerful than even the charisma of very powerful leaders. But the question is, why the same social media hasn’t been able to bring in a similar kind of mass mobilization in other occasions? The difference seems to be, the initial emotional capital involved in an issue and how quickly various other factors (visual and social media) interact to build on the initial emotional capital and take it to the tipping point of unstoppable human response. In both the above referred occasions the initial emotive energy level was extraordinarily high and the media captured it and took to the drawing rooms. Also, certain emotions can

trump over other types in swaying the people in their way. Fear or threat of emotionally attached subjects getting lost has historically and evolutionally been responsible for many mass mobilizations. In this case it is the fear and uncertainty over life and the fear of missing out (fomo) an opportunity of a lifetime. Additionally, the media journalists in news channels themselves were carried away by the wave of emotions and such involved reporting imparted an explosive energy to the event.

When the idol was opened for public view on 1<sup>st</sup> of July, 2019 the media gave a good coverage highlighting the fact that the idol was taken out after 40 years of its under water life and his next appearance would be only in 2059. People who go to various Perumal temples regularly from well-known centres of Vaishnavism closer to Kanchipuram, started visiting this initially. Members of the congregation exhibited plenty of emotive energy after the Dharshan and it was captured in cameras by the media amazingly and was trending well on social media. The initial error in judgment of the district administration in not expecting the event in such a big scale resulted in confusion initially, for crowd management due to the absence of infrastructure for crowd regulation. The time and efforts involved in reaching the temple made the experience of Dharshan even more precious and rare, and the uniqueness of such an experience could be seen prominently in the postings in social media, especially in various Whats App and Face Book groups, and that triggered 'peer influence' followed by 'peer pressure'. This pressure travelled both upwards and downwards through different social institutions like family, friends, offices and groups of like-minded people. The information available in *data.gov.in* shows that Tamil Nadu has the third highest level of penetration of mobile phones in the country, at over 81%, as per the Ministry of Telecommunication, Government of India data, 2017. Further, the rural internet penetration is over seven million users in Tamil Nadu and in urban areas, Tamil Nadu tops the list of subscribers with over 20 million users as on January 2016 (Jayashree, Aruland Yasmin, 2019). The strong network of mobile services combined with multiplicity of Whats App groups in families, friends, colleagues and many other themes across the society meant that many people were part of such groups, and as a result they were subjected to social media-led 'peer influence and peer pressure' through the postings on Athi Varadhar by group members repeatedly. Infact, it created a division of 'Have-seens' and 'Have-not-seens' at various social planes. No one wanted to 'miss out' an event which happens once in 40 years and to be included in 'Have-not-seens'. This point is being prominently demonstrated in the current study among the people across all age groups. The insecurity about life span, considering the increasing prevalence of cancer, heart diseases and many other similar ailments, fed fodder to the thought, if it is not now, never though many live in the town of Kancheepuram who had seen it last time also. In fact, the proportion of youth among the visitors to the ones above 40, was much lesser (The Hindu, 2019). However, many local residents who were interviewed said they had seen the previous version of enormous growth of social and other media forms backed by the penetration of smart phones with cheap data has been an important reason for the logarithmic scale

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### **Policing Response:**

The crowd at Kancheepuram will fit in to the classification of ‘religious crowd’ based on the type of event and the motive of gathering. The frame work of analysis to understand the sufficiency of the police response is, “how far” the police successfully responded to the event in terms of FIST factors (Force, Information, Space and Time) (Fruin, 1993), and how efficiently the police regulated the inflow, outflow and the crowd in the pipeline through demand and supply management (National Disaster Management Authority (NDMA), Government of India, 2014:p11 and 21).

The policing response to Athi Varadhar Vaibhavam can be understood and analysed in three distinguishable phases.

1. Initial chaotic phase
2. Stabilized phase in the middle.
3. Systematic response in the end

### **Initial Chaotic Phase**

The Initial response of the police was totally reactive and based on fire-fighting strategies as the police had little clue of the fastchanging dynamics of this crowd. As the demand on policing resources was growing to match the teeming crowd, more resources were mobilized, but by the time more resources were brought in, crowd further swelled up to overwhelm the available resources; there was action from police leadership to match the demand by injecting further resources and this cycle went on and on as the circle was continuously spiralling out.

In the initial phase all ingredients for a stampede existed but the public safety was ensured by the sheer grit of officers and men in khaki holding the fort, despite hostile weather conditions. The Basic tenets of crowd safety were at risk as the number of exits was not proportionate to the inflow and adequate infrastructure was not available to regulate the crowd in the queue. The experience of officers in the initial phase points that there were many ‘near stampede situations’ but the brilliance and timely response by the officers on the spot, saved the situation.

Classical theories of stampede describe the causes of stampede mainly as “escape panic which is a headlong rush away from something” while a “craze is a rush toward something believed to be gratifying”. In both situations, psychological elements play a central role in altering the mass behavior. Unidirectional stampede can occur when the crowd encounters a sudden positive or negative change in force affecting the forward movement of the crowd(Ngaietal.,2009).All the above described factors of stampede existed in the present event.

Though there was a team working to monitor social media it is not unfair to say that no tool was available with the team to analyse, predict and forecast the number of people who would be visiting the temple, based on trending and popular hashtags on the event in social media and timeslot allotted by visual media to cover the event. Algorithms to understand the gathering of critical mass in both forms of media can be used in such situations. In the absence of above sophistication, the ‘social media monitoring cell’ was overwhelmed by the enormity and complexity of factors determining the decisions of the people to visit.

### **Stabilized Phase in the middle**

In the second phase, proper command and control system was established as more manpower and resources were drawn and better strategies and tactics were adopted. Additional resources were provided in the form of static and mobile barricades, other structures like watch towers, Public Announcement systems, wheel chairs, transport, new parking areas, holding areas to ease the crowd pressure on the queues, illumination and drinking water facilities etc.

These provisions really helped the police to manage the crowd better as many aspects of FIST factors of crowd management were addressed on ground level. The barricaded structures inside and the immediate surroundings of the temple with few holding areas helped the police to accommodate a few thousands within the barricades and a good regulation was put in place.

### **Systematic Response in the end**

Supported by higher scale of deployment of traffic police, additional parking areas were created with ‘guided traffic’ routes to give more buffers in both space and time. Senior citizens and differently-abled people were assisted by the police, which not only helped them in dharshan but was also useful to speed up the movement of the queue. The single most important challenge which comes as a priority for any police force in a democracy is, safety of the people. Studies show that significant compression can occur even with moderate crowds; forces of up to 4500N(1000lb) can be generated by just 6 to 7 people pushing in a single direction with forces large enough to bend steel railings. (Ngaietal., 2009). By taking all the above measures the crowd safety was ensured to a greater extent by avoiding concentration of forces leading to compression.

At one stage the number of policemen and officers deployed reached the peak with 2 Additional Director Generals of Police at the helm, 7 Inspector Generals of Police, 7 Deputy Inspector Generals of Police, many Superintendents of Police, several Additional Superintendents of Police and corresponding scale of Deputy Superintendents of Police, Inspectors, Sub-Inspectors and other ranks.

### **Outcome from the study**

However, the study indicates the necessity to redesign the policing strategies for similar circumstances in the future. The higher dependency on the number of policemen needs reconsideration because, how much so ever number of police personnel we deploy, in a crowd situation, it is 'one to one' game numerically, between the police and the people. Also, more boots on the ground means more physical contact with the crowd and it has got a high level of volatility in behaviour, considering the mood of people and the policemen in stressful situations like this. Thousands of policemen and women were on duty for days together. Tough weather conditions and rigor of duty made the life of the policemen and women very difficult as they had to manage with the available facilities and untimely, duty hours disturbing the biological clocks repeatedly. Of course, each batch of police officers and men was not working for more than a week continuously, but still, considering the magnitude of the crowd, the above problems were real as it was found out in the study. The crowd was also under duress considering the fact that they had travelled long distance and were waiting for hours together, sometime sleeplessly and without attending to their biological routines, in the queue, with so much physical contacts with strangers in the line. They became impatient and restless in many points, though many of them stated that once they had the sight of Athi Varadhar at the end all the pain suffered by them for hours to get her disappeared in a moment. Similar sentiments were expressed by the police as well that they endured the difficulties because it was a great opportunity to do this unique duty. The Police leadership was successful in driving this factor deep in the minds of men in uniform.

Handling people from different States, different social, cultural and linguistic backgrounds was a big challenge. In the temple which has the reputation of escalating even seemingly trivial issues up to Supreme Court of India, things could not be taken lightly by the authorities. The temple could not be kept open for the public 24x7 hours as time was required for the priests to rest and get the temple ready for the next day. Restrictions were imposed by the priests in making extra exits and putting up structures inside the temple in order to ensure safety of the crowd, by quoting the religious rules associated with temple.

As sizeable number of people in the crowd were senior citizens (The Hindu, 2019), less-abled and children, though the administration had provided sufficient number of wheel chairs, the not-so-disabled-friendly track leading to Vasantha Mandapam was a big challenge and it demanded continuous facilitation by the police from entry to exit.



Segregating the senior citizens from other family members was a difficult task and a potential friction point because if the family members were allowed to accompany them liberally, the queue for the less-abled becomes overcrowded, and if the relatives were stopped from joining the less-abled, the wheelchair-bound people had to suffer a lot of inconvenience. So, striking a balance was difficult as continuous inflow of devotees was witnessed even in those queues. Many people in the special queue were carrying even infants, barely a few months old without any protection against infection, and a noticeable number of women in their full term pregnancy also could be seen in the crowd. Safeguarding all of them posed a continuous challenge to the police.

The responsibility of ensuring the safety of all these categories of people befalls on the police, and delivering amidst all these difficulties needs enormous physical and moral strength on the part of the police officers. Another important and difficult challenge the police faced was, the problems associated with the Very Important Person (VIP) culture. People with big ego from all walks of life landed there with or without VIP cards or as free attachments to officials on duty or VIP cardholders, and they did not hesitate to bully the police of lower ranks. Balancing between safety (people) and security (of VIPs) was another problem the police faced, and will be facing in the future as well. On many occasions safety is threatened at the instance of security provided to a specific section of people called, VIPs. The right ratio of VIPs and people who came in the regular queues entering the temple was to be monitored. Keeping the priests in good humour was another challenge the police had to face as they had the tendency to throw tantrums by way of stopping the rituals if anything was done against their will.

### **Forward Strategies:**

#### **Leveraging Technology:**

- The necessity to leverage technology, especially the Information Technology, Machine Learning and Artificial Intelligence, CCTV Network and Drone Technology has been felt in this study. Predictive warning models of stampede through quantitative measurement of crowd density and speed of movement are required to be developed to deal with these kinds of situations (Ngai et al., 2009). CCTV Networks and Drone Technology can give a real time data on the crowd dynamics, mood and behavior of crowd, particularly near bottle necks; this information can be integrated into Machine Learning to predict stampede situations.
- The deployment of the police officers needs a fresh consideration in the light of the technological options available. In a crowd which does not understand the rank structure of the police department, numerically, any police officer of any rank or a constable, is equivalent to one member of the public only. But as we move towards 'non-contact policing' world-wide, a switch over to



‘invisible policing’ is required with the use of technology. Through a network of CCTVs, image Processing Technology can be used to assess the crowd density and crowd movement to predict the possibility of stampede at pressure points; thereby taking immediate measures to decongest that area through the shortest evacuation route(NDMA,GovernmentofIndia,p.51).

- Sophisticated tools are required to understand peoples’ decision to visit in large numbers to any event by studying the trending and popular hashtags in social media and time slots and time of the day allotted to an event in TV channels. “Social media enabled real time crowd monitoring” models are available in the literature which can be customised to local situations. (Haghighi et al,2013). Data on trending can be accessed by following the mostly used hashtags. For instance, the top ten Athi Varadhar hashtags popular on Instagram, Twitter, Facebook, Tumblr were available in the internet to find out the public response. (Best- hashtags.com, 2019). Algorithms have to be developed by combining data on all the factors influencing the conversion of public sentiments in media, particularly social media, into number of people likely to visit. Number of searches made by the internet users on the topic of interest, how many times videos relating to the subject have been uploaded and viewed in YouTube, frequency of appearance and popularity of memes and viral news are some of the indicators determining the impact of social media on crowd turn out and they can help us estimate the critical mass of crowd which warrants immediate mobilization of additional resources. In the Jallikattu protest, a crowd of ten thousand on day one combined with friendly police had put the growth of number of people visited on a logarithmic scale of increase. Expertise should be developed with the voluntary help of domain experts to assist the police officers to do this job and the police need to formally collaborate with IT Schools in this endeavour ; or outsourcing on contractual basis during the time of need. Talent hunting can’t be done when the situation is developing fast but advance resource mapping of such talents-bothin-house and outside can come handy in such situations. The police technical services can be the nodal agency to do this job.

