



Jus Corpus Law Journal

Open Access Law Journal – Copyright © 2025 – ISSN 2582-7820

Editor-in-Chief – Prof. (Dr.) Rhishikesh Dave; Publisher – Ayush Pandey

This is an Open Access article distributed under the terms of the Creative Commons Attribution-Non-Commercial-Share Alike 4.0 International (CC-BY-NC-SA 4.0) License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium provided the original work is properly cited.

Science v Letter of Law: An Analysis of Current Judicial Trends in India

Sagar^a

^aAmity University, Noida, India

Received 28 February 2025; Accepted 28 March 2025; Published 31 March 2025

In the past decades, society has seen rapid technological advances that have allowed humans to attain a relaxed state of living. The impact of these advancements has penetrated judicial systems as well, the use of Information and Communication Technology (ICT) has become common in India, and techniques such as Digital Forensics and DNA Profiling are being accepted and implemented at a rapid pace. While drafters intend to arm the Indian Judiciary with the latest tools and technology to ensure reduced backlog, increased transparency, along with the ability to deal with complex legal questions that require in-depth analysis of scientific evidence, the same intent has not gained popularity with the judiciary. This paper explores the recent trends of judicial acceptance of scientific/ technological advancements and the challenges that are still present. The paper will also discuss the societal impact that these challenges pose and how they affect the overall perception of justice within the country.

Keywords: *justice, scientific evidence, technology, judiciary.*

INTRODUCTION

Humans have evolved at an exponentially fast pace, with the Stone Age spanning 2.5 million years¹ and ending around 3000 B.C., whereas the Industrial Revolution or the era of machines dawned upon humankind as early as the 1760s² and the first general-purpose computer was created around 1945³. In the context of India, we can observe that while society has been able to accept these rapid changes and adapt to them, not all societal machinery can evolve accordingly. One such machinery is the Indian Judicial System, which serves as the cornerstone for guiding the Indian population through complex legal and societal problems.

However, the Indian Judiciary has been undergoing significant changes through its increased integration of technology within its processes to enhance both the efficiency and credibility of justice being delivered⁴. This integration is not an abrupt phenomenon but has been an ongoing process⁵ that has recently brought with it noticeable changes. Globally, the use of technology has grown to the extent of using Artificial Intelligence AI to facilitate courts and judges⁶ in performing a majority of clerical tasks.

Indian judiciary has also accepted the use of ICT to facilitate court proceedings using videoconferencing, and electronic submission of evidence and achieved positive results.⁷ However, when it comes to the use of scientific evidence in the actual decision-making process, the Indian judiciary does not follow any consistent path and often delivers contradicting judgments. For the following discussion, we will be putting both medical evidence, electronic evidence, and technical evidence under the umbrella term of 'scientific evidence'.

¹ 'Stone Age' (*History*, 12 January 2018) <<https://www.history.com/topics/pre-history/stone-age>> accessed 10 February 2025

² 'Industrial Revolution Timeline' (*Britannica*) <<https://www.britannica.com/summary/Industrial-Revolution-Timeline>> accessed 10 February 2025

³ Timothy Williamson, 'History of Computers: A Brief Timeline' (*Live Science*, 22 December 2023) <<https://www.livescience.com/20718-computer-history.html>> accessed 10 February 2025

⁴ *Ibid*

⁵ Karen Eltis, 'The Judicial System in the Digital Age: Revisiting the Relationship between Privacy and Accessibility in the Cyber Context' (2011) 56(2) *McGill Law Journal* <<http://dx.doi.org/10.7202/1002368ar>> accessed 10 February 2025

⁶ 'AI and the Rule of Law: Capacity Building for Judicial Systems' (*UNESCO*) <<https://www.unesco.org/en/artificial-intelligence/rule-law/mooc-judges>> accessed 10 February 2025

⁷ *Ibid*

LEGISLATIVE MANDATE

Laws regarding the use of scientific evidence in courts can be found in criminal statutes and the IT Act, which frequently mention the use of scientific techniques and call for experts to corroborate them. Going through the statute book, the Code of Criminal Procedure (CrPC) can be referred to identify the instances of use of scientific testing during an investigation⁸. CrPC allowed for the inclusion of forensic, ballistic, biological, and chemical experts in the investigation process. These powers were further enhanced on the recommendations of the 185th Law Commission of India report that eventually led to the addition of Section 53A and 164A in CrPC to obtain samples not just from the scene of crime but from the accused and victim (in rape cases with consent of the victim) as well.

