



INTERNATIONAL LAW
JOURNAL

**WHITE BLACK
LEGAL LAW
JOURNAL
ISSN: 2581-
8503**

Peer - Reviewed & Refereed Journal

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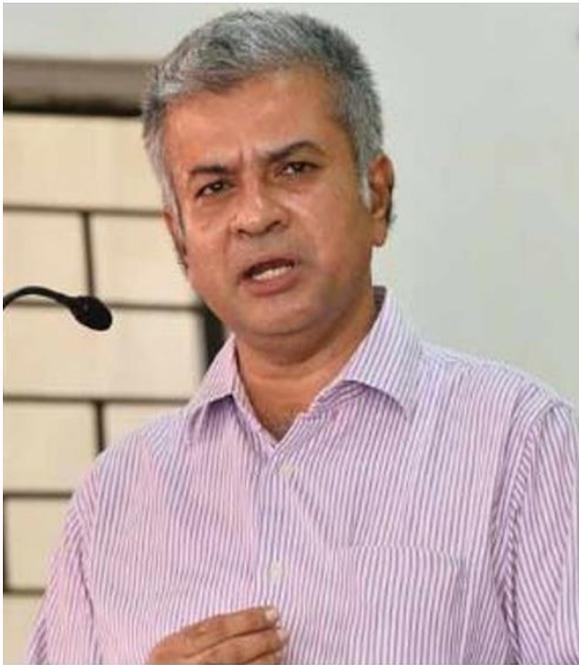
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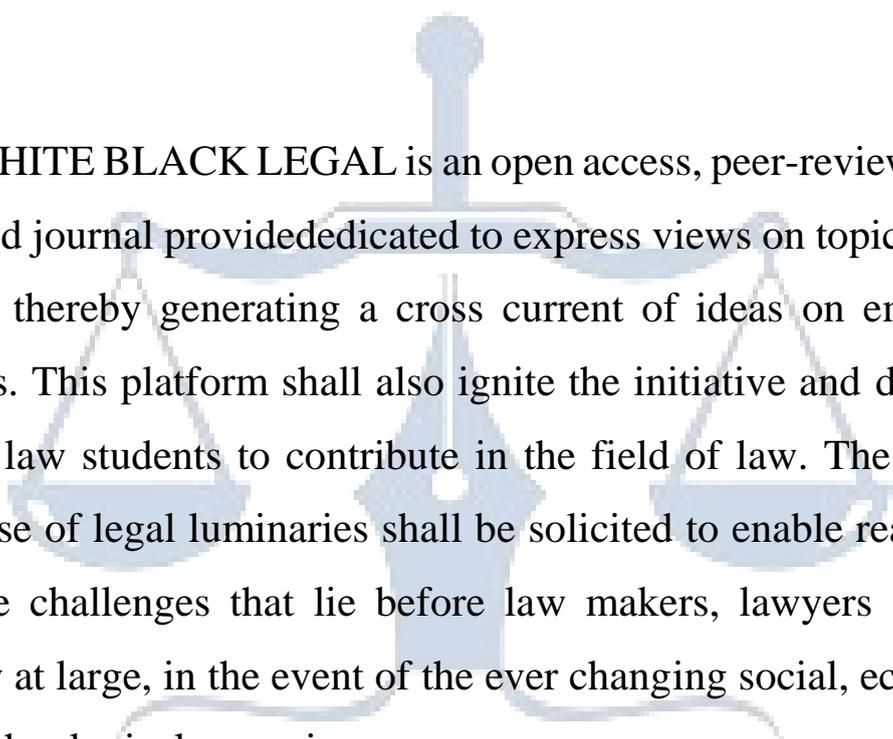


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WHITE BLACK LEGAL is an open access, peer-reviewed and refereed journal provided dedicated to express views on topical legal issues, thereby generating a cross current of ideas on emerging matters. This platform shall also ignite the initiative and desire of young law students to contribute in the field of law. The erudite response of legal luminaries shall be solicited to enable readers to explore challenges that lie before law makers, lawyers and the society at large, in the event of the ever changing social, economic and technological scenario.

