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# Digital Transformation of Criminal Justice System: Challenges and the Way Forward

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## ABSTRACT

*The modernization of criminal laws represents more than just a legal transformation as it reaffirms the commitment of people so that justice aligns with the evolving needs of society. This criminal law reform endeavors to place India towards a fairer, accessible and advanced legal framework. As the process of criminal law reform has begun and the introduction of these reformed laws points to a future where justice is not only delivered, but is also inclusive and reflective of our vibrant democratic values.*

*Criminal justice system encompasses a set of laws, processes and judicial framework which is deliberated to prevent, detect, prosecute and penalize crimes with also safeguarding the rights and safety of the individuals. It is an instrument of acceptable and non acceptable social control. It includes entities such as police, judiciary, legislative institutions as well as supportive organizations like forensic and investigation agencies. Though India has evolved its criminal justice system with the help of significant amendments and judicial pronouncements, but the time has come to change the status quo of the legislations on criminal laws and addressing their complicated ambiguities.*

*It is often said that India's criminal justice system is flooded with problems which seem deep rooted not only in the constitutional organizational structure of institutions, but also in the actions of its functionaries. The current legal framework has been in place for a long time and the new criminal law reform is a significant step towards improving the justice system. The end result of any legislation must be to introduce more approachable, fair and better adapted procedures to meet the changing needs of society. These reforms are considered crucial for upgrading the Indian justice system and recognizing the limitations of Macaulay made laws which were established during the colonial era and were focused on maintaining order rather than ensuring justice.*

**Keywords:** *New Criminal Laws, Criminal Justice System, Criminal Law Reform, Colonial Laws, Criminal Law Enforcement.*

## I. INTRODUCTION

The recent implementation of three new criminal laws aims to reform India's criminal justice system, introducing the Bharatiya Nyaya Sanhita to replace the Indian Penal Code, the

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Bharatiya Nagarik Suraksha Sanhita to replace the Code of Criminal Procedure and the Bharatiya Sakshya Bill to replace the Indian Evidence Act, which has ignited a variety of discussions among intellectuals, highlighting significant issues connected to criminal law reforms.

In his well-known work, Alan Norrie<sup>2</sup> states that ‘rather than being independent foundations for a rational criminal law, the core principles of the law are a site of struggle and contradiction.’ This suggests that while attempting to meet the collective needs of the public through criminal law reforms, there is a substantial challenge posed by differing public opinions that must be reconciled with the state’s vision. The overhaul of India’s colonial-era criminal law is seen as intricate, as participants in this legal framework have become accustomed to it over a span of nearly two centuries.

The Indian criminal law unquestionably serves as a tool for social control, guiding us through an extensive timeframe. It is premature to determine whether the new laws will effectuate the necessary changes in the legal environment or address the shortcomings in the procedures. Nonetheless, the success or failure of these criminal law reforms will significantly depend on their formulation, discussion and long-term implementation. In terms of the relationship between technology and law, the two converge when laws promote as well as regulate technological progress. They also become relevant when society identifies adverse effects of technology and seeks to use the law to limit or alter those impacts. Despite certain critiques, the nature and extent of these modifications will demand months, if not years, of examination, conversation and deliberation. However, these ongoing dialogues are productively yielding meaningful and pertinent contributions. The new laws hold the promise of influencing the future landscape of criminal law. Therefore, it is essential to evaluate their sustainability, effectiveness and compliance with the rule of law and their ability to provide justice.

The three new laws have inculcated technology as the medium on which this development is to be carried out and practiced in day to day procedures of criminal law. The new laws mention about the introduction of cybercrimes to electronic registration of First Information Reports, about mandatory virtual recording of seized property and about digitizing the Indian criminal system in the hopes of achieving efficiency, speed and equity in the delivery of justice to citizens.

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<sup>2</sup> Alan Norrie, *Crime, Reason and History: A Critical Introduction to Criminal Law* (Cambridge University Press, 2014).