### **Need for Specialization:**

More specialization of the police forces is required at senior level to manage similar situations. Replication of many ideas can be done from the Armed Forces straightaway. When a large scale deployment of very senior officers is done each senior officer has to be put in charge of different verticals of specialized tasks, instead of using them as generalists with multiple tasks to accomplish. Necessary administrative set up has to be part of SOP for similar situations. For Athi Varadhar, many specialized activities were

created viz., crowd regulation, control room, technical wing, traffic and intelligence. A separate team was earmarked to repair the barricades and other minor works necessary to keep the infrastructure in good condition to regulate the crowd in queue system, and it was extremely useful for the foot soldiers to concentrate on the work assigned to them straight away, instead of wasting time in works which they were not equipped to do. However, such specialization needs to be institutionalized with periodical training. Even mundane tasks like, arranging barricades needs research and training, if it has to be effective. And one of the most important areas where more specialization could be brought in viz., media management for better perception management as the district Public Relation Officer (PRO) is tasked with too many assignments and he is hardly able to spare time for the police. A professionally qualified PR team can be engaged for mega events like this exclusively for the police to target all versions of media and a senior officer can be in charge of this very important area.

#### **Paradigm change is required:**

In a huge gathering like this it is one to one in the number game irrespective of the ranks in the police and if we rely on the number of police personnel alone and the police can't match the crowd numerically in such situations. Hence, dependency on mere numbers has got limitations; so force multipliers are required rather than force. Hardware like barricades and maintenance of barricades, portable boom barriers with LED display connected to centralised system of communication to display the information needed to be communicated to public, effective PA systems-both static and portable and mobile watch towers of varying heights with PA system and professional announcers are a few to be mentioned.

The effect of crowd mood and behavior on crowd safety has been well documented in literatures. (Haghighi et al, 2013). So a clear strategy for crowd mood and behaviour management needs to be incorporated as an important component of crowd management scheme. Many people, especially the ones from other states expressed they could not understand the announcements made in Tamil. Though there were a few information boards in multiple languages, understandably, announcements were made predominantly in Tamil. There were a few local initiatives by officers on the spot who engaged the policemen who can communicate in other south Indian languages to connect to people as the mood of people became more irritable in some points, aggravated by facts like slow movement of queue, inclement weather and long duration of waiting. Average waiting hours from the time one joins the queue to the time he gets to see the deity on a holiday was 6 to 8 hours. As people had to wait in long lines in lanes impatience had crept in and presence of aggravating factors like hostile weather, fatigue and absence of crowd engaging mechanism by the police made the task of crowd control more challenging, and so the study emphasizes the need to create systems to address each of the factors mentioned above. Persons with skills in wit and story-telling can be useful to engage the

public through interesting bits of information, anecdotes, stories and entertainment covering various age groups in different languages considering people from different linguistic backgrounds from all neighbouring States. A list of such persons can be readily available with the police as a system rather than as an *ad hoc* measure.

### **Health and psychological support the Police:**

Health advisory for the police is required along with preventive medicine kit; necessary vaccines can be provided as the infection level in the air in such massive gathering is complex and heavy. Many officers fell sick days after the duty got over. As the duty was strenuous and stressful owing to tough weather conditions, challenging crowd pressure, lack of opportunity for brief relaxation, demand on energy level to talk to the crowd continuously, the effort involved in convincing them about the unavoidable delay in reaching the temple in spite of the best efforts by the police, answering the queries on civic amenities and so on. Well-being and mental health of the police personnel need special attention. The pioneer scheme introduced in Tamil Nadu police for the well-being of the police personnel has created the necessary administrative infrastructure and resource personnel; this facility can be utilized during strenuous deployments like this. Hiring a counseling psychologist to accompany the police force along with well being team will go a long way in bringing down the stress level of the police in massive and long deployments like this. A handy guide with simple relaxation and stress management techniques suiting specific field situations can be part of security scheme. Similar to the 'May I help you' booths which are setup for the public to seek assistance from the police, a 'well being counter' can also be set up for the police personnel to record their grievances and suggestions. Of course, the highest recognition of hard work came from the government at the end of the event, but I argue that wellbeing has to be part of the security scheme for crowd management to keep the 'hygiene factors' of motivation at bay.

### **Conclusion:**

The mainstream media and social media played a decisive role in bringing hundreds of thousands of people to witness the Athi Varadhar phenomenon at Kanchipuram. The current study shows that intensity of emotion attached to this event from the beginning combined with the sense of insecurity over longevity of life and 'fear of missing out' a unique event of lifetime was responsible for such an unprecedented response. In the crowd management front, though there was some initial struggle in mobilizing and organizing policing resources as the assessment of the situation went awry, the police leadership immediately got its acts together to put up one of the best performances in Tamil Nadu police by the recent times. Of course, there were many grey areas which need attention for the future, but managing such a colossal turn out of human beings triggered by religious frenzy and social media phenomenon without any major incident

is an incredible achievement by the police. The initial assessment of the District Administration in not anticipating such a huge turnout meant a lot of confusion in the beginning in managing the crowd. The importance of using social media tools and leveraging other relevant technologies like CCTV and Drone-based Intelligence integrated to Machine Learning and AI is emphasised in this study. A paradigmatic change is required in the way policing strategies are planned for the future-from force dependency to reliance on force-multipliers with an emphasis on non-contact policing, through technology solutions.

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## Challenges in Policing the International Border in West Bengal

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### Abstract

*Among all the states of India, the State of West Bengal has the longest International Border. The state shares its borders with Bhutan, Nepal and Bangladesh. Policing at the borders is an important aspect of Border Management. The unique nature of the terrain, demography and the criminal activities at the borders pose serious challenges to the police. The agencies responsible for border management look up to the police as a lead agency for coordination and for investigation of the crimes affecting their sphere of activity.*

*The investigations of border crimes have wider ramifications. It is not enough to arrest smugglers, seize smuggled goods or rescue trafficked persons at the borders. It is necessary to unearth the financial transactions related to smuggling and arrest the culprits operating on both the sides of the borders.*

*The issues at the borders not only relate to immigration and freight movement but they affect social and economic life of the people staying at the borders. There is an added responsibility to dissuade the people from engaging in cross border crimes for livelihood. A concentrated effort of all stakeholders is needed to reduce crime and to ensure safe borders.*

### Keywords

*International Border, Border Management, policing, Police District, Smuggling, Trafficking, Border forces, Border security Force (BSF), Sashastra Seema Bal (SSB), Immigration, Integrated Check Posts, investigation, Pontoons, Malkhana, terrain, porous, firing, Cattle, Cough syrup, Siliguri corridor, fundamentalism.*

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## Introduction

The state of West Bengal has the longest International Border in the country. it's the only state to share borders with three countries (Bhutan, Nepal and Bangladesh). Policing at the International Border is an important component of Border Management and has a bearing on national security. The police coordinate activities of all agencies to ensure security and public order on the International border by interacting with all the stakeholders. All the illegal and criminal activities have to be reported to the police for further investigations. They also assist the customs in investigating cases under the customs act. They have an important role to play in ensuring better cooperation between the border guarding forces and the local people.

In addition to manning the International check posts, the police perform myriad functions at the international borders which are traditionally in their domain viz. crime prevention and detection, maintenance of law and order including security arrangements for mass gatherings during festivals, weekly markets, celebrations etc., inquiries and investigations including arrests, searches, seizures, legal custody etc.

While performing these functions, Police face challenges which are unique to border areas of West Bengal. It is necessary to know the extent of the International Border in West Bengal in order to understand the importance of border policing in the state.

## International Border (IB) in the state of West Bengal

The state of west Bengal has a vast stretch of International Border (IB). It has Bhutan in the North East, Nepal in the North West and Bangladesh on the Eastern borders. The border length with respective countries in kilometers is as follows:

Table 1: Length of IB with state of West Bengal.<sup>[1]</sup>

Country	Border length
<b>Bangladesh</b>	<b>2216.7 km</b>
<b>Nepal</b>	<b>100 km</b>
<b>Bhutan</b>	<b>184 km</b>

Picture 1: Interational Border of Eastern India.<sup>[2]</sup>



There are Twenty-one (21) revenue districts in the state. Out of which nine (9) districts have international borders. The revenue districts have been carved into police districts for better policing. There are thirty-nine (39) in total including 4 Railway police districts and seven (7) metropolitan police. Out of the 39 police districts, 14 of them have IB. The details are as follows:



Table 2: Details of bordering districts of West Bengal

Name of the country	Name of the Revenue District in West Bengal sharing International Border	Name of the Police District in West Bengal sharing International Border
Bhutan	Alipurduar Jalpaiguri Kalimpong	Alipurduar Jalpaiguri Kalimpong
Nepal	Darjeeling	Darjeeling
Bangladesh	Coochbehar Jalpaiguri Darjeeling North Dinajpur South Dinajpur Malda Mursidabad Nadia North 24 Paraganas	Coochbehar Jalpaiguri Darjeeling Islampur (North Dinajpur) Raiganj (North Dinajpur) South Dinajpur Malda Jangipur(Murshidabad) Murshidabad Krishnanagar(Nadia) Ranaghat (Nadia) Bashirhat (North 24 Paraganas) Bongaon (North 24 Paraganas)

Unique feature of International Border in West Bengal:Indo Bangladesh Border

India and Bangladesh were once part of British India before being partitioned by the Radcliffe Line, drawn in 1947. Bangladesh was “East Pakistan,” until it declared independence in 1971. The line is now referred to as International Border (IB). Indians particularly people from Bengal share common language, culture, ethnicity and ancestry with people of Bangladesh. <sup>[3]</sup> People from Bangladesh migrated to India in multitudes after their struggle for freedom in 1971. The migration of people from Bangladesh is still continuing albeit for economic reasons.

Out of a total length of IB of 4096.7 kilometers, West Bengal has 2216.7 kilometers of IB which consists of fertile plains and riverine belts with hardly any natural obstacles. The area is heavily populated and cultivated right up to the border. According to the protocol laid out in the Joint India-Bangladesh Guidelines for Border Authorities in 1975, no permanent structure which has a defense potential can be built within 150 yards of the IB.<sup>[4]</sup> Also, it is difficult to erect fence all along the IB due to riverine stretches, slow progress in land acquisition, dense population near the borders and resistance from the locals. This has led to a porous boundary.

The porous boundary, dense population, cultural affinity, similar physical attributes of the people, lack of development and corruption within the government agencies have made the IB a run for smuggling activities, human and drug trafficking and illegal infiltration

### Indo Nepal Border

The district of Darjeeling in West Bengal is the only district having borders with Nepal. The IB with Nepal which is mountainous terrain runs along the entire stretch of the district's western boundary. The length of the Indo Nepal Border in West Bengal is about 100 kilometers. There is one sanctioned Immigration Check Post at Raniganj near the foothills of the district. There are several trade and transit points with Nepal all along the district. The demographic profile of the district Darjeeling is predominantly Nepalese due to unchecked migration of Nepalese in Indian territory.

The management of the border between India and Nepal is governed by the treaty of peace and friendship of 1950 between the two countries. The treaty obligates both the countries for friendly relations to give to the nationals of the other, in its territory, national treatment with regard to participation in industrial and economic development of such territory and to the grant of concessions and contracts relating to such development. Also, the Governments of India and Nepal agreed to grant, on reciprocal basis, to the nationals of one country in the territories of the other the same privileges in the matter of residence, ownership of property, participation in trade and commerce, movement and other privileges of a similar nature.<sup>[5]</sup> Consequently, there is free movement of people and goods between the countries.

### Indo Bhutan Border

Bhutan is a mountainous country. It has borders with India in its south which runs along the foothills of Himalayas. The Indo Bhutan friendship treaty of 2007 reiterates the commitment of India and Bhutan as made in the treaty of perpetual peace and friendship in 1949. The treaty provides for free trade and commerce, cultural and educational exchanges between the countries. The nationals of both the countries will get equal justice in each other's territory and both the countries will comply with the extradition agreements between them.<sup>[6]</sup> A travel permit is required for Indians to travel to Bhutan and vice versa. The agreement on trade commerce and transit between the two countries to facilitate free movement of goods between the two countries subject to reasonable restrictions. The trade transactions between the two countries is in Indian rupees and Bhutanese Ngultrums.

