Twenty Years of DNA Databanks in the U.S.

The FBI's national DNA database has expanded far beyond its original intent: to track convicted felons. By Sheldon Krimsky

Forensic DNA databanking in the United States began in 1990 as a pilot program serving fourteen states and local communities after an earlier start in Britain. The FBI's goal in developing the national Combined DNA Index System (CODIS) linking all the state DNA databanks was to collect the DNA of convicted violent felons and recidivist sex offenders. Within two decades several trends can be identified:

There has been an expansion of the categories of individuals whose forensic DNA samples are deposited into CODIS, extending from convicted felons and recidivist sex offenders to undocumented immigrants and misdemeanants who have neither been charged nor convicted of a crime.

Courts have continued to rule that forcibly taking blood samples or other sources of DNA from a suspect on the mere chance that incriminating evidence might be found violates the individual's 4th Amendment protection. The 4th Amendment of the Constitution provides that "the right of the people to be secure in their persons, houses, papers and effects, against unreasonable searches and seizures, shall not be violated, and no warrants shall issue, except on probable cause." Thus the forcible taking of one's DNA is a breach of one's privacy in the U.S. legal system and requires the state to have a probable cause or an overriding interest. In American jurisprudence, when suspicion is low and invasiveness is high, the 4th Amendment protection is generally high. In contrast, as suspicion grows and invasiveness diminishes, the protection against the invasion of privacy by law enforcement is diminished. Law enforcement agents can obtain a court order for forced blood samples. As DNA identification no longer requires a blood sample—a cheek swab will do—its intrusiveness into the body has dropped propitiously, and with it 4th Amendment protection. In the U.K. mouth swabs and hair samples were reclassified from first being considered "intimate" to "non-intimate." Under British law non-intimate samples can be taken without a person's consent from anyone arrested for a recordable offense and/or detained in a police station.

States and local police jurisdictions that legally obtain a person's DNA for a forensic profile to be entered into a

database typically also retain the person's biological sample, which contains intimate information about a person's genotype.

Most courts have ruled that police can obtain a person's DNA surreptitiously without a warrant, even as the person has an expectation of privacy for the information in the DNA left on a discarded object. Ironically, while a warrant is required to acquire the DNA from a person, the police are free to follow a person around or use a ruse to obtain one's DNA when there is no probable cause and no warrant.

DNA can be used either to implicate or exonerate an individual accused or convicted of a crime. The power of DNA in exoneration is more powerful than its power in conviction. When the DNA doesn't match, as in a rape, it is highly improbable that the incarcerated person is guilty of the crime. When the DNA does match in a violent crime the evidence may be strong, especially when other evidence links the suspect to the crime, but there are other hypotheses which could explain a false positive match such as contamination. Over 250 prisoners have been exonerated for their crimes based on the probative post-conviction value of DNA evidence. Prosecution with DNA is the role of the state and federal police; exoneration with DNA is the role of non-profit organizations, such as the Innocence Project, which operate on philanthropy. Increasingly, states have recognized that prisoner claims of actual innocence have been thwarted by lack of access to the crime scene DNA, which could possibly exonerate them. More states are providing falsely convicted prisoners with compensation for their false imprisonment.

While privacy of one's DNA has become increasingly valued and protected in medical genetics, in the workplace, and for people seeking health care insurance—as a result of passage of the Genetic Information Non-Discrimination Act (GINA)—the opposite trend can be found in the criminal justice system. The courts are more likely to view forensic DNA profiles as they do fingerprints: simply a means of identification. Moreover, because DNA can be taken from an arrestee by a cheek swab, the courts have lowered the bar on personal intrusiveness, thus expanding circumstances where police can obtain a DNA sample without a warrant.

GINA, passed in 2008, prohibits access to an individual's genetic information by insurance companies making enrollment decisions or employers making hiring decisions. Whether collected by police or by insurance companies, an individual's DNA can reveal inherited genetic disorders, predispositional disease states, parental linkages, ancestral identity, sibling connections, familial disease patterns and environmental and drug sensitivities. According to the American Society of Human Genetics, "Genetic information, like all medical information, should be protected by the legal and ethical principle of confidentiality." Bioethicist George Annas noted: "It is useful to view the DNA molecule as a medical record in its own right for privacy purposes." Many, but not all, of the privacy issues associated with DNA databanks would be resolved if the biological sample were destroyed once the forensic DNA profile was obtained. In Germany and Japan biological samples are routinely destroyed once a successful DNA profile is made. In Germany profiles are destroyed upon acquittal or discontinuance of criminal proceedings.

Areas where law and policy remain to be resolved include "abandoned DNA," "familial searching," "arrestee DNA" and retaining DNA profiles of those not convicted of crimes.