## **II. INCLUSION OF TECHNOLOGY IN NEW CRIMINAL LAWS**

Law regularly deals with technology and human activities that use scientific advancements to create new media, tools, equipment and systems that enhance the dignity of living. It may be a result of the utilization of natural resources where the development of contemporary technology has made it possible to utilize energy resources. The distribution, processing and production of natural resources and energy are all governed by law. Technology also finds its significance in the decisions about the final stages of life process that have legal implications which rely on medical concepts like brain death.<sup>3</sup> It is necessary to compare the same concept of therapeutic toughness with the existing technological capabilities. Technology has made tools like electronic signatures and documents available. In order to legalize or control these technologies, the law must adapt to them. Concerns with respect to the infringement of civil liberties are raised by the adoption of surveillance technologies, such as facial recognition and crime preventive systems of police organisations. Legal structures have encountered challenges in finding a balance between the right to privacy and public safety.

Technology can affect the substance of legally protected interests. This can be seen with the example of right to privacy law, which has inculcated changes as a result of the development of information technology. The technological evolution in the telecommunications sector promoted free competition against the monopolistic conventions that have been followed in the sector since ages. Law can also use new technologies to achieve new objectives. For example, the inclusion of E-documents, E-signature, E-payments regulations, online contract completion in modern laws and to regulate such new changes with the help of new provisions in the statutes. Two key objectives of incorporating technology and modern forensics procedures into investigative process are making use of the potential of modern scientific technologies while reforming the criminal justice system. This would also protect the rights of victims and accused parties, raise the bar for evidence quality and provide greater accountability in police investigations.

The new criminal laws aim to transform the legal framework of our country into the modern age. The Bhartiya Nyaya Sanhita, 2023, Bharatiya Nagarik Suraksha Sanhita, 2023 and Bharatiya Sakshya Adhiniyam, 2023 adopts a comprehensive approach to deal with crimes in the digital age. The requirement audio-visual recording of search and seizures serves as an essential tool for both prosecution and safeguarding the civil liberties of citizens. A detailed analysis of the new criminal laws has been done in the later part but the The Bharatiya

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<sup>3</sup> Transplantation of Human Organs and Tissues Act, 1994 (Act 42 of 1994).

Nagarik Suraksha Sanhita, 2023 includes a latest technological change where a forensic expert<sup>4</sup> has to be present at the crime scene which will enhance the efficiency of the investigating officers and will also allow for crimes to be solved at the earliest with the aid of the latest developments in forensic technology.

In the era of digital transformation, the interplay between law and technology can result in better crime recognition which is a part of this criminal justice reform. However there are also certain issues related to digital transformation such as the risk of individuals devoid of internet connectivity or technological ability would get excluded. Therefore, there is an urgent need to ensure that the general public is made aware of the benefits of this digital transformation and technology is made available at fair charges so that the problem of digital divide can thus be addressed. With regards to the judicial viewpoint the help of technology can be taken so that there can be instant conversion and translation of speech to text.

### **III. ANALYSING THE NEW CRIMINAL LAWS IN CONTEXT OF TECHNOLOGY BHARTIYA NYAYA SANHITA, 2023.**

This new law becomes a prominent force in recognizing and leveraging the potential of technology in the context of a crime. Bhartiya Nyaya Sanhita identifies the emerging trends of committing crimes using electronic means and communication. It offers a comprehensive legal framework that is contemporary with the digital era. In a world driven by technological advancements, the act seeks to protect the reliability of the legal system in addition to punishing wrongdoers. Therefore, the Bhartiya Nagarik Suraksha Sanhita, 2023 and the Information Technology Act, 2002 both specify that all terms and expressions pertaining to technology and digital media in general shall have the same meanings as those provided in the new section 2(39) of the Bhartiya Nyaya Sanhita. This will make it possible to identify an even wider variety of acts that come under the definition of an offense, which will be helpful in the identification and prevention of crime. Also, according to Section 2(8) of the act, the electronic and digital records are now considered under the scope of documents. For example, Section 196<sup>5</sup> of the act mentions about encouraging hatred among various groups based on religion, race, nationality, place of residence, language and other factors, as well as engaging in actions that are harmful to the preservation of harmony, including those carried out through electronic communication.

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<sup>4</sup> Bhartiya Nagrik Sukraksha Sanhita, 2023 (Act 46 of 2023), s 176(3).

<sup>5</sup> Bharatiya Nyaya Sanhita, 2023 (Act 45 of 2023), s 196: 'promoting enmity between different groups on grounds of religion, race, place of birth, residence, language, etc., and doing acts prejudicial to maintenance of harmony.'

