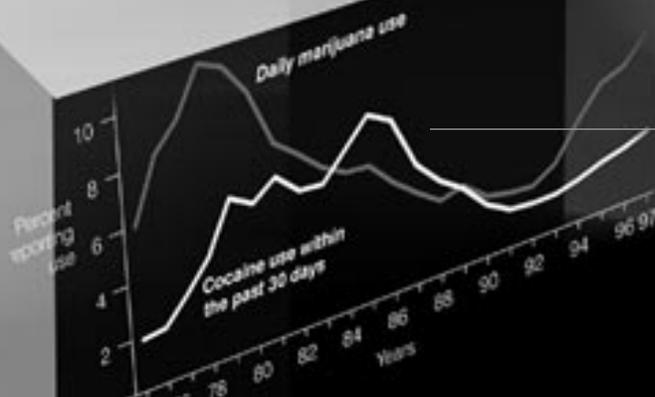
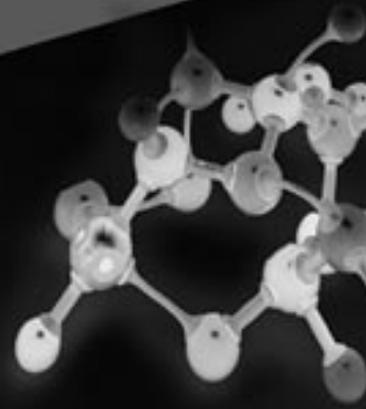


Basic Research

Applied Research

New Technologies



The Nation was heartened to witness once again a year in which crime rates declined. Criminal justice practitioners, policymakers, community leaders, and researchers alike can justifiably celebrate this downward trend. At the same time, these partners are keenly aware that too much crime still occurs and that the causes of the decline are imperfectly understood. Much hard work remains to build upon the gains of the last few years.

In addition to the optimism declining crime rates bring, they also spur debate and heated discussion: What exactly has caused them to decline? Will they continue to decline? What can be done to keep crime rates down?

There are several answers and points of view related to each question, but one rings true for each: only research and experimentation can help explain and answer these questions systematically and objectively.

Communities and their leaders are hungry for definitive and comprehensive answers—and the sooner the

better. Much scientific discovery is, by its nature, a steady, time-consuming process that involves putting one piece with another until a pattern or picture evolves and avenues for success become clearer.

Research and evaluation can provide suggestive data, fuller logic models of what is likely to work, and data to support problem identification. Experiments with problem-solving approaches can occur as the more deliberative scientific process continues to collect needed data, posit solutions, and evaluate the process and its impact.

The Institute's research, evaluation, and development endeavors fall into three main categories: basic research, applied research, and the testing of new ideas and technologies. This section is an overview of NIJ's activities in these three areas. It includes a special section on activities that go beyond the horizons of American criminal justice and concludes with a discussion of how the Institute disseminates knowledge.

Basic Research

NIJ's research rests on the fundamental assumption that scientific inquiry forms the basis of sound policy and practice. The heart of such basic research involves identifying key questions for study, gathering relevant data, analyzing that data, and drawing conclusions and inferences without prejudice or preconceived expectations.

The findings from basic research inform the larger society—those outside the realm of criminal justice—of factors that contribute to policy action and the implications of those actions.

The conclusions and insights gained from basic research are then translated into programs that can be tested in real world settings. But the process of making policy regarding public safety usually does not follow science's straight and careful path because public policy is based on consensus, tradeoffs, individual rights,

Overview of the Year

legal rulings, political climate, public perceptions, and community values. Criminal justice researchers—like all social science researchers—cannot work in a white-coat laboratory where they control all variables as they apply different tests.

Several major projects under way fall into the category of basic research at NIJ:

Chicago Project on Human Development

Understanding the complexities of family, peer, and neighborhood influences on criminal behavior is the goal of the Project on Human Development in Chicago Neighborhoods. The Project, now in its 5th of 8 years, asks theoretical questions about both group and individual behavior in a social context as it examines how individual personalities, family relationships, school environment, and type of community interact over time to contribute to delinquency, criminal behavior, and prosocial development.

One of the Project's priorities for 1998 was the building of a master file of primary variables for a number of analyses, including ones focusing on exposure to violence, adolescent substance abuse, social cohesion as a protective factor in adolescent suicide, and risk factors, such as depression for adolescent girls' delinquency.

Communities and their leaders are hungry for definitive and comprehensive answers—and the sooner the better. Much scientific discovery is, by its nature, a steady, time-consuming process that involves putting one piece with another until a pattern or picture evolves and avenues for success become clearer.

DNA Research

The rapid advance of DNA technologies has left many criminal justice professionals without proper training and technical support. Hence, NIJ is sponsoring three initiatives to foster understanding about the use of DNA evidence and to improve public safety: The National Commission on the Future of DNA Evidence, the Forensic DNA Laboratory Improvement Program, and the DNA 5-Year Plan.

The National Commission on the Future of DNA Evidence. This Commission is gathering data and testimony to make recommendations to the Attorney General on the means of enhancing the use of DNA in the criminal justice system. The Commission is considering how recent advances in DNA research affect operation of the entire criminal justice system, from crime scene through trial, including legal issues, laboratory funding issues, and the use of DNA in postconviction relief.

The 21 Commission members were selected from a broad spectrum of policymakers, defense attorneys, prosecutors, law enforcement officials, scientists, professors, and other experts in the use of DNA forensic evidence. Wisconsin State Supreme Court Chief Justice Shirley Abrahamson chairs the Commission.

During 1998, the Commission held three meetings; its work will continue through 1999 and conclude with final recommendations and a report in 2000.

The Forensic DNA Laboratory Improvement Program. This Program, authorized by the DNA Identification Act of 1994 (Public Law 103-322), is increasing the capacity of State and local forensic laboratories to conduct standardized DNA testing.

Most States use a combination of State, county, and municipal laboratories to provide forensic services to their police organizations, but the equipment and staffing of the laboratories are woefully inadequate to handle the volume of cases involving DNA testing to support analysis of biological evidence recovered from crime scenes.

NIJ awarded \$11.6 million to 39 State and local agencies in fiscal year 1998, plus an additional \$500,000 through two awards to: (1) fund a study to determine the feasibility of external, blind-proficiency testing for DNA laboratories, and (2) conduct an evaluation of the impact of Federal DNA funding programs. The cumulative funds for the Forensic DNA Laboratory Improvement Program now total \$24,118,448.

