Strengthening Justice in the U.S.:
The Impact of Scientific Research*

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I would like to thank the Criminal Justice Research Center and the Department of Sociology for this wonderful invitation. It is such an honor to be part of the distinguished Reckless-Dinitz Lecture Series: a series created to foster the principles of innovation, multidisciplinary work, and the accessibility of research—principles that align well with the National Institute of Justice (NIJ). I am thrilled to discuss a topic that I greatly believe in: the critical role scientific research plays in strengthening the criminal justice system, and how evidence-based knowledge can directly solve challenges faced by hard-working criminal justice practitioners, whether in law enforcement, corrections, or the judicial system.

It is not a surprise that public safety challenges and the prospect of criminal justice reform are being discussed across the country every day. The relationship between law enforcement and the communities they serve is being scrutinized. Mass incarceration and sentencing reform are being debated throughout all levels of government. The complex and numerous challenges related to gun violence and violent extremism have been brought to the forefront with a series of unfortunate and tragic events. Criminal justice is becoming a top priority for our nation—for leaders in Washington, D.C. or in local communities and for individual citizens.

This makes it an extremely exciting time to be a scientist—even more so, the Director of the National Institute of Justice. I have always believed that true policy reform and innovation depend on scientific evidence, and now it feels as if the nation is at a tipping point that could lead to change. For almost 50 years, as the research and development arm of the Department of Justice, NIJ has been investing in scientific research across disciplines to serve the needs of the criminal justice community and build knowledge on what policies and tools they need to be successful. We support our sister agencies in the Office of Justice Programs to

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* Findings and conclusions in this article are those of the authors and do not necessarily reflect the official position of the U.S. Department of Justice.

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evaluate the impact of their programmatic support to law enforcement agencies, judicial systems, victim services, and other crucial justice organizations. Also, we develop evidence around congressional and presidential priorities to guide their decision-making.

NIJ is unique as it serves as a nexus between many different fields and stakeholders. We reside within the Department of Justice and work with the White House and Congress as well as our federal partners, such as the National Science Foundation and National Institute of Standards and Technology. We also have direct connections to criminal justice practitioners—law enforcement agencies, crime laboratories, prosecutors’ offices, and corrections agencies—and to academic researchers, whether in public universities or private research institutions. We take a multidisciplinary approach to our research, bringing together the diverse social sciences with physical and technological sciences. Each discipline has knowledge to contribute to crime and justice. And, it is only through the innovation that comes with working across multiple disciplines that we will be able to address the multifaceted nature of crime and the justice system.

The mission of the National Institute of Justice is to take advantage of this nexus to develop partnerships and invest in research across disciplines that can strengthen science and advance justice. We believe in five guiding principles:

1. Research can make a difference in individual lives. It can improve the safety of communities and create a more effective and fair justice system.
2. Government-funded research must adhere to fair and open competition guided by rigorous peer review.
3. Innovative and rigorous research methods can provide answers to basic questions as well as practical, applied solutions to crime.
4. Research must respond to the real-world needs of victims, communities, and criminal justice professionals.
5. Partnerships with other agencies and organizations, public and private, are essential to our success.

I would like to illustrate these principles with a few examples of how research has been—and will continue to be—an important part of the conversation policymakers, practitioners, and the nation-at-large are having about crime and justice.

I. STRENGTHENING LAW ENFORCEMENT THROUGH SCIENCE

Over the last two years, the nation has been focused on the role of law enforcement in the communities and what effective policing looks like. This has also opened up a conversation about the nature of race, crime, and justice in America. These challenges are not new to those of us who, for years, have been conducting research to inform criminal justice policy and practice. Whether we
are talking about Los Angeles after the beating of Rodney King, Ferguson after the shooting of Michael Brown, or any other area that has been forced to confront these issues, the foundational challenge is the same: Building Trust.

The 2015 report of the President’s Task Force on 21st Century Policing enshrines this in its first lines: “Trust between law enforcement agencies and the people they protect and serve is essential in a democracy. It is the key to the stability of our communities, the integrity of our criminal justice system, and the safe and effective delivery of policing services.”

It is hard to express the importance of this report and its recommendations. It shows a commitment by the Administration to address the concerns of law enforcement and the public; it gives federal, state, and local agencies a catalyst and roadmap for taking action on this issue; and, most importantly, it directly focuses on the importance of using research to identify and develop evidence-based policing practices.

Every single chapter, or pillar, of the report includes a recommendation around the need for research. This is revolutionary. It is a concrete example of how policy is leaning on research, and it has highlighted an important perspective: the need for researchers to partner with law enforcement to shed light on these challenges and to provide evidence of the most effective solutions. I am convinced that policing reform in the 21st century is going to depend on active collaborations between police personnel and researchers.