With this thought, we hereby present to you

W H I T E B L A C K
L E G A L

“THE CHANGING NATURE OF CRIMINAL INVESTIGATION IN INDIA”

AUTHORED BY - SHRISHTI VERMA

1) Introduction: The Criminal Investigation Along With Its Interpretation, Historical Perspective

“The investigation of crime is a highly specialized process requiring a lot of practice expertise training and clarifies the legal position of the specific offense and subject matter of investigation a socio economic factor.”¹ The substantial meaning of the Latin Word ‘Vestigere’ can be interpreted as Track or Trace² and further involves the process, patience, and systematic inquiry. Investigation can be understood as the dynamic process to simplify the tangled truth, which can have various purposes depending on the individual's question. Substantially, depending on the service a person or an authority is availing for there are different kinds of investigation coinciding with its purpose, such as the civil investigation for uncovering the truth related to civil trials, a matter involving properties and money; Background investigation pertaining to credit, criminal history, identity etc.; Undercover investigation in which an individual is injecting herself to a particular situation to discover the hidden information and one of its kind is a criminal investigation which accords careful investigate in the matters which affects the society at large. "The criminal investigation is an ancient science that may have roots as far back as circa 1700 BCE in the writings of the Code of Hammurabi."³and it has continued to strengthen since that time to serve society in the pursuit of justice. “According to Bob morris’s the criminal investigation can be identified in four principal periods: Firstly he refers to ‘Heroic period’ covering the First 50 years after the introduction of the new police; then it was lasting until the interwar years in which a process of organizational specialization got underway; third half-century-long period in which there developed central leadership and oversight of criminal investigation within the police service. Finally, the current era starting in early 1980 in which further centralization, particularly by the government, took hold and

¹JUSTICE K. JAYACHANDRA Reddy, LAW COMMISSION OF INDIA 154 REPORT ON CRPC-1973 6 (Ministry of Law and Justice, 1996)

²BENNET & HESS, CRIMINAL INVESTIGATION 24 (Thompson eds., 7th ed. 2004).

³Dr. Raj Kumar Yadav, *Investigation and Criminal Administration Justice in India: A Study of Legislative & Judicial trends*, 1 SSRN 3, 1-12 (2013)

molded crime investigation practices.”⁴

According to Charles “Criminal investigation can be defined as the process of exploring from the known to the unknown and reconstructing what has happened step by step.”⁵ Its underlying foundation is based upon the logical sequences which can act as the latent backbone of the criminal justice system. Another author Paul specifies it as a "lawful search for individuals and objects relevant in reconstructing the circumstances of an illegal act or omission, as well as the mental state that accompanied it.”⁶ Furthermore, according to Richard Ward, who intends to explain “the criminal investigation through its process, which includes obtaining information, assessing the quality of the information acquired, specifying and locating the culprit of the crime, and presenting the evidence for his guilt to the court.”⁷

Substantially, these definitions are not sufficient to cover every aspect that is circumscribed in terms and processes of the criminal investigation as it is not limited in themselves. However, It can be characterized as a multifaceted problem-solving endeavor with a multidimensional approach that incorporates numerous different fields of study such as law, technology, science, communication, sociology, etc. As society is becoming increasingly convoluted, a strengthening web of crime emerges beneath it, dynamically taking on new forms to devour it. However, it is observed that with evolving nature of crime, there is also a significant upliftment in the standard of investigation not only by itself but with the aid of the heads of the various subject matter surrounding the concept of investigation. Significantly, the investigation is the process of examining, studying, surveying, and researching facts, instances, situations, and happenings, whether connected or not, in order to arrive at a proof conclusion. This process primarily leads to serves the two purposes to coincide with the concept of prevention of crime. The two purposes are to identify and apprehend the culprit and produce him before the court with the properly investigated conclusion.

The investigation is not only involved in criminal matters but is involved in every aspect of life; for instance, it can be almost like academic research. However, it's more of a responsibility for law enforcement machinery functioning through police, who investigate the cases and have other tasks to accomplish that can even deal with a matter of life and death of a person. So, in

⁴TIM NEWBURN ET AL., HANDBOOK OF CRIMINAL INVESTIGATION 545 (Willan publishing, 1st ed. 2007)

⁵ RICHARD H WOOD, INTRODUCTION TO CRIMINAL INVESTIGATION 15 (Addison Wesley Publication Company, 1st ed. 1975).

⁶ *Id.* at 5.

