



**NIJ**

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2010

NIJ ANNUAL REPORT

U.S. Department of Justice  
Office of Justice Programs  
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Washington DC, 20531

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To the President, the Attorney General and  
the Congress:

It is my honor to transmit the National  
Institute of Justice's annual report on  
research, development and evaluation for  
fiscal year 2009, pursuant to Title I of the  
Omnibus Crime Control and Safe Streets Act  
of 1968 and Title II of the Homeland  
Security Act of 2002.

Respectfully submitted,

A handwritten signature in black ink that reads "John H. Laub". The signature is written in a cursive style with a large, stylized "L" at the end.

John H. Laub,  
Director, National Institute of Justice



## INTRODUCTION

The National Institute of Justice is the only federal agency devoted solely to bringing the benefits of scientific research and technology development to the nation's criminal justice system.

NIJ is the research, development and evaluation arm of the U.S. Department of Justice. It helps criminal justice practitioners perform better on the job by assessing new technologies and programs, promoting innovations and conducting research to learn what works and what does not work.

NIJ applies a rigorous scientific approach to its endeavors. Researchers harness the power of science to make the American justice system more effective and equitable. Projects range from measuring the extent and nature of emerging crimes to using modern DNA techniques to free wrongfully convicted prisoners. The Institute works closely with law enforcement organizations, corrections agencies, courts, crime laboratories and other criminal justice and allied organizations.

## **CHAPTER 1: ADVANCING LAW ENFORCEMENT RESEARCH AND TECHNOLOGY**

NIJ remains committed to helping federal, state and local agencies as they work to combat crime and make communities safer. The Institute funds research and development that yield results and identifies what works for practitioners. In 2009, NIJ funded various research and technology endeavors, including evaluations of violence reduction programs and license plate recognition technology. It also launched predictive policing demonstration projects to help agencies take the next step in preventing and controlling crime.

### **Meeting Criminal Justice Needs under the Recovery Act**

In February 2009, the President signed the American Recovery and Reinvestment Act of 2009 into law. The Recovery Act provided the Department of Justice with funding for grants to help state, local and tribal law enforcement; combat violence against women; fight Internet crimes against children; and help crime victims.

NIJ awarded \$14.3 million in technology research and development grants to address high-priority criminal justice needs under the Recovery Act. These funds met several policy criteria, most specifically advancing science. These awards will improve the effectiveness of criminal justice practitioners and add to the nation's economic base. Some Recovery Act funds were carried into 2010.

### **NIJ Launches Predictive Policing Demonstration Project**

For years, businesses have analyzed market conditions and industry trends to predict how conditions might change. Police can use similar methods to help make their work more efficient.

In 2009, NIJ launched several predictive policing demonstration projects. The goal was to develop, test and evaluate predictive policing in a real-world, real-time context. Grants were competitively awarded to seven pilot sites across the United States.

Predictive policing, in essence, is taking data from disparate sources, analyzing it and then using that information to anticipate, prevent and respond more effectively to future crime. NIJ also funded an evaluation of the grant program. By the end of the initiative, the field will know more about what works, what does not work and what is promising in predictive policing.

- More information on the symposium is available at <http://www.ojp.usdoj.gov/nij/topics/law-enforcement/predictive-policing/symposium/welcome.htm>.

## **Web Site Helps Solve Missing Persons and Unidentified Remains Cases**

There are about 4,400 unidentified human remains cases every year and close to 100,000 active missing persons cases on any given day. The National Missing and Unidentified Persons System is a searchable repository and a clearinghouse for missing persons and unidentified decedent records. Medical examiners, coroners, law enforcement officials and the public can search NamUs to help solve these cases.

NamUs reached a milestone in 2009: Its missing persons database and the unidentified decedent database were linked. When a new case is entered into NamUs, the system automatically searches both databases for matches or likenesses between cases.

NamUs was credited with resolving several cases in 2009. The system also received an Excellence in

Technology Award from the International Association of Chiefs of Police in the category of Innovation in Information Technology.

- See <http://www.namus.gov>.

## **Harvard Executive Session on Policing and Public Safety**

To understand how policing continues to evolve, NIJ and Harvard University's John F. Kennedy School of Government are collaborating on the second Executive Session on Policing and Public Safety. The Executive Session brings together leading police executives, scholars and other stakeholders to examine the most pressing issues facing law enforcement today. Topics include the impact of international crime and terrorism on policing, the changing face of technology, police legitimacy and relationships with minority communities, the role of detectives and forensic scientists in police departments, and how a new generation of police officers is advancing change in leadership and organizational structure.

A series of papers will be published throughout the life of the Executive Session. The first paper, "A Week in Heron City" by Malcolm Sparrow, was published in 2009. It is a case study and a teaching tool about how to solve community problems using multifaceted approaches.

- More information on the Executive Session is available at <http://www.ojp.usdoj.gov/nij/topics/law-enforcement/executive-sessions/welcome.htm>.

