

Welcome to TimesPeople
What's this?

TimesPeople Lets You Share and Discover the Best of NYTimes.com

9:15 AM

Get Started No, thanks

HOME PAGE TODAY'S PAPER VIDEO MOST POPULAR TIMES TOPICS

Get Home Delivery Log In Register Now

The New York Times

U.S.

Search All NYTimes.com

Go

WORLD U.S. N.Y. / REGION BUSINESS TECHNOLOGY SCIENCE HEALTH SPORTS OPINION ARTS STYLE TRAVEL JOBS REAL ESTATE AUTOS
POLITICS WASHINGTON EDUCATION

The Saab Presidents' Day Event. During The Saab Presidents' Day Event Get 0% APR For Qualified Buyers For 60 Months On The Saab 9-3 Family. [Click To Learn More](#)

* Monthly payment is \$16.57 for every \$1000 you finance. Example down payment: 14.6%. Some customers will not qualify. Take delivery by 03-02-2009. See dealer for details.

Advertise on NYTimes.com

Science Found Wanting in Nation's Crime Labs

By SOLOMON MOORE
Published: February 4, 2009

Forensic evidence that has helped convict thousands of defendants for nearly a century is often the product of shoddy scientific practices that should be upgraded and standardized, according to accounts of a draft report by the nation's pre-eminent scientific research group.

[Enlarge This Image](#)



Andy Manis/Associated Press

Robert L. Stinson, convicted of murder in 1984, was freed from a Wisconsin prison last month after tests found that bite-mark and DNA analysis did not match evidence from the crime scene.

Related

Times Topics: [DNA Evidence](#) | [False Arrests, Convictions and Imprisonments](#)



Greg Wahl-Stephens

The F.B.I. wrongfully arrested Brandon Mayfield of Oregon.

Readers' Comments

Readers shared their thoughts on this article. [Read All Comments \(40\)](#)

proceedings. The report's findings are not binding, but they are expected to be highly influential.

The report by the [National Academy of Sciences](#) is to be released this month. People who have seen it say it is a sweeping critique of many forensic methods that the police and prosecutors rely on, including fingerprinting, firearms identification and analysis of bite marks, blood spatter, hair and handwriting.

The report says such analyses are often handled by poorly trained technicians who then exaggerate the accuracy of their methods in court. It concludes that Congress should create a federal agency to guarantee the independence of the field, which has been dominated by law enforcement agencies, say forensic professionals, scholars and scientists who have seen review copies of the study. Early reviewers said the report was still subject to change.

The result of a two-year review, the report follows a series of widely publicized crime laboratory failures, including the case of Brandon Mayfield, a lawyer from Portland, Ore., and Muslim convert who was wrongly arrested in the 2004 terrorist train bombing in Madrid that killed 191 people and wounded 2,000.

American examiners matched Mr. Mayfield's fingerprint to those found at the scene, although Spanish authorities eventually convinced the [Federal Bureau of Investigation](#) that its fingerprint identification methods were faulty. Mr. Mayfield was released, and the federal government settled with him for \$2 million.

In 2005, Congress asked the National Academy to assess the state of the forensic techniques used in court

More Articles in US »

Breaking News Alerts by E-Mail

Sign up to be notified when important news breaks.
[Privacy Policy](#)

Find something for your sweetheart
Roll over items to view

Advertise on NYTimes.com

MOST POPULAR

E-MAILED BLOGGED SEARCHED

1. You Try to Live on 500K in This Town
2. In Florida, Despair and Foreclosures
3. Frank Rich: Slumdogs Unite!
4. Op-Ed Contributor: Education Is All in Your Mind
5. Nicholas D. Kristof: Mistresses of the Universe
6. Paul Krugman: The Destructive Center
7. Op-Ed Contributor: My Children Made Me Do It
8. Canadian Rider Has Made Unorthodox Climb to the Top
9. Maureen Dowd: Potomac's Postpartisan Depression
10. Fresh Starts: Digital Archivists, Now in Demand

[Go to Complete List](#) »

The New York Times REAL ESTATE
nytimes.com/realestate

"This is not a judicial ruling; it is not a law," said Michael J. Saks, a psychology and law professor at [Arizona State University](#) who presented fundamental weaknesses in forensic evidence to the academy. "But it will be used by others who will make law or will argue cases."

