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Itty Abraham

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The starting point for this article is the body made subject to the judicial gaze, mediated by forensic technologies. These are a specific set of technologies that seek to establish, simultaneously, the identity of the person under examination and the veracity of the statements being produced by these subjects. The imbrication of identity and truth-telling has a long history, dating back to the colonial courts, when both concerns were uppermost in the minds of judicial power. Who was the native in front of the court and was she telling the truth might be summed up as among the most pressing doubts facing colonial Indian jurisprudence. These concerns did not disappear with the onset of the sovereign state. Postcolonial justice has turned repeatedly to forensic technologies to establish identity and truth, even to the extent of finding it impossible to ban altogether techniques that in most jurisdictions are considered gross violations of the basic liberal injunction against self-incrimination.

The value of this exploration lies in its implications for refining our understanding of biopower (the meeting of disciplinary power and biopolitics) in non-Western settings (Foucault 2003, 48). Intersections of body, law, and technology offer a rich site for this exploration (and a valuable alternative to sexuality), while its location in colonial and postcolonial India permits an archeology of biopower that operated independently of better-known practices in western Europe. While colonial biopolitics began nearly two centuries ago with the first East India Company census in 1760, this state project has been intensified of late with access to new biometric technologies exemplified by the ongoing Universal Identification (UID) project or *Aadhar*. Drawing on insights from new media studies, especially the idea of the database and interface, this article argues that postcolonial biopower contingently positions individual rights and community standards within an *apparatus* that incorporates courts, legislatures, social movements, body parts, and forensic technologies (Foucault 1980, 1940–5).[1]

The apparatus does not claim to offer a complete map of society, unlike the database. Rather, it operates metonymically as an authorized representation of society and it is on this terrain that it acquires its larger political significance. The apparatus simulates particular visions of society: as a result, politics becomes the control of the apparatus, and through that, the instantiation of particular visions of society deemed normative. This is a non-trivial exercise in a country like India, where the concept of society (*samaj*) is so weakly articulated that a leading sociology text does not even include the term in its index (Deshpande 2004). Establishing one vision of society over another is politically powerful because both the law and politics constantly invoke and depend upon a stable

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conception of society in their articulation of institutional foundations including the public good, the social norm, and the national interest.[2]

Colonial Intersections: Body, Identity, Veracity

A convenient place to begin to discuss these issues is the account of the famous prince of Bhawal written up by Partha Chatterjee in '*A Princely Imposter?*' (Chatterjee 2002). In very brief summary: in late 1920 or early 1921, a *sannyasi* (wandering mendicant) appeared on a riverbank in Dhaka, now the capital of Bangladesh. He was "recognized" by locals as Ramendra Narayan Roy, the *kumar* (prince) of Bhawal, a large landed estate near Dhaka. The prince had contracted syphilis in 1909 and, following a brief illness, was said to have died in Darjeeling, a hill resort many hundreds of kilometers from Bhawal. Death rites had taken place in Darjeeling and he was supposed to have been cremated there, far from his family and estate. But Dhaka residents who saw and met the mysterious *sannyasi* a decade later were soon confident that he was in fact none other than the prince.

To cut a long and fascinating story very short, it soon transpired that this rumor had a great deal of popular support. The *sannyasi* appeared to have such an extensive knowledge of the Roy family, its history, and the estate that it was difficult to understand how anyone but the prince could have known these things. The Roy family and the government would however disagree with riverbank opinion and claim the *sannyasi* was nothing but an imposter. This case of contested identity would go to court, as the Bhawal estate was an extremely rich inheritance, and, over two decades later, end up in the Privy Council in London, colonial India's highest court of appeal. The Privy Council would eventually accept the *sannyasi*'s claim that he was in fact Ramendra Narayan Roy and the heir to the Bhawal estate. Two days after the judgment was communicated to Calcutta, in 1946, the *sannyasi/kumar* died of a heart attack.

On a number of occasions, as the case wended its long way through the courts, physical evidence would be introduced to establish the *sannyasi*'s bona fides. These claims would include the lightness of his skin, a scar on his left ankle, the color of his eyes, and marks on his body that appeared to be healed lesions caused by syphilis. While these factors were given some importance, they were not conclusive in the Privy Council's judgment. The Council's opinion rested on joining the nature of evidence with the interests of the witness or plaintiff in question. "What reason would person X have to lie?" became a more telling point in the separation of truth claims than the physical evidence offered in the plaintiff's favor. In other words, in order to settle the vexed case of the contested identity of the prince of Bhawal, corporeal identity was displaced in favor of imputed veracity; the quality of evidence – assessing the truth claims of witnesses in relation to their perceived interests – trumped somatic proof of physical identity.