## NIJ Evaluates Violence Reduction Programs

In 2009, NIJ released evaluation results for two violence reduction programs. The evaluations found that the programs reduced crime and made neighborhoods safer.

*Project Safe Neighborhoods* is an initiative designed to reduce gun crime and violence. The NIJ-funded evaluation found that PSN cities experienced an overall decline in violent crime. Cities with a high rate of federal prosecution saw greater declines. Key reasons for success included leadership by the U.S. Attorneys' Offices, cross-agency buy-in and program flexibility.

The Chicago Project for Violence Prevention's *CeaseFire* program uses prevention, intervention and community mobilization strategies to interrupt the cycle of violence and change behavior. The evaluation showed that *CeaseFire* was effective in reducing shootings and killings in most of the areas studied. Crime mapping showed decreases in the size and intensity of shooting hot spots in more than half of the program sites. There also were significant shifts in gang-related homicides in most study areas, including declines in gang involvement in homicide and retaliatory killings.

- *Project Safe Neighborhoods* evaluation is at <http://www.ncjrs.gov/pdffiles1/nij/grants/226686.pdf>.
- Chicago *Ceasefire* evaluation is at <http://www.northwestern.edu/ipr/publications/ceasefire.html>.

## Study Looks at Effectiveness of License Plate Recognition Technology

License plate recognition technology offers police an innovative way to deal with crimes such as auto theft. It captures images of license plates using cameras and computer software then compares the plate information with database records. The system alerts officers to any matches. But how effective is it?

To help answer this question, NIJ funded the Police Executive Research Forum to conduct the first large-scale randomized experiment on the effectiveness of the technology. The 27-month project focuses on the Mesa (Ariz.) Police Department. The project involves collecting data on the hot spots, transit routes and destination points for auto thefts in Mesa, and evaluating a placement and patrol pattern strategy using the technology. PERF will carry out an experimental design and collect information about how the technology works.

Recognizing that this technology comes with its own set of technical challenges, NIJ and the International Association of Chiefs of Police also will document implementation issues, successes and best practices from law enforcement agencies that have used the technology. The Institute also is developing a license plate reader XML standard to enable sharing of license plate data across jurisdictions.

## Improving Police Communications

Public safety officials must be able to communicate effectively with one another. If they cannot share information across jurisdictions quickly and seamlessly, critical time will be wasted and lives could be lost.

In 2009, NIJ continued its research, development and evaluation efforts to provide assured operable and interoperable communications for law enforcement agencies. This work includes development of the following:

- A low-power, multiband, software-defined radio for law enforcement;
- An advanced development prototype public safety cognitive radio;
- An integrated, reconfigurable antenna for handheld, software-defined radios using new nanoelectromechanical technology.

NIJ is also working with the U.S. Department of Homeland Security to evaluate a multiband radio in public safety applications. If successful, this effort will simplify interagency communications and could potentially improve how law enforcement agencies communicate.

- For more information on NIJ's communications technology work, see <http://www.ojp.usdoj.gov/nij/topics/technology/communication/welcome.htm>.

## NIJ's International Center Imports and Exports Ideas

With advances in technology, criminal organizations now extend beyond national borders, presenting new challenges for criminal justice agencies around the world. NIJ's International Center uses a multifaceted approach to foster the exchange of criminal justice information to help practitioners, researchers and policymakers at home and abroad meet these new challenges.

*Conducting outreach.* In FY 2009, the center hosted 67 visitors from 17 countries through its international visitor program. The center also continued the international document exchange program, which allows members from 60 countries to get new material from partner agencies and file their own reports and studies.

*Building partnerships.* NIJ preserved, renewed and began partnerships with international researchers, the United Nations and foreign governments. This includes partnerships with the Israeli Ministry of Public Security, the United Kingdom's National Policing Improvement Agency and the United Nations Office on Drugs and Crime as well as collaborations with members of the United Nations Programme Network Institutes.

*Conducting research.* The center incorporates international perspectives into all NIJ research programs. In FY 2009, it also began transferability assessments of social science and technology programs around the world to identify innovations not yet seen in the United States and to assess whether similar programs could be established in this country. Continuing

assessments are looking at virtual autopsies, day fines and a public-private partnership in northern Europe to address child pornography sites.

- For more information on NIJ's International Center, see <http://www.ojp.usdoj.gov/nij/international/welcome.htm>.

## CHAPTER 2: COURTS AND CORRECTIONS

NIJ's work in 2009 involved understanding the role sexual assault nurse examiner (SANE) programs play in investigations and prosecutions. Other studies gave the field a better picture of re-entry needs and safety concerns both inside and outside prison walls.

## Study Finds SANE Programs Shape Success of Investigations

SANE programs provide compassionate care to meet sexual assault victims' physical and emotional needs. But do SANE programs — and their forensic evidence collection services — impact the outcome of investigations?