Border Management and agencies:

All modern states have dedicated agencies to regulate and manage activities at the borders. Border management include regulation of movement of people, exports and imports of goods according to the respective treaties, to prevent encroachment of land by neighboring countries, prevention of illegal migration, anti-human trafficking measures, prevention of smuggling activities etc.

Various agencies are responsible for an effective border management that include Border guarding forces, Customs, Bureau of Immigration, Coastal Guards, Directorate of Revenue Intelligence and the Police. In West Bengal, the Border Security Force (BSF) is deployed on Bangladesh border and Sashastra Seema Bal (SSB) is deployed on the Bhutan and Nepal border.

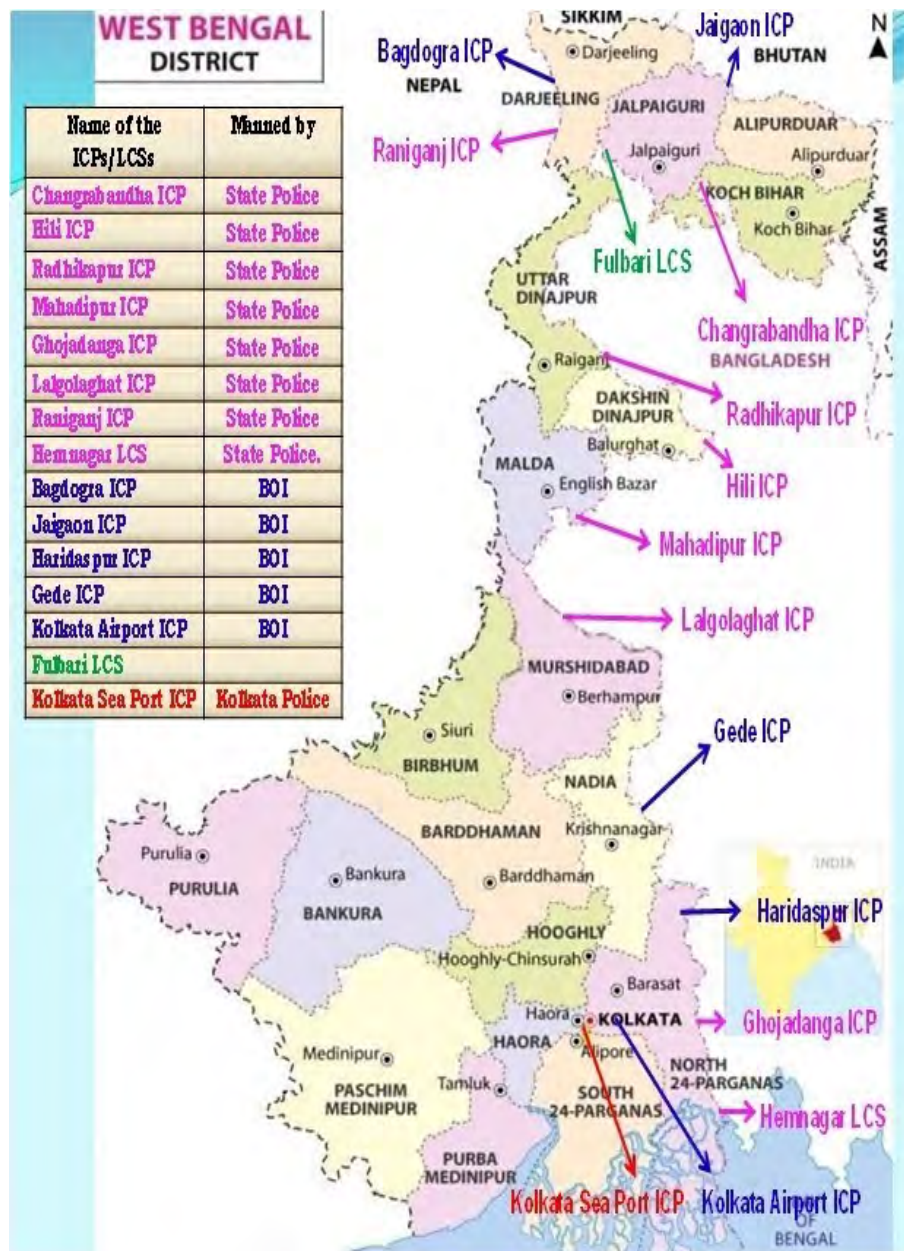
The Superintendent of Police of a district is the Foreigners' Registration Officer (FRO). All foreigners entering the district must be registered at the Foreigners' Registration Office. The process of repatriation or deportation of a foreigner has to be initiated or made through the Police.

Immigration Check Posts (ICP) and the Gates at the International Border:

The Immigration check posts are designated centers for processing, verification and facilitating movement of passengers and freight between the countries on international border.

An Integrated check post is one in which all the agencies are housed together to ensure seamless processing and movement of passengers and goods. The ICP must have facilities such as ware houses and open areas to store, load and unload goods, adequate parking facility for trucks and small vehicles, medical centers, holding areas, quarantine facilities etc. There are 16 Immigration check posts in West Bengal. The only Integrated check post is the Harisdaspur check post on Bangladesh border which has the maximum flow of passengers. There is one sea port in Kolkata and a rail port as ICP in Chitpur Railway Station. Bhutan and Nepal have one sanctioned Immigration post at Jaigaon in district Alipurduar and Raniganj, in district Darjeeling respectively. Their location is indicated in the picture 2.

Picture 2: Location of ICP on IB in West Bengal



As indicated in the picture, Officers and staff of the Bureau of Immigration (BoI) deal with the immigration work in few Immigration posts, while in others the work is done by the West Bengal State Police.

### Challenges in Policing the International Borders

Smuggling: Despite the deployment of specialized agencies for protection and security, smuggling is rampant at the International borders. The following table lists out goods that are smuggled on the international borders.

Table 3: List of major goods smuggled across the IB in West Bengal

Name of the Border	Goods smuggled out of India	Goods smuggled into India
Indo Bhutan	Sandalwood (sent to China via Bhutan), Coal, drugs such as cough syrup, medicines etc. Psychotropic substances such as Marijuana, Brown Sugar etc. and Indian currency for illegal currency exchange	Stone boulders, Paints, Tyres, third country items, steel TMT, clothes, groceries, toys, cosmetics, scrap (these items are costly in India due to high taxes), Bhutanese Liquor, clothes, groceries wildlife and wildlife products such as live Lizards and pangolins, Tiger skin and skull, etc.
Indo Nepal	Sandalwood, endangered animals and animal body parts, antique idols and arte facts, narcotics and psychotropic substances	Gold, Betel nuts, Fake Indian Currency Notes, Garments and electronic goods from third countries, human trafficking
Indo Bangladesh	Cattle, Cough syrup, fish seed, garments, rice, cooking oil, medicines, marijuana, stolen motorbikes, cycles, wild life products and other goods on demand.	Fake Indian Currency Notes, US Dollars, Gold, Exotic birds, animals like turtles, human trafficking.

The investigation of these cases is challenging on many fronts. When smuggled goods are seized by any of the agencies the case is registered with the police. Often the agency which takes action is either the bordering guard force i.e. the BSF or SSB as the case may be or the Directorate of Revenue Intelligence. Generally, these agencies carry out such operations on specific intelligence inputs from human sources. If the arrested persons fail to divulge further information, then there is no further progress in the investigation.

It is seen that smuggling takes place through carriers who are local people who earn a living by transporting the goods across the borders. They have information only about their handlers who are on the other side of the border and about the place where they are supposed to deliver the goods. It is observed that agencies are not forthcoming in sharing details of a case as everyone tries to claim credit in haste.

If the seized goods are voluminous and occupy space, then their custody becomes an issue. The cattle seized by BSF is handed over to Police in case of claimed seizures and to Non-Government Organizations in case of unclaimed seizures. The police use to hand over the cattle to the Customs for auctioning them. However, the Central Board of Indirect Taxes, Customs has decided to discontinue auction of seized cattle, so as to comply with the Order dated 04.08.2017 of the Hon'ble Supreme Court. <sup>[7]</sup> The order reasoned that under the prevention of cruelty to Animals Act, the customs officials are not empowered to take custody and maintain the cattle. It is the duty of the state police to receive the cattle and take further action in accordance with the act.

The seizures and arrests under the customs Act can be made by a customs officer who has reason to believe that the goods are intended for smuggling across the border. In the case of cattle smuggling, the transporters carry certificates issued by local cattle markets. Therefore, it is generally held that there cannot be a presumption of cattle being intended for smuggling. The only course of action remains with the police to act under the Prevention of Cruelty to Animal Act.

Also, from the day of seizure to the day of auctioning, the cattle need to be fed and kept in a suitable place. Generally, the police give the cattle to local villagers who run the cow pounds. They are paid for the expenses incurred by them for taking care of the cattle from the proceeds of the auction. The police intimate the jurisdictional court which issues orders for auction of the cattle. Often the bidders in the auction are the agents of smugglers who procure the cattle at low price and smuggle them across the IB through carriers.

There are allegations of corruption against the police of disposing off the cattle without following due process which is not unfounded. While the Department of Customs has standard operating procedure for auction of seized goods, the police have none. The mounting cost of feeding the cattle, absence of standard auction protocol and paucity of space are reasons for the police to act desperately and relieve themselves of the custody of the cattle at the earliest.

Also the cattle are transported from different parts of the country. It is a syndicate which involves cattle breeders, traders, transporters, representatives of local bodies and cattle market associations. The driver of the truck carrying cattle and his helper are generally arrested during the cattle seizures and are forwarded under the Prevention of Cruelty to Animals Act. The Act was not enacted with an object to curb smuggling. It has limited applicability and has little deterrence in terms of punishment for the offence it provides for, which is for meting out cruel treatment to animals by their improper transport in trucks.

There is a huge demand for cough syrup in Bangladesh where it is used as an inebriant. If the seizures are frequent then such seizures exceed the storage capacity of a police station. They are destroyed on court orders as they cannot be auctioned. It takes about 6 months to 2 years to get the orders issued till then the drugs are kept at the police station which is a huge maintenance and storage overhead for the police stations.

Furthermore, the carriers of drugs are arrested and the investigations do not proceed beyond their arrests and seizure of drugs from them. The main culprits in these cases are not brought to book. They are usually citizens of the neighboring countries which makes it difficult to identify and arrest them. The process of extradition is complex and requires efforts which the police fail to do. The borders with Nepal and Bhutan are open for the people but not for the law enforcing authorities. The process of extradition and authorization for investigation outside the territory is time consuming.

The smuggling activities are financed through gold smuggling and 'Hawala' channels. The over invoicing of lawful exports are suspected in making payments to the smuggling syndicates. The investigation of these aspects of crime are beyond the capacity of investigative officers of the Police station. It requires specialized agencies to investigate such crimes which involve transnational financial transactions.

#### Trafficking cases:

Despite several measures against the scourge of human trafficking, it is still prevalent on the IB. Nepalese girls are trafficked to India for domestic work or for sexual exploitation. Many get their identities changed and are trafficked to middle east on forged Indian passports. Men and women from poor families of Bangladesh enter India for work. They are trafficked for labour intensive jobs and household work. The touts/agents are involved in getting their forged Indian documents done for their unimpeded stay in India. Many young girls are trafficked and are forced into prostitution.

#### Investigating cases of BSF firing

In West Bengal, majority cases of firing by the border forces occur on the Indo Bangladesh border. They relate to firing by the BSF on cattle smugglers. The smugglers operate in gangs and are armed with illegal firearms and sharp cutting weapons. They cut the fences and push the cattle across the border at night. The smugglers observe or deploy locals to observe the patrolling time of the BSF constables. Often the deployment is less than the required strength due to various administrative reasons. BSF patrolling party opens fire on the smugglers on being attacked by them.

The investigation of these cases involve collecting evidence about the facts that the BSF personnel who opened fire was on duty and that he opened fire with his service weapon either in self-defense or as a last resort to protect life and property. The evidences typically include obtaining certified extract copies of relevant entries of Disposition list, Duty register, General Diary, Arms issue register, seizure of empty



cartridge and bullet head and the firearm to collaborate firing from government firearm. The weapon is returned after the investigation is complete on court orders. The post mortem report of the alleged smuggler is an important documentary evidence.

There are several human rights organizations which work on the border and help the family members of deceased smuggler to lodge an FIR against the BSF. The allegation is registered generally on the grounds that the firing was unjustified. The police have to record cases on complaint received from BSF and the family member of the deceased person.