The DNA 5-Year Plan is designed to encourage the development of cutting-edge molecular biology methods and tools to achieve highly discriminating, reliable, economic, and rapid DNA testing approaches appropriate for forensic identity testing. By 2003, NIJ hopes to dramatically reduce DNA testing costs; reduce analysis time from hours to minutes; develop inexpensive, portable, disposable DNA test kits for field use; increase the reliability and legal credibility of DNA testing through the development of a dual testing approach; and develop standard materials for population databases.

Systematic Social Observation

NIJ is supporting basic research on police behavior using a field research method called systematic social observation, which requires researchers to follow precise rules for observing and measuring behavior in its natural setting. Trained observers accompany police officers in their cars, on foot, or on bicycle to observe everything the officer does during a typical tour of duty. They do not rely upon others to describe or interpret events. The goal is to improve general understanding of policing and police policy and to account for variations in the way policing is performed and policies are carried out in different jurisdictions.

Researchers are using systematic social observation in several sites—urban, suburban, and rural—to inform police managers and the public about how officers spend their time, how they organize to work with the public, how they use their authority with the public, how policing styles vary in different beats, and the nature and extent of onscene supervision.

Although systematic social observation yields an extraordinary amount of information on police at work, it is

costly, time-consuming, and dependent on the cooperation of the police. It is, therefore, best suited to special studies rather than routine monitoring of police practices. Despite its expense, it provides a rich volume of information about policing in different contexts.

NIJ has published several reports based on these studies and expects additional reports in the coming year.²

Violence Against Women

Violence against women came to be widely recognized as a serious social problem in the early 1970's, but basic empirical data on the frequency and types of violence against women have been limited until the last few years.

To further knowledge in this area, NIJ and the Centers for Disease Control and Prevention jointly sponsored—through a grant to the Denver-based Center for Policy Research—the National Violence Against Women (NVAW) telephone survey of a national, representative sample of 8,000 women and 8,000 men.

In 1998, the NVAW survey produced two major reports detailing the first empirical data on stalking and other violence.³ The researchers found that the extent of violence against women is more profound and more widespread than originally thought. Among the key findings:

- **Stalking.** Approximately 1 million women and 371,000 men are stalked annually in the United States; 8 percent of surveyed women and 2 percent

² Mastrofski, Stephen D., Roger B. Parks, and Albert J. Reiss, Jr., *Policing Neighborhoods: A Report From St. Petersburg*, Research Preview, Washington, D.C.: U.S. Department of Justice, National Institute of Justice, forthcoming. "Observing Police in Neighborhoods," in *Annual Report to Congress, 1997*, Washington, D.C.: U.S. Department of Justice, National Institute of Justice, August 1998 (NCJ 171679). Mastrofski, Stephen D., Roger B. Parks, and Albert J. Reiss, Jr., *Systematic Observation of Public Police: Applying Field Research Methods to Policy Issues*, Washington, D.C.: U.S. Department of Justice, National Institute of Justice, December 1998 (NCJ 172859).

³ Tjaden, Patricia, and Nancy Thoennes, *Stalking in America: Findings From the National Violence Against Women Survey*, Research in Brief, Washington, D.C.: U.S. Department of Justice, National Institute of Justice, April 1998 (NCJ 169592). Tjaden, Patricia, and Nancy Thoennes, *Prevalence, Incidence, and Consequences of Violence Against Women: Findings From the National Violence Against Women Survey*, Research in Brief, Washington, D.C.: U.S. Department of Justice, National Institute of Justice, November 1998 (NCJ 172837).

NIJ's Intramural Research Program

Since its creation in 1968, NIJ has engaged researchers through a diverse, multidisciplinary extramural research program that involves a highly competitive award process.

Beginning in 1994, NIJ's science, evaluation, and program development staff began infusing the agency with knowledge gained through their independent intramural research studies.

During 1998, staff-authored papers and reports were published or presented on the following topics:

- International comparisons of drug use among arrestees.¹
- The use of geocoding and geographic analysis within law enforcement agencies.²
- The role of women in the criminal justice system (as offenders, victims, volunteers, and professional personnel).³
- Victimization and personal fraud.⁴
- The effects of pepper spray.⁵

¹ Taylor, Bruce, and Trevor Bennett, *Comparing Drug Use Rates of Detained Arrestees in the United States and England*, Research Report, Washington, D.C.: U.S. Department of Justice, National Institute of Justice, April 1999 (NCJ 175052).

² LaVigne, Nancy, and Julie Wartell, eds., *Crime Mapping Case Studies*, Washington, D.C.: Police Executive Research Forum, 1998 (product #834). Mamalian, Cynthia A., and Nancy G. LaVigne, *The Use of Computerized Crime Mapping by Law Enforcement: Survey Results*, Research Preview, Washington, D.C.: U.S. Department of Justice, National Institute of Justice, January 1999 (FS 000237).

³ Office of Justice Programs, *Women in Criminal Justice: A 20-Year Update*, Washington, D.C.: U.S. Department of Justice, 1998 (NCJ 173416).

⁴ Titus, Richard, "Victimization by Personal Fraud," paper presented at the 1998 Economic Crime Summit, St. Louis, April 28, 1998. Titus, Richard, "Personal Fraud: Who Are the Victims and What Are the Scams?" paper presented at the American Society of Criminology 1998 Annual Meeting, Washington, D.C., November 11, 1998.

⁵ Kaminski, Robert, Steven M. Edwards, and James W. Johnson, "The Effects of Oleoresin Capsicum on Assaults Against Police: Testing the Velcro-Effect Hypothesis," *Police Quarterly* 1(2) (NCJ 176335).

of surveyed men said they had been stalked at some time in their lives.

- **Rape.** Eighteen percent of women surveyed said they had experienced a completed or attempted rape at some time in their lives, and 0.3 percent said they had experienced a completed or attempted rape in the previous 12 months. Of the women who reported being raped at some time in their lives, 22 percent were under 12 years old and 32 percent were 12 to 17 years old when they were first raped. Women who were raped before the age of 18 were significantly more likely to be raped as adults.
- **Partner violence.** The findings further revealed that women experienced significantly more partner violence than men: 25 percent of surveyed women (compared to 8 percent of men) said they had been raped and/or physically assaulted by a current or former spouse, cohabiting partner, or date.
- **Extent of injury.** Women were significantly more likely than men to be injured during an assault: 32 percent of women and 16 percent of men who were raped since age 18 were injured during their most recent rape.

