

November 24, 2020

The Use and Abuse of Forensics

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There is little scientific evidence for widely used forensic tools like truth serums, lie detectors, and brain fingerprinting. Their continued use in India for investigating crime is a new form of torture.

In the recent Hathras rape case, the Uttar Pradesh government announced that narcoanalysis tests would be conducted not just on the accused, but even on the victim's family. While the media extensively reported various developments related to the investigation, strikingly absent was any discussion on whether narcoanalysis is a reliable technique or not.

The larger public has come to believe that narcoanalysis is a scientific technique to obtain the truth. This is based on its depiction in media, movies, television shows, and in fiction. The legitimacy of narcoanalysis is further reinforced by its extensive use. Between 1973 and 2014, the Central Forensic Science Laboratory at Ahmedabad administered these tests on over 11,500 suspects (86). The state machinery — including police, forensic psychologists, and forensic laboratories — have used these techniques in high-profile cases like the [counterfeiting of stamp paper](#) by Abdul Karim Telgi, the [2006 Mumbai local train bombings](#), and against alleged Naxalites like [Arun Ferreira](#). In the infamous [Aarushi-Hemraj](#) double murder case of 2008, [a campaign](#) to challenge the conviction of Aarushi's parents substantially drew on the results of narcoanalysis tests to claim them not guilty of murdering their teenage daughter and their house-help. (The tests seemed to implicate Hemraj's friends for the crime.) In 2017, the Allahabad High Court [overturned](#) the trial court's verdict and set the Talwars free.

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Contrary to the popular fascination with narcoanalysis, Jinee Lokaneeta demonstrates in *Truth Machines* that it is not only an unreliable technique, its application also often leads to moral, legal, and physical abuse of the people who undergo the test. *Truth Machines* tells the story of the rise and (mis)use of three key forensic techniques — narcoanalysis, lie detector, and brain fingerprinting — in India. It convincingly rips apart the myth of these “truth machines.”

Lokaneeta begins her book with the context in which these techniques were introduced in India: to replace the long-standing problem of torture or ‘third degree’, a well-known but officially unacknowledged practice associated with the Indian policing culture. In post-independent India, various governmental committees on police reforms expected that the practice of torture would disappear with the introduction of more scientific techniques of interrogation. To understand why this did not happen, a brief introduction to these techniques is needed.

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In narcoanalysis, sodium pentothal, also called truth serum, is injected into the body of a suspect. It is believed that under the influence of truth serum, the suspect would speak the truth. In a lie detector (or polygraph) test, the instrument is attached with the help of wires to the body of the person, and records physiological changes as s/he answers questions. These physiological responses — such as respiration, heart rate, blood pressure, and electrodermal activity — are interpreted by an examiner. The third technique, brain fingerprinting — and the Indian version of it called brain electrical oscillation signature — uses an electroencephalogram (EEG). Here, multiple electrodes are attached to the head of the suspect, who is shown audio-visual materials related to the investigated crime. Experts study the brain's responses to ascertain whether s/he was involved in the crime or not.

A new venue for torture

In an impressive survey, Lokaneeta shows that the reliability of these techniques has been questioned all over the world, especially in the United States where they originated. Drawing on her field-notes from India, she discusses several prominent cases in which the accused who underwent narcoanalysis tests were severely tortured in the process. For instance, one of the accused persons in the 2006

Mumbai local trains blast case told Lokaneeta that he was initially relieved that he would be able to prove his innocence through a narcoanalysis test. His experience was to the contrary. The forensic psychologist “misbehaved and slapped him twice before the test.” He was asked to say certain sentences before the camera. The psychologist threatened to give him an AIDS injection if he did not comply. During the test, she slapped him several times and pinched his left ear with pliers to force him to say specific words. She asked him seemingly illogical questions, like ‘what comes after six’, to which he replied “seven”. When the recording of the test was played back to him, he was shocked to find that he was depicted as responding “seven” to a question on how many bombs were prepared. The entire video had been edited to produce a narrative in which the accused self-implicated himself (151).