It is observed that due to lack of trust, the requisite documents are neither shown by the BSF nor are taken as evidence by the police. These make the legal position of BSF constables vulnerable during the trial of the cases. The investigation and the subsequent trial is affected if the battalion is shifted or the personnel is transferred to some other Unit.

#### Population and livelihood issues

There is high density of population on either side of the IB particularly with Bangladesh. There are agricultural tracts and residential houses right on the international borders making it difficult to manage borders effectively. Border trade and smuggling is an easy and convenient source of income to the people staying near the border. There is habitation and commercial activity at few stretches of Indo-Nepal and Indo-Bhutan border.

The restrictions imposed by the security forces on people living on the border often become cause of conflict between them. As the security forces hail from various states of India, they find it difficult to communicate with the local people who only understand the local language. The raids conducted by border forces in the villages to conduct search operations sometimes lead to serious law and order problems. On the one hand it is necessary to arrest miscreants involved in border crimes while on the other hand, it is also necessary to ensure peace and order. The police have to show determination and a lot of persuasive skills to ensure legal action while maintaining peace.

#### Terrain and connectivity

Due to riverine belts and 'Char land\*', the terrain is difficult to travel. It is slippery and often gets flooded due to rains. The road connectivity is also poor and few places can be reached only on foot. These are limitations for the police particularly in rural areas in terms of vehicles and fuel. These conditions adversely affect the prevention and investigation of border crimes.

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*\*Char Land- river bed exposed due to change in the course of the river.*



### Rise of religious fundamentalism

The upsurge of religious fundamentalism in Bangladesh has led to proliferation of many terrorist organizations such as Jaamaat-ul-Mujahideen Bangladesh, Allah-ar-Dal etc. Recent occurrences have indicated that these fundamentalist organizations are using West Bengal, Assam and Tripura as safe havens. Also Bangladesh was used as a shelter by leaders of the Indian insurgent groups like Kamptapur Liberation Organization (KLO). These terrorist organizations use network of touts and criminals to cross the international borders. It is easy for the touts and criminals operating on the IB to get forged Indian identification documents such as Aadhar cards, PAN cards and Voter cards.

### The Siliguri corridor

The location of the Siliguri corridor known as “the chicken neck of India” is a narrow strip of Indian land 20 kms wide between Nepal and Bangladesh. The Siliguri town which is in the north of the corridor is considered as gateway to North East of India. All the goods transported by road to the North Eastern states pass through it. It is an important town for trade and transit for the people of Sikkim, eastern parts of Bihar and western Assam. It is also an important trade centre for the people of Bhutan, eastern Nepal and to some extent Bangladesh. Siliguri is a sub division of Darjeeling district. All the tourist visiting Darjeeling, Sikkim and Bhutan arrive at and depart from Siliguri before reaching their destinations. Due to its strategic location it has become an easy route for smugglers & traffickers

### Organizational shortcomings

The policemen in the border police stations require specific training in handling challenges related to the IB. The normal police work in these stations is more than the rural stations because most of the border towns are trade centres. There is a problem of understaffing in these police stations. The officers do not have adequate time to pursue investigation of border crimes to unearth the syndicate.

Also the syndicates have the protection of political leaders which adversely affect the prospect of curbing these crimes. The political-police-smuggler nexus has not only undermined the capability of the police but also mars its image.

### The Way Forward

It is observed that special operation groups or special Task Forces of the police are effective in dealing with organized crimes. Every district having IB should have such a specialized unit under the supervision of Additional Superintendent of Police. The unit shall collect intelligence, investigate crimes, maintain database and records of crime and

criminals related to border crimes. It shall also interact and coordinate with other investigating agencies such as Directorate of Revenue Intelligence (DRI), Enforcement Directorate (ED) etc. in addition to liaison with the agencies working on the IB.

As far as finances of smuggling activities by syndicates are concerned, specialized agencies such as the DRI and ED assisted by the police should be given specific mandate to investigate the same and ensure prosecutions. The border crimes can only be stopped if they are made uneconomical to the people committing them.

To deal with human trafficking, every district has an Anti-Human Trafficking Unit. The Criminal Investigation Department of the state is the nodal agency to coordinate and monitor anti human trafficking investigations and measures. There is a need to regulate the placement agencies in major cities in India which recruit people to engage them as domestic help. These are found to be the main source of trafficking from these countries. The credentials of Non-Government Organisations (NGOs) working on the IB in Human Trafficking issues should be established and their list should be maintained. They should be effectively utilized to collect intelligence, identify and arrest the touts and rescue and rehabilitate the victim.

The machinery engaged in issue of Aadhar card, PAN Card and Voter card should be closely supervised. The traffickers and illegal immigrants find it easy to procure the documents. A state level monitoring mechanism should be adopted to keep check or to cross verify the documents issued. The Income tax department could come up with a checking and verification mechanism of issue of PAN card to prevent its misuse.

To ensure better coordination among the agencies, emphasis must be given to training and community policing. There is need for sensitization and combined training of border forces and the police in the matters of investigation of border crimes, handling human trafficking cases, engaging NGOs, maintaining peace and order at the borders and in taking various community police initiatives. The camaraderie between the border forces and the police will go a long way in ensuring peace on the border and prevent border crimes. Such joint training programs help the agencies in understanding their respective roles and responsibilities.

The police and the border forces must involve the local population in community programs. A regular interaction with the people during the peace time jointly by the border forces and the police will help in reducing conflicts and increase mutual trust and confidence. Such programs are also effective means to collect intelligence and to prevent youth from getting involved in border crimes.

To prevent illegal cross over and smuggling in the riverine stretches, the BSF officers suggests that the boundary can be defined and fenced by putting pontoons in the rivers.

As far as IB related infrastructure is concerned, the Department related parliamentary standing committee on Home Affairs has submitted a report on Border Security-Capacity Building and Institutions in the Rajya Sabha on 11th of April, 2017. The committee has recognized the challenges related to border management and made recommendations to address the issues. The observations and the recommendations are

comprehensive from the point of view of the organizations and functioning of the bordering forces. <sup>[8]</sup>

### **Conclusion:**

Policing the International Border is an important aspect of Border Management. Its effectiveness or the lack of it has serious implications on national security. The police of the border districts must be made aware of the special nature of crimes on the borders and their ramifications if the investigation is not carried out properly.

The extradition process of criminals taking shelter in neighboring countries on the eastern border should be standardized as done in the case of deportation and repatriation of nationals of these countries. This will help in prosecuting the kingpins and handlers of border crimes. These will act as a serious deterrent to terrorists who take shelter in foreign territory.

The border crimes should be seen as financial crimes. The focus should be on making the crimes uneconomical by giving mandate to special agencies investigating financial crimes to unearth and curb the transactions of the smuggling syndicates. Also, there should be a robust mechanism to check impersonation by use of identity related documents.

Finally, there is a need for better coordination among the various agencies. The agencies must interact regularly at least on a monthly basis and should be in continuous communication with each other. There is a need to convert the immigration check posts into integrated check posts and bring all concerned agencies under one roof. This will ensure streamlining of immigration process and prevent exploitation of the present truncated system by touts and criminals.

A renewed focus on the policing of the International Border will go a long way in enhancing national security.

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Sardar Vallabhbhai Patel  
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## CCTV Mapping: An Effective Investigation and Supervisory Tool

Seju P Kuruville, IPS\*

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### **Abstract:**

*Emerging technologies acts as harbingers of change and by leveraging these technological advancements the police department should set in place protocols which will help the department in improving organizational efficiency.*

*Closed Circuit Television Cameras, popularly known as CCTVs, were not a very common feature in India a decade ago. But with the changing socio-economic landscape and the installation costs drastically coming down the CCTV Cameras have become a buzzword for the Indian Households.*

*The Police departments across the country have found it very convenient to use the CCTV footages available to them for Criminal Investigation, Law and Order Management and for Traffic Enforcement and Regulation.*

*The question is whether the District Police have an account of all the CCTV Cameras available within its jurisdiction, if not, is it possible to obtain such complete details.*

*The second question is whether we have protocols in place to ensure that the CCTV footages are utilized for investigation purposes.*

*This paper will give a detailed account of the CCTV Mapping Project initiated by Outer District of Delhi Police, which was later adopted in other districts in Delhi and elsewhere.*

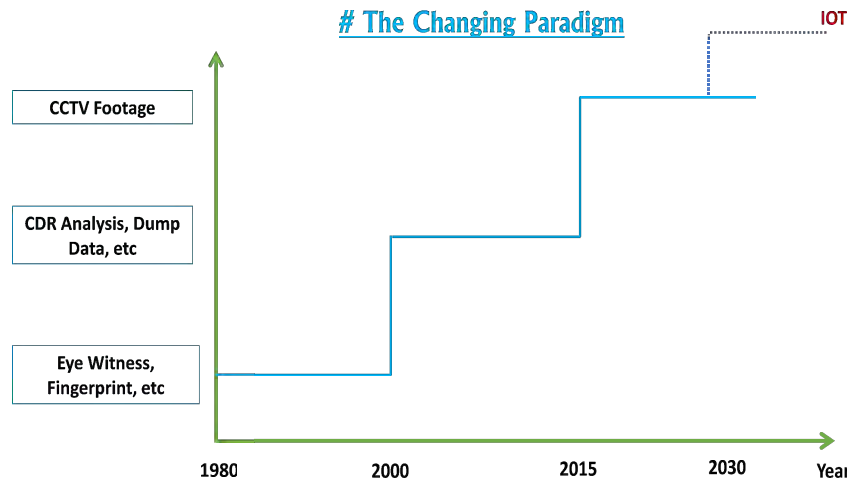
### **The Changing Paradigm:**

Till the end of 20<sup>th</sup> century Investigating Officers were dependent on eye witnesses, documentary and physical evidence from the Scene of Crime to solve the criminal cases.

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With the advent of the mobile phone during the 1<sup>st</sup> decade of the 21<sup>st</sup> century this shifted to relying heavily on CDR Analysis for solving of criminal cases. In the present scenario, the Investigating Officers have started using the CCTV footages available in and around the Scene of Crime for solving cases.



### Role of CCTV footages in criminal investigation: Global Perspective

A criminal investigation can be thought of as a series of questions: *who* was involved in an incident, *where* did it happen, *what* happened, *when* did it happen, *why* did it happen and *how* were any offences committed, known as the ‘5WH’ investigation model (Cook et al.2016; Stelfox 2009). CCTV may be useful in answering at least two or more of these questions: what happened, where and when did it happen, who all were involved.

A good quality recording could potentially allow investigators to watch an entire incident unfold in detail, providing information about the sequence of events, the methods used and the entry and exit routes taken by the offender. Even if this is not possible, CCTV may be useful in corroborating or refuting other evidence of what happened, such as witness testimony (College of Policing 2014). Recordings may also provide information that investigators can use to contextualize other evidence (Levesley and Martin 2005).

CCTV may assist in identifying who was involved in a crime either directly, as when a suspect is recognized by someone viewing the recording, or indirectly, such as when the recording shows a suspect touching a surface from which police are then able to recover forensic evidence (Association of Chief Police Officers, 2011). Images can also be used to identify potential witnesses (La Vigne et al. 2011, p 27). However, CCTV may be less useful in answering some of other 5WH questions. For example, even a good-quality recording may shed little light on why a crime was committed.

### **What is the necessity of mapping CCTV cameras?**

With the ever increasing number of CCTV Cameras in the neighborhood it is imperative that most of the movements of the criminals are captured by one or the other cameras. These eye witnesses (cameras) will not speak out on their own, until the IO searches for the footages and retrieves them. It is also important to understand that the eye witnesses (cameras) do not have unlimited memory like Human Beings; their memory is limited to the capacity of the Hard Disk and will only last for couple of Days/weeks before being overwritten.

In this scenario the timely efforts made by the IO to identify the CCTV Cameras and retrieve the information becomes even more critical in solving cases. Hence the mapping project will assist the IO in identifying the Cameras in and around the SoC and also along the Entry and Exit Routes, for retrieving and analyzing the footages in a time bound manner before the footages are overwritten and the evidence is lost forever.

### **The project:**

The project aims at locating and mapping all private/public CCTV cameras across the jurisdiction of a District/State with the prime objective of assisting the Investigation Officers in obtaining valuable CCTV footages from and around the Scene-of-Crime within the shortest period of time. CCTV footage has become an integral part of criminal investigation and with more and more cameras being installed it has become imperative to map this spread for effective policing and efficient criminal investigation.