The challenge of building trust falls on more than just law enforcement. It falls on entire communities, including researchers. Former Attorney General Eric Holder realized this when he created the National Initiative for Building Community Trust & Justice, which is a consortium of national experts from John Jay College of Criminal Justice, Yale Law School, and the Urban Institute. It is guided by a board of advisors that includes law enforcement, academia, faith-based groups, community stakeholders, and civil rights advocates. The Initiative explores information about what strategies can enhance procedural justice, reduce implicit bias, and support racial reconciliation. It is testing these strategies in six pilot sites across the country. NIJ has provided close to $2 million to support the research and evaluation components of these demonstrations.

Many of these efforts to improve police culture and build community trust were first implemented by state and local communities. For example, in 2012, Sue Rahr and the Washington State Criminal Justice Training Commission were leading the nation with their work to bring procedural justice and community trust concepts into law enforcement training academies. They transformed police training in Washington and encouraged police leaders to have open discussions about their agency’s culture and how the culture inside the agency should reflect

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the culture of the community they serve. This work is critical to enhancing the legitimacy of our law enforcement agencies within their communities. You can learn more in a paper entitled “From Warriors to Guardians” from our New Perspectives in Policing series.²

As NIJ supports work on building community trust, we are also supporting a mechanism by which law enforcement agencies can collect data related to non-traditional metrics of police performance. We need a mechanism that can collect data beyond the typically used benchmarks of crime incidents, number of arrests, or citizen complaints to include the community’s satisfaction with law enforcement encounters, the line officers’ views of their work, and police leadership’s approach to innovative reforms. Progressing from counting activities to actually measuring the quality of policing is an essential step for agencies seeking to sustainably improve community relations. That is why we have designed and supported the National Police Research Platform.³

The research team, led by Dennis Rosenbaum at the University of Chicago, worked with 100 law enforcement agencies, large and small, throughout the country to collect an array of survey data from community members and police officers. The Platform not only provides us with data on policing across the U.S., but it also gives agencies metrics on issues like police legitimacy, safety and wellness, and an ability to compare their results with similarly situated departments. This allows police chiefs to gain insight into the challenges and opportunities within their own agencies, whether on officer stress and burnout or unsatisfied citizens in a particular precinct. The Platform also allows us to measure police culture, both within the agency and in the community, and gives us meaningful information about what approaches can be used to develop strong, trusting law enforcement-community relationships.

In addition to providing information on how to police effectively, research can provide insight into the complex challenges faced by law enforcement and identify solutions. For example, NIJ has supported a multidisciplinary team composed of sociology, computer science, and nursing researchers at Washington State University who are studying the role of implicit bias on behavior in deadly force encounters. While more research is necessary on this topic, the team recently published an article⁴ in Criminology and Public Policy, which found that in an experimental simulation of deadly force encounters, officers were slower to shoot

armed black suspects than armed white suspects and they were less likely to shoot unarmed black suspects than unarmed white suspects. These findings challenge the assumption that implicit racial bias affects officer behavior during encounters with black suspects and runs counter to media narratives on this issue. We should interpret these findings cautiously and invest in more research to ensure they are not limited to a particular region or law enforcement agency, and to ensure that they are not due to the nature of the simulation. But even with this in mind, their work highlights the importance of scientific research on policing, the potential to impact national policy and even discourse on reform.

NIJ is increasingly investing in such multidisciplinary research because justice challenges fall in areas beyond one scientific discipline. When I say research, I mean a wide variety of scientific work, not just in the social sciences but also in the physical sciences and in technology. Too often, as scientists, we focus only on the type of research in our personal areas of expertise; but I firmly believe, and I hope you will, too, by the end of my talk, that research across the sciences can inform one another and that they all have a place in our discussions of criminal justice reform.

An example of the social and physical sciences working together to enhance our knowledge and provide solutions to practitioners is our work around the use of video technology and data by law enforcement agencies. As jurisdictions across the country adopt, or consider, the use of body-worn cameras, there are many challenges to be addressed. NIJ is funding randomized controlled trials of body-worn camera programs in Las Vegas and Los Angeles to collect data on a host of indicators that we hope will tell us more about:

- The impact of body-worn cameras on police-citizen encounters;
- What policies agencies are developing for the use, storage, and analysis of this data; and
- How well officers are adhering to departmental policy.