⁷DR.K.V.K.SANTHY, PROBLEMS IN THE CRIMINAL INVESTIGATION WITH REFERENCE TO INCREASING ACQUITTALS:A STUDY OF CRIMINAL LAW AND PRACTICE IN ANDHRA PRADESH 22 (Govt. of India, 2016)

order to meet the liabilities as mentioned earlier, this investigative agency requires advanced power sources to meet basic requirements, maintenance, and advancement, which can only be accomplished with the assistance of the state.⁸ Eventually, employing judicial interpretation, this research study attempts to encapsulate the history of criminal investigation in India as well as an examination of those emerging investigation methodologies with their respective limitations.

1.1) Literature review

Vanity of literature has been used strategically to complement the understanding of the topic, some of them are mentioned below:

The journal article titled **“Investigation and Criminal Administration Justice in India: A Study of Legislative & Judicial trends.”**⁹, expresses a comprehensive analysis of investigation and criminal administration in India mainly through the application of procedures and limited case laws. It was constructive in analyzing the procedural aspects of the subject matter. However this research article lacks the practical aspect and developing arena of subject matter.

The book acknowledged as **“Forensic Science in Criminal Investigation & Trials”**¹⁰ especially accumulates with the significant development which has paved the way for the changing nature of the criminal investigation in India. It was remarkably useful for the researcher in analyzing the developmental aspect of the subject matter. But it had not embodied the procedural and current perspective which is needed to understand the underlying interest of the subject matter. In research article titled **“Hundred Years of Forensic Science in India (1849–1947): A Historical Perspective”**¹¹ provided a deeper reading experience in terms of historical perspective on the subject, allowing the researcher to acquire a fresh perspective on a specific aspect of the problem. However, it fails to explore the problem from a judicial perspective in the context of the topic's history, leaving it rather incomplete.

⁸ FRIED E INBAN, SCIENTIFIC POLICE INVESTIGATION 322 (New York Book Company, 1st ed. 1972).

⁹ *Supra* note 1.

¹⁰ BR SHARMA, FORENSIC SCIENCE IN CRIMINAL INVESTIGATION & TRIALS 8 (LexisNexis, eds. 6th ed., 2020)

¹¹ Saumitra Basu, *Hundred Years of Forensic Science in India (1849–1947): A Historical Perspective*, 55 IJHS 85, 83-93 (2020).

1.2) Research Methodology,

At the introductory stage of research, the researcher has adopted the doctrinal form of research to compile the secondary sources of data from the virtual library like books, conventions, treaties, journals, case laws, reports, case studies, research paper, etc., to create the substantial standing of the research. So the researcher can use the previously researched data and can become deliberately aware of it while compromising with the contemporary issues associated with the subject matter. Later, the researcher has also encompassed the analytical form of research to critically analyze the changing nature of criminal investigation in India, its current development during pandemic and various aspects related to it.

1.3) Research question

1. What is the criminal investigation along with its interpretation, historical perspective and procedural aspect?
2. Why there is transforming nature of the criminal investigation and its necessity in India?
3. What are the acknowledged substantial improvements which revolutionized the criminal investigation in India?
4. What are the judicial views in respect to the varying nature of the criminal investigation in India?

2) The Criminal Investigation and understanding procedural aspects related to it

The competent and diligent functioning of the criminal justice system is directly proportionate to a well-developed legislative framework that specifically states roles and obligations surrounding the criminal inquiry. Because an investigation is a connection that enables us to determine if a wrong has occurred in society and, if it has, then to bring the accused to court to seek justice against those who have committed the wrong.¹² In our country, India, the requirement of such legislature is fulfilled by Code of criminal procedure 1973, which has an objective to govern substantial criminal law and every aspect related to it. Since its enforcement from 1974, it has provided machinery for investigation in crime. In section 2(h) of code¹³, it defines investigation as “the collection of evidence conducted by the police officer or by another person who magistrate authorizes in his behalf.” The court in *K. Ashok Kumar v. CBI*

¹² K.N. Chandrasekharan Pillai, *Criminal Investigation in India- Human Rights Perspective*, 48 JILI 433, 435-438 (2006).

¹³ The Code of Criminal Procedure, No. 2 of 1973, CODE CRIM. PROC. (1974), sec. 2(h).