### **Aims & Objectives:**

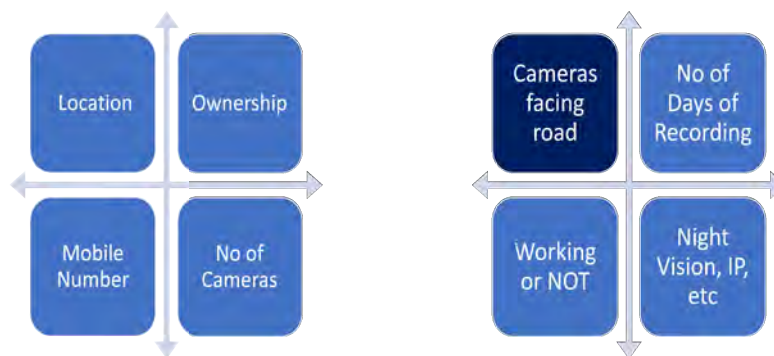
- 1) To plot all the CCTV cameras whether public or private across the entire jurisdiction of the District/State through a detailed and intensive beat level survey.
- 2) To make available to every Investigating Officer, the location of all CCTV Cameras in the vicinity of the crime scene along with other details like ownership, mobile number, etc so that the Investigating Officer can contact the appropriate person and view the CCTV footage.
- 3) To create intelligible data base for spatio-temporal analysis of street crime and property offences.
- 4) To create a 'Centralised Digital Library' of all useful CCTV footages that proved useful in establishing and solving crime.
- 5) To update and supplement the existing data base through quarterly audit and re-survey of the CCTV cameras. Each such survey shall further verify, authenticate and augment the initial data base systematically. The quarterly survey may be done during the month of January, April, July and October every year.

## Components



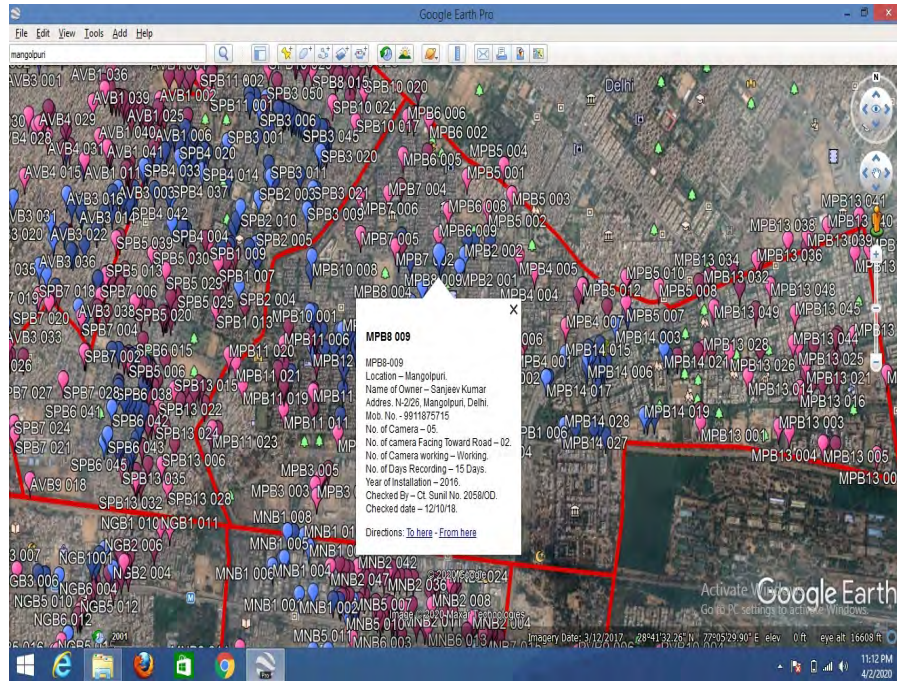
The Fields Captured:

## Fields Captured





### GIS Mapping of CCTV Cameras on Google Earth: Mangolpuri Police Station, Outer District, Delhi.



### Role & Responsibilities:

(A) District CCTV Control Room:- District CCTV Control Room shall be the custodian of the centralized data base of all CCTV locations plotted on Google Earth.

- The Control Room shall function 24 x 7.
- The District CCTV Control Room shall be assisted by the CCTV Analysis Team of each Police Station to collect and collate the data.
- The District CCTV Control Room staff shall coordinate with the Investigating Officers and plot the exact location of all the street crimes and property offences – robbery, snatching, burglary, house theft and MV Theft taking place in the district on a day to day basis. On receipt of location of the Scene of Crime they shall revert back to the Investigating Officer, the location and details of all CCTV cameras in and around the Scene of Crime.

- They shall coordinate the quarterly CCTV survey and ensure its sincere and meaningful completion.
- The District CCTV Control Room shall maintain a register (Excel Sheet) and keep the record of all requests received for Location Services.
- The District CCTV Control Room shall prepare fortnightly report regarding the number of times the CCTV Location Facility was used by the IOs and also report regarding the number of cameras found not functioning and send the report to concerned SHOs and SDPOs for necessary corrective measures.

(B) CCTV Analysis Team of each Police Station:- Each Police Station to constitute a CCTV Analysis Team consisting of at least 2 police personnel under the supervision of Inspector Investigation. They shall do the following:

- Visit each crime scene and assist the Investigating Officer in harnessing the CCTV footage from and around the Scene of Crime.
- Provide complete technical assistance to the Investigating Officer in analyzing the CCTV footage systematically and comprehensively.
- They shall conduct regular field visits in coordination with the Beat and Division staff to ensure that the existing CCTVs can be made more useful by ensuring that they cover entry and exit routes, are meaningfully oriented, have sufficient storage and power backup, are having night vision capability, are repaired and monitored on a regular basis.
- They shall plot the additional cameras and update the data base on the basis of the quarterly audit and field survey being undertaken by the concerned Beat and Division staff. The updated data base shall be shared with the District CCTV Control Room after the completion of each quarterly survey.
- While analysing the CCTV Cameras around the scene of crime, many a time it is found that the camera is not working or there are other shortcomings. It is the duty of the CCTV Analysis Team to intimate the same to District CCTV Control Room and also to the concerned Beat & Division Officers and the SHO.

(C) Beat Staff & Division Officers:

- The Beat and Division Staff needs to ensure that comprehensive plotting of all the CCTV cameras in their Beat/Division is done.
- They must proactively motivate the residents of Housing Societies and members of RWAs and MWAs to increase the number of CCTVs and improve the quality of the CCTVs installed.

- Regular checks must be done of the already mapped CCTVs with the objective of making the existing CCTVs more useful by ensuring that they cover entry and exit routes, are meaningfully oriented, have sufficient storage and power backup, are having night vision capability, are repaired and monitored on a regular basis.
- They shall conduct audit and field survey on quarterly basis to ensure that the existing data base is augmented and revised.

(D) Investigating Officers:

- The Investigating Officer should reach the Scene of Crime as soon as possible and he/she shall send the exact G.P.S. location of the crime scene to the District CCTV Control Room on the designated WhatsApp Number [xxxxxxxxxx].
- The Investigating Officer should work closely with the CCTV Analysis Team and the Beat and Division Staff of the Police Station and swiftly collect and analyse all CCTV footage related to the incident.

(E) Inspector Investigation: The Inspector Investigation shall constantly monitor the Investigating Officers and ensure that:-

- Investigating Officers physically visit each crime scene as soon as possible.
- Investigating Officers as a standard practice send their GPS location through WhatsApp to the District CCTV Control Room and collect the details of all CCTV camera locations in and around the Scene of Crime.
- Ensure that the CCTV Analysis Team of the Police Station provide full technical support to efficiently analyse all the CCTV footages available in the vicinity of the crime scene.
- The Inspector Investigation shall ensure to provide copies of relevant CCTV footages that proved useful in establishing and solving crime with specific time and location details to the DCP/SP Office for upkeep of the Centralized Digital Library.

(F) Additional SHO :-

- The Additional SHO shall ensure that the Beat and Division Staff conduct the quarterly survey in letter and spirit to comprehensively map the CCTV Cameras in the area.
- He shall conduct regular field visits to ensure that the existing CCTV Cameras can be made more useful by ensuring that they cover entry and exit routes, are meaningfully oriented, have sufficient storage and power

backup, are having night vision capability, are repaired and monitored on a regular basis.

(G) S.H.O :-

- The primary task of the SHO is to ensure that there is thorough and comprehensive mapping of the CCTV Cameras.
- The SHO should strive to motivate the RWAs and MWAs to install more good quality cameras and increase the community participation wherever possible.
- The SHO shall ensure that all the staff posted in the Police Station are briefed regarding this facility and the designated WhatsApp Number [xxxxxxxxxx] is saved in their mobile phone.

(H) S.D.P.O.:-

- Being the overall incharge of the Sub-Division the SDPOs must ensure that the entire protocol starting from identification and plotting of CCTV cameras; visit of Scene of Crime & sharing of GPS location by IOs; quarterly audit and survey of the CCTV cameras; timely upkeep of the Digital Library; etc are sincerely executed.

**Initiatives taken by various States & UTs:**

Many of the States and UTs across the country have started the initiative of mapping CCTV Cameras and also at the same time encourage public to install more and more CCTV Cameras. Some of the progressive states have enacted Laws, issued OMs and Circulars thereby enabling legal backing to the police initiatives to improve safety and security.

The Chennai Municipal Corporation has issued an Order as early as December, 2012 making it mandatory in all Public Buildings, Commercial Establishments and places of large public gathering for installation of CCTV Cameras as a precondition for License.

The undivided State of Andhra Pradesh enacted the Andhra Pradesh Public Safety (Measures) Enforcement Act-2013. This is a very comprehensive act and had given a great push towards installation of CCTV Cameras in all Public Spaces, Commercial Buildings, Residential Colonies, etc.

In Punjab the government has pushed for installation of CCTV Cameras by the public through the Community Policing Project – “SAANJH”.

The Delhi Police have been promoting installation of CCTV Cameras by the Market Welfare Associations and the Resident Welfare Associations through the “NIGHEBHAN” Scheme.

In Jharkhand the CCTV Mapping project was recently launched in Jamshedpur City.

### Utility of CCTV footages: Research Findings

There has been extensive research on the utility of closed –circuit television (CCTV) for preventing crime, but little on its value as an investigative tool.

The study done by Mr. Matthew P. J. Ashby, Nottingham Trent University, UK and published online on 21<sup>st</sup> April, 2017 sought to establish how often CCTV provides useful evidence and how this is affected by circumstances by analyzing 2,51,195 crimes recorded by British Transport Police that occurred on the British Railway Network between 2011 and 2015. CCTV was available to investigators in 45% of cases and judged to be useful in 29% (65% of cases in which it was available.).

Useful CCTV was associated with significantly increased chances of crimes being solved for all crime types except drugs/weapons possession and fraud. Images were more likely to be available for more serious crimes, and less likely to be available for cases occurring at unknown times or in certain types of locations. Although this research was limited to offences on railways, it appears that CCTV is a powerful investigative tool for all types or crime.

#### The Value of CCTV Surveillance Cameras as an Investigative Tool

An Empirical Analysis  
by  
Matthew P B Ashby(NTU)  
on  
British Railway Network  
from  
2011 - 2015

<i>CCTV not available and therefore not useful</i>	134,819	54.7
1.Incident location not covered by CCTV	72,042	29.2
2.Recording not requested by officers	49,647	20.1
3.CCTV system faulty	5,891	2.4
4.Recording over-written before it was retrieved	7,239	2.9
<i>CCTV available but not useful</i>	39,218	15.9
1.Recording viewed but incident not shown	25,987	10.5
2.Recording viewed but images of insufficient quality	12,055	4.9
3.Wrong images requested or retrieved	1,176	0.5
<i>CCTV useful</i>	72,390	29.4

In the Indian context there have been no specific research studies done so far regarding the utility of CCTV Camera footages in solving cases. But from discussions with many of the Superintendents of Police and Deputy Commissioners of Police, it has been revealed that the Cases Solved using evidence from CCTV footages is less than one percentage of the total cases registered within the jurisdiction of the respective districts.

In the times to come it is more likely that the Investigating Officers will be looking for CCTV footages to solve criminal cases. The effectiveness will depend on the spread and coverage of CCTV Cameras in public spaces, the preparedness of the District Police in mapping all the cameras within its jurisdiction and the effectiveness of the protocols established.

