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A critical analysis of the role of forensic science in investigation under The Bharatiya Nagarik Suraksha Sanhita, 2023

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Abstract
The Bharatiya Nagarik Suraksha Sanhita, 2023 (BNSS) replaced the Code of Criminal Procedure, 1973 with effect from 1 July 2024 and, in doing so, moved forensic science from the margins of Indian criminal investigation to its centre. Under the old Code, whether a forensic team ever reached a crime scene depended largely on the discretion of the investigating officer and on what resources the district happened to have. The BNSS changes that default. Section 176(3) now requires a forensic expert to visit the scene and collect evidence in offences carrying a sentence of seven years or more, with the entire process to be videographed. Section 105 requires audio-video recording of search and seizure operations, and several other provisions push the investigative process toward greater reliance on scientific method, digital documentation and time-bound procedure. This paper examines these statutory changes, situates them against the older CrPC framework, reviews how courts have responded to the new requirements in the short period since the BNSS came into force, and considers the practical difficulties that stand between the text of the law and its implementation on the ground, particularly the shortage of forensic infrastructure and trained personnel. It concludes that while the BNSS represents a genuine legislative commitment to scientific investigation, its success will depend far more on capacity building than on the statute itself.

Keywords: Bharatiya Nagarik Suraksha Sanhita, forensic science, crime scene investigation, Section 176(3), chain of custody, criminal procedure, digital evidence

Introduction

Forensic science sits at the point where a crime scene stops being a scene of confusion and starts becoming a source of proof. Fingerprints, bloodstains, ballistic marks, DNA, digital trails left on a phone or a server — none of this speaks for itself. It has to be recognised, collected without contamination, preserved, tested, and then carried into a courtroom in a form a judge can rely on. For most of independent India's history, the law governing this process was the Code of Criminal Procedure, 1973 [3], a statute that said very little about forensic method and left the question of whether a scientific expert was ever called to a crime scene to the judgment, and often the convenience, of the investigating officer. That gap mattered. Indian criminal trials have repeatedly foundered not because the wrong person was accused but because the evidence against the right person was gathered carelessly, or not gathered at all. Delayed forensic examination, poorly sealed exhibits, contaminated samples and an absence of any real chain of custody have all featured, at one point or another, in appellate judgments explaining why a conviction could not stand. The Bharatiya Nagarik Suraksha Sanhita, 2023 [1], which came into force on 1 July 2024 and replaced the CrPC, was drafted with this history in view. Its Statement of Objects and Reasons speaks explicitly of bringing technology and forensic science into the investigative process, and several of its provisions — most notably Section 176(3) on the mandatory forensic visit to a crime scene, and Section 105 on the audio-video recording of search and seizure — give that intention statutory teeth. This paper looks at what the BNSS actually requires, how the new provisions differ from the CrPC position, and what the early judicial and administrative response suggests about their workability.

Objectives and Methodology

The paper sets out to:

1. trace the shift from a discretion-based to amandate-based approach to forensic investigation
2. in Indian criminal procedure;
3. examine the specific forensic and technology-related provisions of the BNSS and the
4. obligations they place on investigating officers;
5. review how courts have interpreted and appliedthese provisions in the period since the
6. BNSS came into force; and
7. identify the practical constraints that are likely toaffect implementation, and suggest

measures that could narrow the gap between statute and practice. The study is doctrinal. It relies on the text of the BNSS and the Bharatiya Sakshya Adhiniyam, 2023 [2], on reported and unreported case law decided after July 2024, and on secondary commentary published in law journals and legal news platforms. Given how recently the BNSS has come into force, the body of case law is still developing, and the analysis in Part 5 should be read as an account of early trends rather than settled doctrine.

From the CrPC to the BNSS: A Shift in Legislative Approach.

The CrPC did not ignore forensic evidence — provisions on medical examination of the accused and the victim, and on sending material to a forensic laboratory, existed in some

form. What it lacked was any requirement that a forensic expert actually attend the crime scene, and any consequence attached to the failure to do so. Whether a scene was preserved, whether an expert was called before or after it had been disturbed by curious onlookers and constables, was left almost entirely to local practice. In a country where the ratio of forensic personnel to police stations has historically been thin, discretion tended, in practice, to mean absence. The BNSS reframes this as an obligation rather than an option, at least for serious offences, and pairs the obligation with a documentation requirement — videography — designed to make non-compliance visible rather than something that simply disappears into an incomplete case diary. This is the central shift this paper is concerned with: not the introduction of forensic science to Indian criminal law, which was already present in a limited way, but its conversion from a discretionary good practice into a statutory duty.