Moreover, Section 111 of the act mentions about punishing organized crimes including cybercrimes and unlawful activities.<sup>6</sup> The act also prescribes punishment on providing false information under section 197(d) of the act.<sup>7</sup> Further, Section 152 of the act mentions about endangering sovereignty, unity and integrity of India by the means of electronic communication,<sup>8</sup> a similar provision as Section 124A of the Indian Penal Code (Act 45 of 1860) whose constitutional validity has been challenged from time to time as the provision stood its test on judicial scrutiny.

Recalling the first amendment of the Indian Constitution,<sup>9</sup> the Supreme Court<sup>10</sup> ruled that there must be a balance between the right to freedom of speech and expression and the security of the nation. Nonetheless, the Court gave an allusive idea to demarcate the boundaries between a citizen's right and the state's security. It meant that any conduct that has the potential or the objective of disturbing the state's security or public order may be considered as sedition. It follows that an act of this kind is motivated only by dissatisfaction or animosity toward the government and lacking a motive or mere dissatisfaction to undermine public order or state security, will not be considered sedition. The words 'subversive activities', 'endangering the unity of India' or 'misleading information' mentioned in the new provision are not defined in the act.<sup>11</sup> Therefore, the ambit of the provision will attract arbitrary use of the power by persons in authority which will as a result affect the important fundamental rights of individuals.<sup>12</sup> Determining what exactly qualifies as a sedition charge becomes very pertinent, as to whether an electronic communication is fraudulent or modified and how far such communications can be accessed in response to sedition accusations are all some important points to consider. To safeguard individual privacy, it is also necessary to define the conditions that stipulate the access of personal electronic communications of people and such access shall be adequate and reasonable.

The act incorporates electronic records and prescribes the use of digital summons under Section 206 (non-attendance with respect to the service of summons) and any content in

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<sup>6</sup> Bharatiya Nyaya Sanhita, 2023 (Act 45 of 2023), s 111.

<sup>7</sup> Bharatiya Nyaya Sanhita, 2023 (Act 45 of 2023), s 197(d): 'makes or publishes false or misleading information jeopardising the sovereignty unity and integrity or security of India'.

<sup>8</sup> Bharatiya Nyaya Sanhita, 2023 (Act 45 of 2023), s 152: 'Whoever, purposely or knowingly, by words, either spoken or written, or by signs, or by visible representation, or by electronic communication or by use of financial means, or otherwise, excites or attempts to excite, secession or armed rebellion or subversive activities, or encourages feelings of separatist activities or endangers sovereignty or unity and integrity of India; or indulges in or commits any such act shall be punished with imprisonment for life or with imprisonment which may extend to seven years and shall also be liable to fine.'

<sup>9</sup> The Constitution (First Amendment) Act, 1951, s 3(2).

<sup>10</sup> Kedar Nath Singh v. State of Bihar, AIR 1962 SC 955.

<sup>11</sup> Supra note 7.

<sup>12</sup> The Constitution of India, 1950, art 19: Protection of certain rights regarding freedom of speech, etc.

electronic form under the sale of obscene publications under Section 292. More provisions have been simplified by the Act to embrace digitalization, such as Section 337, which deals with possession of fabricated documents and includes data in electronic form.

#### **IV. BHARTIYA NAGRIK SURAKSHA SANHITA, 2023**

The Bhartiya Nagrik Suraksha Sanhita includes the use of technology in a significant manner by from visiting crime scenes to conducting investigations and ending with trials. This will revolutionize the expeditious trial process and bring transparency in the inquiry methods. Utilizing the power emerging scientific technologies and upgrading the criminal justice system are two important goals of integrating technology and forensics into investigations. Additionally, this will enhance the quality of evidence, guarantee more accountability in police investigations and safeguard the rights of both victims and accused party.