An NIJ-funded study found that SANE programs contribute to higher prosecution and conviction rates. A research team led by Dr. Rebecca Campbell of Michigan State University examined two SANE programs in a large Midwestern county. The researchers measured the progression of sexual assault cases through the criminal justice system during the years before and after the programs started. They found statistically significant increases in various case progression measures, including the percentage of cases that resulted in guilty pleas or convictions.

The study found that SANE programs provide quality evidence in a timely way that can help shape the course of an investigation. In addition, evidence showed that SANE programs provide help that can contribute to more complete, fully investigated and fully corroborated cases. Victims also lauded the care they received through the programs.

- Read an *NIJ Journal* article about the study at <http://www.ojp.usdoj.gov/nij/journals/264/SANE.htm>.
- The complete study is available at <http://www.ncjrs.gov/pdffiles1/nij/grants/226497.pdf>.

## The Serious and Violent Offender Reentry Initiative

The Serious and Violent Offender Reentry Initiative was a national response to the criminal justice, employment, education, health and housing challenges faced by offenders as they returned to their communities. Under this collaborative federal effort, 69 sites received more than \$100 million to develop or expand programs that offer integrated supervision and services to offenders. The program aimed to promote productive social roles and reduce the likelihood of a return to crime and imprisonment.

NIJ sponsored an evaluation of the effectiveness of the program across the 69 sites. Preliminary findings suggested that the programs provided small but significant increases in service provisions before and after release. Participants were 10 percent more likely than nonparticipants to report supporting themselves with a job three months following release. They were also more likely to report having a job that was permanent, offered formal pay and had benefits such as health insurance and vacation pay.

- For more information on the SVORI evaluation, see <http://www.svori-evaluation.org>.

## “Redemption” in an Era of Widespread Criminal Background Checks

Criminologists and practitioners alike believe that an offender’s probability of re-offending declines steadily the longer he or she stays arrest-free. Most recidivism occurs within three years of an arrest and almost certainly within five years.<sup>1</sup> But at what point are the chances of a known offender committing another crime so low that they match the likelihood of those of the same age without a criminal record? Pre-employment background checks for criminal history are ubiquitous and arrests from long ago are typically viewed no different from a more recent arrest.

NIJ funded a study to determine the length of time that needs to pass after an offender commits a crime before he or she is at no greater risk of committing a new crime than is a member of the general population of the same age. The general population group would include people who had been arrested as well as people who had never been arrested. Alfred Blumstein and Kiminori Nakamura of Carnegie Mellon University studied the criminal history records of 88,000 individuals arrested for

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<sup>1</sup> Maltz, M.D., *Recidivism*, Orlando, FL: Academic Press, August 1984; Beck, A.J., and B.E. Shipley, “Recidivism of Prisoners Released in 1983” (<http://bjs.ojp.usdoj.gov/content/pub/pdf/rpr83.pdf>), Special Report, Washington, DC: Bureau of Justice Statistics, April 1989 (NCJ 116261); and Langan, P.A., and D.J. Levin, “Recidivism of Prisoners Released in 1994” (<http://bjs.ojp.usdoj.gov/content/pub/pdf/rpr94.pdf>), Special Report, Washington, DC: Bureau of Justice Statistics, June 2002 (NCJ 193427).

burglary, robbery or aggravated assault for the first time in New York State in 1980. The researchers examined whether individuals had stayed arrest-free or had committed another crime during the 25 years following their arrest and the length of time before the subsequent crime had occurred. They then compared the data against that for people of the same age in the general population who had never been arrested.

The result is a model for providing empirical evidence on when an ex-offender has been “clean” long enough to be considered, for employment purposes, “redeemed.” This research could have important implications for policies on preserving and accessing criminal record databases. The researchers are now expanding the study to include drug arrests and to explore racial difference in the time to “redemption.”

- Read an *NIJ Journal* article at <http://www.ojp.usdoj.gov/nij/journals/263/redemption.htm>.

## **Study Finds Megan’s Law Has Little Effect on Recidivism**

In 1994, 7-year-old Megan Kanka was raped and murdered by Jesse Timmendequas, a convicted sex offender who had been released from a New Jersey prison after serving a maximum sentence. In response, community members successfully lobbied for a law requiring sex offender registration and public notice that a sex offender was living and working in the community. Since the mid-1990s, all 50 states and the District of Columbia have passed similar legislation, collectively referred to as “Megan’s Law.”

Researchers funded by NIJ examined the impact of Megan’s Law in New Jersey and in each county within the state. They found the law did not reduce the number of repeat arrests for sex offenses. Moreover, it did not have any demonstrable effect on the length of time between prison release and the next offense. The data show no decrease in the number of victims. Given this, the researchers questioned whether the growing costs of implementation were justifiable.

- Read more at NIJ’s Web topic page: <http://www.ojp.usdoj.gov/nij/topics/crime/rape-sexual-violence/sex-offenders/new-jersey-study.htm>.
- The complete study is available at <http://www.ncjrs.gov/pdffiles1/nij/grants/225370.pdf>.