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## Drug Walking- The Trails of Police Investigation

Aishwarya Dongre, IPS\*

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### Abstract

*India is witnessing a rise of drugs usage in a rather exponential manner. It is social menace; and also poses a threat to the security of the state. Police is a main stakeholder in addressing the challenges in this regard. Punjab has been spotted significantly on the drug map of India. However, many other states including Kerala are also facing this menace. The government machinery needs pull up its sleeves and address this concern decisively.*

*Narcotic Drugs and Psychotropic Substances (NDPS) Act, 1985 is a very stringent law for the of- fender. It also requires strict adherence to the law and procedures on the part of the investigating agencies. The entire investigation process should not just be really fair and just, but it must also appear to be so. And thus, the police's role in investigation of such cases becomes pivotal. This must closely follow the lines of what Venkatsubramniam had said on the Indian Legal Platform: "The apex court's acquittal of an accused under the NDPS Act raises questions about investigators' compliance with its provisions. It has been found that a large number of offenders in NDPS cases are acquitted due to non-compliance with mandatory procedures. The number of acquittals in such cases greatly outnumber the convictions. If the investigators comply with all the mandatory procedures, there would be fewer acquittals by the courts on technical grounds".*

*This paper is an endeavour to chalk out a better path for conviction in NDPS cases by understanding the various nuances associated with the investigation of such cases. It is necessary that a Drug raid and the FIR so registered leads to a conviction. Anything other than a conviction should be unsettling for the Police. Plugging the loopholes in procedural aspects would enable us to throttle the drug menace in the country.*

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\* Assistant Commissioner of Police, Thiruvananthapuram



**Keywords:** *Drug-crime, contraband substance, NDPS, Acquittal, physical possession, detecting officer, Drug Law Enforcement Officer, Gazetted officer, non-compliance, procedural irregularities, commercial quantity, excise, anti-narcotic, Drug Disposal Committee, drug detection kit, precursor chemicals kit, new generation drugs, Kerala, Section 57*

## Introduction

Drugs are seeing a rampant rise in the state of Kerala, which otherwise boasts of brilliant development parameters and indices. The state has also been confident in the fact that its crime-re- porting figures are more thorough and reliable, compared with others. So, there is a cause for real worry when a cursory glance at the Kerala Police's crime statistics for cases under special and local laws from 2008 to March 2019 show that one category of cases is on an alarming upward trajectory: cases registered under the NDPS Act.

The Narcotic Drugs and Psychotropic Substances (NDPS) Act is the main statute governing drug-related cases in the country. From a total of 508 cases registered in 2008, cases under the NDPS Act in Kerala have risen steadily over the years. In 2017, the provisional figure of cases filed was 9,242, and the first three months of 2018 saw 2,391 drug-related cases being filed.

Excise Commissioner Rishiraj Singh IPS had raised eyebrows in 2016 when he said Kerala could find itself in the same situation as Punjab was in with respect to drug trafficking and abuse within five years. The Crime in India-2016 report of the National Crime Records Bureau, which was released in late 2017, noted that Kerala's incidence rate for NDPS cases (cases per lakh people) was 16.6 per cent, second only to Punjab's 20.2 per cent (George, 2018). The serious contention as raised by officials is that despite seizure of an average of 100 kg of a variety of drugs each month, they have been unable to make a significant dent in the drug trade in Kerala. Further, as per British reports the drug-crime nexus is growing out of proportion. It includes activities like:

- Serious and organised crimes
- Widespread acquisitive crime for drug addicts to fund their habit
- Violence generated by drug intoxication and dealers
- Hidden social problems at homes, schools
- Petty to dangerous crimes ranging from shoplifting to rapes and murders. (Bagchi, 2005) Supporting the above, news bytes from Kerala have begun painting a gory picture for the peace and security and also public order.



Sl.No	Crime Heads	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018 (Provisional- E&OE)	2019 (Up to April)	Trend
1	Arms Act	325	344	296	293	259	273	250	215	215	176	141	
2	NDPS Act	646	769	693	696	974	2239	4103	5924	9244	8700	3645	
3	Gambling Act	2659	3257	3601	4496	4394	3810	3691	3556	3112	2492	755	
4	Abkari Act	20213	37896	42747	52282	48828	51989	58197	65046	58994	38763	11837	
5	Explosive & Explosive substance Act	496	466	631	443	462	444	373	782	458	315	181	
6	Immoral Traffic (P) Act	314	309	197	210	180	140	138	121	52	14	12	
7	Railways Act	2	2	11	10	6	9	22	11	3	1	0	
8	Registration of foreigners Act	38	47	30	21	20	26	12	7	31	3	2	

Image Source: Kerala Police Website

Along with the prevailing usage issue, another crucial pointer that probes further study in this topic is that Kerala has a literal double than average conviction rate as compared to the national scenario in IPC Cases. While the national conviction rate of IPC cases during 2016 was 46.8 per cent, in Kerala it was 84.6, according to Crime in India 2016, the latest publication of National Crime Records Bureau (The Deccan Chronicle). However when it comes with regard to downing it to NDPS Cases, whilst 4103 cases were registered in 2015 in Kerala, only 1319 were convicted. Taking it to 2016, around 5924 cases were registered only 2615 were convicted. This reflects a dismissal conviction rate in Kerala for NDPS Cases hovering around 39% when seen as an average.

This brings us to probe into the efficacies of NDPS cases investigation which involves a cumulation of processes involving detection, registration, investigation and charge sheet of these cases. It is necessary to understand the prevailing considerations under the act, the existing lacunae and how these fault lines can be bridged to improve the conviction rate. Here it must be duly noted that as held in accordance to SC judgements, NDPS Investigation must generally comprise of the following steps:

- Proceeding to the spot
- Ascertainment of the facts and circumstances of the cases
- Discovery and arrest of the suspected offender

- Collection of evidence relating to the commission of the offence in a duly mentioned manner, which also consists of witness examination and search of places for seizure
- Opinion formation as to whether the material collected has a serious offence so committed where it has to be placed before the magistrate for trial and if so necessary steps must be taken to file charge sheet. (Bagchi, 2005)

### **Authorities handing NDPS cases**

It is essential that a clear knowledge is available on who is authorised to look into the dealing of NDPS Cases. As per section 41, 42 and by virtue of section 4 of NDPS Act, the following have the authority:

1. State Police
2. Central excise department
3. Narcotics commissioner
4. The Narcotic Drugs and Psychotropic Substances Consultative Committee
5. Customs
6. Revenue intelligence
7. Narcotic control bureau (by notification no so 96 (E) dated 17.3.1986)
8. Any other department of central government including the para military forces or armed forces.

This reflects that with the involvement of several authorities our numbers of cases registered, cases detected, those convicted should rise stupendously. However, this creeps in the certain faulty techniques adopted in investigation, varying techniques adopted by different authorities and the lack of coordination between various agencies resulting in blotching the path for a definite penal action against drug criminals.

### **Specific considerations during Investigation of NDPS cases:**

1. In all cases of NDPS detection, the detecting officer has to prove the culpable mental State of the accused. Every culpable mental State contains intention, motive, knowledge of the fact, and reason to believe a fact.
2. Usually in an offence to be committed, the 4 stages must be covered - Intention, Preparation, Attempt and Commission. In section 28 of NDPS Act, it is specific that even an attempt would be treated at par with the offence committed. Similarly, even preparation is an offence as per section 30 of the Act, if read specifically with regard to 19, 24, 27 of the Act and commercial quantity. This reflects that just commission of an offence is not an end in itself, as the very precursors to the same can trigger the criminal law into motion.

3. Moreover to make the investigation most effective, the IO has to prove the exclusive conscious possession of the alleged Drugs. In this case the panch witnesses play a crucial role during the search which is integrated into this point. The Supreme Court in the case of Baldev Singh Vs. State of Haryana, reported in (2015) 17 SCC 554 has held: "Once the physical possession of the contraband by the accused has been proved, Section 35 of the NDPS Act comes into play". Sec 35 of the Act stands for presumption of culpable mental state.
4. The Sealing and Sampling of the MOS is of utmost reverence. The sealing of the same must be done in two heat salted plastic bags and then kept in paper envelopes which in turn are sealed and marks as original and duplicate. Due consideration must be given to the test memo and sent to the laboratory. The contraband article must also be sent to the magistrate.
5. Chain of Custody has to be proved before the court of law. Chain of custody refers to the Chronological documentation and or paper trail showing the Seizure, Custody, Control, transfer, analysis and disposition of evidence, physical or electronic. This is of pivotal importance in NDPS trials.
6. In most of the situation, the Police takes the service of gazetted officers from the Police department. This will cause the acquittal of the case. The Gazetted officers should not be the member of the raiding party. He should be independent.

Any person being searched has a right to be searched before a Gazetted Officer or a Magistrate (Section 50). The officer searching the person has to explain to the person that he has a right to be searched before a Gazetted Officer or a Magistrate and if the person wishes to be searched before a Gazetted Officer or a Magistrate he should be taken to the Gazetted Officer or the Magistrate and searched. However, if the officer has reason to believe that it is not possible to take him to a Gazetted officer or a magistrate without giving him a chance to part with the drug, controlled substance, etc., he can search him under Section 100 of the Cr. P. C. [Section 50(5) and 50 (6)]

7. Searches, As per Section 41 of the NDPS Act, Gazetted Officers of the empowered Departments can authorise searches. Such authorisation has to be based on information taken down in writing. As per Section 42, searches can be made under certain circumstances without a warrant (from a magistrate) or an authorisation (from a Gazetted Officer). In case of such searches, the officer has to send a copy of the information taken in writing or the grounds of his belief to his immediate official superior within 72 hours.
8. Arrests: The person who is arrested should be informed, as soon as may be, the grounds of his arrest [Section 52 (1)]. If the arrest or seizure is based on a warrant issued by a magistrate, the person or the seized article should be forwarded to that magistrate [Section 52(2)].

### **Prevailing lacunae in the Investigation**

A rise in NDPS cases being detected and a preliminary understanding based on readings of various judgements and interviews with ground level officers reflect a number of drawbacks on the side of the investigating teams. They have broadly been enlisted below, so as to draw our attention on the existing loopholes:

1. Inordinate delay is often noticed in Sending the FIR and connected records to the court in time which creates a doubt in the mind of the court with regard to the genuineness of the detection.
2. Police and excise relation- Though both the departments deal in the anti narcotic activities, it is often noticed that greater moves could be made in the matter of detection only by the Excise Department. This may be due to many reasons like, their Concentrated effort, plenty of sources lack of heavy work load and pressure and Separate secret fund for the informants etc. The Po- lice on the other hand, out of their innumerable other activities, often find difficulty in concentrating on the detection of NDPS cases. Though both departments keep cordial relations in the normal sense, there is an existing strain in the regard to NDPS cases which leads to non-co-operation and counter- blaming. In the process, several cases go undetected and the criminals flourish on the same.
3. In most of the cases, the Source of NDPS can't be unearthed due to many reasons. The detection problem, the lack of timely information plays spoilsport in such cases. In situations where the detection is effected at places where no independent witness are available, the whole task is vested on the detecting officer to prove the case beyond reasonable doubt. In situation where the detection is effected at places where law and order situation is prone to happen, full and justifiable detection will not be possible. In such cases there are chances of planting the witnesses in the case.
4. Most of the Detecting officers are reluctant to take the Service of modern technology and forensic tools. The various drug detection kits are not adequately utilised for this purpose. As a result there exists concerns if the items so seized are of contraband nature, as based on just sensory impulses cannot be ground enough, especially as the nature of drugs used and seized are changing with changing times.
5. No Police officer takes pain to take steps against the NDPS Accused's illegally acquired property. This allows the proceeds of crime to thrive. This may be of no concern immediately to the IO but it not being addressed, lays fertile ground for the future of drug trails to prevail.
6. Most of the detecting officers are not aware of the minute formalities enshrined in the NDPS Act and naturally many procedural irregularities are prone to creep in. These irregularities will bring the case to acquittal. The lack of continuous training and up-gradation of nuances associated with NDPS investigation can

affect the cases related with the act.