One can see this displacement as a perennial problem for colonial governance, namely, the poverty of the colonial gaze. It was widely acknowledged, for example, that Europeans had great difficulty in telling natives apart. Herbert Hope Risley, the colonial ethnographer and editor of the *People of India* compendium would explain this problem in apparently scientific terms. He would authoritatively pronounce that the "range of variation" in Indian faces was "exceedingly small" (Singha 2000). Photography, when it first arrived on the colonial scene, should have been the answer but turned out to have an ambivalent response (Pinney 1998). Contemporary accounts report that the natives were apparently unable to distinguish one Indian face from another in photographs although the police, somehow less encumbered, soon began to use photographs of native criminals to track their movements across different jurisdictions. But the problem is larger than the lack of recognition.

Although I have juxtaposed the authentic identity of the native body against the representation of the native as always a potentially untrustworthy or dissembling subject, in fact identity and truth-telling were always jointly imbricated. The problem of "natives" fabricating identities of convenience, as the historian Radhika Singha has shown, had long plagued both Company and colonial state. She points to cases of "criminal" tribes passing themselves off as high castes, of Brahmins claiming they were agricultural workers, non-martial communities seeking admission to the Indian Army, and peasants being described to plantation overseers as Chotanagpur tribals (Singha 2000). It is no surprise to find Francis Galton, famous statistician and eugenicist, articulating a typically colonial solution (and language) when he proposed that:

> "[Fingerprinting] would be of continual good service in our tropical settlement, where the swarms of dark and yellow-skinned races...are grossly addicted to [im]personation and other varieties of fraudulent practice."(Singha 2000, 192)

If telling the natives apart was difficult enough, even for natives, the problem was compounded in the courtroom where the alleged habits of colonial mendacity made testimony under oath from both witness and accused always less persuasive than it might have been. The problem of separating judicial truth from parochial interests was compounded by the common practice of using "approvers" in criminal cases.

Approvers were criminal participant-observers who had gone over to the prosecutor's side – turning "King's" (or "Queen's") evidence – in the hope of judicial immunity. But as the historian Shahid Amin points out, to be an effective approver meant also implicating oneself in the crime(s) under examination. "The more the accused confessed the greater the justness of the punishment became...[and thereby] the better the chances of the [approver] being pardoned" (Amin 1987, 187). It is clear that this prosecutorial strategy was always fraught with tension. The final judgment had to walk the tightrope of not crossing the exceedingly fine line between accepting the reliability of evidence that clearly was given in order to exculpate one guilty subject while at the same time using this same speech to implicate others of these crimes. Establishing the true identity of the subject while also parsing her speech to extract probatory evidence could not be separated in a colonial judicial system that began from an essential and irrevocable distance between native and European (Mehta 1999).

Before technologically mediated forms of identification became commonplace, identification in the colonial courts had relied on personal memory – "I know this and remember that, hence it is me" – and social recognition – "she is the same person that I knew" – both oral discursive modes that struggled to overcome the prevailing representation of the mendacity of the native (Chatterjee 2002). With the advent of new forensic techniques, the "legible" body returned to the forefront of efforts to create an unimpeachable means to establishing identity (Anderson 2004). The native body had been in this position before. Back in the day of John Company, as indeed in contemporary Europe, Indians had often been tattooed and branded after being convicted of criminal offences as a way of preventing them from ever escaping this felonious past (Ginzburg and Davin 1980). A common practice among the police was to examine the backs of alleged criminals to see if marks of a lash were visible. If there were, it would prove that these were repeat offenders (Singha 2000).

If brands, tattoos, and lash marks were externally imposed proof of prior criminal behavior, from the 19th century onwards scientists began to search for physical signs of criminality from the "inside out." The starting points for the body as proof of identity were anthropometric techniques such as phrenology (Cole, 2001). Measuring and looking for telltale signs on the human skull, it was

believed, could tell an expert the true nature of a person and whether they were naturally predisposed to crime or other anti-social behaviors (Wagner 2010). Scientists such as the Italian Cesare Lambroso, founder of so-called positivist criminology, like many others of his time, believed that there was such a person as the criminal type. These were humans who had an inherent proclivity for criminal behavior, the signs of which could be observed and measured, particularly by the bumps on their head. Kavita Philip reminds us that a facility with anthropometric techniques had become a required skill for advancement in the Indian Police by the end of the 19th century (Philip 2004).

French criminologists like Alphonse Bertillon had been collecting reams of anthropometric data on convicted criminals with the intention of creating a universal register of criminals but struggled to make their system functional for everyday police work. In the 1860s, the colonial Indian magistrate William Herschel became suspicious at the number of Indians over the age of 100 who were collecting government pensions and began to collect pensioner fingerprints as a way of cutting down on fraud. It worked well but for all his efforts to popularize the practice, fingerprinting never really caught on during his term of service. It was only in the late 19th century that the ICS officer Edward Henry, who would go from India to South Africa and then on to Scotland Yard, established a functional system for using fingerprints to establish identity, with the help of his Indian colleagues (Breckenridge, 2008).