## CHAPTER 3: GENERAL FORENSICS AND DNA

Forensic evidence plays an important role in investigations and prosecutions. Even the smallest samples can hasten arrests, prevent further crime and exonerate the innocent. However, significant backlogs of unanalyzed evidence plague the nation's crime laboratories.

In 2009, NIJ continued to help crime laboratories improve their capacity and reduce backlogs. In addition, the Institute continued to fund significant research aimed at improving forensic techniques.

## Study Looks at the State of Forensic Science in the U.S.

In 2009, the National Academy of Sciences, under a grant from NIJ, released its seminal report on the state of forensic science in the United States, *Strengthening Forensic Science in the United States: A Path Forward*. The report found that crime laboratories currently vary widely in capacity, oversight, staffing, certification and accreditation across federal and state jurisdictions. All too often, according to the report, laboratories have inadequate educational programs and lack compulsory and enforceable standards founded on rigorous research and testing.

Since the early 2000s, NIJ has funded significant research about the fundamental underpinnings of forensic methods. In 2009, the Institute competitively awarded 15 grants under its solicitation, *Fundamental Research to Improve Understanding of the Accuracy, Reliability and Measurement Validity of Forensic Science Disciplines*. For the first time, NIJ is funding research on the cognitive biases of practitioners, providing statistical characterizations of qualitative methods and practices to reduce errors in traditional forensic techniques. This research builds on NIJ's prior work in latent print identification, document examination and DNA.

NIJ also is taking part in the National Science and Technology Council's subcommittee on forensics, which is developing the federal response to the NAS report.

- The full report for *Strengthening Forensic Science in the United States: A Path Forward* is available at

<http://www.ncjrs.gov/pdffiles1/nij/grants/228091.pdf>.

## Using DNA to Clear the Wrongly Convicted

DNA technology has become a powerful tool to help ensure a just legal system. It can help identify offenders and eliminate innocent suspects. Increasingly, DNA is also used to exonerate the wrongly convicted. More than 200 Americans convicted of serious crimes have been freed from prison after DNA testing showed they could not have committed the crimes.

In 2009, NIJ brought together representatives from 46 states — prosecutors, defense lawyers, police officers, forensic scientists, victim advocates and others involved in postconviction reviews — for a two-day training symposium. Participants discussed strategies for overcoming the challenges of postconviction cases at the state and local levels.

Because of this effort, applications for NIJ's 2009 Postconviction DNA Testing Assistance program doubled from the previous year. In 2009, NIJ awarded \$9.8 million in grants to nine states — Connecticut, Minnesota, North Carolina, Colorado, Louisiana, Wisconsin, California, New Mexico and Maryland. The Institute has awarded more than \$17.6 million to 14 states over the two years of the program. States can use the money to review rape, murder and manslaughter cases; to find evidence; or to analyze evidence in cases in which the

innocence of a convicted person may be revealed through DNA.

- Learn more about postconviction DNA testing at <http://www.dna.gov/funding/postconviction>.
- Watch a video from the symposium at <http://www.ncjrs.gov/pdffiles1/nij/grants/228091.pdf>.

## Understanding and Reducing the DNA Backlog

One problem facing the criminal justice system today is the large backlog of unanalyzed DNA samples and biological evidence from crime scenes. This includes biological evidence containing DNA from forensic casework evidence. Some cases involve unsolved crimes for which a suspect has not been identified. Analysis could result in DNA profiles that could be entered into the Forensic Index of the Combined DNA Index System (CODIS). Using searching and matching algorithms, these DNA profiles can be searched against the Convicted Offender Index (which contains profiles generated from samples taken from people convicted of crimes) and the Arrestee Index (which contains profiles generated from arrested people). The resulting matches can be used by law enforcement agencies as investigative leads to identify and apprehend offenders faster than ever before. Therefore, the timely submission and analysis of DNA samples can help to reduce victimization. NIJ is updating the current data, quantifying the backlog of samples that were submitted for and

pending analysis in DNA crime laboratories in 2007.

Meanwhile, a recent NIJ-funded survey examined a related issue: forensic evidence stored in police property rooms that has *not* gone to a laboratory for analysis. Based on a survey of more than 2,000 police departments, researchers determined that forensic evidence had not been sent to a laboratory in 14 percent of open homicide cases, 18 percent of open rape cases and 23 percent of open property crime cases. There are many legitimate reasons evidence collected from a crime scene would not be sent to a laboratory. Evidence may not be sent to a laboratory if prosecutors drop the charges against the alleged perpetrator or if someone pleads guilty to the crime. The study may prompt law enforcement agencies to consider new ways to improve their use of forensic evidence.

To help expand laboratory capacity and reduce backlogs, in 2009, NIJ awarded nearly \$63 million directly to state and local DNA laboratories through its Forensic DNA Backlog Reduction program. The program helps to prevent the increase of DNA backlogs and reduce the existing backlog. The program provides funding for laboratories to build their capacity to meet the increasing demand for DNA analysis through automation, new technology, and hiring and training new personnel, among other avenues. The program also provides funds for the purchase of supplies, the provision of overtime for existing laboratory staff, and the outsourcing of forensic casework samples for DNA analysis to reduce backlogs in DNA laboratories.