7. For offences involving Section 19, 24, 27A or for offences involving commercial quantity, a complaint (in case of non-police officers)/a charge sheet (in case of police officers) must be filed within 180 days and in all other cases 60 days from the date of arrest. However, in the first category of the cases, the court may extend the said period up to one year upon sufficient cause shown by Drug Law Enforcement Officer through the Public Prosecutor. This knowledge gap of period extension in case of serious NDPS offences causes the IO to make a hastened charge sheet and could also signify shoddy, pieced up investigation (Field Officer's Handbook).
8. Inadequate records of when the contraband, seized article was delivered to the magistrate. The improper record maintenance of the delivery of the same, ie date, time and officer in charge, could reflect foully on the police side and could be taken up in the court of law. (Annexure 1).
9. Improper knowledge of the existing and new entrants to the category of contraband substances. Hence, even during vehicle checking - investigation falls short at the detection stage only be- cause of poor database enhancement.
10. The seizing, sampling and labelling of the seized articles is also of poor nature. (Annexure 1) It is usually preferred that a dedicated weighing scale should be always available with the police party. However this is breached, where it is borrowed from vegetable vendors. Hence the weighing scale used has no authenticity that could be proved in the court. The sampling should be usually be taken before the magistrate and in a prescribed format. However varying drug enforcement agencies use different sampling techniques that affects the trial process (Delhi Police Training College Study Material, 2005).
11. The court has demanded in the Mohinder Singh vs State of Punjab that the prosecution must establish the quantity of contraband article seized - thereby establishing the NDPS Offence. The best specimen to prove this would be the court records as to the production of the contraband before the Magistrate and deposit of the same before the Malkhana. However poor police station record maintenance may fail the case at the trial stage. The police fail to realise the importance of records, which is quintessential in a law that is so procedural and strict in its own sense.
12. The destruction of the contraband articles is not done in the stated manner. The existence of a Drug Disposal Committee is as good as non existential or even if present, it's not actively triggered to do any action. Thus at the court of law, when methods associated with the destruction of the seized items are put forth by the defence, usually the prosecution tends to fumble,
13. The lack of knowledge of informing superiors within 72 hours of obtaining the information or the delay in the same, can be a point to be pondered upon. Here,

records like the GD entry of the information so obtained are of importance. But preliminary knowledge of police station level work reflects inadequate focus and due attention being given to the GD maintenance.

14. A joined communication is usually given u/s 50 of the Act to two or more accused in a case. It purports the very purpose of the section and would affect conviction as stated in *State of Rajasthan vs Paramanand* and another 2014(2) RCR (Criminal) 40 (SC).
15. The seal if it is tampered with, could reflect malafide intentions of the investigation team. The improper handling of seals, it not being given to independent witnesses, different seals on different samples of the same case- could weaken the case.
16. Usually due to a nexus between the Gazetted officer and the police, they go hand in gloves where arm chair investigation could take place. Without actually going to the scene of crime, documents are forged of the presence of such officers. However when the defence checks on the CDR of the stated officers, improper match of the location and the time stated in records could be bad for the case.
17. Non compliance of section 57 of the NDPS Act also adds to reasons of acquittal as stated in the *Haider Ansari vs State* 2018 case. A report of the arrest and the seizure not being sent to the higher authorities within 48 hours could weaken the case. It must be noted that, though the non- compliance of the provisions of section 57 by itself is not mandatory but directory only, it may not vitiate the recovery of contraband substance single-handedly, but in case it is found that the accused has been caused prejudice by its non-compliance, it may adversely impact the case of prosecution. If delay occurs in compliance of this provision, that can be condonable but total non-compliance maybe taken to affect the accused adversely. Its non-compliance may have adverse impact on the probative value of evidence regarding arrest and search.

### Plugging the investigation Loopholes

In addition to addressing the above lacunae and building on the same, an overall analysis reflects that the following steps could be taken in, to improve conviction rates:

1. The investigating officer should be aware of the new generation drugs and pharmaceutical drugs.

### VISUALS OF FEW COMMONLY ABUSED DRUGS



CANNABIS SATIVA



OPIUM POPPY



COCOA



SYNTHETIC DRUGS

### OPIUM







OPIUM BEING COLLECTED ON THE NUSHTAR

Cannabis Sativa



Marijuana

Hashish

Hashish Oil



COCA FLAKES



COCAINE FREEBASE



PURE HEROIN - S W ASIA



BROWN SUGER - INDIA



BLACK TAR HEROIN MEXICO







2. Addition of the **Drug Detection Kit**: These kits assist the DLEO in forming a reasonable belief about a substance being a drug. The kit is a portable case containing different reagents that are used to test a small quantity of the substance recovered and determine the nature of the substance based on the colour range resulting from the reactions of the suspect substance with the reagents. There are three types of test kits used at present: *Narcotic Drugs Kit* to test traditional drugs like Ganja, Charas, Opium, Heroin, Cocaine, and the like; **Precursor Chemicals kit** to test Acetic Anhydride, Ephedrine, Pseudoephedrine etc. and *Ketamine Kit*. All these kits are very user friendly and come with an instruction sheet to guide the user draw appropriate inference. It is essential that the DLEO conducts the test, matches the resultant colour and forms a reasonable belief that the substance gives positive colour pattern for a drug. This process must be recorded in the *Panchanama* (Field Officer's Handbook).

In Meghalaya infact there are dedicated teams that are the carriers, testers and users of the Drug Addiction Kit. These special units being wholly dedicated ensure good quality assurance of the existence of the drug.

3. The latest changes in NDPS Act and the rulings of High courts and Supreme Court should be brought to the notice of the IOs. This can be done with PHQ circulars being printed in this regard and discussed with the various stakeholders, at frequent intervals. These add ones, amendments, enhancements in investigation alter with passing times. Thus, these frequent up gradation sessions are needed for refreshing the mindset.
4. Maximum digital evidence including CDR, voice records, Bank transactions etc. should be utilised in the investigation of the case to fit the accused with the case. However, this should not be an end in itself. The adequate focus shall yet remain the physical seizure of the contraband articles, the vehicle that maybe transporting it. The digital evidence should infact be an additional component supplementing the investigation, thereby corroborating the same.
5. The destruction of the seized articles should be done by roping in the Drug Disposal Committee. This is done after an application which is sent to the Magistrate under the Notification of the Ministry of Finance, 2015 (The annexure is attached below). This application includes the inventory of the seized items in accordance to section 52A of NDPS Act. This is then sent to the committee along with photographs, samples to decide the mode of disposal. Following this procedure ensures that a supervisory team exists to address the vulnerabilities of misuse, theft, substitution.
6. The seizing officer and the investigating officer of NDPS cases must be different. These are newly added directives which must be well publicised to ensure awareness of the same.

7. If the chain of evidence in the case could be Proved beyond doubt before the court there is every chance for conviction. The chain of custody is the most pivotal in these cases. Hence the sampling, sealing must be properly adhere to as in accordance of stated procedures.
8. At the onset, the IO has to prove that the detection was bonafide. This can be done by having timely GD entry of the information, passing on the information to the seniors in stipulated time- so as to hold the case true before the court of law.
9. Need for coordination with the various departments. Infact the excise department is a crucial arm in this regard. Joint raids, aiding in investigation trails must be positive fallouts of a healthy relationship. Regular NDPS coordination conferences must be held, and the information exchange would enhance the database of both the teams. Working in isolation is a lose all situation for both departments and a win for the offenders.
10. The seized items should be ensured that they are sent to the concerned FSL for analysis and re- port within 72 hours of seizure. The inventory of seized items is of crucial importance of the trial process. If the sized items, packages, articles and documents recovered are large in number, separate inventories should be made for each type of item, giving details such as serial number allotted, description of the item, marks and numbers found thereon, quantity, weight etc. All the recovered and seized documents must be signed by the owner/occupier, witnesses and the DLEO himself (Field Officer's Handbook).
11. Each piece of the investigation process must fall in place. Hence, loopholes like movement of officers (as corroborated by CDR Analysis), signatures on seizure memos, photography of the sampling process my be followed.
12. The snippets showcased below reflect that various authorities dealing with NDPS investigation must continuously brush their knowledge of the new techniques adopted by the offenders. A outdated understanding of the modus operandi of these criminals, can put us on the backfoot. Regular pa- trolling, strengthening the beat system, evolving the concept of Janmaitri policing to gather information from resident associations could be steps that could be considered. Local based intelligence collection is a crucial trigger point to put the law in motion

*“One of the major problems officials face is that there are numerous, seemingly innocuous means, through which drugs are smuggled. The most common says, Excise circle inspector T Anil Kumar, is through courier services, where drug packages are marked as foodstuffs such as tamarind”*

*“besides courier services, another common method of smuggling narcotics is through inter city bus services as well as by migrant workers, says a police officer in Kollam”*

*“With the growth of the internet and encrypted communication technologies like whatsapp, drug smugglers and peddlers are able to communicate without interception by*

*the police, to evade the police net, the chain works like this: the customer calls one person. Then another person calls the customer back to fix the time and venue for the exchange. A third person comes to collect the payment and the fourth person administers the drug injection, says Arun B Nair, Assistance professor at the de-addiction center the Government Medical College, Thiruvathapuram”*

## Conclusion

Kerala has boasted itself for following the established law of the land at several instances as seen by its conviction figures. The acceptance of this menace is the first step to arresting the same. Drug Walking has become the new norm of this developed state, where the inflow of remittances, influence of pop culture and the developed infrastructure within the state has facilitated the darkness of drug crime to creep in. The Narcotic Drug and Psychotropic Substances (NDPS) Act is a procedural law. The more stringent its provisions are, the more well engrained punishment exists and an equally uptight trial process prevails. For the sake of conviction, every minute detail of investigation is of immense importance for the prosecution to prove the case. If the various stakeholders within the state, join hands and adhere to the norm – Kerala could become a purer model for development. The issue of narcotic substances plaguing the state, has currently blackwashed its otherwise renowned parameters. There is a need for rampant change.

The investigation of NDPS Cases is aimed at detecting the commission of an offence(s), the person(s) who has (have) committed it (them) and recovery of the drug in respect of which the offence is committed and the Illegally Acquired Property held by the persons in the name of self or relatives and associates. The process and consequently the investigation officer should define precisely each of these four elements and conduct investigation in such a way that evidences gathered are relevant at least to one element.

The nature of crimes are changing along with the social conditions. As the menace of drugs is on the rise, and taking a terrible turn towards dooming the society - as law enforcers and also as citizens having certain moral obligations towards society, the police must look into these cases with all seriousness. Just following procedures with all due regard to the letter and spirit of the law, the court judgements would nab these nuisance creators and would reflect in our conviction rates. And further in particular of Kerala police, which believes in "Mridhu Bhava Dhrida Kruthye" which means "Soft in Temperament, Firm in Action" should thus mean that our firmness would be reflected if we address the new 'high' that Kerala is facing and crippling its society by upgrading our investigation and uplifting our conviction rates.

## Annexure

## Annexure 1



## INVENTORY OF SEIZED NARCOTIC DRUGS, PSYCHOTROPIC SUBSTANCES, CONTROLLED SUBSTANCES AND CONVEYANCES

[under Section 52A (2) of the Narcotic Drugs and Psychotropic Substances Act, 1985]

Case No. ....

Seizing agency: .....

Seizing officer: .....

Date of seizure: .....

Place of seizure: .....

Name and designation of the officer preparing this inventory: .....

TABLE

Sl. No.	Narcotic Drug/ Psychotropic Controlled Substance/ Conveyance	Quality	Quantity	Mode of packing	Mark and numbers	Other identifying particulars of seized items or packing	Country of origin	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)

Signature, name and designation of the officer

Certification by the Magistrate under sub-section (3) of Section 52A of the Narcotic Drugs and Psychotropic Substance Act, 1985

Whereas the above officer applied to me under sub-section (2) section 52A of the Narcotic Drugs and Psychotropic Substances Act, 1985 to certify the above inventory, and sub-section (3) of that section requires any Magistrate to whom an application is made to allow the application as soon as may be, I, having been satisfied that the above inventory is as per the seizure documents and the consignments of seized goods related to the case presented before me, certify the correctness of the above inventory.

Signature, name and designation of the Magistrate

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Interviews of Police and Excise officials in the Kerala Government



Sardar Vallabhbhai Patel  
National Police Academy  
Journal Vol. LXIX, No. 1, 128-135

## Decision Support System- COPS (GIS Based Technology for Tech Savvy & Trained Police)

Praveen Kumar\*

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### **Abstract**

**“Enquire into that fully”**

**vimrusati etat aseshena [Bhagavad Gita 18.63]**

*Since time immemorial, **Effective Decision-Making** has been a **Must Have** quality for the law enforcement agencies. Effective decision making requires sufficient and relevant data, so that calculated risks can be taken. Till 20<sup>th</sup> century the whole decision making process was largely dependent on “Heuristics” inside the commanders’ mind, but now, with the tremendous progress of mankind in biotech & infotech sectors, the decision making loop is more explicit and can be taken outside the human body to some extent. Artificial Intelligence is being integrated with explicit algorithms as part of decision-making calculations in real life situations. Therefore, a tech savvy and trained police force duly acquainted with the latest trends of biotech & Infotech is the need of the hour.*

**Key words** – Decision Support System, SMART Police, GIS (Geographic Information System), **COPS** (Counter Insurgency Ops Planning Software)

S- Strict and sensitive;  
M- Modern and mobile;  
A- Alert and accountable;  
R- Reliable and responsive;  
T- Techno-savvy and trained.