& others¹⁴ underlined that section 2(h) has a greater scope in terms of who can investigate. In *Directorate of Enforcement vs. Deepak Mahajan*¹⁵, the court defines section 2(h) of the code as an encompassing definition that implies searching for material and facts to determine whether or not an infraction has occurred. In the case of *NH Dave vs. Mohammed Akhtar*¹⁶, the Gujarat High Court stated while investigating under section 104 of the customs act that the term "investigation" has been defined under section 2(h) as of inclusive nature and that the connotation of the word "investigation" cannot be disregarded. The Supreme Court examined the substantial element of the investigation in *H.N. Rishbud v. State of Delhi*¹⁷, which included going to the scene of the occurrence, ascertaining existing facts, finding, collecting evidence by scrutinizing diverse people, things, and locations, and finally forming an opinion.

The investigation begins with an informant submitting a FIR under section 154 of the code¹⁸ if the crime is cognizable, or after filing private complaints with the magistrate under section 155 of the code if the offence is not cognizable.¹⁹ Thus, it specifies the categorization of investigation procedures based on the offense committed, firstly, with section 154 allowing police officers to commence investigation proceedings and under section 155 requiring the magistrate to respond appropriately.

Section 156²⁰ explains the capacity of the police to investigate in a cognizable matter, stating that any official in charge of the police station can begin the investigation procedure without the magistrate's approval. Furthermore, if the magistrate deems it necessary, this provision enables the magistrate to order such an investigation under section 190²¹.

According to section 167 of the CrPC²², if an investigation takes more than 24 hours, the accused must appear before a magistrate, and further, the accused can be kept in judicial or police custody remand on the case's suitability after applying to the magistrate. In addition, if there is the need to hold the accused beyond fifteen days, then he can detain him under this

¹⁴K. Ashok Kumar v. CBI & others 2011 CrLj 1928 (1935). (India)

¹⁵ Directorate of Enforcement vs. Deepak Mahajan (1994) CrLJ 2269. (India)

¹⁶ NH Dave vs. Mohammed Akhtar (1984) 15 ELT, 353. (India)

¹⁷ H.N. Rishbud v. State of Delhi AIR 1955 S.C. 196. (India)

¹⁸ The Code of Criminal Procedure, No. 2 of 1973, CODE CRIM. PROC. (1974), sec. 154.

¹⁹ The Code of Criminal Procedure, No. 2 of 1973, CODE CRIM. PROC. (1974), sec. 155.

²⁰ The Code of Criminal Procedure, No. 2 of 1973, CODE CRIM. PROC. (1974), sec. 156.

²¹ The Code of Criminal Procedure, No. 2 of 1973, CODE CRIM. PROC. (1974), sec. 190.

²² The Code of Criminal Procedure, No. 2 of 1973, CODE CRIM. PROC. (1974), sec. 167.

provision, then he can hold the accused up to the detention for 90 days²³ in order to aid the investigation if the case's penalty is death, life imprisonment, or a period of imprisonment of not less than 10 years. In the case of any other offense, the detention will not exceed 60 days. Furthermore, after the days mentioned above have passed, the accused person shall be released on bail. In terms of the investigation's completion (time limit), there is no set time limit because under section 173²⁴, it is only stated that it should be completed without unreasonable delay, and the term is not defined in the Crpc, so it is left to the discretion of the investigating officer to determine what is and is not undue delay. This section of the code relating to criminal investigation operates as a loophole in various instances involving the investigative process. However, restrictions through judicial precedents try to cover the loophole up as in Kanpur RP vs. state of Punjab²⁵ the SC emphasized its disapproval of the excessive delay in filing the police report, stating that it would cause the court to consider that the quality of the IO's investigation was not adequate and that it had an ulterior purpose.

3) Understanding Evolution of the criminal investigation in India

The criminal component of civilization began with its inception, and it has developed as a parasitic twin of the society that is evolving together with it. Furthermore, if we do not decrease its impact on society or attempt to eliminate the parasitic component, the civilization will eventually be destroyed. As the society becomes stronger, the parasitic twin grows stronger. Thus the only way we can try to eliminate most of the parasitic twin's portion is to investigate and cut the part that is infecting the society or creating a link between it and the parasite twin. Therefore, to properly execute an operation, we must advance our preexisting investigative instruments so that we can see through every nerve and uncover the truth.