Although these provisions were limited to rape cases, they were nevertheless a major step in giving DNA evidence its much-awaited place in legislation. The Bhartiya Nagarik Suraksha Sanhita, 2023, also carries with it the principles laid down in the older legislations and makes it mandatory for the collection of forensic evidence by experts for offenses punishable by imprisonment of seven years or more⁹. However, the problem with such provisions is that while these provisions create a mandate for the collection of scientific evidence for specific offenses, they do not prevent the collection of scientific evidence in other cases, whereas the judiciary is more inclined not to refer to scientific evidence at all.¹⁰

To ensure that there is no misinterpretation of such provisions, additional provisions have been put in place to empower a magistrate to order a collection of scientific evidence from any person, even when the person in question has not been arrested.¹¹ To further facilitate the process and to save the time of the courts, scientific evidence can now be presented to the court directly through a report rather than an expert appearing for oral testimony in court.¹² These provisions lay sufficient groundwork for the judiciary to actively call for scientific evidence without

⁸ Code of Criminal Procedure 1973

⁹ Bhartiya Nagarik Suraksha Sanhita 2023, s 176(3)

¹⁰ Dr. Kusum Chauhan, 'Admissibility and Evidentiary Value of Scientific Evidence: Legislative and Judicial Approach in India' (2023) 8(1) International Journal for Research Trends and Innovation <<https://ijrti.org/papers/IJRTI2301024.pdf>> accessed 10 February 2025

¹¹ Bhartiya Nagarik Suraksha Sanhita 2023, s 349

¹² Bhartiya Nagarik Suraksha Sanhita 2023, s 329

negatively affecting the judicial process. The same benefit is also extended to witnesses to present their statements to police¹³ or to conduct Test Identification Parades (TIP)¹⁴ using Audio-Video recordings.

Going through the statute book, we find that the Indian Evidence Act.¹⁵ Provided for inclusion of scientific evidence through expert opinion as part and parcel of the decision-making process, and the same was sublimated in its latest counterpart, Bhartiya Sakshya Adhiniyam 2023¹⁶. These provisions call for experts to be made part of the judicial decision-making process by providing corroborating opinions to judges.¹⁷ Historically, it can be noted that even after providing an enabling provision, DNA testing as scientific evidence became part of the mainstream judicial process as late as 1989¹⁸.

In addition to these, we have multiple statutes that provide for provisions or processes that require scientific evidence to establish or corroborate offenses mentioned in those statutes, some of the examples are the Drugs and Cosmetics Act, 1940, The Medical Termination of Pregnancy Act 1971, Narcotic Drugs and Psychotropic Substances Act 1985, The Poison Act 1990 and The Information Technology Act 2000.

To further facilitate the investigation and the judicial process, the legislature has even come up with the DNA Technology (Use and Application) Bill, 2019, which, when passed, will allow for the collection, storage, and analysis of DNA samples and allow investigating agencies to put DNA profiling to use. This bill has, however, met with severe roadblocks in the form of privacy concerns, misuse concerns, and lack of adequate infrastructure and training within investigating agencies, and as observed by legal scholars, none of these objections is without merit¹⁹.

¹³ Bhartiya Nagarik Suraksha Sanhita 2023, s 180(3)

¹⁴ Bhartiya Nagarik Suraksha Sanhita 2023, s 54

¹⁵ Indian Evidence Act 1872, s 45

¹⁶ Bhartiya Sakshya Adhiniyam 2023

¹⁷ Shubham and Amritpal Kaur, 'A Comparative Analysis of Scientific Evidence in the Indian Evidence Act and the Bharatiya Sakshya Adhiniyam' (2024) 5(10) International Journal of Research Publication and Reviews <<https://ijrpr.com/uploads/V5ISSUE10/IJRPR34321.pdf>> accessed 10 February 2025

¹⁸ *Kunhiraman v Manoj II* (1991) 1 DMC 499

¹⁹ *Ibid*

JUDICIAL RESPONSE

While laws have been put in place to empower the judiciary to take advantage of scientific evidence and a new set of laws have been put into place that direct investigating agencies to collect scientific evidence in certain cases, none of these laws places any obligation on the judiciary to consider any scientific evidence.