The Statutory Framework

1. Section 176(3) — Mandatory Forensic Visit to the Crime Scene

Section 176 of the BNSS lays down the general procedure for investigation once an officer in charge of a police station suspects that an offence has been committed. Its third sub-section is the provision most directly concerned with forensic science. It requires that, on receipt of information relating to an offence punishable with imprisonment of seven years or more, the officer in charge shall cause a forensic expert to visit the crime scene to collect forensic evidence, and shall also cause the process to be videographed on a mobile phone or other electronic device. Where a state does not yet have the forensic facility needed for a particular kind of offence, the provision allows the state government to notify the use of a facility located in another state until its own capacity is developed. The provision is not open-ended in its commencement. States have up to five years from the date the BNSS came into force to notify the date from which this requirement will actually apply within their jurisdiction, which means the seven-year forensic mandate is being rolled out unevenly across the country rather than taking effect everywhere on a single day. Several commentators have pointed out that this phased structure was a practical concession to the uneven distribution of forensic laboratories and mobile forensic units across Indian states, but it also means the reform's full effect will only be visible some years after the BNSS itself came into force. Read narrowly, Section 176(3) applies only to offences crossing the seven-year threshold, which excludes a large share of ordinary crime. Read against its stated purpose, however, it signals a broader legislative expectation that forensic input should shape how an investigation is conducted from its earliest stage, not brought in as an afterthought once a chargesheet is already being prepared. Commentary on the provision has also connected it to the categories of offence — unnatural death, custodial death, and sexual offences among them — where the reliability of the initial forensic examination has historically had the greatest bearing on whether a case survives trial.

2. Section 105 — Audio-Video Recording of Search and Seizure

Section 105 requires that the process of conducting a search or taking possession of property under the relevant chapter, including preparation of the seizure list and the signing of that list by witnesses, be recorded through audio-video electronic means, preferably a mobile phone, and that the police officer forward the recording without delay to the District Magistrate, Sub-Divisional Magistrate or a Judicial Magistrate of the first class. A parallel obligation applies to search warrants under Section 185. The provision reorients the old CrPC model, which relied heavily on independent witnesses to vouch for the fairness of a search, toward a model of contemporaneous digital documentation. Courts examining the point have generally treated the requirement as mandatory rather than merely directory, and have suggested that a failure to comply, particularly where the recording is not forwarded to a magistrate, can weaken the evidentiary value of a recovery and count in an accused person's favour at the bail stage, though the degree of prejudice caused to the accused remains a relevant consideration. Practical difficulties have already surfaced in early commentary — insufficient phone storage and battery life in the field, uncertainty among investigating officers about whether footage later transferred to a memory card or pen drive still counts as primary evidence once its hash value has changed, and the absence of formal training on how to preserve the integrity of such recordings through the chain of custody.

3. Medical Examination, DNA Profiling and Chain of Custody

The BNSS carries forward and updates the CrPC's provisions on the medical examination of an accused person by a registered medical practitioner at the request of the investigating officer, including, where necessary, DNA profiling. Read together with Section 176(3), this creates a broader statutory expectation that biological evidence — whether from the person of the accused, the victim, or the crime scene itself — will be collected and preserved through a documented process rather than an informal one. The BNSS does not, however, resolve every question about how that chain of custody is to be maintained once material leaves the crime scene and travels through police custody to a forensic laboratory and eventually into court; that remains a matter substantially governed by departmental practice and, at the margins, by judicial interpretation.

4. Electronic and Digital Evidence

Alongside the forensic provisions in the BNSS itself, the Bharatiya Sakshya Adhiniyam, 2023 [2] — the statute that replaced the Indian Evidence Act, 1872 — governs the admissibility of electronic records. This is a live issue in Indian evidence law: the Supreme Court initially held, in State (NCT of Delhi) v. Navjot Sandhu, that electronic records could be admitted without the certificate required for secondary evidence, only for that position to be overturned in Anvar P.V. v. P.K. Basheer, which reinstated the certificate requirement for electronic evidence not produced in original form. The BSA carries this certification requirement forward, and its interaction with the BNSS's own push toward digital documentation — audio-video recordings of search and seizure, videographed forensic visits, chain-of-custody records for electronic devices — means investigating officers are now expected to generate a great deal more digital evidence than before, while also observing the formalities needed to make that evidence admissible.

5. Timelines and Institutional Obligations

Beyond the specifically forensic provisions, the BNSS introduces time limits that indirectly press investigating agencies toward faster and more organised use of forensic resources. Section 193, for instance, sets a two-month deadline for investigation in specified sexual and offences involving children, requires periodic progress updates to the informant or victim, and requires the chargesheet to record the sequence in which electronic devices were held in custody. None of this is forensic science in the narrow sense, but all of it depends on forensic and technical work being completed, and properly documented, within a defined window rather than at whatever pace suited the investigating officer.

