



AALS

AALS Evidence Section Newsletter

Spring / Summer 2008

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Send contributions to the Fall/Winter 2008 newsletter to:

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Message from the Chair

Dear Section Members,

I hope your semester has gone well and that you find yourself on the verge of what promises to be a productive and enjoyable summer. I'd like to use this message to briefly describe two upcoming events.

MIDYEAR AALS CONFERENCE ON EVIDENCE, *The Future of Evidence: How Science and Technology Are Changing Evidence Law*—June 3-6, 2008, Renaissance Cleveland Hotel, Cleveland, Ohio

The program for this extremely promising conference includes sessions on fMRI and lie detection, the use of technology in the classroom, the use of technology for evidence presentation in court, the implications of social science research for evidence law, and a host of interesting sessions on the challenges of teaching evidence. The conference will be a great way to catch up with old friends and meet new Section members.

A full description of the program can be found at <http://www.aals.org>. To register online go to http://www.aals.org/events_2008evidence.php and then on "Register."

ANNUAL CONFERENCE—January 6-10, 2009, San Diego, California

The Section is sponsoring two events this year: a Friday luncheon followed by a Section panel.

EVIDENCE SECTION PANEL, Friday, January 9, 2009 at 1:30-3:15pm,
Evidentiary Foul Play: Deception, Destruction, and Just Deserts

Judges and practitioners report that evidentiary foul play is commonplace. Documents that should be produced in response to a discovery request are regularly shredded, altered, or suppressed. Witnesses frequently lie to investigators, deponents, and courts. Fact finders are routinely misled by the fabrication and destruction of evidence.

Explicit academic analysis of evidentiary misbehavior, however, is relatively uncommon. Such considerations often do play a background role in the analysis of well studied rules, such as those concerning hearsay, the Confrontation right, and the privilege against self-incrimination. But the need remains for a well developed and well connected literature that directly and comprehensively explores the delineation, discouragement, and punishment of evidentiary misdeeds.

This Program is an attempt to aid in the development of such a literature. Papers will touch on a diverse array of topics, but all will be centered on the question: how and to what extent should the law discourage and punish evidentiary foul play?

Section elections will take place immediately after the program.

SECTION LUNCHEON, Friday, January 9, 2009 at 12:15-1:30pm

Our Section luncheon, which immediately precedes our Section panel, will be a great opportunity to chat with fellow Section members in a more casual atmosphere. Planning for a short program is still in progress. Suggestions for speakers are more than welcome (csanchir@law.upenn.edu).

Looking forward to seeing you all at the midyear and annual conferences.

Chris Sanchirico
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Rounding Up the Usual Suspects

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Countries around the world have established databases consisting of the DNA profiles of suspected or convicted offenders. In the United States, state and federal databases combined in the FBI's National DNA Index System hold over five million convicted offender DNA profiles as well as those of some people who are merely arrested or detained. These identification databases have helped solve cases that have baffled investigators for decades. In one case, a federal database search linked a 58-year-old man suspected of raping at least 25 women in three states to semen on underwear from a 1973 rape.

When the DNA profile from a crime-scene stain matches one of those on file, the person identified by this "cold hit" will become a target of the investigation. A fresh sample will be taken from the suspect to verify the DNA match, and other evidence normally will reinforce the investigatory lead. In rare cases, prosecutors will even proceed with no other evidence. In one such case, a San Francisco jury convicted John Davis, already behind bars for robbery and other crimes, of the murder of his neighbor, Barbara Martz, nearly 22 years

earlier. The database match was all the jurors had to go on. This was enough for a conviction, at least where the probability that a randomly selected, unrelated individual would match the crime-scene DNA sample — the “random-match probability” — was said to be “quadrillions-to-one.”