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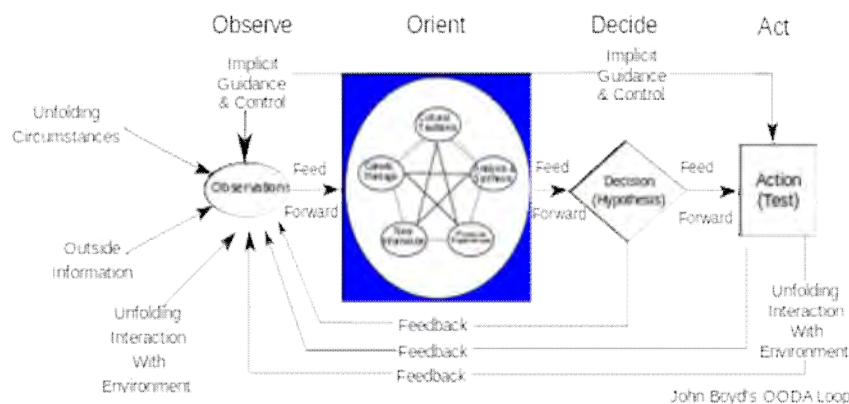
\*Deputy Commandant, CRPF Academy, Gurugram



With the phenomenal progress of mankind in Information Technology & biotechnology, in recent times there is tremendous scope for ICT to positively influence the decision making process and compute huge calculations to suggest a best outcome. This can be best explained by taking a concrete example of task of **listing out probable ambush locations in an AOR of a District**. This task can be seamlessly executed by the machine if we facilitate the machine with relevant and sufficient data namely in the form of **Gradient, Slope, Intervisibility, Forestation, landform, Water bodies, Roads, escape routes, culverts, Big trunk trees etc, more the merrier**. This habit of data collection, data processing and data analysis is needed to be taken to the cutting edge level of leadership to eliminate human errors due to negligence and complacency. The task seems big given the competencies of the lower level of police functionaries but it can be very well executed if our training focuses on producing thinking policemen.

### ***Scope of Using Technology in Operations***

With the phenomenal progress of mankind in space technology, Information Technology & Communication sectors, these technologies are enabling customized and user friendly GIS applications, devised for both analysis and operational planning, to support decision-making at cutting edge level of command. Decision support systems transcend the 'observe and orient' stage of the (OODA) loop to help commanders in calculations, plans, execution and post action analysis of the field operations. (1)



The OODA loop has become an important concept in operation planning. **Observations is the perception** of the evolving situation **tempered with implicit filtering** of the problem being addressed. The observations are the raw information on which decisions and actions are based. In notes from his talk, Boyd said, **the second O i.e orientation** is the most important part of the O-O-D-A loop since it shapes the way we observe, the way we decide, and the way we act.

### Definitions of GIS (2)

A geographer named David Cowen defined GIS as **a decision-support tool that combines the capabilities of a relational database management system with the capabilities of a mapping system** (1988).

- “A decision support system involving the integration of spatially referenced data in a problem solving environment”(Cowen, 1988)

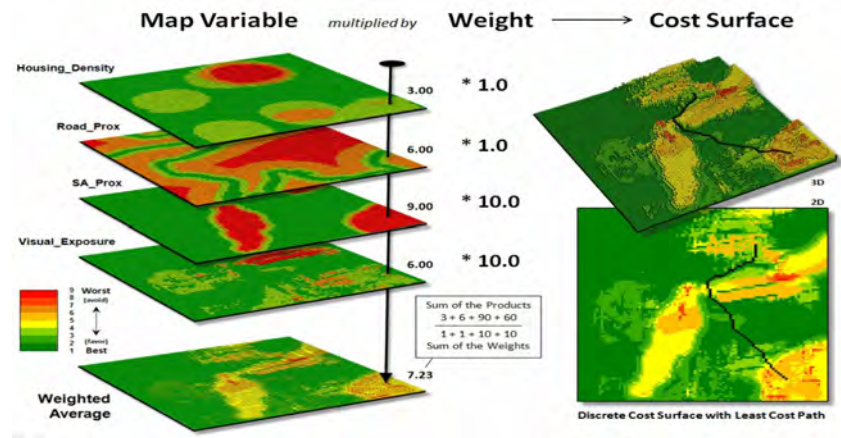
Although the above definitions cover wide range of subjects and activities best refer to geographical information. Sometimes it is also termed as Spatial Information Systems as it deals with located data, for objects positioned in any space, not just geographical, a term for world space. **Similarly, the term 'a spatial data' is often used as a synonym for at- tribute data (i.e. rainfall / temperature / soil chemical parameters / population data etc are referred as attribute data).**

### Gis data layers –

Geographical data deals primarily with two types of data: Spatial and Non-spatial



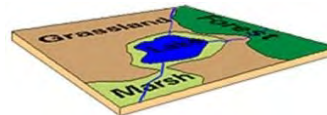
Changing field situations, constant up gradation of variable & temporal data coupled with expert interpretation with due weightage to relevant factors minus the errors is the key to



### Representation of Spatial Data in Cops

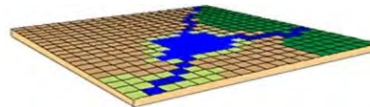
Spatial data is that which has physical dimensions and geographic locations on the surface of earth. Some examples are a river, a state boundary, a lake, a state capital etc.

Basic spatial data models exist as a combination of two types of data. (REAL WORLD = RASTER PLUS VECTOR DATA)



**Raster:** based on geometry of

- grid cells (images, bitmaps, DIGITAL ELEVATION MODELS)



**Vector:** based on geometry of

**Point feature** - A discrete location depicted by a single x, y coordinates

**LINE feature** - Represents a linear feature. A set of ordered x, y coordinates

**POLYGON feature** - An area feature where boundary encloses a homogeneous area



### **Representation of Non-Spatial (Attribute) Data**

It is the data about the data, so it is also called Metadata. Attribute or Non-spatial data describes some aspects of spatial data, which are not specified by its geometry alone.

For

e.g. In the raster data model, the cell value (Digital Number) is the attribute.

- Examples: brightness, land cover code, SST, etc.

For vector data, attribute records are linked to point, line & polygon features. Vector features are linked to attributes by a *unique feature number*. For e.g. elevation

### **COPS as an aid in Operations Planning**

Applications like COPS apply decision analysis methods coupled with GIS support in analyzing a set of alternative spatial solutions and provide a prioritized list of acceptable courses of action. It enables creation and organization of data for better planning by integrating the data and expert knowledge. For E.g. it can identify and predict Maoist ambush sites, landmine sites, and camp locations if it is given relevant and sufficient data based on certain parameter which can be given relevant weight age by the users. It involves basically three steps. These are –

- A) Data Collection
- B) Data Processing
- C) Data Analysis

#### **Data Collection –**

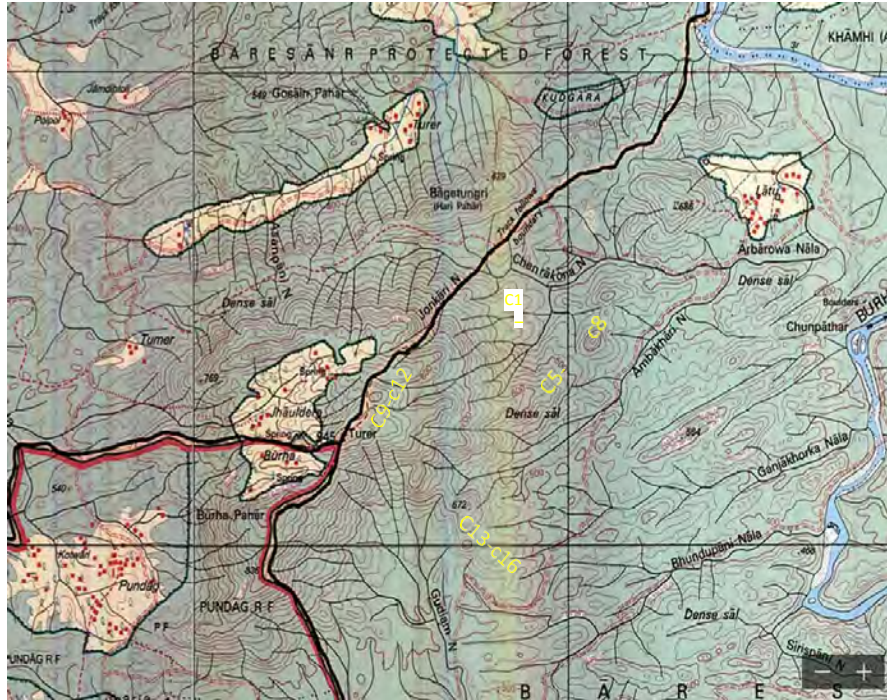
This is the first step which is expected to be done by the beat constable as they are the foot on the ground. They are expected to observe and feed the data in the system for institutional memory making.

#### **Data Processing-**

This is the second step and it involves organising the data in the format which is desirable for the machine. It can be done by employing some technological qualified graduates as is being done in OCTOPUS (Organisation for Counter Terrorist Operations) It is an elite counter terrorism joint unit of the state of Andhra Pradesh & Telangana.

#### **Data Analysis –**

This is the advanced task and demands competence. As GIS based decision support systems are at a nascent stage at present, so the task demands a good analyst of the raster and vector data and its implications.



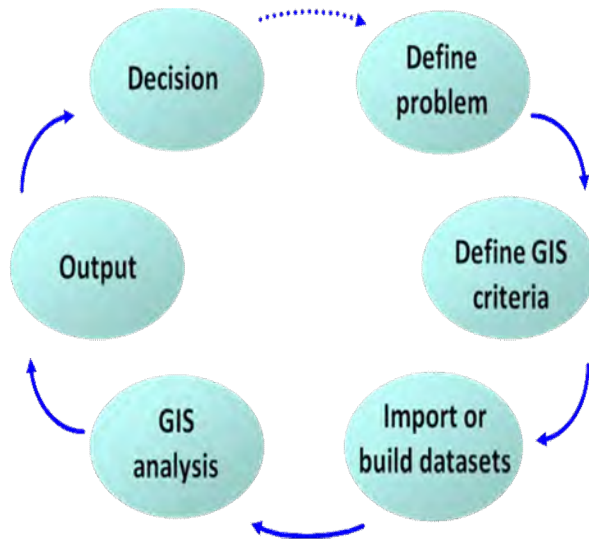
**21 Sq Kms of area. This is huge area to launch search operation. But given the objectivity of the task and relevant filters with a competent analyst, it can be reduced to just some 8-10 relevant location to search and save the efforts of jungle bashing and wild search.**

### Suggested Filters for A Probable Naxal Site for Filtering

- Curves in Tracks
- Close to Water point < 1/2 km
- Slope – convex and concave
- Availability of Escape routes
- Tracks Visible from Observation Post
- Re-entrants
- Gradient, Intervisibility, Forestation, landform, Water bodies, Roads, escape routes, culverts, Big trunk trees
- The list is not exhaustive.



### Decision Making Procedure in the Cops Software



### Output by Cops & Benefits for Police Forces

There is much filtering of the raster and vector data through the analytical filters to speculate the probable objective location/ hideouts duly including previous experiences. A sample response is marked as C1 to C12 to indicate the possible camping location. It will prompt the user with probable danger sites which will narrow down the search area and thereby reducing the wild shooting in the dark by the troops. This information can be used for rehearsal by Simulation Technology in virtual replications to test these alternates before launching real operations. This will be a real game changer as it will save the wasted cost incurred on the unsuccessful operations with little tangible results.

### Concluding Remark

These Decision support systems are continuously improving, the inputs regarding specific requirements for better operational results are very essential to contribute toward future research. A GIS-based application that provides real-time data for effective Command, control, coordination & communication in battlefield situation will need contribution from all stakeholders most importantly the user. Therefore the Police personnel who are going to be the end users of these systems are required to be vocal for their requirements, so that necessary R & D can integrate these user demands and cre-

ate a customized decision support system for better calculations. As the legend said about calculations –

“The general who wins a battle makes many calculations in his temple where the battle is fought. The general who loses a battle makes but few calculations beforehand. Thus many calculations lead to victory and few calculations to defeat. It is by attention to this point that I can foresee who is likely to win or loose”<sup>3</sup>

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