NIJ awarded nearly \$10 million to 24 states through its FY 2009 Convicted Offender/Arrestee DNA Backlog Reduction and Contract Outsourcing Programs to help state CODIS laboratories reduce their backlog of these types of samples. The goal of this program is to accelerate the submission of samples taken from convicted offenders and arrestees.

NIJ also awarded \$3.5 million through the FY 2009 DNA Unit Efficiency Improvement Program. This competitive award program funds innovative and novel methods of improving the efficiency of DNA testing agencies and funds laboratories with well-defined critical needs. NIJ is seeking model programs and best practices that can be adopted in other DNA laboratories across the nation.

- Learn more about DNA backlogs at <http://www.ojp.usdoj.gov/nij/topics/forensics/lab-operations/evidence-backlogs/welcome.htm>.
- Learn about a study of untested evidence at law enforcement agencies at <http://www.ojp.usdoj.gov/nij/topics/law-enforcement/handling-evidence/unanalyzed-evidence.htm>.
- Learn more about CODIS at <http://www.dna.gov/dna-databases/software>.

## NIJ Grants and Trainings Help Agencies Solve Cold Cases

Cold cases can be among the most difficult and frustrating challenges detectives face. Nevertheless, recent advances in DNA technology offer new promise for these investigations. Crime scene samples — some of which were thought to be unsuitable for testing several years ago — may now yield DNA profiles. Samples that previously gave inconclusive results can be analyzed again using advanced methods.

To help agencies solve cold cases, NIJ made 27 awards in 2009 totaling \$12.3 million to states through its Solving Cold Cases with DNA grant program. Recipients can use the funding to identify, review and investigate violent crime cold cases that have the potential to be solved through DNA analysis. They also may use the funds to find and analyze biological evidence for these cases.

Even with technological advances, a trained team of investigators, crime laboratory analysts, prosecutors and victim advocates is critical. In 2009, NIJ collaborated with the Virginia Center for Policing Innovation to provide four training sessions designed to help investigators and prosecutors resolve cold cases. NIJ received approximately 700 applications from 41 states and nearly 300 agencies, almost double the number of available seats. An online version of the training will be available for those who could not attend.

- More information about solving cold cases is available at

<http://www.dna.gov/solving-crimes/cold-cases>.

- Information about cold case training for law enforcement officers is available at [http://www.dna.gov/solving-crimes/cold-cases/regional\\_training](http://www.dna.gov/solving-crimes/cold-cases/regional_training).

## Paul Coverdell Forensic Science Improvement Grants Program

The Coverdell program is dedicated to improving the quality and timeliness of forensic science and medical examiner services for criminal justice purposes. Funding, which rose to \$25 million in 2009, may be used to buy laboratory equipment and supplies, provide training and education, and cover costs associated with accreditation and certification, personnel, and renovations and construction.

- For more information on the Coverdell program and a description of eligibility requirements, see <http://www.ojp.usdoj.gov/nij/topics/forensics/nfsia>.

## CHAPTER 4: HELPING CRIME VICTIMS

NIJ is working to provide practitioners with the information they need to identify abuse or risk factors for future victimization and respond effectively to victims' needs.

### Identifying and Prosecuting Elder Abuse

Eleven percent of elders reported experiencing at least some form of mistreatment — emotional, physical, sexual or potential neglect — during the 12 months prior to being interviewed, according to a study funded by NIJ. The National Elder Mistreatment Study examined the mistreatment of people age 60 years or older. The study found the risk was higher for those who had a low household income, poor health or low levels of social support; were unemployed or retired; or had experienced a prior trauma. Similar to other forms of violence that occur within families, these cases may involve caregivers who are also abusers, making investigations difficult.

Elder abuse is difficult to detect and prosecute. Elderly people may be reluctant to report abuse, and their testimonies can be complicated by medical conditions such as dementia. Caregivers, adult protective services agencies and doctors often cannot distinguish injuries caused by mistreatment from those caused by an accident, illness or aging.

To help distinguish between accidental injuries and abuse, an NIJ study examined bruising on confirmed victims of elder mistreatment. The research found that 60 percent of the examined bruises reported by victims had been inflicted, 14 percent were accidental and 26 percent were of unknown cause. The study noted that bruises resulting from physical mistreatment were often large (greater than 5 centimeters) and on the head, neck or torso.

Also in 2009, NIJ and its partners came together to begin development of a DOJ-hosted virtual

training library to aid in the identification and prosecution of elder mistreatment. In addition, the Institute funded a prototype for a computer-assisted application to measure physical abuse, neglect and sexual abuse of elders.