From the investigation side, apart from the laws in place, other agencies are also implementing their guidelines to ensure the collection of forensic evidence.²⁰ However, the judicial stance toward the use of such scientific evidence has been lacklustre.²¹ The first hurdle towards judicial acceptance of scientific evidence has its foundation in the Constitution of India through the Right against self-incrimination.²² Though as early as 1962²³, it has been established that the collection of scientific evidence, in this case fingerprints, from the accused does not trigger the right against self-incrimination but the courts have still formed opinions where collection of scientific evidence, especially through invasive processes²⁴, still needs to be consented to by the person but when done under absolute orders of the court even the collection of the blood sample will not be considered violative of Article 20(3)²⁵.

Though there is no obligation on the courts to follow expert opinions due to their advisory nature,²⁶ courts have the duty to decide which expert opinion to consider in the presence of multiple alternatives.²⁷ Still, it has been observed that even in 2025, courts tend to avoid scientific evidence in favour of established principles of law²⁸. Notably in civil cases, the judiciary would only refer to scientific evidence when it supports the pre-existing notion of what the judge

²⁰ 'Delhi Police First Force to Make Collection of Forensic Evidence Mandatory' *The Hindu* (31 August 2022) <<https://www.thehindu.com/news/cities/Delhi/delhi-police-first-force-to-make-collection-of-forensic-evidence-mandatory/article65831296.ece>> accessed 12 February 2025

²¹ Poulomi Bhadra and Kanika Aggarwal, 'Judicial Gatekeeping of Scientific Evidence and Experts in Criminal Adjudications' (2021) 36 *Delhi Law Review* <<https://pure.jgu.edu.in/id/eprint/5696/1/Judicial%20Gatekeeping%20of%20Scientific%20Evidence%20and%20Experts%20in%20Criminal%20Adjudications.pdf>> accessed 12 February 2025

²² Constitution of India 1950, art 20(3)

²³ *State of Bombay v Kathi Kalu Oghad* (1962) 3 SCR 10

²⁴ *Selvi v State of Karnataka* (2010) 7 SCC 263

²⁵ *Swati Lodha v State of Rajasthan* (1999) 1 CrLJ 939

²⁶ *Malay Kumar Ganguly v Dr. Sukumar Mukherjee* (2009) 9 SCC 221

²⁷ *Baso Prasad and Ors v State of Bihar* (2006) 13 SCC 65

²⁸ *Ivan Rathinam v Milan Joseph* (2025) INSC 115

believes to be correct but if the scientific evidence leads to a finding contrary to the popular sentiment of justice among judges, then the party to the suit is denied the opportunity to even refer to such scientific evidence.

An example of this can be taken from the case of *Kunhiraman v Manoj*²⁹ where the court was more than content to refer to scientific evidence to establish the paternity of a child but when in the case of *Ivan Rathinam v Milan Joseph*³⁰ such scientific evidence would have challenged the archaic presumption under Section 112 of Indian Evidence Act, the court actively denied even the referral to scientific evidence. Under the guise of social morality³¹, courts have been actively denying the use of scientific evidence to establish truth³². While Article 51A(h) of the Constitution of India lays a Fundamental duty on its citizens to develop a scientific temper, the judicial scepticism in place due to a lack of scientific literacy always trumps, and the use of scientific evidence takes a backseat in civil cases³³.