In 2007, the *New York Times* (April 2) ran a story titled "Stalking Strangers." Author Amy Harmon wrote:

"They swab the cheeks of strangers and pluck hairs from corpses. They travel hundreds of miles to entice their suspects with an old photograph, or sometimes a free drink. Cooperation is preferred, but not necessarily required to achieve their ends… The talismans come mostly from people trying to glean genealogical information on dead relatives. But they could also be purloined from the living, as the police do with suspects. The law views such DNA as 'abandoned.'"

Helena Kennedy, chairperson of the Human Genetics Commission in the UK, commented after Parliament passed a law honoring the privacy of a person's DNA to anyone outside of law enforcement: "Until now there has been nothing to stop an unscrupulous person, perhaps a journalist or a private investigator, from secretly taking an everyday object used by a public figure—like a coffee mug or a toothbrush—with the express purpose of having the person's DNA analyzed. Similarly, an employer could have secretly taken DNA samples to use for their purposes." This is the first law of any country with a DNA databank that honors the expectation of privacy by prohibiting people who are not legitimate members of law enforcement from analyzing so-called "abandoned DNA."

Familial DNA searching allows police to explore the family members of someone who came up as a close but not exact match between a crime scene DNA sample and their profile on a DNA databank. The issue as yet unresolved is what privacy considerations can be given to family members of a person who has his or her forensic profile on a databank, when there is no probable cause. To what extent can police troll members of the population for evidence of guilt when all they have is a "familial DNA resemblance?"

In a July 12, 2010 editorial, the *New York Times* raised civil liberties and civil rights concerns over familial searching. "Hundreds of people could fall under suspicion simply because they are related to someone in the criminal DNA database. Because blacks and Hispanics are disproportionately

represented there, a first-time black offender has a better chance of having his DNA lead to a familial match than does a first-time white offender."

Japan and Germany do not allow familial searching. In the United States individual states can pass their own familial searching laws and issue regulations for their use. Four states—California, Colorado, New York and Florida—have such laws. Only Maryland has categorically banned familial searching. At the very least, familial searching, which usually involves acquiring the DNA of family members to determine if there is an exact match, should be limited by a court warrant.

About 11 states have passed laws allowing police to obtain DNA forensic profiles of arrestees who have not been charged or convicted of a crime. In November 2004, California voters passed Proposition 16 which amended the "DNA Fingerprint, Unsolved Crime and Innocence Protection Act." According to Proposition 16, persons arrested or charged with any felony could be subject to warrantless seizure of their DNA. The arrestee provisions of the act were challenged. On August 4, 2011 the Court of Appeals of California struck down the arrestee provision of Proposition 16. The majority wrote: "[T]he DNA Act, to the extent it requires felony arrestees to submit a DNA sample for law enforcement analysis and inclusion in the state and federal DNA databases, without independent suspicion, a warrant or even a judicial or grand jury determination of probable cause, unreasonably intrudes on such arrestees' expectation of privacy and is invalid under the Fourth Amendment of the United States Constitution." This is the first major court decision that questions the extension of DNA databanking to arrestees.

With no suspects in a murder case, police have sometimes resorted to "DNA dragnets" in communities small enough to initiate a voluntary program of DNA collection from all men between certain ages. While such dragnets have not proved very successful in tracking down the perpetrator, police add the forensic profiles they collect to the state databank, which enters it into CODIS. The people who provide the DNA do so to exclude themselves thereby narrowing the field of suspects. But they do not expect that, after being excluded as a suspect in the crime, their DNA will be under constant surveillance and remain on the national forensic network of felons when they were not arrested or charged with a crime. Most states do not guarantee to DNA dragnet volunteers, who are excluded as suspects, the removal of their forensic profile and the destruction of their biological sample.

In the Cape Cod community of Truro, Massachusetts, police began collecting DNA samples from nearly 800 male residents within three years after the murder of fashion writer Christa Worthington. While the DNA dragnet did not yield the murder suspect, the samples and forensic profiles of those men who had volunteered their DNA remained on the databank. After a lawsuit filed on behalf of 100 men who had volunteered their DNA, by 2008 police had only "returned" the DNA of one man. This illustrates the need for uniform rules on returning the voluntarily submitted DNA of innocent people to law enforcement in community DNA dragnets. It should be part of the informed consent process that voluntary DNA of innocent people is taken off the databank.

The recent California Appeals Court decision suggests that many of the unresolved questions pertaining to forensic DNA will see their day in court, if not in the legislature. ■■■

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Genetic Justice: DNA Databanks, Criminal Investigations, and Civil Liberties

National DNA databanks were initially established to catalogue the identities of violent criminals and sex offenders. However, since the mid-1990s, forensic DNA databanks have in some cases expanded to include people merely arrested, regardless of whether they've been charged or convicted of a crime. The public is largely unaware of these changes and the advances that biotechnology and forensic DNA science have made possible. Yet many citizens are beginning to realize that the unfettered collection of DNA profiles might compromise our basic freedoms and rights.

Two leading authors on medical ethics, science policy, and civil liberties take a hard look at how the United States has balanced the use of DNA technology, particularly the use of DNA databanks in criminal justice, with the privacy rights of its citizenry.

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