INTERNATIONAL JOURNAL FOR LEGAL RESEARCH AND ANALYSIS

Open Access, Refereed Journal Multi Disciplinary
Peer Reviewed

www.ijlra.com

 ISSN: 2582-6433

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 ISSN: 2582-6433

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 ISSN: 2582-6433

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ISSN: 2582-6433

BALANCING THE RIGHT TO PRIVACY AND THE ADMISSIBILITY OF FORENSIC EVIDENCE: A CONSTITUTIONAL AND LEGAL INQUIRY

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Abstract

The evolution of forensic science has significantly enhanced criminal justice mechanisms worldwide. However, its rapid integration with law enforcement tools poses grave challenges to individual liberties, particularly the right to privacy. This article explores the constitutional foundations of the right to privacy in India, with a focus on its implications for the admissibility of forensic evidence in legal proceedings. It critically analyzes judicial pronouncements, statutory frameworks, and international standards to assess whether India's current legal system offers sufficient safeguards against the misuse of scientific evidence. The study advocates for a balanced legal architecture that upholds the rule of law while protecting civil liberties in the age of technological advancement.

Keywords:
Right to Privacy, Forensic Evidence, Indian Constitution, Criminal Justice, DNA Profiling, Judicial Review, Admissibility, Surveillance, Digital Forensics

1. Introduction

In contemporary legal systems, the administration of justice increasingly relies on scientific methods. The use of forensic evidence such as DNA profiling, biometric data, and digital trails has significantly improved the accuracy and efficiency of criminal investigations and prosecutions. While this development is a boon for law enforcement, it simultaneously raises critical concerns regarding individual liberties—especially the right to privacy. The tension between the need for accurate, scientific evidence and the protection of fundamental rights has sparked considerable debate among legal scholars, policymakers, and human rights advocates.

 ISSN: 2582-6433

The landmark judgment in Justice K.S. Puttaswamy v. Union of India[1] has entrenched the right to privacy as a fundamental right under the Indian Constitution. This development necessitates a re-evaluation of existing forensic practices and their admissibility in courts. This article delves into the complex interplay between privacy and forensic science, critically assessing how Indian laws and judicial interpretations have evolved to manage this delicate balance.

2. The Right to Privacy: Constitutional Foundations

2.1 Evolution in Indian Jurisprudence

The Indian Constitution does not explicitly mention the right to privacy. However, through judicial interpretation, the Supreme Court has progressively recognized it as an integral part of Article 21, which guarantees the right to life and personal liberty. The journey began with Kharak Singh v. State of U.P. (1962)[2], where the Court struck down unauthorized police surveillance practices, albeit without a firm declaration of privacy as a fundamental right. Subsequent decisions, such as Govind v. State of M.P. (1975)f[3], acknowledged a limited form of privacy, subject to reasonable restrictions.

The jurisprudential milestone was reached in R. Rajagopal v. State of Tamil Nadu (1994)[4], where the Court recognized the right to be left alone, especially from unauthorized media intrusion. The definitive affirmation came in Justice K.S. Puttaswamy v. Union of India (2017), where a nine-judge bench unanimously held that privacy is a fundamental right derived from Articles 14, 19, and 21. This decision laid the groundwork for evaluating state actions, including forensic practices, through the lens of legality, necessity, and proportionality.

2.2 Dimensions of Privacy

The Puttaswamy judgment outlined privacy as a multi-faceted right encompassing bodily integrity, informational privacy, and decisional autonomy.[5] Bodily privacy pertains to the sanctity of one's physical self, which is directly implicated in procedures like DNA sampling or fingerprinting. Informational privacy relates to the control individuals exercise over their personal and digital data, a domain increasingly vulnerable in the age of digital forensics. Decisional autonomy refers to the right to make personal life choices without undue

[1] Justice K.S. Puttaswamy v. Union of India, (2017) 10 SCC 1.
[2] Kharak Singh v. State of U.P., AIR 1963 SC 1295.
[3] Govind v. State of M.P., (1975) 2 SCC 148.
[4] R. Rajagopal v. State of Tamil Nadu, (1994) 6 SCC 632.
[5] Bhatia, G. (2018). *The Transformative Constitution: A Radical Biography in Nine Acts*. HarperCollins.