However, many questions still remain unanswered.

For example, studies are needed to determine why the prevalence of violence varies significantly among women of different racial and ethnic backgrounds, and more needs to be understood about the financial impact of medical treatment for violence against women.

In the coming years, NIJ's vigorous violence against women and family violence portfolio will begin producing more findings as projects funded in 1996 and later are completed.

Evaluating Drug Use in Prisons

In addition to the awards NIJ gives to research centers, NIJ's own staff also contribute scientific expertise to the store of knowledge. (See "NIJ's Intramural Research Program.") One of these intramural projects involved evaluating a drug detection and interdiction effort in the Pennsylvania prison system. The study found that drug testing through hair analysis can be a valuable component in the drive to eliminate illegal drugs in prisons.

In 1996, the Pennsylvania Department of Corrections instituted get-tough policies—such as phone monitoring, increased use of narcotic-detecting electronic devices on visitors, and increased cell searches using drug-sniffing dogs—to tackle the serious problem of drug use in several of its State prisons.

Before the changes were put in place, NIJ researchers analyzed data from samples of hair and urine from inmates to determine the extent to which inmates were using drugs. Urinalysis was used to reveal short-term, recent use, and hair analysis was used to reveal sporadic or episodic use that might have occurred over a period of several months.

Two years later, researchers analyzed a second wave of samples and compared the pre- and posttest results to

assess the effectiveness of the new drug interdiction measures. The results: The number of inmates who tested positive for illegal drugs decreased nearly 80 percent during the 2-year period.⁴ The research, the first of its kind within a State prison system, not only provided feedback to prison administrators about the effectiveness of their methods, it also contributed to a better understanding of the effects of prison-based drug detection and interdiction strategies and the prevalence of drug use within prisons. As important, it demonstrated both the advantages and challenges of using hair analysis to detect drug use in prison.

⁴ Feucht, Thomas E., and Andrew Keyser, “Reducing Drug Use in Prisons: Pennsylvania’s Approach,” *NIJ Journal*, October 1998 (JR 000241):10–15.

Applied Research

Translating basic research into action has been characterized as “a cyclical process.”⁵ It involves diagnosing the problem, developing solutions, planning and implementing action steps, evaluating the results, making mid-course corrections, and repeating the steps. Two distinguishing features of applied research are the nature of the partnerships that are formed and the evaluations that are conducted to make programs and projects work.

Partnerships

In 1997, NIJ published a report to Congress called *Preventing Crime: What Works, What Doesn’t, What’s Promising*.⁶ The authors concluded that seven entities—communities, families, schools, labor markets, places, police, and criminal justice agencies—are interdependent in affecting crime at the local level. NIJ’s applied research program frequently encompasses many of these institutions.

Criminal Justice Partnerships. In the researcher and practitioner model, both parties work hand-in-glove to develop strategies and solutions to community problems.

Some research partnerships, such as Boston’s Ceasefire Project, involve multiple Federal, State, and local agencies and community groups with multiple perspectives on the problem. These types of projects often involve several midcourse adjustments.

When Boston wanted to stop youth violence and homicide, a partnership—composed of researchers, community leaders, members of the clergy, probation officers, police officials, and Federal enforcement agency personnel—came together to devise a strategy to intervene in the local gun market. When data revealed that the problem was more specifically caused

⁵ Elden, Max, and Rupert Chisholm, “Emerging Varieties of Action Research: Introduction to the Special Issue,” *Human Relations* 46(2) (1993): 121–41.

⁶ Sherman, Lawrence W., Denise Gottfredson, Doris MacKenzie, John Eck, Peter Reuter, and Shawn Bushway, *Preventing Crime: What Works, What Doesn’t, What’s Promising*, A Report to the United States Congress, Washington, D.C.: U.S. Department of Justice, National Institute of Justice, 1997 (NCJ 165366). The full report was followed in 1998 with a condensed summary especially suited to policymakers and practitioners (Sherman et al., *Preventing Crime: What Works, What Doesn’t, What’s Promising*, Research in Brief, Washington, D.C.: U.S. Department of Justice, National Institute of Justice, July 1998 (NCJ 171676).

by youth gangs, not simply gun markets, the partnership adjusted its strategies. Boston's hard work paid off: youth homicides fell by two-thirds after the Ceasefire strategy was put in place.

NIJ is now supporting a five-city effort that is similar to Boston's. The Strategic Approaches to Community Safety Initiative involves teams led by the local U.S. attorney and composed of local law enforcement officials, criminal justice agencies, other community stakeholders, and a research partner. The goal is to identify and tackle their communities' most pressing problems.

During 1998, the teams identified their problems, analyzed data to confirm their hypotheses, and began drawing up their action steps. Among the first things they learned were that they were not accustomed to thinking and acting as partners and their "corporate cultures" varied tremendously. They also learned that data can confirm or reject their "hunches" about the cause of their crime problems.

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The five Strategic Approaches to Community Safety Initiative sites are:

Site	Target Crime Problem
Indianapolis, Indiana	Homicide
Memphis, Tennessee	Sexual assault
New Haven, Connecticut	Gun-related crime
Portland, Oregon	Youth violence
Winston-Salem, North Carolina	Youth violence

During 1999, the researchers will provide strategic feedback as the practitioners implement the action steps. Policymakers and community leaders will be watching the results carefully for the impact on the community. A national assessment also is in place to draw cross-site lessons and understand common factors that lead to success.

Multidisciplinary Research Partnerships. As criminal justice practitioners and policymakers clamor to figure out what works, they look to a wider research community for answers, including educators, public health specialists, engineers, and psychologists. Science naturally evolves to encompass multiple disciplines—research that starts as social or forensic science often evolves to include epidemiology, technology, geography, psychosociology, life-course studies, and prevention research. Just as it has taken time for criminal justice methodologies to mature, so too has it taken time to recognize that so many fields touch criminal justice.