3.1) Understanding the necessity of the change

Several factors have been recognized as fundamental causes for India's shifting character of criminal investigation: To begin with, the magnifying shifts in social change that are experienced by Indian law and society as a result of significant factors such as "centralization, globalization, neo-liberalization, and risk-oriented concerns." Second, because of the great population density and the reality that most people are self-centered, the criminal may simply flee and erase the evidence. Third, the growth of an average person's knowledge in today's

²³ State of Gujarat vs. Iasmanish Chandrasinh Padhiyar 2008 CrLJ 3843 (3850). (India)

²⁴ The Code of Criminal Procedure, No. 2 of 1973, CODE CRIM. PROC. (1974), sec. 173.

²⁵ Kanpur RP vs. state of Punjab AIR 1960 SC 866. (India)

environment may be further enhanced via the effective use of World Wide Web resources.²⁶ Fourth, the introduction of technological growth is accountable for the expansion of the criminal arena. Fifth, traditional investigative procedures, which are primarily reliant on confessions, eyewitnesses, approvers, and stock witnesses, are not as trustworthy for the sorts of current crimes occurring in society and even degrade the quality of the evidence through unethical means and practices involved in it. Furthermore, based on the preceding assertions and facts, it has been concluded that the combination of technological advancements and the other variables stated has escalated crime to a new level that is unmanageable utilizing present investigative instruments and methods.²⁷ However, developing investigation tools and processes in conformity with the current level of crime in society is insufficient; the investigative instrument must go beyond societal standards.

3.2) Examining the development of criminal investigation with judicial interpretation

“A miscarriage of justice may arise from acquittal of the guilty no less than from the conviction of the innocent.”²⁸ Further, “more than 90% of the time, the offender is acquitted based on a single plea that cannot be proven beyond a reasonable doubt.”²⁹ If this system continues, India's criminal justice system will lose confidence, and justice's practical component will be undermined. We can prevent the criminal justice system from collapsing by advancing the element of the criminal investigative system; if it is established, then it will provide standardized scientific evidence that cannot be questioned as to its reliability. So in order to find such a way, we need to look back at our roots, so as in literature written 2300 years ago, such as *Kautilya's Arthashastra*, which shows detailed mentioning of the scientific methods that is the amalgamation of the advanced use of science applied in favor of justice. For instance, the use of fingerprint methods to investigate the case is also known as “Trija” by the communities employing it centuries ago.³⁰ The further employment of forensic science in the enforcement of criminal investigation was also acknowledged in “British India for the period between 1849-1947.”³¹ As a result, we can see that forensic science technology for efficient criminal investigation is not new to India and has evolved progressively through time. Fingerprinting technology, explosives, handwriting, serology, note forgery, footprint section,

²⁶ *Supra* note 10.

²⁷ *Supra* note 4.

²⁸ *Shivaji Sahebrao Bobade v State of Maharashtra*, AIR 1973 SC 2622. (India)

²⁹ *Id.* at 28.

³⁰ Nivedita Grover & Isha Tyagi, *Development of Forensic Science and Criminal Prosecution-India*, 4 IJSRP 2267, 2250-3153 (2014)

³¹ *Supra* note 11.

and ballistic department are forensic methods discovered earlier in India, particularly during the colonial period, and contribute to various parts of forensic inquiry.

Modern society has improved these earlier techniques and even introduced a new evolved technique that aids in various types of criminal investigations: Firstly, Narcotics analysis which is a method that lowers a subject's inhibition by “interfering with his neurological system at the molecular level, making it difficult or impossible for him to lie”³²; Secondly, “Brain mapping is a thorough examination of brainwave frequency patterns in order to detect items or details about the crime scene that only the suspect will be aware of; Thirdly, polygraphy technique: While a suspect is asked a series of questions, a polygraphy apparatus identifies a lie by monitoring numerous physiological parameters “such as blood pressure, pulse, respiration and breathing rhythms, and skin conductivity”;³³ Fourthly, DNA profiling, and fifthly, fingerprinting, etc.³⁴ The tests mentioned above, mainly based on contemporary drug and psychotropic chemical processes, are collectively referred to as deception detecting tests. Deception is described as a deliberate attempt to manipulate another person with a lie. Using these approaches, the deception statement made by the accused may be determined, along with hidden facts pertaining to the crime or relation to the investigation. In the case *Dinesh Dalmia v State of Tamil Nadu*,³⁵ the court emphasized that Polygraph, Narco Analysis, and Brain Mapping tests substitute for the third-degree methods.