Judicial Response

Because the BNSS has been in force only since July 2024, the body of case law interpreting its forensic provisions is still forming, but a few threads are already visible. The Kerala High Court, in Rollymol v. State of Kerala, commented favourably on the emphasis the BNSS places on the use of modern technology at every stage of a criminal proceeding, treating this as a deliberate and welcome legislative choice rather than an incidental feature of the new Code. On the search-and-seizure side, an Allahabad High Court bail order in late August 2024 treated the absence of any video recording of a seizure, and the failure to forward such a recording to a magistrate, as a factor weighing in favour of bail, on the basis that the prosecution record did not show compliance with Section 105. The broader pattern suggested by this early case law is that courts are inclined to treat the forensic and documentation requirements of the BNSS as substantive safeguards rather than empty formalities, while also recognising that non-compliance will not automatically be fatal to a prosecution in every case — much will depend on whether the accused can show actual prejudice, and whether other, independent evidence supports the recovery or the forensic finding in question. This mirrors the way Indian courts have historically approached procedural safeguards in search and seizure law more generally: a serious lapse can undermine the prosecution's case, but a technical or explainable gap need not.

The Significance of Forensic Science in the Investigative Process

The case for embedding forensic science more firmly into criminal investigation rests on a few connected ideas. First, physical and biological evidence is largely immune to the pressures that can distort testimonial evidence — a witness can be threatened, persuaded to forget, or simply mistaken, but a bloodstain or a fingerprint does not change its story under pressure, provided it has been properly preserved. Second, forensic evidence narrows the field of suspects and, just as importantly, helps rule people out, which matters as much for preventing wrongful convictions as it does for securing a correct one. Third, a documented, scientific process of collection is far harder to attack in cross-examination than an investigation built mainly on oral recollection, which tends to improve both the reliability of convictions and the speed with which contested facts can be resolved at trial. The BNSS's forensic and videography provisions are best understood as an attempt to make these benefits available as a matter of routine practice rather than of local initiative — to ensure that whether a case is investigated well no longer depends quite so heavily on which police station happened to receive the complaint.

Challenges in Implementation

The gap between what the BNSS requires and what Indian forensic infrastructure can currently deliver is the most obvious constraint on the reform. India's central and state forensic science laboratories have long carried more casework than their staffing allows, and mobile forensic units capable of reaching a crime scene within a useful window of time are unevenly distributed, with rural and remote districts particularly underserved. Section 176(3)'s own five-year window for state notification is, in effect, a legislative acknowledgment of this shortfall. A second difficulty concerns training. Requiring a search to be videographed, or a forensic visit to be recorded, does not by itself guarantee that the resulting material will be handled in a way that preserves its evidentiary value — investigating officers need clear guidance on storage, hashing, transfer and sealing of digital recordings, and at present this guidance is inconsistent across states and often absent altogether at the station level. A third difficulty is definitional and procedural rather than technological: the BNSS does not fully specify what happens when a forensic expert cannot reach a scene within a reasonable time, how a chain of custody is to be documented once material passes from an investigating officer to a laboratory and back, or how courts should weigh partial compliance against the interests of an accused person. These gaps are likely to be filled gradually through departmental standard operating procedures and through case law, but in the interim they create real uncertainty for investigating officers acting in good faith.

Suggestions

A few measures follow reasonably directly from the difficulties identified above:

- Expanding the number of functional forensic sciencelaboratories and mobile forensic units, with particular attention to districts currently without ready access to either, so that the phased rollout under Section 176(3) does not simply track existing inequalities in infrastructure.
- Developing a uniform, nationally applicable protocolfor the collection, hashing, storage and transfer of audio-video evidence gathered under Sections 105 and 176(3), so that the evidentiary value of such material does not depend on which state or district produced it.
- Building recurring training for investigating officerson forensic awareness and digital evidence handling, rather than treating this as a one-time orientation delivered when the BNSS first came into force.
- Strengthening coordination between investigatingagencies and forensic laboratories so that requests for examination and the return of results move within the time limits the BNSS otherwise imposes on investigation as a whole.
- Encouraging the appellate courts to develop clearerguidance, as cases under the BNSS begin

to reach them, on how the consequences of non-compliance with the forensic and videography requirements should be assessed, so that trial courts and investigating officers are not left to work this out case by case.

Conclusion

The Bharatiya Nagarik Suraksha Sanhita, 2023 [1] does something the Code of Criminal Procedure never quite managed: it turns forensic investigation from a matter of local practice and individual discretion into a statutory obligation, backed by a documentation requirement that is meant to make its own absence visible. Section 176(3) and Section 105, read together with the evidentiary framework of the Bharatiya Sakshya Adhiniyam, represent a genuine legislative attempt to make Indian criminal investigation more scientific, more transparent and more resistant to the kind of evidentiary failure that has undone prosecutions in the past. Whether that attempt succeeds will not be decided by the text of the statute but by what happens afterward — by how quickly forensic infrastructure is built out, how well investigating officers are trained to use the tools the law now requires of them, and how consistently courts hold agencies to the standards the BNSS has set. The early case law suggests courts are taking the new requirements seriously. The larger question, still open, is whether the institutions responsible for carrying them out can be brought up to the level the statute now expects of them.

References

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