 ISSN: 2582-6433

interference. These dimensions offer a comprehensive framework for evaluating the constitutional validity of forensic evidence collection and use.

3. The Forensic Paradigm in Criminal Justice

3.1 Types and Relevance

Forensic evidence encompasses a broad array of scientific techniques employed in criminal investigations. This includes DNA profiling, fingerprint and handwriting analysis, voice recognition, ballistics, toxicology, and increasingly, digital forensics.[6] Such evidence is valued for its perceived objectivity and accuracy in linking suspects to crimes, reconstructing events, and corroborating witness testimonies.

However, the process of obtaining this evidence often involves intrusion into personal spheres, either by collecting bodily samples or accessing private digital communications. As the state harnesses scientific tools for law enforcement, concerns about the erosion of civil liberties become pressing. Balancing effective investigation with the protection of individual rights is thus a critical legal challenge.

3.2 Legal Reliance on Forensics

Indian courts have progressively acknowledged the value of forensic evidence, often treating it as a critical component in establishing guilt or innocence. The Indian Evidence Act, 1872, particularly Sections 45 to 51[7], permits expert testimony on matters requiring specialized knowledge. Nonetheless, the courts have also underscored the need for such evidence to be collected and presented in a legally permissible manner. The integrity of the collection process—especially whether it respects constitutional guarantees—is vital in determining admissibility.

4. Admissibility of Forensic Evidence: Legal Standards

4.1 Relevance and Reliability

Admissibility under the Indian Evidence Act depends on the relevance and reliability of the evidence. Relevance pertains to whether the evidence makes a fact in issue more or less probable. Reliability concerns the method and legality of evidence collection. Evidence

[6] Houck, M. M. (2015). *Forensic science: Modern methods of solving crime*. Praeger.
[7] Indian Evidence Act, 1872, Sections 45–51 & 65B.

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obtained in violation of procedural or constitutional safeguards may be excluded or its probative value diminished.

Forensic evidence must not only be scientifically sound but also collected in accordance with due process. The courts are tasked with ensuring that evidence, particularly that which intrudes on privacy, is scrutinized for legality and proportionality before being admitted.

4.2 Digital Evidence and Section 65B

The proliferation of digital technology has rendered digital evidence—emails, messages, surveillance footage—central to many criminal cases. Section 65B of the Indian Evidence Act governs the admissibility of electronic records. The Supreme Court in Anvar P.V. v. P.K. Basheer (2014)[8] held that such records require certification to be admissible. This underscores the importance of authenticating digital evidence to preserve its integrity and ensure it has not been tampered with.

4.3 Judicial Oversight

Indian jurisprudence has laid down critical precedents in limiting invasive forensic practices. In Selvi v. State of Karnataka (2010)[9], the Supreme Court held that narcoanalysis, polygraph tests, and brain mapping conducted without consent are unconstitutional. Similarly, the judgment in State of Bombay v. Kathi Kalu Oghad (1962)[10] differentiated between physical and testimonial evidence, ruling that compelling an accused to give fingerprints or handwriting samples does not violate Article 20(3). These decisions illustrate the judiciary's role in delineating the permissible boundaries of forensic investigation.

5. Privacy Intrusions in Forensic Practices

5.1 DNA Profiling

DNA profiling is among the most reliable forensic tools, capable of identifying individuals with near-certainty. However, it involves collecting genetic material that can reveal deeply personal information, including medical history and familial relationships. The DNA Technology (Use and Application) Regulation Bill, 2019[11], seeks to institutionalize the use of

[8] Anvar P.V. v. P.K. Basheer, (2014) 10 SCC 473.
[9] Selvi v. State of Karnataka, (2010) 7 SCC 263.
[10] State of Bombay v. Kathi Kalu Oghad, AIR 1961 SC 1808.
[11] DNA Technology (Use and Application) Regulation Bill, 2019.