A critical examination of the recent legal changes in criminal law reveals several important provisions. Section 2(1)(i) defines ‘electronic communication’ as the transmission of written, spoken, pictorial, or video information between individuals or devices (or vice versa) using electronic devices such as telephones, mobile phones, wireless communication devices, computers, audio-video players, cameras or any other electronic form specified by notification from the Central Government. Section 54 of the Bhartiya Nagrik Suraksha Sanhita permits the use of audio-video tools for identifying individuals who have been arrested. Furthermore, Sections 63-71 and Section 94<sup>13</sup> now include the issuance of summonses through electronic methods, such as messages. Section 64<sup>14</sup> specifies how summonses should be served through electronic communication in a form and manner determined by rules set by the State Government. The act also seeks to reform the process of presenting evidence by mandating audio-video recordings during search and seizure operations to prevent evidence tampering.<sup>15</sup> Measures must also be put in place to protect digital records from contamination, ensuring that audio-video evidence remains unaltered. It will be necessary to implement appropriate rules to ensure the accuracy and integrity of electronic evidence.

When it comes to inspection, search and seizure of electronic devices and evidences the powers of law enforcement agencies been enhanced by the New Criminal Procedure Code.<sup>16</sup> It allows for the seizure of any electronic device or record that is likely to include digital

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<sup>13</sup> Bhartiya Nagrik Suraksha Sanhita, 2023 (Act 46 of 2023), s 94, Summons to Produce Document or other thing.

<sup>14</sup> Bhartiya Nagrik Suraksha Sanhita, 2023 (Act 46 of 2023), s 64, Summons How Served.

<sup>15</sup> Bhartiya Nagrik Suraksha Sanhita, 2023 (Act 46 of 2023), s 105, Recording of search and seizure through audio-video electronic means.

<sup>16</sup> Bhartiya Nagrik Suraksha Sanhita, 2023 (Act 46 of 2023).

evidence. Moreover, it allows for the production of such records by a person other than the accused. If a police officer has sufficient grounds to suspect that an individual's property won't be returned without causing undue delay, they may search and seize the person's property without a written warrant. However, Indian courts have previously held that the right against self-incrimination is limited to information given from personal knowledge.<sup>17</sup> Having said that, the investigations targeting businesses or corporations, where it is far more likely that electronic devices may be available for seizure may benefit from the increased powers available to law enforcement. This raises the risk that multinational corporations' offices in India will have to take, even in situations when the primary economic activity is conducted elsewhere. This will also affect the goodwill, confidentiality and company operations. To overcome these obstacles, businesses may need to improve their digital security procedures and legal compliance plans.

This demonstrates that the Indian legal system will undergo a huge transformation in the ensuing decades. The provisions specify that recording of information through audio and video means during search and seizure may include the process of compiling a list of materials seized and the signature of witnesses. It is anticipated that transparency in search and seizure procedures will discourage the fabrication of evidence and guarantee the participation of impartial witnesses. When it comes to the Witness Protection Scheme, the new law under Section 398 directs each state government to create a witness protection scheme for ensuring witness' safety.<sup>18</sup> Although, recognizing the importance of protecting witnesses, there still lies ambiguity on how such a scheme would apply to corporate whistle blowers irrespective of the regulations of the Securities and Exchange Board of India.

On the other hand, there are certain shortcomings to use digital evidence and summons. There are a variety of reasons why search and seizure might occur and someone who isn't even a party to the case may be required to produce any pertinent digital evidence from laptops, mobile phones or other devices. There is no efficient monitoring of such access of the personal data of individuals who are not even connected to the case, despite the fact that these devices hold personal data that may not be relevant to the proceedings. This may have an impact on both, the right to data privacy and the prohibition against self-incrimination, which are a part of fundamental right which are mentioned under Part III of the Indian Constitution.

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<sup>17</sup> The State of Bombay v. Kathi Kalu Oghad and others, AIR 1961 SC 1808.

<sup>18</sup> Bhartiya Nagrik Suraksha Sanhita, 2023 (Act 46 of 2023), s 398, Witness Protection Scheme: 'Every State Government shall prepare and notify a Witness Protection Scheme for the State with a view to ensure protection of the witnesses.'