- Visit NIJ's elder abuse Web topic page at <http://www.ojp.usdoj.gov/nij/topics/crime/elder-abuse/welcome.htm>.
- Read the *National Elder Mistreatment Study* at <http://www.ncjrs.gov/pdffiles1/nij/grants/226456.pdf>.
- Read *Bruising as a Forensic Marker of Physical Abuse* at <http://www.ncjrs.gov/pdffiles1/nij/grants/226457.pdf>.

## **NIJ Series: Research in the Real World**

NIJ began a series of Washington, D.C.-based seminars in 2009 featuring research that has changed policies and practice. Called "Research in the Real World," the seminars were recorded with a live audience and later posted on the NIJ Web site.

### ***Murder-Suicide***

Cases in which one intimate partner murders another and the children and then kills himself are rare. Yet these cases of "familicide" usually garner widespread media coverage.

In 2009, NIJ brought together three leading experts for a symposium to review what the research shows about men who murder their families. Dr. Jacquelyn Campbell of Johns Hopkins University, Dr. Richard Gelles of the

University of Pennsylvania and Dr. David Adams, author of *Why Do They Kill? Men Who Murder Their Intimate Partners*, discussed important risk factors associated with domestic violence homicide followed by suicide and potential prevention strategies.

The panelists noted that although the economy and unemployment are risk factors, prior domestic violence is by far the number one risk factor in domestic violence murder cases. The men usually display possessive, obsessive and jealous behavior, and they typically use guns to threaten and terrorize even before they use them to kill.

- The symposium can be viewed at <http://www.ojp.usdoj.gov/nij/multimedia/video-men-who-murder.htm>.

### ***Racial Profiling***

Tom R. Tyler, chair of the New York University psychology department, described research on profiling and community policing. His research found that citizens of all races show greater respect for law enforcement when they believe officers are treating them fairly. Even citizens who experienced a negative outcome — getting a traffic ticket, for example — showed higher levels of respect for and cooperation with law enforcement as long as they believed they were not being singled out unfairly. Tyler discussed the implications for building trust in law enforcement and how it increases community cooperation.

### ***Crime Mapping and Hot Spot Policing***

David Weisburd of George Mason University described his research into neighborhood crime "hot spots" in a seminar in 2009. The recipient

of the 2010 Stockholm Prize in Criminology, Weisburd's work indicates that intensified police patrols in high-crime hot spots do not merely push crime to another block.

Weisburd and his colleagues show that crime can drop substantially in small hot spots without rising in other areas. The evidence suggests that crimes depend not just on criminals, but also on policing in key places.

In his seminar, Weisburd explained the effectiveness of policing that concentrates prevention efforts at less than 5 percent of all street corners and addresses where more than 50 percent of urban crime occurs.

## Studies Examine Human Trafficking

Human trafficking remains a largely underground crime. As a result, it is difficult to estimate the true extent of victimization. Knowledge gaps exist about the characteristics of victims and perpetrators. Legal, cultural and organizational barriers also impede the investigation and prosecution of trafficking cases.

In FY 2009, NIJ funded four projects investigating trafficking:

- A study that focuses on the unique needs of domestic youth who are trafficked, and
  - A project to assess labor trafficking among undocumented migrants in San Diego County, Calif.
- Visit NIJ's Web topic page on human trafficking at <http://www.ojp.usdoj.gov/nij/topics/crime/human-trafficking/welcome.htm>.
- An effort to identify indicators of labor trafficking that could be used by state and local law enforcement,
  - A project to identify and help overcome barriers to local prosecution of human trafficking cases,

## **CHAPTER 5: SETTING STANDARDS FOR PUBLIC SAFETY EQUIPMENT**

NIJ has been developing standards for public safety personnel for more than 30 years. The standards improve safety conditions for workers while improving the equipment they use. In FY 2009 standards were under development for the following equipment: bomb suits; electronic countermeasures against explosive devices; metal detectors; handcuffs and other restraints; holsters; offender tracking systems; a chemical, biological, radiological and nuclear ensemble for law enforcement; and vehicular digital multimedia recording systems.

NIJ also published a new standard development process for current and future efforts. This process is based on the formation and work of a special technical committee. Members include practitioners, scientists and test laboratory representatives. The final products of the committee are three related documents: the equipment standard, conformity assessment requirements and a selection and application guide. The carefully selected committee membership produces comprehensive, validated documents and receives the support of the law enforcement community.

In a related standards effort, NIJ also made significant strides in its work to ensure computer forensics tools produce accurate and objective results.

- Learn more about NIJ's standards program at <http://www.ojp.usdoj.gov/nij/topics/technology/standards-testing/welcome.htm>.

## Protecting Officers Who Respond to Chemical, Biological, Radiological and Nuclear Events

Law enforcement officers may be called upon to respond to chemical, biological, radiological and nuclear incidents. They also may face dangers posed by clandestine drug laboratories, including potential injury from explosions, flash fires, chemical burns and toxic fumes.