Cases like *Davis* that emanate from cold hits have been called “trawl cases” because “the DNA match itself made the defendant a suspect, and the match was discovered only by searching through a database of previously obtained DNA samples.” Peter Donnelly & Richard D. Friedman, *DNA Database Searches and the Legal Consumption of Scientific Evidence*, 97 MICH. L. REV. 931, 932 (1999). These database-trawl cases can be contrasted with traditional “confirmation cases” in which “other evidence has made the defendant a suspect and so warranted testing his DNA.” *Id.* In terms of this dichotomy, we must ask whether the fact that the defendant was selected for prosecution by trawling requires some adjustment to the random-match probability. Two committees of the National Academy of Sciences (NAS) thought so. In their influential reports on “DNA Forensic Science,” they reasoned that a match coming from a trawl is much less impressive than a match in a confirmation case — just as finding a tasty apple on the very first bite is more impressive than pawing through the whole barrel of apples to locate a succulent one. To account for the extra bites at the apples, they described approaches that would inflate the normal random-match probability.

The response has been disputation and litigation. Two early commentators, Bill Thompson and Simon Ford, gave “a Bayesian analysis” to suggest that “this evidence has no probative value.” William C. Thompson & Simon Ford, *DNA Typing: Acceptance and Weight of the New Genetic Identification Tests*, 75 VA. L. REV. 45, 100 (1989). Ten years later, Donnelly and Friedman reached precisely the opposite conclusion. They applied Bayes' rule in more detail -- and correctly -- to show that the trawl actually increases the probative value of the match.

Recently, three appellate opinions on the issue have emerged -- *United States v. Jenkins*, 887 A.2d 1013 (D.C. 2005), *People v. Johnson*, 43 Cal.Rptr.3d 587 (Ct. App. 2006), and *People v. Nelson*, 48 Cal.Rptr.3d 399 (Ct. App. 3 Dist. 2006), *rev. granted*, 147 P.3d 1011 (Cal. 2006). In these cases, defendants argued that until the scientific community can agree on a single statistic to characterize the import of a database trawl, even the fact of a match should not be admitted. Even though the dispute in the scientific community is limited to the question of whether there is any reason to bother with the NAS adjustments to the probability figure, the trial court in *Jenkins* felt compelled to exclude the DNA evidence in its entirety.

The appellate courts all rejected the defense challenges, but their opinions fail to address the dispute in the scientific and legal literature. The avoidance mechanisms they employ are singularly unimpressive. In *Nelson*, for example, the court of appeal claimed that California's general acceptance standard for scientific evidence does not apply because after the database trawl identifies the suspect, a fresh sample from the suspect is typed. If the fresh sample matches, only this match is introduced at trial. In the court's view, it is as if the database trawl never took place.

To a statistician, this is a jaw-dropping claim. The challenge is not to the use of a convicted-offender DNA database as an investigatory tool. The objection

is to the use of the random-match probability at trial to gauge the power of the later match when the defendant has not been selected for DNA testing “at random” — that is to say, on the basis of factors that are uncorrelated with his DNA profile. When the defendant is selected for a later test precisely because of his known DNA profile, the replication adds no new information about the hypothesis that the defendant is unrelated to the actual perpetrator and just happens to have the matching DNA profile. It adds no information because the datum — a matching profile in the new sample — is just as probable when this hypothesis is true as when it is false. Replication helps eliminate the risk of a laboratory error in determining or reporting the DNA profile, but it has no further value in probing the possibility of a coincidental match.

Because the rationales presented in the three cases to date are unconvincing, the emerging case law needs to be reoriented to confront directly the competing statistical arguments about the meaning of a database match. Recent statistical literature seems to favor the view that no adjustment to the random-match probability is necessary, but this may just reflect the fact that most statisticians writing about forensic science are Bayesians rather than frequentists. Although Donnelly and Friedman have presented the Bayesian perspective forcefully and simply, it appears that it will take more to convince the courts that they need to think more deeply -- and more clearly -- about the subject.

© 2008 D.H. Kaye. These comments are adapted from a forthcoming book, *The Double Helix and the Law of Evidence: Controversies over the Admissibility of Genetic Evidence of Identity* (Harvard Univ. Press).