What was key to this successful "digitization" of personal identity, according to Chandok Sengoopta, was simplifying and speeding up the process of identification (Sengoopta 2003). What made the system work – and where the French had been less successful – were logistical innovations that combined consistency in the recording of information with ease of retrieval. The Bengal Police successfully developed an infrastructure of identification that anyone could learn and use, with records that could be stored safely and were portable, and where retrieval of information was relatively easy. If Edward Henry's personal prestige and standing took the fingerprint from imperial Calcutta to metropolitan London, the person most responsible for making the system functional in the first place was Henry's assistant, Aziz-ul-Haq, a graduate of Presidency College, along with his fellow native policeman and colleague, H. C. Bose (Cole, 2001).

Fingerprinting permitted confidence that impersonation was next to impossible, that individuals could not disguise their criminal pasts, and that accurate identification of persons would not be affected by the passage of time. As the case of the Kumar of Bhawal shows, however, what fingerprinting could *not* do was establish the identity of a person not already in the fingerprint registry. For fingerprinting to be used in order to identify any member of society, what was first required was a database that included all members of society, criminals and non-criminals, Europeans and natives, alike. While even the colonial judicial system drew the line at this prospect, the biopolitical fantasy of a national database that includes every person, resident or citizen has never gone away.

What needs to be stressed here is that long-standing colonial suspicions over the identity of the native would only be assuaged when that body was irrevocably marked or technologically reduced to a more compliant form. Tattoos, lashes, branding, head bumps and fingerprints became "bio-synecdochal" devices for establishing permanent criminal identities. Discrete body parts proved the criminality of the whole.

The Decomposed Body and Judicial Truth

The body as an unimpeachable source of judicial truth approaches its limit with the use of polygraphs, brain scans, and so-called narcoanalysis.[3] Polygraphs are lie detector tests, brain scans

involve measuring spikes in electrical activity in the brain during questioning and narcoanalysis – popularly known as the truth serum – involves placing the subject in a hypnotic state through the administration of drugs like sodium pentathol which lowers conscious resistance to questioning. What is common among these procedures are the means by which evidence is gathered. All three techniques gain their value by speaking directly to the body while bypassing the conscious (and hence potentially dissembling) mind. Based on the body's seemingly involuntary reactions to questions while confined to the apparatus of measurement, evidence is created and meaning inferred that adds to or diminishes the credibility of the judicial subject, whether witness or accused.

Indian law enforcement, with the support of the courts, took to these techniques with alacrity. Notwithstanding repeated concerns about the reliability of evidence drawn from these procedures, the police made it clear that refusing to be subjected to them is itself a sign if not of outright guilt then at the very least of suspicious behavior. A number of provincial High Courts supported the use of these methods, dismissing their lack of widespread scientific acceptance and arguing for them in the larger public interest. These courts have even argued that the use of these techniques is a humane advance over widely used "third degree" methods, historically commonplace in Indian police *thanas*.

In an alarming development, High Court judgments suggested that applying these techniques did not need voluntary and informed consent as no testimony was being offered; rather, evidence was being gathered. Speaking under the influence of drugs or having probes attached to the body that measure heart rates, perspiration, and brain activity fell under the category of physical evidence, the courts argued, not direct testimony. Just as taking fingerprints and other forms of physical evidence was well-established criminal investigation procedure that needed no consent, these controversial procedures were nothing more than new techniques of gathering physical evidence. Due process and informed consent only become relevant when direct testimony – oral speech – was being offered.

Disregard for the moment that there are verified physical risks involved in each of these techniques. It is also well established that the results of polygraph tests can be highly misleading. Trained respondents can alter their bodily responses to so-called control questions in such a way that what appears to be true or false is in fact the result of their manipulation of the apparatus. Others may, as a result of the physical and mental stresses of being subjected to these tests, find their responses leading to false positive results. Asking questions under a drug-induced hypnosis does not guarantee truthful answers. In fact what emerges from narcotic hypnosis – or from torture for that matter – can include all manner of information, some "useful", some incorrect, some imaginary, but now all potentially probative. The brain scan depends on inferences made during questioning through the observation of spikes in brain electrical activity at certain frequencies. Spikes are taken to imply prior knowledge of the event under question, but cannot determine how this information was obtained. Brain scans, in other words, cannot distinguish between an innocent citizen who has read about a terrorist attack in a newspaper and the criminal mastermind who carried it out. The apparent mendacity of the subject and the alleged skill of the technician are both in question during these tests, which is why courts around the world have thrown out brain scans, polygraphs and narcoanalysis as legal and reliable evidentiary techniques.