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DNA data for criminal investigations. Critics argue that the bill lacks robust privacy safeguards, such as explicit consent requirements, limits on data retention, and independent oversight.

The absence of detailed procedural safeguards raises concerns about misuse, data breaches, and unjustified inclusion of individuals in forensic databases. Without a comprehensive legal framework governing collection, storage, and usage, DNA profiling may infringe upon bodily and informational privacy.

5.2 Digital Surveillance and Metadata Analysis

In an era where individuals generate vast digital footprints, law enforcement agencies increasingly resort to digital surveillance and metadata analysis. These practices involve accessing emails, social media activity, browsing history, and encrypted communications. Section 69 of the Information Technology Act, 2000[12], permits government agencies to intercept and monitor digital communications in the interest of national security or public order. However, the law lacks detailed procedural safeguards or provisions for judicial oversight.

The Supreme Court in Anuradha Bhasin v. Union of India (2020)[13] emphasized the need for proportionality and transparency in restrictions involving digital rights. Blanket surveillance without adequate checks threatens informational privacy and creates a chilling effect on free expression.

6. Consent, Compulsion, and the Constitution

6.1 Consent in Evidence Collection

Consent plays a crucial role in determining the legality of forensic evidence collection. While courts have generally held that non-testimonial physical evidence such as fingerprints or photographs can be collected without consent, the same does not hold for invasive procedures.f[14] Blood samples, DNA swabs, and other bodily intrusions require statutory authorization and must meet constitutional tests of legality and proportionality.

The principle of informed consent ensures that individuals are not subjected to coercive or involuntary procedures. Investigative practices must be guided by respect for bodily autonomy and due process, particularly when the evidence sought has the potential to infringe on fundamental rights.

[12] Information Technology Act, 2000, Section 69.
[13] Anuradha Bhasin v. Union of India, (2020) 3 SCC 637.
[14] Gautam Bhatia (2017). "Privacy and the Body." *Indian Constitutional Law and Philosophy* Blog.

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6.2 Testimonial Compulsion and Article 20(3)

Article 20(3) of the Indian Constitution provides that no person accused of an offence shall be compelled to be a witness against themselves. This protection extends to testimonial evidence but not to physical evidence. In the Selvi case, the Supreme Court clarified that involuntary techniques such as narcoanalysis or brain mapping involve testimonial compulsion and thus violate Article 20(3).

However, non-invasive forensic methods, if collected within the bounds of due process, are considered constitutionally valid. The challenge lies in ensuring that the collection process is free from coercion and adheres to the principles of fairness and legality.

7. International Norms and Comparative Law

7.1 United States

In the United States, the Fourth Amendment protects individuals from unreasonable searches and seizures. The Supreme Court, in Riley v. California (2014)[15], held that accessing digital content on a phone without a warrant constitutes an unconstitutional search. Conversely, in Maryland v. King (2013)[16], the Court upheld the collection of DNA samples from arrestees as a legitimate identification tool. These decisions reflect an attempt to balance investigative needs with constitutional safeguards.

7.2 United Kingdom and ECHR

The European Court of Human Rights, in S and Marper v. United Kingdom (2008)[17], ruled that indefinite retention of DNA samples from unconvicted individuals violates Article 8 of the European Convention on Human Rights. Following this, the UK enacted the Protection of Freedoms Act, 2012, which introduced stricter controls on DNA databases and retention practices.

7.3 European Union

The European Union's General Data Protection Regulation (GDPR)[18] treats biometric and genetic data as sensitive information, necessitating explicit consent for processing. The Law

[15] Riley v. California, 573 U.S. 373 (2014).
[16] Maryland v. King, 569 U.S. 435 (2013).
[17] S and Marper v. United Kingdom, App. Nos. 30562/04 and 30566/04, ECHR (2008).
[18] European Union. (2016). General Data Protection Regulation (GDPR).