Multidisciplinary partnerships play a major role in several areas of NIJ's research, evaluation, and technology portfolio. Funding partners in NIJ's family violence program, for example, include the Centers for Disease Control and Prevention and the National Institutes of Health. NIJ's partners in several technology projects include various branches of the U.S. Departments of Defense, Transportation, Commerce, and Energy. The Institute's international perspectives on criminal justice naturally involve colleagues at the U.S. Department of State and researchers and practitioners from other countries.

Evaluation

Evaluation is an important aspect of NIJ's larger mission to identify programs of proven success and to understand why they work. As researchers examine innovative programs, they analyze all aspects of the effort and provide feedback—both positive and negative. Knowing what doesn't work is equally as valuable as knowing what does. These objective, reliable evaluations are helping communities as they strive to prevent and reduce crime in their neighborhoods.

One portion of NIJ's evaluation portfolio consists of national evaluations of major congressional anticrime initiatives. These are conducted under NIJ's statutory mandate to report to Congress and the public on the lessons learned from national-level programs. Several major national evaluations were funded in 1998:

- **An evaluation of law enforcement programs** designed to encourage arrest will document the type and extent of arrest policies in cases of domestic violence in 20 sites and the impact on victim well-being and offender accountability in 5 of the sites.
- **The Juvenile Accountability Incentive Block Grant program** encourages States to hold juveniles to strict accountability for delinquent behavior. A State is eligible for funds by demonstrating that it is actively considering or will consider legislation, policy, or practices that provide accountability-based sanctions, such as transferring violent and repeat juvenile offenders to adult court.
- **An evaluation of victim assistance programs** will assess the effectiveness of State victim compensation and assistance programs. The project will obtain information from the victims' viewpoint, including assessments of the services available to victims, identification of unmet needs, and suggestions for improving the delivery of and payment for services to crime victims.

In addition, several national evaluations concluded their analyses and reported findings during 1998:

The National Evaluation of the Youth Firearm Violence Initiative. This project examined firearms reduction strategies in 10 sites, identified the factors that contributed to the program's successes and failures, and suggested strategies that could be transferred to other jurisdictions.

The evaluation focused on implementation and operation in five of the cities (Birmingham, Alabama; Bridgeport, Connecticut; Milwaukee, Wisconsin; Richmond, Virginia; and Seattle, Washington) and on crime impact and process issues in the other five cities (Baltimore, Maryland; Cleveland, Ohio; Inglewood, California; Salinas, California; and San Antonio, Texas).

A number of factors varied considerably from site to site:

- The strategic emphasis (traditional enforcement or prevention and education).
- The tactical approach to enforcement (saturation or directed patrol, search warrants, probation stops and searches, knock and talk, bar checks, or use of informants).
- Police organizational structure (dedicated, full-time units or staffing by rotation with overtime).
- The geographic focus (citywide or defined target areas).
- The population targeted (general population, gangs, or identified individuals).

The evaluation found considerable variation in the number of arrests made (less than 100 to more than 1,000) and the number of guns seized (less than 40 to more than 250). To a large extent, the number of arrests and seizures was influenced by the choices the sites made in strategy and tactics. A city that emphasized prevention and education, for instance, had fewer arrests and seizures than one that emphasized traditional enforcement techniques, such as patrol and stop and search.

In half of the cities where an impact evaluation was conducted, a relationship between the intervention and gun-crime trends was evident. In the remainder, changes in the target area did not differ much from trends in the city at large. Using data from Salinas, California, the researchers examined the 2-year relationship between gun-related arrest rates and subsequent gun-related crimes, taking into account the total level of crime (the crime index) in the surrounding county. The researchers found that gun crimes, the general crime index, and gun-related arrests were related as follows: a 10-percentage point increase in the crime index was associated with one additional gun crime in Salinas, California, and an increase of five gun-related arrests was associated with one less subsequent gun crime in that town.

This finding suggests that enforcement directed at firearms possession and use has a systematic, measurable impact on gun crime.

Assault Weapons Ban. An NIJ-funded look at the short-term effects of the assault weapons ban (Title

XVIII of the Violent Crime Control Act of 1994) found the following:⁷

- The ban triggered speculative price increases and ramped-up production of the banned firearms prior to the law's implementation, followed by a substantial postban drop in prices to levels of previous years.
- Criminal use of the banned guns declined, at least temporarily, after the law went into effect, which suggests that the legal stock of preban assault weapons was, at least for the short term, largely in the hands of collectors and dealers.
- The ban may have contributed to a reduction in the gun murder rate and the murder of police officers by criminals armed with assault weapons.
- The ban has failed to reduce the average number of victims per gun murder incident or multiple gun-shot wound victims.

An evaluation is now under way of the long-term effects of the ban on semiautomatic assault weapons and large-capacity ammunition magazines. It is examining the impact increased juvenile restrictions and regulation of Federal firearms licenses are having on violent crime.

The Weed and Seed strategy brings together Federal, State, and local crime fighting agencies; social service providers; business owners and other representatives of the private sector; and neighborhood residents—linking them in a shared goal of “weeding” out violent criminals, drug trafficking, drug-related crime, and gang activity in targeted areas while “seeding” the area with social services, economic revitalization, and neighborhood reclamation projects.

National Evaluation of the Violence Against Women Act Grants. This ongoing project documents the range of programs funded by the STOP (Services, Training, Officers, Prosecutors) grants program for law enforcement and prosecution under the Violence Against Women Act. The evaluation is assessing grantee outcomes and planning and implementation efforts, along with developing a strategy for documenting long-term impacts. Reports on the evaluation of STOP formula grants were prepared in 1996 and 1997. The 1998 report found the following:⁸

- In fiscal year 1998, 54 of the 56 States and territories eligible for STOP funds received them—

⁷ Roth, Jeffrey A., and Christopher S. Koper, *Impacts of the 1994 Assault Weapons Ban: 1994–96*, Research in Brief, Washington, D.C.: U.S. Department of Justice, National Institute of Justice, March 1999 (NCJ 173405).

⁸ Burt, Martha, Lisa C. Newmark, Lisa K. Jacobs, and Adele V. Harrell, *1998 Report: Evaluation of the STOP Formula Grants Under the Violence Against Women Act of 1994*, Washington, D.C.: Urban Institute, July 1998.

totaling more than \$130 million—within 3 months of the congressional appropriation.