Legal experts expect that the report will give ammunition to defense lawyers seeking to discredit forensic procedures and expert witnesses in court. Lawyers could also use the findings in their attempts to overturn convictions based on spurious evidence. Judges are likely to use the findings to raise the bar for admissibility of certain types of forensic evidence and to rein in exaggerated expert testimony.

The report may also drive federal legislation if Congress adopts its recommendations. Senator [Richard C. Shelby](#), Republican of Alabama, who has pushed for forensic reform, said, "My hope is that this report will provide an objective and unbiased perspective of the critical needs of our crime labs."

Forensics, which developed within law enforcement institutions — and have been mythologized on television shows from "Quincy, M.E." to "CSI: Miami" — suffers from a lack of independence, the report found.

The report's most controversial recommendation is the establishment of a federal agency to finance research and training and promote universal standards in forensic science, a discipline that spans anthropology, biology, chemistry, physics, medicine and law. The report also calls for tougher regulation of crime laboratories.

In an effort to mitigate law enforcement opposition to the report, which has already delayed its publication, the draft focuses on scientific shortcomings and policy changes that could improve forensics. It is largely silent on strictly legal issues to avoid overstepping its bounds.

Perhaps the most powerful example of the National Academy's prior influence on forensic science was a 2004 report discrediting the F.B.I. technique of matching the chemical signatures of lead in bullets at a crime scene to similar bullets possessed by a suspect. As a result, the agency had to notify hundreds of people who potentially had been wrongfully convicted.

In its current draft report, the National Academy wrote that the field suffered from a reliance on outmoded and untested theories by analysts who often have no background in science, statistics or other empirical disciplines.

Although it is not subject to significant criticism in the report, the advent of DNA profiling clearly set the agenda. DNA evidence is presented in less than 10 percent of all violent crimes but has revolutionized the entire science of forensics. While DNA testing has helped to free more than 200 wrongfully convicted people, "DNA was a shock to police culture and created an alternative scientific model, which promoted

standardization, transparency and a higher level of precision," said Paul Giannelli, a forensic science expert at Case Western Reserve University School of Law who presented his research to the National Academy. Enforcement officials, Mr. Giannelli said, "chose to say they never make mistakes, but they have little scientific support, and this report could blow them out of the water."

[Peter J. Neufeld](#), a co-director of the Innocence Project, a nonprofit group that uses DNA evidence to exonerate the wrongfully convicted, presented to the academy a study of trial transcripts of 137 convictions that were overturned by DNA evidence and found that 60 percent included false or misleading statements regarding blood, hair, bite mark, shoe print, soil, fiber and fingerprint analyses.

The appeal of North Stamford

Also in Real Estate:

[Homes for \\$2 million or less in Stamford](#)

[Homes for \\$1 million or less in Stamford](#)

[Homes for \\$500,000 or less in Stamford](#)

ADVERTISEMENTS

Get the inauguration issue.
[CLICK HERE](#)
The New York Times

KNOW

Spring online courses include writing, education, law, and business.
[Click here for full details](#)

The New York Times
Knowledge Network

Build your card now at Capital One® Card Lab



Earn up to 3X rewards
As low as 0% intro APR

[Go!](#)

Advertise on NYTimes.com

Ads by Google

what's this?

[Composite Deck Cleaner](#)

Easy to use - Superior Results Buy Online - Save 20% Today!
[www.corteclean.com](#)

[Homeland Security Israel](#)

Learn CT techniques in Israel while earning Edu Credits in one week!
[www.HomelandSecuritySsi.com](#)

[Mortgage Rates at 4.25%](#)

Fixed mortgage rates at 40 yr low. 15 year fixed APR is 4.564%. Act Now
[Refinance.MortgageQuoteSite.com](#)

INSIDE NYTIMES.COM

The courts have long struggled with the proper role of scientific evidence. In a 1993 landmark decision, *Daubert v. Merrell Dow Pharmaceuticals*, the [Supreme Court](#) held that scientific testimony had to meet an objective standard. Federal courts have occasionally excluded evidence like handwriting and hair analysis.