The Individualization Fallacy

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In his recent book on DNA typing, David Balding explains what he terms "the uniqueness fallacy." Attorneys, judges, and experts commit this fallacy in cases involving DNA evidence when they assume that a set of genetic markers that is expected to occur less than once per five billion people (a denominator that roughly equals the earth's population) must be unique. An illustration is provided by the following argument offered in the O.J. Simpson murder trial:

[L]adies and gentlemen, his blood on the rear gate with that match, that makes him one in 57 billion people that could have left that blood, I mean there is [sic] what, five million [sic] people on the planet, that means you would have to go through 57 billion people to find the DNA profile that matches Mr. Simpson's. There is [sic] only five billion people on the planet. Ladies and gentlemen, that is an identification, okay, that proves it is his blood. Nobody else's on the planet; no one.

Balding refers to a British case in which the appellate judge made a similar assumption: "I should think there are not more than 27 million males in the United Kingdom, which means that it is unique." Likewise, a forensic science textbook states: "Balthazard has mathematically determined that the probability of two individuals having the same fingerprints is one out of 1×10^{60} This probability is so small as to exclude the possibility of any two individuals having the same fingerprints." In yet another example of the same faulty logic, Keith Inman and Nora Rudin argue that objects of forensic interest are unique by analogy to the asserted uniqueness of snowflakes, claiming that the number of ways that water molecules can be arranged into a typical snowflake:

is so astronomically larger than the number of snowflakes that have ever existed that it is unreasonable to believe that any one arrangement has occurred more than [sic] once. When a characteristic (or characteristics) of an item can be described in such a fashion, it is believed to be unique, with no duplicate on earth. It has then been individualized.

Although markers that rarely occur *might* be unique, it is a fallacy to infer uniqueness from profile frequencies simply because they are smaller than the number of available objects. A simple analogy clarifies this point: Imagine a machine that prints lottery tickets with numbers 00 through 99. This machine can print one hundred different tickets. Suppose that each of ten customers purchases one ticket and that the machine generates ticket numbers at random, with replacement. The total number of unique tickets that could be sold (one hundred) exceeds the population of customers (ten) by a factor of ten. And yet there is no law of mathematics or nature that prevents two (or more) customers from being issued different tickets bearing the same number. Indeed, the probability of that happening is nearly 40%.

Some people might be surprised by the rather high chance of finding matching lottery tickets in this example. Empirical research demonstrates that people commit an array of errors when describing and interpreting probabilistic evidence like DNA random match probabilities. Probabilistic reasoning is hard, and assigning an appropriate weight to unfamiliar and extreme probabilistic events, such as those that occur 0.1% or 0.001% of the time, is particularly challenging. Certainly, a criminalist's work and a fact-finder's task would be simplified if they could assume that physical evidence reportedly matching a potential source resulted in unique and absolute identification of the source of the evidence. Unfortunately, that is not possible on current knowledge. That is the central point of this Essay. The concept of "individualization," which lies at the core of numerous forensic science subfields, exists only in a metaphysical or rhetorical sense. It has no scientific validity, and it is sustained largely by the faulty logic [and faulty intuition] that equates infrequency with uniqueness.

Excerpted from *The Individualization Fallacy*, 61 VANDERBILT L. REV. 199 (2008).

Symposium Announcement

Neuroscience, Law & Government

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On September 25 and 26, 2008, The University of Akron School of Law will host a symposium on *Neuroscience, Law & Government*. Fascinating neuroscience developments are changing how we perceive and understand the world around us. Many neuroscience discoveries have important implications for both law and government, particularly in detecting deception and visualizing mental illness, injury or disease. The U.S. Government is interested in potential uses for neuroscience, and the courts have begun to admit neuroimaging evidence at trial. This symposium considers the complicated intersections of neuroscience with government and law. Topics that may be included are:

- The current state of neuroscience and neuroimaging research
- Scientific and legal reliability standards for neuroscience research
- Neuroscience research and the “war on terror” - accuracy, privacy, national security, and the role of the state
- The legal implications of brain, mind, and person
- The Military Commissions Act and the admissibility of neuroscience evidence in tribunals
- Neuroscience and proof of mental illness, injury, and disease in criminal and civil trials
- Neuroscience and neuroimaging in death penalty cases
- Neuroscience and privacy