- The majority of the grants are providing direct services to victims, alone or in combination with other activities. Training for law enforcement and prosecution is the focus of nearly a quarter of the projects.
- More than 90 percent of the subgrantees required to provide matching funds did so.
- All States submitted certification, as required, showing that victims do not bear the costs of prosecuting offenders in sexual assault or domestic violence cases.

Other ongoing evaluations of the STOP grants program include reviews of agencies that set police training standards, an examination of the States' capacity to comply with the full faith and credit provision of the Violence Against Women Act, and a study of the effects of the grants on raising awareness among tribal leaders.

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social services, economic revitalization, and neighborhood reclamation projects.

During 1998, evaluators presented their report and recommendations about Weed and Seed efforts in 10 communities in 8 different cities. Major findings and recommendations include:

- Pre-existing community features—such as the strength of the social and institutional infrastructure, the severity of the crime problem, geographical advantages favoring economic development, and transiency of the population—may make Weed and Seed easier or more difficult to effectively implement.
- The mix of weeding and seeding activities and the sequence in which these components are introduced appear to be important factors in gaining community support for the program.
- Sites appeared to have greater success if they concentrated their program resources on smaller population groups, especially if they could channel other public funds into similar activities and leverage private funds.
- The more successful programs tended to have the active and constructive leadership of key individuals in the community.
- The most effective implementation strategies were those that relied on bottom-up, participatory decisionmaking approaches.

Technology Development

A significant portion of NJ's portfolio of research and evaluation relates to the development and demonstration of better technology for law enforcement and corrections.

In fiscal years 1996–98, Congress set aside 1 percent of Crime Act law enforcement funds to create, in each of these years, a \$20-million fund at NJ for investment in law enforcement and criminal justice technology.

Congress also began funding a program to improve State-operated DNA laboratories (discussed on pages 6 and 7).

In fiscal years 1997 and 1998, Congress also appropriated funds for the development of domestic counterterrorism technologies. Those funds have been used to expand technology development and demonstrations for State and local law enforcement and corrections agencies.

NIJ has responded to this expanded mandate by creating an integrated mix of science and technology strategies. To make sure NIJ is addressing the needs of State and local agencies, the Institute regularly consults with practitioners, primarily the 150 members of the Law Enforcement and Corrections Technology Advisory Council (LECTAC). The priorities identified by the Council are translated into an agenda for funding science and technology research and development programs.

The top technology needs of the law enforcement and corrections communities, as identified by LECTAC, include the following:

- **Concealed weapons and contraband detection.** NIJ and the U.S. Departments of Defense and Transportation are the leaders in the development of relatively inexpensive, easy-to-use concealed weapons detection technology.
- **Vehicle-stopping technology.** Research is under way on a variety of new and innovative technologies that can be used to safely and effectively stop a vehicle. In 1998, NIJ completed the process to commercialize the Road Spike™ tire deflation device—a retractable strip designed to be carried in the trunk

of a car and rolled onto the highway well in advance of a fleeing vehicle. The Road Spike™ deploys retractable hollow metal spikes that will puncture, embed in, and release the air out of a tire in several minutes. This device prevents the driver from losing control of the vehicle and allows pursuit vehicles to quickly catch up and arrest the suspect.

In a related area, NIJ supported the Pursuit Management Task Force, a multidisciplinary group that defined contemporary police pursuit practices and the role of technology in managing high-speed vehicular pursuits. The Task Force issued recommendations regarding the development and application of technology in pursuit management.

In 1998, NIJ issued a solicitation for proposals to test electromagnetic devices designed to stop vehicles and completed a strategic plan for NIJ's vehicle-stopping program.

- **Investigative and forensic science initiatives.** A major focus of NIJ's investigative and forensic science technologies portfolio is the identification and development of evidence to solve criminal cases. Among areas of interest in which NIJ is funding research are the following: DNA analysis, trace evidence, questioned documents examination, fingerprints, firearms, and teleforensics.

Testing New Ideas and Technology

Once research begins uncovering the cause-and-effect factors that contribute to certain social conditions, criminal behaviors, or phenomena, science can begin experiments that test the validity of various hypotheses. Testing and experimenting, however, must be accompanied by rigorous evaluation of the effects—intended and unintended—of the mechanisms employed to improve the situation, eliminate the behavior, or reduce the effects of the phenomenon. NIJ supported several important demonstration tests during 1998.

Breaking the Drug Abuse-Crime Cycle. Since 1997, the Institute has supported a program in Birmingham, Alabama, that is testing the hypothesis that a systemwide effort to use drug testing, mandatory treatment, enhanced judicial involvement, and other interventions with all arrested adults with a history of illicit drug use will reduce drug abuse and criminal behavior. Much of the funding for this initiative was provided by the White House's Office of National Drug Control Policy. During 1998, NIJ extended the program to two more sites and one juvenile justice site.

At the end of 1998, NIJ awarded \$3 million each to Jacksonville, Florida, and Tacoma, Washington, to implement jurisdictionwide intervention strategies designed to identify, supervise, and treat all adult drug-using defendants and \$2 million to the Eugene, Oregon, site targeting juvenile drug offenders. The results of a process and impact evaluation will become available in 2000.

Reducing Corrections and Police Officer

Stress. Since 1996, NIJ has awarded 25 grants to support activities to better understand and reduce the harmful effects of stress on law enforcement and correctional officers and their families. Congress established the program under Title XXI of the Violent Crime Control and Law Enforcement Act of 1994. Among other development activities, the program consists of demonstration and research grants awarded to State and local law enforcement and corrections agencies or their affiliated support organizations, such as unions and professional associations. The grants are being used to develop and promote education, training, and treatment programs at the local level. Several programs are comparing stress intervention methods, conducting research on the extent and nature of stress among officers, and examining critical incident stress debriefings. NIJ intends to publicize results from the innovative programs to reduce stress as the early findings become available.

Developing Standards and Testing

Products. In the realm of technology, NIJ pioneers efforts to find advanced technological methods of deterring, identifying, and apprehending criminals. It supports the exploration and creation of alternative techniques to improve criminal justice practice. The Forensic DNA Lab Improvement Program is a good example. The Program is increasing the capacity of State and local forensic laboratories to support criminal investigations involving biological evidence recovered from crime scenes. State and local labs are purchasing equipment, supplies, and training to both upgrade and standardize their forensic DNA labs.