To ensure that officers have adequate personal protective gear when responding to these situations, NIJ is developing a CBRN protective ensemble standard for law enforcement. The standard will contain minimum requirements for protective ensembles designed to provide law enforcement personnel with full-body CBRN protection. Prior to NIJ's work, other standards existed for various emergency service workers, ranging from firefighters to hazardous materials response teams. However, none of the standards fully addressed law enforcement needs (e.g., human threats, stealth operations, durability and dexterity). CBRN incidents may result from accidents or may be the work of deliberate, malicious perpetrators intent on killing or harming citizens and disrupting society.

## NIJ Updates Body Armor Standard

NIJ completed its revised standard for ballistic-resistant body armor (NIJ Standard-0101.06). For the first time, police officers can use body armor that has been performance tested after being exposed to heat, humidity and other typical "wear and tear" conditions. In addition, manufacturers are now subject to follow-up inspections to ensure that subsequent production units are constructed consistent with the model originally tested for NIJ compliance. Currently, there are 54 armor models available to law enforcement that have been tested and meet the standard.

Often mistakenly called "bulletproof vests," body armor provides protection against bullets but is not bulletproof. Body armor has saved the lives of more than 3,000 police officers since the mid-1970s, when NIJ began testing body armor and developing performance standards.

- Visit NIJ's body armor Web topic page at <http://www.ojp.usdoj.gov/nij/topics/technology/body-armor/welcome.htm>.

## **NIJ Updates Standards for Holsters, Handcuffs and Other Restraints**

Suspects and prisoners who are improperly or inadequately restrained pose an immediate threat to the safety of law enforcement and corrections personnel responsible for their control and custody—and ultimately to public safety.

NIJ began work to update and improve its standard for metallic handcuffs (NIJ Standard-0307.01). The existing standard specifies requirements for workmanship, weight, dimensions, mechanical strength, and resistance to corrosion and tampering. The revised standard addresses wrist and ankle restraints, covers materials used to make restraints and categorizes restraints based on their use and material composition.

NIJ also began development of a new standard for firearm retention holsters. The Institute requested input from public safety officials and industry representatives on test methods and performance requirements related to handgun retention, accessibility of holstered weapons and holster durability. The duty holster is perhaps the most important piece of equipment keeping officers from being shot with their own guns when engaged in a physical fight with a suspect.

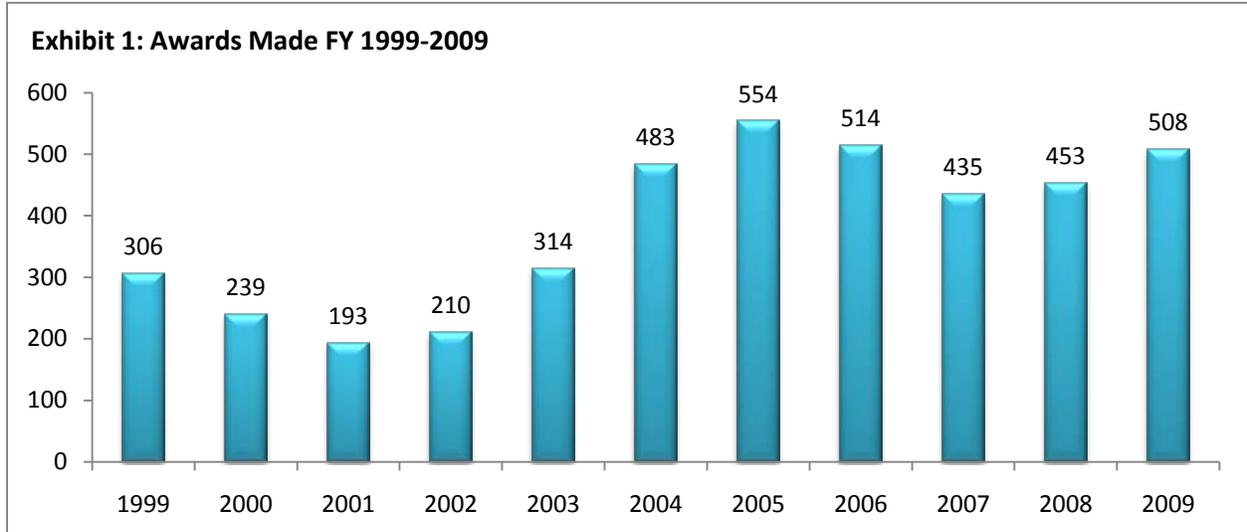
## **NIJ Ensures Validity of Computer Forensics Tools**