In their 2010 decision in *Selvi and others vs. Karnataka*, a three-justice bench of the Indian Supreme Court agreed with their international judicial peers and ruled that refusing to be subject to these invasive techniques was constitutionally protected.[4] Their judgment was based on the following arguments: that what emerged from the use of these techniques was in fact testimony, not physical evidence; since it was testimony, it required voluntary and informed consent before application; that

applying these techniques involuntarily was a denial both of the right to privacy (even though such a right is relatively weakly provided for in the Indian constitution) and the right against self-incrimination (a robust entitlement that lies at the heart of due process); hence, evidence gathered through these methods could not be used in court or to further an investigation. However, just as the votaries of liberal justice were raising a cheer, the justices added that *voluntary* application of these techniques remained permissible under the law. As long as testimony was given voluntarily, they wrote, the police could use any information obtained through these procedures to pursue their investigations.

In their judgment, the justices made clear that they were well aware of the unreliability of polygraphs, brain scans, and narcoanalysis as means to discovering evidence. In addition, they chose to apply a high standard of constitutional validity to deny the involuntary application of these techniques, notably Article 20(3) of the Indian Constitution, the right against self-incrimination. But as noted above, their decision was deeply ambivalent. On the one hand, the justices raised the bar against the use of these techniques even further by denying that they could ever be used in a legally valid way, on the other hand, they shifted the burden for their application to the judicial subject in the form of a voluntary decision, in effect leaving them in place. The most generous reading of this judgment is that the court was saying, "[W]e don't find these techniques reliable, but you can choose to use them if you think they will get you off…"

It is puzzling that the Supreme Court refused to ban the use of these techniques altogether while simultaneously acknowledging that they constituted "cruel, inhuman and degrading treatment" and also agreeing that investigating officials might pressure accused subjects to submit to one of these tests in order to prove their innocence. Most important, the court also noted that prior consent was meaningless in situations when the subject was not fully aware of the questions being asked due to her altered physical state. Their judgment is clear on this question: "No presumption can be made about voluntariness of the test results" *even with voluntary and prior consent"* (Ibid.). Yet the paradoxical exception remains: if these tests are applied voluntarily, their results constitute judiciable evidence.

Technologically mediated "confessions of the flesh" have overcome the long history of judicial skepticism regarding the identity and veracity of the potentially criminal subject. The body has become such an impeccable and irreproachable source of knowledge that it finally appears to resolve the conjoined problem long faced by the colonial and now postcolonial courts, namely, "Is she who she says she is?" and "Is he telling the truth?" The application of technology to the body to establish identity leads unerringly to the discovery of judicial truth. The technologically mediated body can now inform the court of the identity of the judicial subject: criminal, witness, or innocent bystander. Even when techniques of speaking to the body have reached the point of extracting evidence through means that violate the constitutional injunction against self-incrimination, the court finds itself unable to ban these techniques outright. The court agrees with the legal, medical, and ethical doubts cast on the legitimacy of the brain scan, the polygraph, and narcoanalysis, but cannot bring itself to question the reliability of the body as a source of technologically-mediated truth.

Branding and tattoos were once signs that the body before the court was a repeat offender regardless of what the subject might have claimed. With these new tests, the body has been decomposed into a form of evidence that bypasses the speaking subject and offers evidence directly to the prosecuting authority. Individual silence and lies no longer hinder the courts from establishing the truth of the matter before them; the unwitting body has become in effect a transparent text and the court's greatest ally in establishing identity and truth. Over the next century, technopolitical identification techniques advanced through increased capitalization and depersonalization. New body organs would be pressed into service to confirm personal identities and the process of authentication

would eventually become automated. In the late 1980s, DNA "fingerprinting" would become the latest stage in the conjoining of identity and evidence. While the technique might appear to be a definitive means of identifying a person, in the courtroom, it also became a means of establishing unimpeachable judicial truth.

DNA as Evidence

The first Indian case using DNA evidence came before the courts in Kerala in 1989 (Indian Express, 1990). It involved a paternity claim, the details of which are all too typical. A well-to-do businessman, Kunhiraman, had led a younger woman, Vilasini, to think he would marry her, whereupon she agreed to have sexual relations with him. When she became pregnant and delivered a child, she entered his name on the birth certificate. Hearing of this, Kunhiraman denied his paternity of the child and had his name removed. Vilasini appealed to the courts to reinstate his name as father and further made a claim for child support. Kunhiraman fought the case and eventually the court proposed that the best way to settle the case was to turn to the newly available technique of "DNA fingerprinting" to establish once and for all whether he was the father of her child. The couple proceeded to the Center for Cellular and Molecular Biology in Hyderabad where Dr Lalji Singh had developed a novel DNA probe using the Indian banded krait (Singh and Pandit 2012, 23). The testing proved, beyond reasonable scientific doubt, that Kunhiraman was in fact the father of Manoj, then aged 4. However, Kunhiraman rejected this finding and denied all allegations in court. He claimed that he had only met the plantiff once in the presence of her superior at work.[5]