## **V. BHARATIYA SAKSHYA ADHINIYAM, 2023**

Bharatiya Sakshya Adhiniyam places electronic evidence on equal footing with traditional documentation for admissibility. The definitions of ‘evidence’ and ‘documents’ are expanded under the new law which include futuristic elements like server logs, location evidences and digital voice messages and to also include electronic or digital Records.<sup>19</sup>

Bharatiya Sakshya Adhiniyam, 2023 transforms the law of evidence, making electronic evidence as equal to physical evidence in courts of law. Under Section 57 of the act, it mentions about primary evidence to include electronic records also.<sup>20</sup> The most pertinent modification in the new law, in contrast to the Indian Evidence Act of 1872, is the acknowledgment of the evidentiary nature and the admissibility of electronic evidence. The proposed amendments broaden the definition of primary evidence to encompass copies of electronic or digital files.<sup>21</sup> The Act outlines comprehensive regulations for handling digital evidence, ensuring that it is collected, stored and presented in a manner that guarantees the authenticity of the disputed electronic documents. To minimize the chances of data violations, the legislation mandates the use of secure methods for the collection and storage of digital evidence.<sup>22</sup>

The standards for consideration into process of electronic records as outlined in Sections 57 and 63 of the Act are explicitly stated within the legislation. This provision is akin to Section 65B of the previous Evidence Act. Section 63 of the Bharatiya Sakshya Adhiniyam establishes a clear procedure for the acceptance of electronic records.<sup>23</sup> According to the Act, digital records will now possess the same ‘legal effect, validity and enforceability’ as physical documents as per the New Evidence Act.<sup>24</sup> Moreover, electronic communications will also be regarded as documents since these records consist of data that is saved, recorded, or reproduced in the memory of the relevant communicating device.<sup>25</sup> It seems from the

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<sup>19</sup> Bharatiya Sakshya Adhiniyam, 2023 (Act 47 of 2023), s 2(d).

<sup>20</sup> Bharatiya Sakshya Adhiniyam, 2023 (Act 47 of 2023), s 57, Explanation 4: ‘Where an electronic or digital record is created or stored and such storage occurs simultaneously or sequentially in multiple files, each such file is primary evidence.’

<sup>21</sup> Ibid.

<sup>22</sup> Bharatiya Sakshya Adhiniyam, 2023 (Act 47 of 2023), s 86, Presumption as to Electronic Records and Electronic Signatures.

<sup>23</sup> Bharatiya Sakshya Adhiniyam, 2023 (Act 47 of 2023), s 63, Admissibility of Electronic Records.

<sup>24</sup> Bharatiya Sakshya Adhiniyam, 2023 (Act 47 of 2023), s 61: ‘Nothing in this Adhiniyam shall apply to deny the admissibility of an electronic or digital record in the evidence on the ground that it is an electronic or digital record and such record shall, subject to section 63, have the same legal effect, validity and enforceability as other document.’

<sup>25</sup> Bharatiya Sakshya Adhiniyam, 2023 (Act 47 of 2023), s 63(1): ‘...any information contained in an electronic record which is printed on paper, stored, recorded or copied in optical or magnetic media or semiconductor memory which is produced by a computer or any communication device or otherwise stored, recorded or copied in any electronic form (hereinafter referred to as the computer output) shall be deemed to be also a document...’

language of the provision that electronic documents may serve as primary evidence. Section 63(4) of the Act stipulates that certificates must be provided by an expert and the individual responsible for the computer or communication device to ensure the authenticity of any electronic evidence. The central government designates the expert referred to in this provision, who is intended to be impartial and free from external influences. In addition, having qualified forensic professionals available will be essential for the swift verification of electronic evidence. It will also be crucial to meet the administrative requirements within laboratories to address the backlog in evidence processing, particularly in areas like DNA profiling and cyber forensics. Resolving these issues is vital, as they could lead to prolonged trials in serious cases.

## **VI. EXPLORING TECHNOLOGY FOR FUTURE CRIMINAL LAW REFORMS**

The process of implementing the new criminal laws is intricate and demands careful planning and cooperation from multiple stakeholders. The E-Sakshya app<sup>26</sup> is one of the digital solutions that the Ministry of Home Affairs has tested proactively to expedite the implementation process. This software helps law enforcement agencies by allowing them to record crime scenes, carry out searches and seizures linked to criminal cases and transfer the resulting files to a cloud-based platform. The police officer has to upload a selfie after the procedure is complete. Each recording will be no longer than four minutes and several of these files are to be uploaded for each FIR, according to the information provided with state police stations. These technologies can be used to automate routine procedures and analyze huge quantities of data, which can improve the effectiveness of criminal investigations. But it is also crucial to make sure that artificial intelligence systems are impartial, transparent and devoid of prejudices.