Various cases have been solved using forensic science, such as “*Vasu v. Santha 1975 (Kerala)*”, in which the court established rules for DNA testing and its admission as evidence in court. When there is a strong prime facie case in which the husband must prove non-access to dispel the presumption originating under “section 112 of the Evidence Act”, the court assessed that this test could not be used as a matter of course subjectively be recommended in court practice.³⁶ The court should carefully consider the implications of conducting a blood test, including whether it will inadvertently label the kid and mother as a bastard and an unchaste woman, respectively. Finally, the court stated that while this test is used to evaluate contested paternity, it cannot be imposed on anybody.

³² Harsh Malaviya, *Forensic Science - From Investigation to Court*, 2 NCRBJ. 14, 10-18 (2019).

³³ DR. Apurva Pathak, *Chalking Equilibrium Between Effective Investigation and Individual Rights*, 4 GJRA 15, 14-16 (2015).

³⁴ *Id.* at 33.

³⁵ *Dinesh Dalmia v State of Tamil Nadu*, 2006 Cr LJ 2401. (India)

³⁶ *Vasu v. Santha 1975 (Kerala) AIR (1986) M.P. 57. (India)*

In the Tandoor Murder Case in Delhi,³⁷ it is also known as India's first criminal case solved through the assistance of forensics. Susil Sharma, a husband, shot his wife at home with three bullets, assuming she was having an affair. After killing her, he transported her body to Bagiya restaurant via car, where the restaurant manager and husband of the deceased attempted to burn her body in the tandoor. Sharma's pistol and blood-stained rags were seized and sent to a forensic lab. They also obtained a blood sample from the parent of the deceased and sent it to Hyderabad for DNA testing. "The blood sample saved by the doctor during post mortem and the blood on two leads obtained from the skull and neck of deceased Naina's corpse is of the 'B' blood group." Later, the DNA result established beyond a reasonable doubt that the DNA of the deceased's blood was identical to that of her parents, and Sushil Sharma was found guilty of the crime he had committed.³⁸

The two suspects in "Nithari's serial killer case, Moninder Singh Pandher and Surendra Koli, were found guilty of murdering 30 children and women who were sexually assaulted after and/or before the deaths."³⁹ Both of the accused were then submitted to narco analysis, brain mapping, and polygraphy tests. Surendra was discovered to be a cannibal psychopath driven by sexual impotency after a narco analysis test and in brain mapping test they revealed some names of ministers and doctors.⁴⁰

These are just a mentioning of handful of the instances that have been solved with the assistance of forensic science, and justice has been served. Other instances, such as the Abdul Karim Telgi case⁴¹, which included a multi-crore stamp paper fraud and the Nirbhaya case, which entailed determining the accused who were involved in the crime by examining blood, semen, swabs, sputum, sweat, hair sample, fingernail clippings, etc. In the case of the Mumbai suburban train blasts on July 11, 2006 (i.e., the 11/7 serial blasts), the accused, who was responsible for killing 200 people and injuring 600, was subjected to narco analysis, brain mapping, and lie detector tests in order to reveal significant information about the nation's security against terrorism.⁴² These cases serve as examples of what may be accomplished using forensic science in the realms of the criminal inquiry.

³⁷ Sushil Sharmav. State of Delhi 1996 CriLJ 3944. (India)

³⁸ *Supra* note 12.

³⁹ KS Puspa, *A Forensic Science and Methods of Criminal Investigation: An Analysis and Judicial Recognition in India*, 9 IJMER 94, 92-104 (2020).

⁴⁰ Surendra Koli vs State Of U.P.(2011) 4 SCC 80. (India)

⁴¹ *Supra* note 34.

⁴² *Id.* at 41.

3.3) Limitation of the development of criminal investigation in India

In most situations, the evolving nature of the criminal investigation in India involves the rising use of the deception test, but with that growth comes the necessity to strike a balance between its use and invasion of an individual's personal rights. If the deception tests are not used for a healthy and positive criminal investigation and are instead misused by the authorities, it will have a direct impact on article 20(3)⁴³ and article 21 of Part 3 of the constitution⁴⁴, which include the right to health, as interpreted in *Urjit Singh vs State of Punjab*⁴⁵ as if a person experiences health problems after being subjected to various deception tests and the infringement of other rights such as the right to remain silent and the right to privacy.