Improving old technologies and developing new ones introduces the need to develop standards against which to measure the usefulness of the technology. NIJ not only develops such performance standards for equipment and technology, it also supports testing of products against those standards. This way, law enforcement and corrections agencies can make more informed decisions about the equipment they purchase. NIJ does not recommend particular brands of products. Rather, it tests many brands and distributes lists of products that have passed the standardized tests showing the strength, endurance, and performance of a particular product.

Testing and research have led to performance standards for more than 60 types of criminal justice equipment, including handguns, soft body armor, patrol cars, and handcuffs.

NIJ's primary partner in the development of standards and the testing of products is the Office of Law Enforcement Standards at the National Institute of Standards and Technology, U.S. Department of Commerce.

In the realm of technology, NIJ pioneers efforts to find advanced technological methods of deterring, identifying, and apprehending criminals. It supports the exploration and creation of alternative techniques to improve criminal justice practice.

Expanding the Horizons

During this last decade, many economic and social phenomena—including crime—previously confined by national boundaries have exploded across the globe. The globalization of financial markets and communications systems, the easing of international transportation, the tearing down of the Berlin Wall, and the collapse of the Soviet Union have all contributed mightily to an international and transnational crime problem. The illicit movement of people, money, goods, and services across national borders has created new challenges for law enforcement and the administration of justice. New kinds of crimes—such as human trafficking; cybercrime; international money laundering; and transnational trafficking in drugs, arms, and stolen autos—are confronting not only Federal authorities, but also State and local law enforcement.

The impact of these developments clearly is being felt on the streets of America.

NIJ created an International Center in 1997 to coordinate international activities within the Office of Justice Programs and NIJ, to help inform policymaking on transnational issues, and to promote the global exchange of criminal justice research information. The latter task involves both exporting American research and practice information abroad and importing the best research and practices from around the world. (See, for example, “ADAM Goes International.”) The International Center’s primary constituents are American policymakers, practitioners, researchers, and scholars.

ADAM Goes International

An international component of the Arrestee Drug Abuse Monitoring (ADAM) program held its first strategic planning meeting in Miami, Florida, in April 1998. In attendance were representatives from:

- Eight nations (Australia, Chile, England, the Netherlands, Panama, Scotland, South Africa, and Uruguay).
- Two international organizations (Organization of American States and the United Nations Drug Control Program).
- Experts in the field of drug testing systems.
- NIJ staff.
- Representatives of U.S. Federal agencies (such as the Justice Department’s Drug Enforcement Administration and the Department of Health and Human Services’ National Institute on Alcohol Abuse and Alcoholism).

In total, 40 people attended the conference.

With its launching, International ADAM (I-ADAM) became one of only a few international drug prevalence measures and the only international drug testing system for monitoring the drug use rates of arrestees. I-ADAM’s development is important because the existing drug surveillance systems differ from one another to such an extent that comparisons among countries are difficult.

From its inception, I-ADAM was designed to be a standardized international system that will use similar instruments, sampling, training, and other protocols. By 1999, six of the eight strategic planning countries—Australia, Chile, England, the Netherlands, Scotland, and South Africa—will have started collecting I-ADAM data. Comparative data will be analyzed and the results will be published as they become available.

Visit the ADAM Web site at <http://www.adam-nij.net>.

In 1998, the Center undertook a number of activities to fulfill its coordinating role and to facilitate comparative and transnational research, including the following:

- **Three international challenge grants** were awarded to support research on (1) comparative juvenile justice processing in Denver, Colorado, and Bremen, Germany; (2) human trafficking from Fuzhou, China; and (3) the commercial sexual exploitation of children trafficked into the United States through Canada and Mexico.
- **Major research partnerships** were begun with Israel, Ukraine, and the United Kingdom.
- **An international visiting fellow** was brought to NIJ from Russia to share knowledge about transnational organized crime in the former Soviet Union.

- **The international visitor program** coordinated meetings with 117 visitors from 34 countries.

In addition, work proceeded on the International Center's Web site, linking the World Justice Information Network and the National Criminal Justice Reference Service to provide an electronic network serving the worldwide criminal justice community. (See "NIJ's World Wide Web Presence.")

The International Center is the vehicle for extending NIJ's research and development role onto the global stage. As the face of crime takes on an increasingly international cast, our level of understanding and ability to respond must change. It is the Center's mission to inform and enlighten that process.

Sharing Knowledge

One of NIJ's primary goals is to disseminate science-based findings and their related policy implications as widely as possible. One path involves traditional mechanisms—publications, conferences, and face-to-face meetings. The other path is an electronic one where information-sharing occurs instantly in cyberspace.

Reaching Out Via Cyberspace

Since NIJ's World Wide Web site was unveiled in 1997, it has continued to grow and be refined, especially in regard to content and ease of access. The site regularly posts newly released publications, which can be downloaded directly or requested through the National Criminal Justice Reference Service (NCJRS). The site also posts news about awards, grants, solicitations, upcoming conferences, and links to related sites. In addition, visitors can learn detailed information about NIJ's programs.

The newest addition to the NIJ Web site is *NIJ News*. Launched in June 1998, the online newsletter features articles from the director on current issues, along with

coordinated articles, announcements, and links to related sites. The newsletter has been expanding its format to reach a broader audience and soliciting feedback on possible improvements. Like other segments of NIJ's Web site, the newsletter helps bridge the time gap of print media by making information available to audiences sooner.

Since NIJ's World Wide Web site was unveiled in 1997, it has continued to grow and be refined, especially in regard to content and ease of access.

Several NJ program areas have greatly expanded their presence on the Web during the past year, adding links to publications, announcements about events, other

sites, and summaries of grants. (See “NJ’s World Wide Web Presence.”)