The Ministry of Home Affairs has stressed how crucial it is to implement such technology in a way that it preserves lawfulness and protects privacy of individuals.<sup>27</sup> To safeguard digital records and data obtained during criminal investigations, strong encryption and other security measures should be maintained in place to stop unlawful access of data and its breaches. Moreover, data protection against emerging threats can be guaranteed by routine audits and security protocol upgrades. To reduce risks connected with improper use of digital tools, law enforcement officials should get training on cyber security and data privacy practices. This will guarantee the privacy concerns that are incorporated into criminal investigations at each

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<sup>26</sup> Press Information Bureau, <<https://pib.gov.in/PressReleaseIframePage.aspx?PRID=2041322>> accessed 09 September 2024.

<sup>27</sup> Information Security Best Practices, 2019, rule 4.

stage.

### **DNA Profiling**

DNA profiling, also known as DNA analysis, inspects DNA found in materials like hair, saliva, and sperm to determine if it can be linked to samples from a specific individual. DNA analysis has increasingly become a standard form of evidence in criminal cases.<sup>28</sup> It is also frequently utilized in civil matters, especially in cases that require the establishment of paternity or identity. The use of DNA evidence in criminal trials nationwide is rising, aiding in both exonerating individuals wrongfully accused and securing convictions. In murder investigations, forensic specialists in the United States apply sophisticated DNA analysis methods to connect genetic information and biometrics collected at crime scenes with potential suspects. When DNA is identified at a crime scene, it serves as a remarkably precise type of biological evidence. It can associate suspects with both crime scenes and criminal acts. In some cases, DNA can also assist in exonerating those who have been wrongfully accused of crimes. To ensure its reliability and gain court acceptance, DNA evidence must always be meticulously and accurately collected, preserved and documented.<sup>29</sup>

The fundamental rights of an individual, including the right to privacy and the right against self-incrimination, are crucial. These rights are being threatened by advancements in DNA technology, prompting courts to routinely scrutinize the investigative processes before accepting evidence based on DNA analysis. Article 21 of the Indian Constitution ensures the right to life and personal liberty, encompassing the right to privacy.<sup>30</sup> An accused individual in a criminal proceeding is safeguarded from providing evidence against them or any evidence that may lead to their conviction under the right against self-incrimination as stated in Article 20(3).<sup>31</sup> However, the right to life and personal liberty is not absolute, as the Supreme Court has consistently ruled in numerous cases.<sup>32</sup>

### **Use of Artificial Intelligence**

Artificial intelligence is gradually becoming a useful tool for checking illegal activities and punishing offenders. It is no longer a technology that is disregarded because of its demerits

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<sup>28</sup> Dr. Nirpat Patel and others, 'The Role of DNA in Criminal Investigation – Admissibility in Indian Legal System and Future Perspectives' (2013) 2(7) *International Journal of Humanities and Social Science Invention*, <[https://www.ijhssi.org/papers/v2\(7\)/Version-3/C0273015021.pdf](https://www.ijhssi.org/papers/v2(7)/Version-3/C0273015021.pdf)> accessed 10 September 2024.

<sup>29</sup> Naomi Elster, 'How Forensic DNA Evidence Can Lead to Wrongful Convictions' (2017) *JSTOR* <<https://daily.jstor.org/forensic-dna-evidence-can-lead-wrongful-convictions/>> accessed 10 September 2024.

<sup>30</sup> Justice K.S. Puttaswamy v. Union of India, (2017) 10 SCC 1.

<sup>31</sup> The Constitution of India, 1950, art 20(3): No person accused of any offence shall be compelled to be a witness against himself.

<sup>32</sup> Maneka Gandhi v. Union of India, AIR 1978 SC 597.

rather the technology is being accepted due to its innumerable advantages. It is one of the most advanced techniques that are being used by law enforcement agencies worldwide to deter crime. One method being used for maintaining public order is facial recognition, which is being extensively used in a number of areas. Additionally, AI is rapidly emerging as a key to fraud detection<sup>33</sup> technology. Big E-Commerce businesses<sup>34</sup> are relying on AI to prevent fraudulent attempts to get access to huge data of individuals by identifying unusual behaviors and patterns to keep the data safe from breaches.

