The problems with a DNA registry

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Despite the spate of violent attacks against women, including rapes, in India, very few of the men implicated have been convicted. While identifying the rapist is the first step to serving justice, his identity does not guarantee due punishment or a stiff sentence for the crime. According to the National Crime Records Bureau, only about a quarter of rape cases ended in conviction in 2016. These rates are low in other countries too. The outrage over these attacks has reinforced the belief that India needs a <u>sex offenders' database</u> or a DNA database of those accused and charged with rape. India has developed a draft Bill for such a DNA database and the Andhra Pradesh government even announced that it has signed up with a private agency for collecting DNA from all its citizens.

Concerns

Based on experience in other countries, building such a database is not easy, does not always offer justice, and is an ethical landmine of sorts, say many experts who have been studying the use of DNA databases for forensics. A few people may roll their eyes at these concerns, since rape is such a serious offence. But even those who routinely use DNA databases express serious concerns about DNA databases and profiling. For instance, Peter Neufeld, co-founder of the Innocence Project, which uses DNA to exonerate people on death row, has said that we need to make "forensic science more about science and less about law enforcement so it becomes an impartial assessor of evidence rather than a branch of law enforcement."

DNA identification technologies have advanced so much that even minor genetic differences, such as those among family members, may be used to distinguish individuals and identify a person from his or her unique DNA. Still, planting of DNA in a crime scene, misinterpretation of tests, and errors in analyses have all taken place in cases where DNA has been used to implicate a suspect, resulting in the miscarriage of justice. Besides, everybody leaves traces of DNA in numerous places, as cells are shed, leading to ridiculous mistakes such as the Phantom of Heilbronn (when the German police admitted that a woman they were searching for more than 15 years based on DNA traces at crime scenes never in fact existed). Protecting innocent people's privacy and their civil liberties and rights are the main concerns.

Targeting particular groups

In the aftermath of the Cambridge Analytica scandal, people will have a better appreciation of how their DNA information could be misused just as their personal information and profiles are being misused by many data mining companies.

When DNA tests were initially used, they were meant to supplement other evidence. For instance, when the Federal Bureau of Investigation's Combined DNA Index System was first developed, it was limited to those who had been convicted of serious crimes. But the law was changed and now DNA is collected from suspects who may be arrested (not convicted) or charged with minor offences. The expansion of this technology to include potentially innocent people squashes their constitutional rights with the assumption of guilt.

The police sometimes use DNA dragnets whereby all the people in a community are persuaded to give their saliva or blood in order to identify a possible suspect amongst them. These methods are simply an expansion of the 'stop and search' approach to target particular groups of people on the basis of race, ethnicity or class, even though most of their members would be innocent. Such

samples later get included in forensic DNA databanks, thus violating people's civil liberties. In a number of cases, the police may follow persons they suspect and then gather their DNA surreptitiously (for example, by taking a bottle or cup they were drinking from) and without warrants. Collecting this so-called "abandoned DNA" has been challenged as being clearly unethical and unlawful.

In the recent capture of an elusive serial killer in California, DNA at a crime scene was matched from a company that gathers DNA for genealogy. A related family member, a great-great-grandparent, according to the *Los Angeles Times*, was matched and using the family tree, possible relatives who could be the suspect were then identified. Later the police followed the suspect and obtained his DNA surreptitiously. The use of the genealogy database, a source not used in the past, was seen as a novel technique, a breakthrough by law enforcement agencies that had been stymied for a long time. Still, a number of people would fall under suspicion simply because they are related to a suspect. As with Facebook, where a person's personal details also end up breaching the privacy of their friends, there is lot to be concerned about.

Law enforcement is responsible for gathering DNA for forensics, and police bias towards minorities leads to the latter's over-representation. It was reported that in 2007, close to threequarters of the young black male population in the U.K. were on the DNA database. Scholars have discussed this civil rights matter extensively in the media. If such a system were set up in India, one would expect minorities to make up the bulk of the DNA, not implying that they are the criminals, just that they are the ones the police would most suspect and therefore gather DNA from.

Protections

What, then, are the implications of living in a society where DNA can be readily gathered, analysed, profiled, and then the data stored permanently in a number of databanks? An increasing number of sites for genealogy, genetic testing, medical information and criminal justice are now gathering and maintaining such information. How can it be used in a way that respects the rights of people and their privacy?

In 2010, the National DNA Database of the U.K. contained DNA profiles and samples from about six million individuals. Later, based on the requirements of the Protection of Freedoms Act of 2012, the U.K. government said that it deleted the profiles of close to 1.8 million innocent adults and children.

Some people have said that having everyone's DNA in the database would be a good thing, since anyone can be apprehended if matched to a crime scene. But experience with the U.K. and U.S. databanks has shown that having more innocent people's DNA stored increases the chances of a false positive and has not increased the chances of finding a guilty match.

Regarding a DNA database for India, at the very least, the following should be ensured. One, it is absolutely essential that the people from whom DNA is taken give their informed consent; taking DNA surreptitiously should be prohibited. Two, a court order should be required for obtaining DNA without informed consent and the DNA should only be compared with the crime scene DNA for the suspect. Three, those who are cleared for a crime should not have their DNA information stored, and DNA gathered from offenders should be destroyed after identification so that such information is not used for profiling in future. Four, a court order should be necessary to access medical records for genetic data.

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