The keynote speaker for the symposium will be Henry T. Greely, Deane F. and Kate Edelman Johnson Professor of Law at Stanford. Greely is a leading expert on legal, ethical, and social issues surrounding health law and the biosciences, and co-director of the MacArthur Foundation’s Law & Neuroscience Project. Other confirmed speakers include:

- Professor Jay D. Aronson, History, Carnegie Mellon University
- Professor Nita Farahany, Vanderbilt Law School
- Professor Daniel Langleben, Psychiatry, University of Pennsylvania;
- Professor Jonathan H. Marks, Bioethics, Humanities and Law,

Pennsylvania State University;

- Professor Michael L. Perlin, New York Law School
- Professor Stacey Tovino, Drake Law School

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Or visit our website:

www.uakron.edu/law/neurosymposium.php

Conference Announcement

Forensic Inference and Statistics

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The Seventh International Conference on Forensic Inference and Statistics will be held in Lausanne, Switzerland, from Thursday, 21st August to Saturday, 23rd August, 2008. The conference seeks to bring together the diverse scientific communities involved in law, forensic interpretation and statistics (statisticians, forensic scientists, attorneys, members of the judiciary, and others with an interest in quantitative methods and law). There are introductory workshops on the 20th of August, on forensic DNA analysis, fingerprint identification and Bayesian networks in forensic science. For more information, see <http://www2.unil.ch/icfis/>.

Book Announcement

Crime, Procedure and Evidence in a Comparative and International Context

Edited by
John Jackson, Queen's University Belfast
Maximo Langer, University of California, Los Angeles
Peter Tillers, Cardozo School of Law, Yeshiva University

Studies in International and Comparative Criminal Law - no. 3
Hart Publishing. October 2008. Pp. 372. \$115.00.

This book aims to honour the work of Professor Mirjan Damaška, Sterling Professor of Law at Yale Law School and a prominent authority for many years in the fields of comparative law, procedural law, evidence, international criminal law and continental legal history. Professor Damaška's work is renowned for providing new frameworks for understanding different legal traditions. To celebrate the depth and richness of his work and discuss its implications for the future, the editors have brought together an impressive range of leading scholars from different jurisdictions in the fields of comparative and international law, evidence and legal theory. Using Professor Damaška's work as a backdrop, the essays make a substantial contribution to the development of comparative law, procedure and evidence. After an introduction by the editors and a tribute by Harold Koh, Dean of Yale Law School, the book is divided into three parts. The first part explores a number of insights from Professor Damaška's work in the fields of evidence, criminal law and legal theory. The second part considers contemporary trends in national and international criminal procedure, examining both the extent to which these are resulting in converging practices across national jurisdictions and the growing importance of international criminal law. The final part of the book assesses Professor Damaška's contribution to comparative law and the challenges faced by comparative law in the twenty first century.

Section Member News

- **Chris Chambers Goodman** (Pepperdine) recently signed a contract with Aspen Publishers to write a California Evidence book in their *Examples and Explanations* series. The study aid will be of interest to California law students studying for the California bar.
- **Ann Murphy** (Gonzaga) and **David Kaye** (Arizona State) are delivering presentations on evidence in May at a Fulbright-sponsored conference in Hong Kong on teaching American law. The conference is the first step in producing a book on U.S. law for law students in Chinese universities.
- **D. Michael Risinger** (Seton Hall) was recently appointed the John J. Gibbons Professor of Law at Seton Hall. In addition to his usual duties at Seton Hall, Michael will also be teaching evidence at Penn in the fall.

Joining the Evidence Listserv

To subscribe to the Evidence Listserv send an e-mail message to **Roger Park** (Hastings) at parkr@uchastings.edu. Please include your faculty position and school.

SSRN's EVIDENCE AND EVIDENTIARY PROCEDURE ABSTRACTS

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Contributions to the Fall/Winter 2008 Newsletter

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