Dr. Lalji Singh provided the key testimony in the courtroom. He had brought along a slide projector to show the court a visual image of the DNA evidence only to find that the Tellicherry courtroom was not set up for projection. He went ahead anyway, holding the slide projector in his hands and projecting images on the wall. Although a novelty in the Indian courts, Kunhiraman's lawyer did not question the validity of DNA evidence but proposed that the way the tests had been conducted had led to false conclusions. He pointed to a recent press report that even leading laboratories in the United States made a mistake once "every 49 samples." The magistrate rejected this defense noting that Dr. Singh had decades of experience in the field of molecular and cellular biology and had proceeded with "great care and caution [hence] there was no room for the test to go wrong." The chief medical advisor to the Kerala Police corroborated the validity of DNA testing and was adamant that the test could "never go wrong" (Singh and Pandit 2012, 23).[6]

Seven of the last ten pages of the magistrate's 19-page single spaced ruling were devoted to a biology lesson explaining what chromosomes and DNA were, the step-by-step procedure adopted for the technique of DNA fingerprinting, and the logic behind and the statistical reasons for confidence in this new test. The possibility that mistakes could be made in the process of testing was not entertained. Visual representation of DNA bands "belonging" to Manoj and his putative parents and a UK-trained scientist noting that he had proceeded with "great care and caution" in his testing more than persuaded the chief judicial magistrate that the paternity claim was justified. Kunhiraman appealed the judgment to the Kerala High Court to no avail. To remind us why this case matters beyond the novelty of being India's first DNA trial, the identification of Manoj's father through DNA profiling had the immediate effect of also proving Kunhiraman was not telling the truth. The disassembled body represented by a strand of DNA projected on the wall of the courtroom had become the latest technological development in the body's mediation between personal identity and judicial truth. With the onset of DNA in the courtroom, moreover, the line between the analogue and the digital had been irrevocably crossed.

Biology and Politics

Biology has long been a powerful discursive resource for politics (Maasen, Weingart, and Mendelsohn 1995). While the idea of the body politic is perhaps the most obvious and widely used metaphor that joins political life to a biological imaginary, a conjoined discourse of biology and politics has a long history. Metaphoric borrowings go in both directions and range from the specific to the general. Ed Cohen shows for example that the idea of immunity, a legal term that dates back to Roman times and means the condition of being beyond or not subject to municipal law, would over a millennium later become the term through which biologists would begin to conceptualize the protections that the human body provides itself (Cohen 2009). The political theorist Hobbes would use a starkly imagined alibi of the "state of nature" that pitted "all against all" as his starting point for explaining why humans would agree to give up their inherent sovereignty and join a regulated society. The idea of territoriality as it took shape in following centuries had a powerful resonance as it worked to normalize animal behavior with modern political life especially after the onset of the nation-state (Elden 2010). Biopolitics itself would only become imaginable once society could be imagined as a species with its own scale of functioning. Metaphoric borrowings often lost their rhetorical origins and became naturalized as social and technical imperatives (Edwards 1997). The onset of theories of evolution would have a particularly checkered afterlife in political and social visions with the much-overused trope of the "survival of the fittest" being used to justify everything from fascism to non-altruistic behavior in humans (Duster 2003). Moving in the opposite direction, it was only when immunologists stopped thinking in Freudian-derived terms of self and other, that their understanding of autoimmunity moved beyond seeing the phenomenon as an aberration or in Paul Ehrlich's phrase, "horror autotoxicus" ((Tauber 2004).

While the discursive channels between politics and the life sciences remain in place, molecular and cellular understandings of life are now increasingly understood in terms derived from informatics, offering new imaginaries of what we mean when we speak of human "society." "Molecular biology underwent a 'gestalt shift to information thinking' in the 1950s," Wendy Chun notes (Chun 2011, 104). William Bogard elaborates, "the medical coding of the body in the modern age has gone from linguistic to informatic, and medical practice from diagnostics (reading signs from the body) to engineering, hyperdiagnostics, and virtualization (the body as an informational structure)" (Bogard 1996, 142). Perhaps the best-known example of this shift is the human genome project, the multi-billion multinational effort to map the diversity of the human species through its genetic material. The human genome project is premised on the idea of the body as an open text that can be read and written into an enormous library where the world's genetic information can be stored forever. This library maps a virtual world that is as complete as the world of human subjects it derives from but exceeds it as well through the technological combinations and manipulations that now become possible, creating new possibilities of what we call life. In what follows, I follow this turn in the understanding of life through informatics to explore the political implications of contending visions of the social collective that emerge from these intersections of law, body, and technoscience.