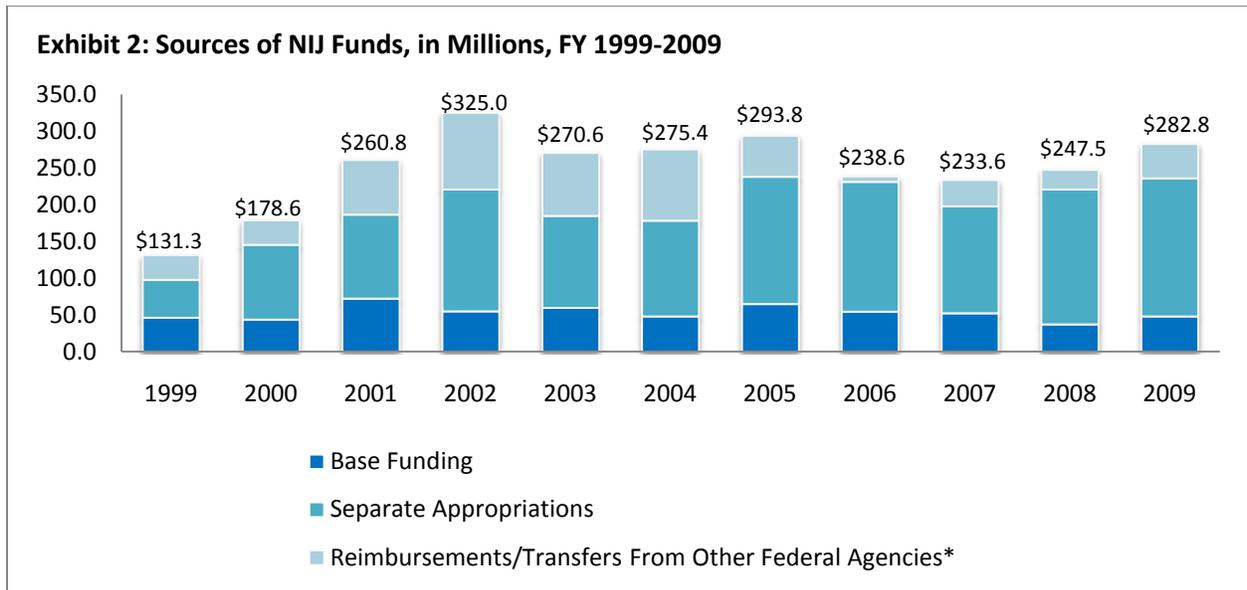
Law enforcement agencies routinely use about 150 different automated tools in their investigations of crimes involving computers. These tools can help create critical evidence, but there are no standards against which to evaluate the validity of their results.

NIJ, in collaboration with the National Institute of Standards and Technology, developed the Computer Forensics Tool Testing project to help ensure the tools used in the investigations of computer-related crimes consistently produce accurate and objective results. The project develops specifications and test methods for computer forensics tools and tests tools to those specifications. This work helps manufacturers improve computer forensics tools, provides potential buyers with information about using the tools, and helps the legal community and others understand the tools' capabilities.

In 2009, NIJ published five reports from this effort, which are available at <http://www.ojp.usdoj.gov/nij/topics/technology/electronic-crime/cftt.htm>. This work is a method by which computer forensics is validated for presentation in court.

## Appendix: Financial Data





\*Funds listed as Reimbursements/Transfers from Other Federal Agencies include \$14.3 million in Recovery Act funds received from the Office of Justice Program's Bureau of Justice Assistance and Office of Juvenile Justice and Delinquency Prevention.

**Exhibit 3: Allocation of NIJ Funds as a Percentage of Total Funding, FY 2009\***

Social Science	Evaluation	0.7
	Research	8.6
Science and Technology	Capacity Enhancement**	48.5
	Research and Development	16.6
	Standards	1.3
	Technology Assistance	2.1
	Technology Evaluation	5.2
Program Support		0.1
Dissemination		2.4
Other***		14.5

\*Total funding of \$282.8 million consists of a NIJ base appropriation of \$48 million plus separate appropriations and funds transfers that include \$14.3 million in Recovery Act funds.

\*\*Grants to improve and enhance crime laboratories.

\*\*\* Includes DNA- and forensic-related Earmark transfers from other DOJ components and incoming reimbursements/transfers from other federal agencies.

**Exhibit 4: Funding for DNA-related and Forensic Programs and Activities, FY 2009**

The National Institute of Justice received \$156 million for DNA-related and forensic programs and activities, which was awarded in the major purpose areas shown below.

Convicted Offender DNA Backlog Reduction	\$9.8M
Cold Case	\$12.3M
DNA Unit Efficiency	\$3.4M
Earmark Transfers from Other DOJ Components**	\$16.5M
Forensic DNA Backlog Reduction	\$62.3M
Identifying Missing Persons	\$6.0M
National Institute of Standards and Technology (NIST)	
Testing	\$3.2M
Post-Conviction Testing	\$4.9M
Research, Development and Evaluation	\$25.6M
Training for the Criminal Justice Community	\$14.0M

\*In addition to the totals listed above, \$14.5 million from this source was used to cover program support, peer review, dissemination costs and any administrative rescissions associated with each activity area as well as unobligated balances.

\*\*Includes DNA- and forensic-related Earmark transfers from other DOJ components and incoming reimbursements/transfers from other federal agencies.