Technology using advanced form of biometrics and facial recognition software with the artificial intelligence can be used to match faces to images accumulated within huge databases. This can prove as groundbreaking achievement of fraud detection and prevention. However, it must also be noted that in most of the scenarios these kinds of surveillance practices are found infringing of the peoples' right to privacy.<sup>35</sup> Therefore, clear rules and guidelines must be framed to regulate the use of Artificial Intelligence into criminal justice system before providing huge and sensitive databases of individuals to the service providers.

Artificial Intelligence has been an important tool for identification which has helped to identify over 17,000 children who had fallen victim to sex trafficking. This has resulted in a 63% reduction in the investigation time.<sup>36</sup> It is also to be mentioned that the intrinsic boundaries of such laws must preserve the harmonious balance between search and seizure powers of the investigative bodies and right of individual privacy rights stood at the cornerstone of a fair and just society.

## VII. CONCLUSION

The new criminal laws have transformed the countries legal framework into the modern age. However, it is also said that with every right, there comes great responsibility. Every single technological inclusion brought under the new criminal laws has in some form or other concerns such an important right of an individual that is the right to privacy. It is further upon the courts to apply tests of proportionality with respect to arbitrary search and seizures that go

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<sup>33</sup> Christopher Rigano, 'Using Artificial Intelligence to Address Criminal Justice Needs' (2019) NIJ 280 <<https://www.ojp.gov/pdffiles1/nij/252038.pdf>> accessed 01 September 2024.

<sup>34</sup> Eric Knorr, 'How PayPal Beats the Bad Guys with Machine Learning' (Ahead of the Curve, InfoWorld April 13, 2015) <<https://www.infoworld.com/article/2237179/how-paypal-reduces-fraud-with-machine-learning.html>> accessed 02 September 2024.

<sup>35</sup> B. Goold, 'Privacy rights and public spaces: CCTV and the problem of the unobservable observer' (2002) 21(1) Criminal Justice Ethics <<https://www.tandfonline.com/doi/abs/10.1080/0731129X.2002.9992113>> accessed 02 September 2024.

<sup>36</sup> January Contreras & Katherine Chon, 'Technology's Complicated Relationship with Human Trafficking' (Family Room Blog, 28 July 2022) <<https://www.acf.hhs.gov/blog/2022/07/technologys-complicated-relationship-human-trafficking>> accessed 03 September 2024.

against the facets of fundamental right to privacy and the immunity against self incrimination to a person. Strict procedural and regulatory guidelines need to be passed by appropriate authorities to check the extent, duration and procedure of which data can be accessed and impugned devices can be confiscated in custody.

The prevalent issues of ambiguity has been tried to be addressed with the wordings of the new laws as they have been made simple, concise and easy to understand for the general public. However, there is a significant enhancement in the discretionary powers given to the police officials under the new laws with respect to registering of FIRs for non-cognizable offences after conducting preliminary inquiry, attachment of property and arresting without a warrant. Adequate guidelines need to be promulgated to prevent the abuse of power on the discretion that has been granted under new criminal laws.

The aspect of inclusion of technology in the new criminal laws will reform the criminal justice system of the nation. It must also be said that the State has now a greater obligation to protect personal information of individuals rather than granting a right to its officers to access it. Since the State must be held accountable for any electronic records or devices in the custody of the Police, it is also for the courts to check, whether the provisions of the new data protection act<sup>37</sup> will be safeguarding the rights of individuals in cases of arbitrary use of the provisions of new criminal laws.

The advancements in India's criminal justice system also pose significant challenges, particularly concerning data privacy and the safeguarding of individual rights. The heightened accessibility of digital data to law enforcement agencies increases the risk of potential misuse of such sensitive data. Cybercrime and digital fraud often have international dimensions, necessitating global coordination and collaboration. India needs to work together with other countries and international entities to establish more robust anti-cybercrime regulations.

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<sup>37</sup> Digital Personal Data Protection Act, 2023, s 17, Exemptions.