Society as Database

The origins of modern biopolitics in India dates back to at least the first census conducted in 1871, although arguably the founding moment could be pushed back even further to 1760 (Cohn 1987, 232). As with all such technologies of enumeration, census taking led to the enforcement of novel

social norms and standards such as defining manhood from the age of 12 and the corresponding age of the woman at 10. Scholars have pointed in particular to the effect of the census on the institution of caste, broadly arguing that census taking reinforced caste as a form of social distinction and became a means for its reproduction over time and homogenization across space (Appadurai 1996). The census, Bernard Cohn concludes, played no small part in making Indian culture and society "objective" to themselves.

The colonial state had sought to build expertise in enumeration and measurement for practical and commercial reasons and these practices were further enhanced by the postcolonial state. Bureaucracies from the newly formed Planning Commission to the Finance ministry, now concerned with national development rather than more efficient revenue extraction, required new kinds of data infrastructures to enable them to carry out their work. Perhaps even more important than the decennial census in this context was the National Sample Survey organization, a statistical intelligence unit that was first set up in 1950 (Ghosh et al. 1999). Largely focused on rural India, NSS surveys collect data on everything from rural debt to morbidity rates to studying the "unorganized" sector. India as a database society is not a new phenomenon.

While the Indian constitution includes a mandate requiring all citizens to provide information to the state, the government has never sought to implement this provision. India, unlike most states, does not require citizens or residents to carry an identity card or other form of proof of political identity and/or residential legitimacy (Krishnaswamy 2013). Other prosthetic technologies came to bridge the identification gap between the citizen and the state beginning with the "ration card," an entitlement for citizens to access the subsidized public food distribution system. With time the ration card would morph into an everyday form of identification although originally lacking such obvious means of identification such as a photograph. Beginning in the 1990s amidst the growing use of informational technologies in governance, the first steps towards a de-facto identity card emerged in the form of an "elector's photo identity card," or voter ID card, issued by the Election Commission of India. In spite of the logistical challenges in producing inexpensive, rugged, and tamper-proof cards for over 500 million people, the project was successfully carried out and now voter ID cards are widely used as a form of official identification.

A few years ago the most ambitious project yet to gather information on people living within India was announced in the form of the *Aadhar* project. Combining a welfare function (comparable to the ration card) with the goal of creating a digital platform that would ideally integrate information on Indians currently held in discrete government databases, Aadhar seeks to combine the latest informational technologies with biometric measures of identification, notably an iris scan and fingerprints. Represented visually by the fingerprint, Aadhar represents the final apotheosis of the idea of population, namely, the state's fantasy of having every life form represented in a single national database. Before we fall back into a familiar discourse of the surveillance or database state, namely, middle class concerns over questions of personal privacy and state over-reach, it must be recognized that weaker sections of Indian society have seen the universal database project as a powerful instrument for their own empowerment. Aadhar offers the poor, migrant, and marginal a means to becoming legible in the eyes of the state. This technology permits them the possibility of accessing state welfare and entitlements that they have been blocked from reaching in the past. In short, Aadhar – society as database – means very different things to different sections of society.

The significance of the database has been highlighted by new media studies. Lev Manovich reminds us that what is critical to understand about the database is its lack of narrative order. "While a database can support narrative there is nothing in the logic of the medium itself that would foster its generation" (Manovich 2001, 228). To make sense of a database – to create a narrative from the

elements of the database – we need interfaces, the structured paths through which the information in the database is accessed and extracted (Galloway 2012). Wendy Chun explains what is at stake more directly: "[interfaces] are a functional analog to ideology" (Chun 2011, 66). In a database society, the social collective – society – can only be defined as an outcome of the interfaces that are applied to the living database. From the 'paradigmatic' database, the archive of all the information collected, a number of 'syntagmatic' narratives can be constructed, each offering a discrete vision of society that is as meaningful as another (Manovich 2001, 288–230). The algorithmic paths taken through the database define the boundaries and topographies of "society" in particular and discrete ways. No vision can be comprehensive: society is always partial, less than the extent of the database, a divided body.

Although social narratives that emerge from the database are always based on incompleteness, their putative origins in a universal database lead to strong rhetorical claims of both comprehensiveness and representativeness. The long history of developmental efforts conceived in bureaucratic offices that singularly fail to deliver what they have promised is a direct result of the database standing in for the messy and complex realities of everyday social relations. It is in the gap between database and society that these best laid plans often meet their doom, notwithstanding even the genuine desire of all parties to make them succeed (Li 2007).

Society as a database leads to authoritative claims about the desires or needs of the Indian "middle class," "poor," "minorities," and other familiar social categories. Due to the structuring rules of database access, each interface produces a unique narrative about a single social category. When we set different narratives against each other – the needs of the poor versus the wants of middle class, for instance – what we are comparing in fact are the different interfaces that produce these narratives. Comparisons of database interfaces give us the impression that we are making reliable public policy choices by comparing the social bodies that are invoked by each interface, but that may not be what is taking place. As is well known, the poor are defined in multiple and competing ways that cannot be captured by a single interface while databases themselves may not capture significant "local" conditions of poverty such as homelessness.