As a matter of consolation, this situation is predominantly observed in civil cases only; when it comes to criminal cases, the courts have developed a streamlined approach. The courts give more weight to eyewitnesses than to scientific evidence.³⁴ But they don't outright reject the corroborative and advisory value of scientific evidence.³⁵ Due to this acceptance by courts, techniques such as footprinting³⁶, Graphology³⁷, DNA testing³⁸, Brain Mapping³⁹, Ballistic data⁴⁰, and digital documents⁴¹ have been utilised actively, albeit with some inconsistencies that

²⁹ *Kunhiraman v Manoj II* (1991) 1 DMC 499

³⁰ *Ivan Rathinam v Milan Joseph* (2025) INSC 115

³¹ *Yasu v Santh* (1975) 1 Ker Lt 533

³² *Kantidev v Poshiram* (2001) 5 SCC 311

³³ Sandhya Verma and Anjum Parvez, 'Institutional problems in the Indian judicial system relating to admissibility of scientific evidence: Causes and remedies' (2021) 6(2) IP International Journal of Forensic Medicine and Toxicological Sciences <<https://doi.org/10.18231/ijfmts.2021.011>> accessed 12 February 2025

³⁴ *State of Madhya Pradesh v Dharkole @ Govind Singh & Ors* (2005) 13 SCC 308

³⁵ *State of UP v Krishna Gopal* (1988) 4 SCC 302

³⁶ *Prtam Singh v State of Punjab* (1956) 1 CRI LJ 805

³⁷ *Ishawari Prasad v Mohd. Isa* (1963) 3 SCR 722

³⁸ *Krishna Kumar v State of Haryana* (2001) INSC 679

³⁹ *Ranjitsing Brahmajeetsing Sharma v State of Maharashtra* (2005) 1 CrLJ 2533 (S)

⁴⁰ *Ram Narain Singh v The State of Punjab* (1975) 1 SCR 27

⁴¹ *State (NCT of Delhi) v Navjot Sandhu* (2005) 11 SCC 600

do not affect the bigger picture. Even after these developments, we get cases such as *Anvar v P.K. Basheer*,⁴² where courts outright deny the admissibility of scientific evidence.

The use of scientific evidence as a whole has been met with a lot of scepticism, and its admission and reliability have been challenged in the court of law in various instances. The over-reliance on scientific evidence has been cautioned⁴³, however, it still retains its position overall as an indispensable tool⁴⁴.

CONCLUSION

While dealing with these observations and case laws, we can identify that the current approach of the legislature and the judiciary towards scientific evidence paves the path for a future where the judiciary will be actively utilising scientific evidence to corroborate its findings. While we frequently come across nuanced decisions, such as *Ivan Rathinam v Milan Joseph*,⁴⁵ where the court actively denies the use of scientific evidence in favour of established practices, we should avoid drawing hasty generalisations because of such independent observations.

The analysis of current trends, even after giving due regard to all nuances and weaknesses, provides us with an overview that courts are willing to balance scientific evidence with the current legal regime. Initiatives such as the E-courts project, the establishment of the National Forensic Science University, and emphasis on Audio-video inputs under new criminal laws promise a more consolidated place for scientific evidence in the judicial decision-making process. However, to achieve the same, we need to address challenges such as a lack of standardised guidelines, a lack of scientific literacy among judges, judicial scepticism, and the inherent unreliability of scientific evidence. While there is a need for more active acceptance of scientific evidence, there is also a need to avoid over-reliance on it. Tasked with the duty to find and maintain the balance between the two, the Judiciary and the Legislature have shown remarkable progress in creating a place for scientific evidence in the judicial landscape. The

⁴² *Anvar P.V. v P.K. Basheer* (2015) 10 SCC 473

⁴³ *Tomaso Bruno v State of Uttar Pradesh* (2015) 7 SCC 178

⁴⁴ Uma Maheswari, 'Medico-Legal Aspects in the Admissibility of Scientific Evidence' (2014) 1(8) International Journal of Innovative Science, Engineering & Technology <https://ijiset.com/v1s8/IJSET_V1_I8_01.pdf> accessed 12 February 2025

⁴⁵ *Ivan Rathinam v Milan Joseph* (2025) INSC 115

present laws and the present direction taken by the Indian judiciary are working on sorting the issues one at a time and effectively delivering justice to the population.