Donald Kennedy, a Stanford scientist who helped select the report's authors, said federal law enforcement agencies resented "intervention" of mainstream science — especially the National Academy — in the courts.

He said the National Institute of Justice, a research arm of the Justice Department, tried to derail the forensic study by refusing to finance it and demanding to review the findings before publication. A bipartisan vote in Congress in 2005 broke the impasse with a \$1.5 million appropriation.

Mr. Shelby also accused the National Institute of Justice of trying to infiltrate the forensic study panel with lobbyists for private DNA analysis companies, who were seeking to limit the research to DNA studies.

The National Institute of Justice said it would not comment until the report was released. But a preview of potential turf wars played out in the presentations to the National Academy in December 2007. A forensic expert from the Secret Service blasted the F.B.I. for developing questionable techniques "on an ad-hoc basis, without proper research."

He said the Secret Service wanted the National Academy "to send a message to the entire forensic science community that this type of method development is not acceptable practice."

Everyone interviewed for this article agreed that the report would be a force of change in the forensics field.

One person who has reviewed the draft and who asked not to be identified because of promises to keep the contents confidential said: "I'm sure that every defense attorney in the country is waiting for this report to come out. There are going to be challenges to fingerprints and firearms evidence and the general lack of empirical grounding. It's going to be big."

A version of this article appeared in print on February 5, 2009, on page A1 of the New York edition.

[More Articles in US »](#)

[Click here to enjoy the convenience of home delivery of The Times for less than \\$1 a day.](#)

Ads by Google

[what's this?](#)

[Search Criminal Records](#)

Instant Criminal records lookup. Criminal records online database.
[Criminal.GovtRegistry.com](#)

[Background Checks](#)

Background Checks, Surveillance & Infidelity Investigations. Call Us.
[Rp.com/AaaaBondingofRutherford](#)

[Criminal Background Check](#)

Instant Criminal Background Check, Lawsuits-Property-More-Free Summary
[Criminal.Background.Intelius.com](#)

Past Coverage

[FRESH STARTS; On the Trail Of Digital Secrets](#) (October 14, 2007)
[Houston Won't Review Cases in Lab Inquiry](#) (June 14, 2007)
[IN TOUCH; Fighting Crime With Cellphones' Clues](#) (May 3, 2006)
[POP QUIZ; To Catch a Criminal](#) (April 23, 2006)

Related Searches

[Forensic Science](#)

[Get E-Mail Alerts](#)

[Crime and Criminals](#)

[Get E-Mail Alerts](#)

[Science and Technology](#)

[Get E-Mail Alerts](#)

False Arrests, Convictions and Imprisonments

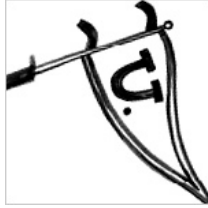
Get E-Mail Alerts

WEEK IN REVIEW »



America's Scorecard in Iraq

OPINION »



Op-Ed: Send R.O.T.C. Back to School

N.Y. / REGION »



To Some, Gillibrand's Evolution Is a Betrayal

OPINION »

Editorial: Rockefeller Laws, an End in Sight

Change is welcomed to laws that squandered many young lives.

MOVIES »



A Film School's New Look Is Historic

BUSINESS »



Investment Advice by Anonymous Volunteers

[Home](#) | [World](#) | [U.S.](#) | [N.Y. / Region](#) | [Business](#) | [Technology](#) | [Science](#) | [Health](#) | [Sports](#) | [Opinion](#) | [Arts](#) | [Style](#) | [Travel](#) | [Jobs](#) | [Real Estate](#) | [Automobiles](#) | [Back to Top](#)
Copyright 2009 The New York Times Company | [Privacy Policy](#) | [Search](#) | [Corrections](#) | [RSS](#) | [First Look](#) | [Help](#) | [Contact Us](#) | [Work for Us](#) | [Site Map](#)