The social categories that emerge from the database become visible at the expense of other competing but invisible definitions of social formations due to their absence from or only partial presence within the database. The ideological power of the interface working through a database however absolves us from this knowledge, transforming individuals and communities that contradict the norm into anomalous cases. For society as database, the interface becomes the ideological means to create the norm and the standard, the anomalous and the aberrant, now all virtual simulations. Claims about the database are represented as claims about the entire social body, with the significance of the inevitable gap between these two formulations left unclear. These conditions are a product of constituting the interface between the user and the database as a black box beyond social scrutiny. Politics, as a result, becomes redefined as the struggle to establish the dominance of one vision of society over another.

Society as Apparatus

Amniocentesis is a medical procedure that was originally created in order to test for chromosomal and genetic disorders in the fetus. It can also be used to determine the sex of the unborn child. When this DNA-based technique was introduced to India, it led to a rash of what became termed "sex-selective" abortions. The number of maternity clinics offering the procedure expanded enormously and the test became commonplace although amniocentesis was originally intended to be used only

for mothers who had a high risk of bearing children with genetic anomalies. In the Indian context, the procedure was more commonly used to determine fetal gender. If the fetus was found to be a girl, it led to abortions in some cases, hence the term "sex-selective abortions." This procedure added fetal death to female infanticide and the willful neglect of and discrimination against young girls that have led to an extremely skewed national gender ratio, currently around 110 males to 100 females. Although sometimes glossed as an Indian "cultural" preference, it is more accurate to describe the preference for boys over girls in terms of economic advantages reinforcing existing gender hierarchies. Unlike the patterns of female infanticide, using amniocentesis to determine the sex of the fetus was more common in urban areas and among middle and upper middle class families due to the high cost of the procedure (Sunder Rajan 2003, 192). The proliferation of clinics offering this procedure led feminist groups to begin a national campaign against this technology. First individual states and eventually the Indian parliament passed laws ending this discriminatory practice. The national law criminalizing sex-selective abortions was passed in 1994 but the practice is far from ended.[7]

This account of the feminist campaign against amniocentesis might at first glance appear to be altogether different from the use of truth serums, polygraphs, and brain scans to extract evidence from judicial subjects. Yet what ties them is the apparatus consisting of technologically mediated body parts and actions – from amniotic fluid, neural excitation and biochemical transformations to sweat and skin – that produce evidence that might indicate potential criminality. The silence of the subject that is captured by the apparatus leads to an "organic" society composed of body parts that have come to have an independent juridical existence. It is a heterogeneous formation that is constituted as an embodied site of interaction between state institutions, social movements, technical expertise, as well as contested concepts such as culture, privacy, and rights, joined through claims and counterclaims of criminality. The apparatus comes into play contingently and emerges during social crises, when public decisions have to be made or justified. The apparatus is, in effect, a syntagmatic expression of the paradigmatic database. Chun reminds us the interface is ideological. Foucault puts it more concretely: the apparatus is also a "formation which has as its major function at a given historical moment that of responding to an *urgent need*. The apparatus thus has a dominant strategic function" (Foucault, 1980: 194-5). Society as apparatus produces social insecurities, ideally converting them into programmes for action.

What joins the apparatus composed of amniotic fluid, embryos, feminists, clinics, and the parliament, shot through with the rights of culture, with the apparatus that combines sweat, nerves, polygraphs, truth serums, the police and the courts, working across a terrain of the rights of personal privacy, are competing claims over what is good for society. In both cases, one set of rights is being marginalized in favor of another set; in both cases, particular individual rights are being set aside in favor of claims to what are public mores, underscored by ideological beliefs in the "good" of the community. In the courts, the need to subject defendants to brain scans and the like is justified by confidence in the security of innocent subjects, the need for the police not to be hindered in their investigations, and the possibility of reducing "third degree" measures in the police station (i.e., the relative humanity of the polygraph). These goods permit the strategic dilution of personal protections such as privacy and the right against self-incrimination.

In the clinics, the law banning amniocentesis for sex-determination takes away (ironically) the long-standing feminist demand for women to have control over their own bodies and the rights of families to decide for themselves what are their best interests. This is justified by weighing the rights of the fetus against the mother, as well as by applying a standard that sets competing sets of social norms against each other. The inherently lower standing and lesser value of women is the

parochial Indian claim; the need to take steps against the systematic devaluation of women and their life chances is the competing (and more universally held) counter-claim. Regardless of the merits of each side in each case, what is important to note – as we have already seen in relation to society as database – is that each side is invoking entirely different societies.