Several Supreme Courts have recognized the aforementioned rights as an essential aspect of personal liberty, such as in the case of *Kharak Sing v State of Uttar Pradesh*⁴⁶, where the importance of the right to privacy was underlined as part of Article 21 of the Indian constitution⁴⁷. In another decision, *Smt. Selvi and Ors Vs State of Karnataka*⁴⁸, the Supreme Court stated that various forms of deception tests will be deemed an infringement on the right to privacy if they are done without the permission of the individual.

3.4) Pandemic and new adaptation in the criminal investigation in India

It was extremely difficult to implement established criminal investigation practices, such as forensic science-based investigation while maintaining social distance during the COVID-19 pandemic years, which provided a new opportunity to include the use of Layered Voice Analysis, which focuses on voice signature, speech to text, and emotional analysis. It primarily observes "psychological patterns" in order to obtain a emotional analysis of the individual and can identify feelings such as tension, rejection, anxiety, embarrassment, stress, and bewilderment. LVA has the best accuracy rate in detecting deceit when using a deception pattern. LVA is a cutting-edge technique for truth verification since it can evaluate frequency, which is influenced by facial emotions, body movements, gain modulation, and hormones. It is more beneficial since it can be used both offline and online because it is entirely based on live or recorded audio recordings that can be transmitted anywhere and at any time to a forensic

⁴³ INDIA CONST. art. 20(3).

⁴⁴ INDIA CONST. art. 21.

⁴⁵ *Urjit Singh vs State of Punjab* AIR 1996 SC 1388. (India)

⁴⁶ *Kharak Sing v State of Uttar Pradesh* (1964) 1 SCR 33. (India)

⁴⁷ *Abhyudaya Agarwal & Prithwijit Gangopadhyay, Use of modern scientific tests in Investigation and evidenc: Mere Desperation or Justifiable in Public Interest?*, 2 NUJS L. REV. 35, 31-54 (2009).

⁴⁸ *Smt. Selvi and Ors Vs State of Karnataka* 2010 (7) SCC 263. (India)

laboratory. It has been used to investigate a variety of situations, including fraud, terrorism, rape, and domestic abuse, and it may even be used to gather evidence in family affairs. In November 2014, the police successfully utilized this technology to investigate the Mumbai gang-rape case and accused Siraj Rehman Khan of raping a rag picker and a sex worker.⁴⁹

4) Conclusion and Recommendations

The criminal investigation is critical to the existence of India's Criminal Justice System since it is the foundation upon which justice is given to the people and confidence is established between them and the respected institution. Furthermore, in order to maintain the faith that people have in institutions, it is necessary to evolve criminal investigative methodologies in every shift of society and crime so that justice may always triumph while celebrating the reality of the unfolded facts. There is also a need for the diverse criminal investigation development approaches, such as criminal forensic investigation, to be in harmony with individual rights and act as the assistance but not as a tyrant. Following the previous opinion, the rational limitations should be imposed on the investigation agencies coinciding with the various judicial interpretations in different significant cases. A specified guidelines needs to be created in order to regulated these developing investigative techniques of investigation. After researching and analyzing the multiple perspectives of criminal investigation, there is an important necessity to revise procedural laws and set a criterion for the time limit concerning the finalization of the investigation. Also, there is the need for the separation of the investigation agencies with the external influences as also recommended by the 154th law commission in 1996, which is yet ongoing. Additionally, in order to enhance criminal justice institutions in society, the employment of immoral convention tactics in the investigation should be abandoned, and a new model for investigations should be researched and adopted subjects to the limitation concerning individual's right. Ultimately, the employment of technology, science, and other disciplines should be utilized in amalgamation of law in the subject of investigation and interrogation in criminal justice system. However, these new advancements must be grounded on principles of justice and equity.

⁴⁹ Dr. Priyanka Kacker & Pratik Shukal, *Use of Layered Voice Analysis (LVA) for Investigation with Social Distancing*, 3 NCRBJ 68, 67-73 (2020)

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