NJ’s World Wide Web Presence

In addition to NJ’s Home Page (<http://www.ojp.usdoj.gov/nij>), several of NJ’s programmatic and topic areas have their own Web presence:

- **The Arrestee Drug Abuse Monitoring program** tracks trends in the prevalence and types of drug abuse among booked arrestees in an urban network of sites across the United States and several international sites (<http://www.adam-nij.net>).
- **Breaking the Cycle** is a systemwide intervention designed to identify and treat all defendants in need of substance abuse treatment. The approach focuses on maintaining continuous treatment as the defendant moves through the system (<http://www.ojp.usdoj.gov/nij/brekprog.htm>).
- **The Corrections and Law Enforcement Family Support program** is discovering innovative ways to prevent and treat the negative effects of stress experienced by law enforcement and correctional officers and their families (<http://www.ojp.usdoj.gov/nij/clefs/welcome.html>).
- **The Crime Mapping Research Center** promotes the research and development of GIS (geographic information systems) and crime mapping to identify, solve, and monitor crime problems in communities (<http://www.ojp.usdoj.gov/cmrc>).
- **The Data Resources Program** ensures the preservation and availability of research and evaluation data collected through NJ-funded research. Datasets collected through NJ-funded research are archived and made available to other scientists to support new research to replicate original findings or test new hypotheses (<http://www.ojp.usdoj.gov/nij/dataprog.htm>).
- **The National Commission on the Future of DNA Evidence** posts announcements and transcripts of meetings and summaries of working group meetings. The site will post the Commission’s forthcoming report and recommendations (<http://www.ojp.usdoj.gov/nij/dna/welcome.html>).
- **The Sentencing and Adjudication program** announces funds for research, including fellowship and NJ-funded grant awards in the areas of judicial

decisionmaking, courts management, specialized courts, prosecution, defense, impact of legislation, sentencing outcomes, structured sentencing, and the general topic of sentencing (<http://www.ojp.usdoj.gov/nij/saap/welcome.html>).

- **Technology Development Portfolios** describe programmatic areas related to crime prevention, officer protection, less-than-lethal weapons, investigative and forensic sciences, information sharing and analysis, counterterrorism, training, and simulation (<http://www.ojp.usdoj.gov/nij/sciencetech/welcome.html>).
- **The Violence Against Women and Family Violence program** features research on the safety of women and family members and the effectiveness of the criminal justice system’s response to these crimes (<http://www.ojp.usdoj.gov/nij/vawprog/welcome.html>).

In addition to NJ’s programmatic Web sites, the Institute supports several additional Web sites:

- **JUSTNET** is a gateway to information on new technologies, equipment, and other products and services available to the law enforcement, corrections, and criminal justice communities. The JUSTNET site contains news and information services, interactive chat lines and topic boards, data and publications, and links to related sites (<http://www.nlectc.org>).
- **The Partnerships Against Violence Network (PAVNET)** is a database on violence prevention programs, curricula, and funding. With more than 500 subscribers, the PAVNET listserv is an important online source of information for professionals and volunteers in the violence prevention, education, treatment, and enforcement fields (<http://www.pavnet.org>).
- **The World Justice Information Network (WJIN)** is a multilingual communications tool and a professional forum for concerned citizens worldwide. Through a partnership with Globalink, WJIN members can instantly translate documents, send e-mail, and chat online in French, German, Italian, Portuguese, Russian, and Spanish, with other languages to be added in the future (<http://www.wjin.net>).

Reaching Out Via Traditional Means

Even as electronic distribution and dissemination took on heightened visibility and intensity this year, traditional modes of dissemination continued to be highly popular with NIJ's audience. (See "Most Popular Publications Released in Fiscal Year 1998.")

Publications. NIJ's published materials fall into three major categories:

- **Concise summaries of research or programs.** These publications, which range from 4 to 32 pages, discuss findings from discrete projects or programs. Included in this category are several newsletters and the Research in Brief, Research in Action, Research Preview, and Program Focus series. This year, NIJ's newsletter *TechBeat*, which is issued quarterly and devoted to keeping readers up to date on technologies for use in law enforcement, corrections, and other criminal justice agencies, won two national publishing awards.
- **Longer discussions of the issues.** This category of publications includes the Research Report series, which spans a wide range of topics; the Issues and Practices in Criminal Justice series, which features innovative programs designed to address critical topics of the day; and the Research Forum series, which highlights papers from NIJ-sponsored conferences.
- **The NIJ Journal.** The Institute's quarterly journal contains feature articles on thought-provoking issues, new findings, or research questions of general interest to policymakers and practitioners. Cover stories during 1998 included articles on drug addiction as a brain disease (by Alan Leshner, director of the National Institute on Drug Abuse); the challenges of conducting research on crime in public housing (by Jeffrey Fagan and colleagues at Columbia University); and Boston's interdisciplinary and multiagency approach to crime prevention (by David Kennedy, senior researcher at Harvard University's John F. Kennedy School of Government).
- **Crime and Justice.** NIJ supports the *Crime and Justice* series, which provides comprehensive, authoritative, and balanced summaries of current

Most Popular Publications Released in Fiscal Year 1998

(as measured by orders for copies, requests for more information, and inquiries from the media)

- *National Guidelines for Death Investigation*, by the National Medicolegal Review Panel, Research Report, February 1998 (NCJ 167568).
- *Crack, Powder Cocaine, and Heroin: Drug Purchase and Use Patterns in Six U.S. Cities*, by K. Jack Riley, Research Report, March 1998 (NCJ 167265).
- *Kids, COPS, and Communities*, by Marcia R. Chaiken, Issues and Practices, April 1998 (NCJ 169599).
- *Stalking in America: Findings From the National Violence Against Women Survey*, by Patricia Tjaden and Nancy Thoennes, Research in Brief, June 1998 (NCJ 169592).
- *Protective Intelligence and Threat Assessment Investigations*, by Robert A. Fein and Bryan Vossekuil, Research Report, July 1998 (NCJ 170612).
- *ADAM: 1997 Annual Report on Adult and Juvenile Arrestees*, by K. Jack Riley, Research Report, July 1998 (NCJ 171672).
- *Preventing Crime: What Works, What Doesn't, What's Promising*, by Lawrence W. Sherman, Denise Gottfredson, Doris MacKenzie, John Eck, Peter Reuter, and Shawn Bushway, Research in Brief, July 1998 (NCJ 171676).
- *Crime in the Schools: A Problem-Solving Approach*, by Dennis Kenney, Research Preview, August 1998 (FS 000224).
- *Prevalence, Incidence, and Consequences of Violence Against Women: Findings From the National Violence Against Women Survey*, by Patricia Tjaden and Nancy Thoennes, Research in Brief, November 1998 (NCJ 172837).

knowledge, prior experience, and promising future inquiries in the field. Editor Michael Tonry and an 11-member editorial board of prominent scholars guide

the series, which is published by the University of Chicago Press. Each annual volume contains essays from nationally acclaimed researchers and other experts. Occasionally, an issue with a single theme, such as youth violence or prisons, is published.