Lokaneeta’s work is loaded with several such studies. In short, narcoanalysis and the other forensic techniques did not end torture. Rather, the forensic laboratory emerged as a new venue for torture besides the dark prison cell. The role of the men in khaki is assumed by the men and women in white, the forensic psychologists, who often misuse their powers.

Why do these techniques continue to be in use if they have no scientific value? Lokaneeta believes that market forces have played a crucial role.

It is not just the application of these techniques which is a problem. Lokaneeta suggests that the techniques themselves are the problem. For instance, the truth serum can do major harm to the person in whose body it is injected. In fact, several police officers told Lokaneeta that much before the use of truth serum became a norm, they were already using drugs and other substances during interrogations. Further, as Lokaneeta discusses how a large number of scientific studies have refuted the validity of these techniques. They belong more to the fantasy world of the science-fiction than that of actual science.

The question is, why do these techniques continue to be in use if they have no scientific value? Lokaneeta believes that market forces have played a crucial role. Forensics is emerging as a huge global market and vested interests who want to sell their machines often back their sales pitches with questionable studies. For example, there is a huge market for brain fingerprinting, with just two firms involved in manufacturing and sales of these machines. Lokaneeta also shows that in the United States media and popular culture — and not scientific institutions — played a crucial role in lending credibility to these techniques. But while the influence of these forensic technologies has gradually waned in the US, in India they continue to thrive with the backing of the government.

Lokaneeta also brings up the legal complications involved in the use of these techniques. Against numerous complaints of violations, India’s National Human Rights’ Commission issued guidelines in 1999 on their use. The Commission noted that “the tests had been conducted under coercion and without informed consent, making them violations of the self-incrimination clause of [Article 20 \(3\)](#) of the Indian Constitution. Second, these techniques violated [Article 21](#) [...] which requires techniques of interrogation to be non-invasive” (85). The Commission argued that voluntary consent recorded in front of a judicial magistrate was a must for conducting such tests.

The accused rarely understand what would happen to them if they volunteered for such tests. In fact, in Indian police culture, there is a thin line dividing voluntary and involuntary use.

In 2010, the Supreme Court too “[declared](#) the *involuntary* use of polygraph, brain scanning and narcoanalysis unconstitutional.” The court noted that the compulsory administration of the techniques violated “the right against self-incrimination ... unjustified intrusion into mental privacy, and amount[ed] to cruel, inhuman or degrading treatment” (124). However, the Supreme Court did not question the relevance of the techniques themselves, and permitted their use if the accused consented to be tested.

But as Lokaneeta’s work suggests, the accused rarely understand what would happen to them if they volunteered for such tests. In fact, in Indian police culture, there is a thin line dividing voluntary and involuntary use of these techniques. All of this suggests that the judgment of the Supreme Court had a limited impact on the use and misuse of these techniques.

Conclusion

On the whole, *Truth Machines* is an impressive work. For her research, Lokaneeta has also interviewed policemen and forensic psychologists to understand their perceptions. Most police officers perceived these techniques emerging from the critique of police torture. As a retired police officer from Coorg told her: “narcoanalysis came; human rights came; we had to use very patient methods, very slow detection” (24). The forensic psychologists also told her that their techniques could eradicate the use of third degree and could protect innocents from being wrongly implicated.

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Lokaneeta has done a great service by bringing up such an important yet neglected matter to the academic world of India. The book, however, could have been a more focused exploration of forensic culture alone, as her forays into explaining conventional police violence have weakened it.

To sum up, there is an urgent need to discard these techniques; perhaps they should even be banned. Yet, governments in India continue to build and fund more laboratories equipped with these techniques; which suggests that their misuse is likely to continue. In fact, in a commentary on the Hathras case, Lokaneeta [argues](#) that the use of narcoanalysis tests would further victimise the Dalit woman’s family by publicly contesting their version.