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EDITORIAL

The DNA Fingerprint Story (Continued)

On the front page of the *New York Times* last week there was news of three people incarcerated for rape who are soon to be released because DNA evidence clearly shows that they could not have been the rapists. This follows two other recent reports of the use of DNA technology—to identify the drowned corpse of an infant whose features were unrecognizable, and to resolve a paternity suit in which a child's father accepted financial responsibility when told that DNA evidence of his relation to the child was conclusive. This acceptance of the validity of DNA evidence is exactly what most scientists in this area have believed appropriate, and a rebuke to the judicial process that has been so slow to accept DNA evidence by failing to see that a couple of outspoken individuals were less representative of the scientific community than the vast majority of careful scholars. (It is notable that the scientists prominent in casting doubt on DNA use for the prosecution seem to be nowhere in evidence to cast doubt on its use for defense.)

One note of caution that the doubters raised was correct: the need for careful analyses on well-authenticated samples. But their argument that elaborate state machinery is needed to monitor the work of testing agencies is clearly overkill. Undergraduates are now doing good DNA tests, and their results can easily be checked by standard control samples.

Moreover, the genome project is becoming mechanized so rapidly that soon it may be possible to put a DNA sample in an automated machine with both defense and prosecution acting as witnesses to the procedure. Mutual supervision in an authenticated laboratory seems preferable to a test that could, because of incompetence or malfeasance, be very confusing to a jury. In the scientific laboratory, such a suspicion is easily resolved—by doing the test again. In a law court, the double jeopardy argument might make such a simple solution impossible.

One of the incredible features of the DNA debate is the peculiar standard that some courts try to establish on the admissibility of evidence. In most rape and murder cases there is unlikely to be eyewitness testimony, and in cases when it is available, the events are so traumatic that eyewitness testimony has a good chance of being erroneous. The FBI and Scotland Yard report that one-third of all suspects in rape cases are released before booking because DNA evidence exonerates them. That use alone is an enormous gain for fairness. An individual indicted for a sex crime, but who later proves his innocence, would have the scandal hanging over him for the rest of his life. Twenty-six states now keep DNA data on felons as well as thumbprints and fingerprints. Some judges are continuing to make silly rules indicating they still do not understand the science, but most courts now accept DNA data as routine. The courts need better procedures to validate new technologies rather than allowing an individual judge to establish a precedent or a few scientists to represent a division in the community when the vast majority are not divided.

There is an irony in this new acceptance of DNA fingerprinting. Ink fingerprinting went through the same type of debate, with questions about whether more than one person could have the same print, whether there could be abuse by police, whether there would be care in sample-taking, and so on. Caution is appropriate; unreasonable doubt is not.

The resolution of a scientific procedure in the case of DNA fingerprinting could set the stage for better use of science by society in the future. Statistics would be a good subject for all lawyers to understand. In the United States 37% of the population dies of cancer, so when a suit states that the ingesting of a single pill already approved by the FDA, or a walk under a power line, or the use of a cellular phone, causes cancer, such a suit should be treated with skepticism, not with a full court press.

The community of scientists can, in this case, be proud that it has added a new tool for justice—for conviction of the guilty and acquittal of the innocent. It is to be hoped that scientists can also be part of a dialogue with responsible jurists to aid in resolving the problem of admissibility of evidence.

Daniel E. Koshland Jr.