A complete list of the publications produced in fiscal year 1998 can be found in appendix B.

Meetings and Other Gatherings. NIJ uses conferences, panels, lectures, seminars, workshops, and other meetings to stimulate discussion, shape its research agenda, and resolve scientific controversies. Such face-to-face gatherings, which encourage frank discussions and debate, are one of the best ways to share information and shape future research activity.

Far too many gatherings occurred in 1998 to list in this report. However, highlights include:

- **Technology fair.** In March 1998, NIJ displayed an array of technology (both under development and commercially available) at a technology fair held in the Rayburn House Office Building on Capitol Hill. Members of Congress and their staffs visited numerous booths examining state-of-the-art equipment for law enforcement and correctional officers and discussing the issues surrounding these new technologies.

Equipment featured at the fair included telemedicine for correctional settings, thermal imagers (which resemble palm-size camcorders and allow officers to see in the dark), devices that allow officers to translate simple phrases from English into another language so they can communicate with non-English speaking citizens, and guns that can be fired only by an authorized user.

- **Perspectives lectures.** To promote informed and rational discourse, NIJ established the first Perspectives on Crime and Justice series in 1996. Since then, NIJ has invited the Nation's most prominent scholars to share their policy perspectives with an audience of opinion leaders, congressional staff, Federal officials, journalists, policymakers, researchers, and criminal justice professionals.

Speakers are asked to challenge conventional thinking, offer candid recommendations, and stimulate a robust debate. Their collected lectures are published in the Research Forum series.

The 1998 series featured the following scholars:

- George Kelling, "Crime Control, the Police, and Culture Wars: Broken Windows and Cultural Pluralism," December 1997.
- Randall Kennedy, "Race, the Police, and 'Reasonable Suspicion,'" February 1998.
- David Musto, "The American Experience With Stimulants and Opiates," March 1998.
- Joan Petersilia, "A Decade of Experimenting With Intermediate Sanctions: What Have We Learned," April 1998.
- Philip Cook, "The Epidemic of Youth Gun Violence," May 1998.
- **Annual research and evaluation conference.** Every summer, NIJ cosponsors with other Office of Justice Programs offices and bureaus a conference for practitioners, policymakers, and researchers on the latest research and evaluation. The 1998 conference, titled "Viewing Crime and Justice From a Collaborative Perspective," focused on the rewards and challenges of collaborative endeavors with the community and other partners. More than 750 people attended.
- **National Academy of Sciences workshops.** The National Research Council of the National Academy of Sciences is a key partner with NIJ in the effort to increase scientific understanding of crime and justice, identify new areas of research, and promote theory development. During 1998, the National Research Council, through its Committee on Law and Justice and with NIJ support, conducted workshops on transnational crime and pathological gambling.

The transnational crime workshop focused on defining the issues and measuring the problem while considering the interface between legal and illegal activities and the implications of

transnational crime for local law enforcement. The workshop's report, *Transnational Organized Crime: Summary of a Workshop*, edited by Peter Reuter and Carol Petrie, is available from the National Academy Press at <http://www.nas.edu>.

The project on pathological gambling is studying data sources that can produce reliable measures of the prevalence of pathological gambling and its multiple impacts. The project also is examining the factors that cause or mitigate problem gambling and its social and economic costs. The National Research Council's Report, *Pathological Gambling: A Critical Review*, is available from the National Academy Press at <http://www.nas.edu>.

- **Executive sessions on corrections and sentencing.** The effects of sentencing reforms, the continuing increase in the inmate population, and concerns about the effects of large numbers of former inmates returning to their communities have prompted NIJ and the Corrections Program Office to jointly sponsor a multiyear series of meetings at which a group of researchers and practitioners examine major issues surrounding sentencing and corrections. Using commissioned papers as the basis for their meetings, practitioners and scholars discuss a variety of topics. Five sessions are planned; three were held in fiscal year 1998. The papers will be published as they become available.
- **Technology Institutes.** Since 1997, NIJ has brought State and local law enforcement practitioners together to introduce them to the array of technology and technical assistance available from the Federal Government and teach practitioners about the many ways technology can help them confront current challenges. This year, NIJ introduced a Technology Institute designed especially for correctional practitioners. The 23 practitioners selected by NIJ visited several Federal agencies in the Washington, D.C., area to learn how they can improve the detection of drugs and contraband in facilities and among probationers and parolees, how to improve security in facilities, and how to exchange information and share their experiences and lessons learned.

- **Multinational peacekeeping missions.** Civilian police are increasingly being used in multinational peacekeeping missions around the world. During 1998, NIJ, in conjunction with the Police Executive Research Forum and the Center for Strategic and International Studies, convened a workshop that brought together public safety specialists with experience in peacekeeping missions in Bosnia, Haiti, Somalia, and Central America. The group addressed a range of issues related to the limitations of the United Nations CIVPOL (civilian police) unit, particularly its inability to provide effective oversight and logistical support for field operations. NIJ published the proceedings of the conference.⁹
- **National Governors' Association and juvenile crime.** NIJ and the Office of Juvenile Justice and Delinquency Prevention worked closely with the National Governors' Association's Center for Best Practices to develop three regional policy forums on crime prevention and the effective administration of juvenile justice and corrections. After each forum, the Center published an *Issue Brief* highlighting the issues, research findings, and best practices in the field.¹⁰

Reaching Out Through an Information Network

The NCJRS is one of the most extensive sources of information on criminal and juvenile justice in the world, providing services to an international community of policymakers and professionals. Sponsored by NIJ, its Office of Justice Programs partners, and the Office of National Drug Control Policy, NCJRS functions as a dynamic information clearinghouse, responding to more than 5,000 requests each month from around the world. Its database of abstracts, available on the Web, contains summaries of more than 150,000 documents. The complete text of more than 1,500 documents is available on its Web site (<http://www.ncjrs.org>).

⁹ Burack, James, William Lewis, Edward Marks, David H. Bayley, Robert M. Perito, and Michael Berkow, *Civilian Policing and Multinational Peacekeeping—A Workshop Series: A Role for Democratic Policing*. NIJ Research Forum, Washington, D.C.: U.S. Department of Justice, National Institute of Justice, January 1999 (NCJ 172842).

¹⁰ The *Issue Briefs* are posted at <http://www.nga.org>.