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Enforcement Directive[19] further mandates data protection by design in criminal justice systems, ensuring that privacy remains a foundational consideration in forensic practices.

8. Technological Developments and Emerging Concerns

8.1 AI and Predictive Policing

Artificial Intelligence (AI) tools are increasingly used in predictive policing, suspect profiling, and behavioral analysis[20]. While these technologies offer efficiency gains, they also raise concerns about algorithmic bias, lack of transparency, and over-reliance on machine-generated data. The risk of disproportionately targeting marginalized communities necessitates stringent oversight and human review mechanisms to prevent misuse.

8.2 Cloud Storage and Jurisdiction

With data often stored on servers across multiple jurisdictions, accessing cloud-based digital evidence presents legal challenges.[21] The absence of robust Mutual Legal Assistance Treaties (MLATs) and jurisdictional ambiguities complicate investigations and raise questions about the admissibility of such evidence in court. Clear international protocols are needed to ensure that evidence obtained from cloud storage respects sovereignty and individual rights.

9. Need for a Comprehensive Forensic Law

9.1 Legislative Reforms

India urgently requires a comprehensive forensic law that outlines procedures for evidence collection, establishes thresholds for admissibility, and safeguards privacy. Such legislation must incorporate the principles laid down in Puttaswamy, including legality, necessity, and proportionality. The law should also provide for grievance redressal, independent oversight, and periodic review.

9.2 Institutional Framework

The establishment of an independent forensic regulatory authority would ensure accreditation of laboratories, standardization of procedures, and regular audits.[22] Institutional safeguards can

[19] Directive (EU) 2016/680 of the European Parliament and of the Council (Law Enforcement Directive).
[20] Ferguson, A. G. (2017). *The Rise of Big Data Policing: Surveillance, Race, and the Future of Law Enforcement*. NYU Press.
[21] Swire, P., & Hemmings, J. (2019). *Mutual Legal Assistance in an Era of Globalized Communications: The Analogy to the Visa Waiver Program*. NYU Journal of International Law & Politics, 50(2), 469–552.
[22] National Human Rights Commission of India. (2019). *Discussion Paper on Forensic Justice in India*.

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prevent the manipulation or misuse of forensic evidence and enhance public trust in the justice system.

9.3 Privacy-by-Design in Investigation

Adopting privacy-by-design principles in investigative practices can help harmonize technological innovation with constitutional values. This includes anonymization, encryption, minimal data retention, and clear access protocols. Investigators should be trained to recognize privacy risks and implement privacy-preserving techniques.

10. Judicial Trends and the Road Ahead

Recent judicial decisions indicate an emerging consensus on the need to protect privacy without compromising justice. Courts are increasingly applying the proportionality test to assess whether investigative techniques infringe upon fundamental rights. There is also a growing insistence on the reliability and scientific validity of expert evidence.

Going forward, legal aid systems must be strengthened to inform accused persons about their rights concerning forensic procedures. Judicial academies and law enforcement agencies should be sensitized to evolving privacy norms and international standards. These measures can foster a balanced legal ecosystem that respects both justice and liberty.

11. Conclusion

The relationship between forensic science and the right to privacy is complex and evolving. While forensic evidence enhances the capacity of the state to uphold law and order, it must not come at the cost of constitutional liberties. As technological capabilities expand, the legal system must evolve to provide adequate safeguards against misuse.

The Indian legal framework must strike a careful balance—protecting individual rights while enabling effective criminal investigation. This requires clear legislation, independent oversight, and a commitment to constitutional principles. Only then can forensic science serve the cause of justice without eroding the foundational values of a democratic society.[23]

[23] Chandrachud, A. (2022). *Republic of Rhetoric: Free Speech and the Constitution of India*. Penguin Books.

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