Our radical inability to determine which is the more authentic society invoked by different elements of the apparatus – the ideal social collective against which a set of mores can be read off – does not leave the debate hanging. Rather it turns the discussion in the direction of elements of the apparatus with access to seemingly unqualified knowledge, the experts. Expertise is a central element of the apparatus, expressed in two modes. The first is the scientific technique that produces "objective" knowledge through its examination of the body, the second are the community of experts who translate this knowledge for their respective audiences: whether courts, publics, police, legislatures, or defendants. Confidence in expertise comes from the self-representation of science as well as the object of their analysis, the technological body that has been resurrected as a means to unmediated truth. But its strongest claim comes from science's constant victory in the public arena.

Although competing claims to technopolitical significance are at the heart of public debates over the apparatus – consider the ongoing debates over GMOs – in the end it doesn't matter which side is more correct. All the sides to the dispute bring out their top scientific advisors who then slug it out across varieties of forums. When the dust settles, one side has won the tactical victory but technoscience has won the strategic battle. The disagreements between scientists that expose glaring differences between different interpretations (and which highlight the discursive nature of scientific controversy) are papered over in the overall victory of technoscience that once again has adjudicated the public dispute (Latour 1987).

Scientific actors, like all others in the public arena, bring vastly different resources to bear on any dispute. Victory for one side is not necessarily a victory of better science over worse, even though it might be represented as such, but rather the more powerful side over weaker ones. The apparatus can be understood as a temporary map of alliances between material forces, inanimate techniques, discourses, and institutions, organized around the technologically mediated body. The centrality of the body in the apparatus obscures the extensive conjunction of forces – scientific and other – that face off in the primary battle over deciding whose vision of society is going to prevail and thereby determine, for the moment, the public good. The apparent neutrality of technoscience obscures the politics of struggle over how the public is defined and who benefits from particular visions of the public good. Postmodern technological societies are not societies without politics; rather they are arenas where politics is mediated through technology and science, and where participation has become universal through virtuality.

Conclusion

Postmodern biopower – seen through intersections of law, body, and technoscience – engenders virtual societies in the form of the database and the apparatus. Although every invocation of society is tacitly a claim to comprehensiveness, what emerges through biopower is never more than a simulation of society. What is soon forgotten is that the simulation is inherently partial, incomplete, strategic, and structured through unequal power relations. Politics thus becomes defined around the ability to control these representations and to instantiate one vision of society over another. Society as apparatus leads to contradictory outcomes over public policy, as this article has shown. The Supreme Court's protection of the right against self-incrimination founders against its greater faith in the truth produced by the decomposed body that is independent of the conscious mind. A debate

over the protection of individual rights that appear to be at risk when the state seeks to create a universal database effectively marginalizes the needs and desires of the numerically larger poor to be included in the database and thereby become visible to state power. The right of women and families to make autonomous decisions over their own bodies is held subordinate to the right of the fetus to life in the larger interests of promoting a society that values the girl child, leading to a complete reversal of the Western debate over abortion. These outcomes are manifestations of society as apparatus.

Even more troubling is the loss of one of the most important aspects of the political, namely, normatively transgressive visions of the future. Perhaps the greatest political cost of the technologically simulated society is not (even) the loss of privacy and individual rights, the intrusive state, developmental failures, the social construction of marginality, or a parochial vision of the public good. It is the changing meaning of possible social futures. In the apparatus society, the future is experienced in the form of a series of crises, necessarily unforeseen and unintended, that together act to diminish the idea of change as the outcome of collective social desires or purposive action.

Notes

[1] In this paper, I deploy an expanded notion of the apparatus as *dispositif* or heterogeneous assemblage that includes both living and non-living things. See also (Lemke 2014).

[2] As the recent controversy over Wendy Doniger's book (*The Hindus: An Alternative History*, Delhi: Viking Penguin 2009) shows, again, India has long used the idea of community standards to censor artistic work ranging from books to cinema, in the interests of the larger public good. The individual right of expression is consistently held to be subordinate to the danger of violating the mores of different national communities, both majority and minorities. However, the definition of the public good is left entirely to the views of the executive agency or judicial bench in question and is rarely itself the subject of public discussion.

[3] It is worth noting that such techniques are favored by the prosecutor, not the defense.

[4] Smt. Selvi and others vs. the state of Karnataka. MANU/SC/0325/2010.

[5] Magistrate's Court (MC) Case no 17 of 1988, petitioner Elaveettil Manoj (minor) and counter-petitioner Alora Veettil Kunhiraman. Tellicherry, Kerala.

[6] For an early analysis of the dangers of mismatching during DNA testing, see (Lewontin 1992).

[7] Clinics are now much more circumspect about offering the procedure due to the criminal penalties involved but it is an open secret that sex-selective abortions are still carried out, albeit on a far smaller scale than before.

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