I give you these examples to show you how powerful research can be in supporting policing reform and building community trust. A growing number of police executives are opening their doors to researchers for help answering questions not just about preventing and reducing crime, but also about how to assess the efficiency of their operations. And more than that, they want to assess the integrity of their department and learn how to improve relationships with particular populations in the community. These police leaders should be loudly commended for their bold step in opening their doors to researchers. They are embracing accountability and legitimacy. I encourage you all to think how your scientific work could inform police chiefs and policymakers working to build community trust.
II. MAKING RESEARCH WORK FOR CORRECTIONS

Policing is not the only part of the criminal justice system that is being debated by practitioners, policymakers, and the public alike. Corrections, and more specifically mass incarceration and the use of restrictive housing, has also been placed in that spotlight. In 2014, NIJ supported a landmark study by the National Academy of Sciences titled *The Growth of Mass Incarceration in the United States: Exploring the Causes and Consequences*.

This report takes an in-depth look at how the U.S. penal population has more than quadrupled in the last four decades and examines the causes of such growth, the effects it has on society, and makes recommendations for changes in sentencing, prison, and social policies to reduce the nation’s reliance on incarceration. Since this report was published, we have heard about mass incarceration and efforts for sentencing reform in the news more than ever—with statements from the White House and Congress, state legislative bodies, and corrections departments. I believe this study contributed to a large portion of this reform discussion.

One practice within the area of corrections that has received a large amount of attention recently is the use of restrictive housing, otherwise known as administrative segregation or solitary confinement. While it is common practice and can be an important option that safeguards the well-being of staff and inmates, there are concerns with its effects on prisoners, especially those with mental illness, and concerns about its potential over-use.

This past January, the Department of Justice published a review on the use of restrictive housing, which looks at how, when, and why federal correctional facilities isolate certain prisoners from the general inmate population and sets out Guiding Principles that would responsibly limit the use of restrictive housing at the federal, state, and local level, as well as specific recommendations for policies that the Bureau of Prisons can implement for federal institutions.

This report created a foundation of knowledge about the use of restrictive housing in federal correctional facilities, but we have a long road ahead because there is a lot we do not know about this practice. There are few data sources that speak to how widespread the practice is or how and when it is used. We have even less data about the long-term effects on inmates or correctional officers who work in these units.

NIJ is committed to investing in a strategic and comprehensive research agenda to address these questions. To launch this effort, in October 2015, I convened a diverse group of more than 80 experts from federal, state, and local.

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corrections agencies, advocacy groups, academia, and research organizations to discuss:

- What we know and do not know about the inmates who are placed in this type of housing;
- The relationship between institutional violence and restrictive housing;
- Issues related to the mental health of inmates, officer and inmate safety and wellness, civil rights, and safe alternatives to restrictive housing; and
- Gaps in data collection efforts and the existing empirical literature.

When the meeting concluded, it was clear that everyone was on board with the idea of building a scientifically rigorous road of inquiry that will produce policies and practices that are based on evidence. We have published a summary of the meeting on NIJ.gov along with the first in a series of white papers on restrictive housing being written by scholars from varying disciplines, including psychology, sociology, and law.\(^7\)

I want to underscore how important the role of researchers is to this topic. During the meeting, I heard practitioners ask again and again for more evaluations of programs, for assistance analyzing their internal data, and for an evidence-based roadmap on restrictive housing reform. Practitioners cannot know for certain which alternatives to restrictive housing work in which situations without research. I encourage active researcher-practitioner collaborations on this topic and am eager to see an expansion in the evidence base that can guide corrections officials.

NIJ is also looking at another related and critical issue within corrections: the safety and wellness of inmates, specifically those in local jails. In 2015, a report by the Bureau of Justice Statistics showed that self-harm and suicide are more likely to occur in jails than prisons and that these incidents have been increasing over time.\(^8\) In 2013, more than a third of all local jail deaths were the result of suicide.\(^9\) Moreover, these statistics do not take into account the instances of self-harm and suicide that occur after an individual is released back into the

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9. Id. at 1.
community. We all remember the tragic suicide of Kalief Browder after his release from Riker’s Island in New York.\(^\text{10}\)

To identify effective suicide prevention strategies for this population, we are partnering with Michigan State University, the National Institute of Mental Health and its Office of Behavioral and Social Sciences Research. The four-year, $6.8-million study called Suicide Prevention for At-Risk Individuals in Transition, or SPIRIT, will focus on the high-risk individuals who are transitioning from jail to the community. SPIRIT will use trained community mental health providers to test a practical approach to reducing suicide by comparing it to standard care. Researchers will track improvements in suicidal behavior, psychiatric and substance abuse outcomes, as well as service use and re-arrest rates for both types of care. Findings from this research may help correctional setting and behavioral health program directors consider programs that can be implemented for suicide prevention.

III. ADDRESSING SYSTEM WEAKNESSES TO PREVENT HARM

We are also looking at preventing and responding to self-harm within the New York City jails system as part of our Sentinel Events Initiative. This initiative has been exploring whether nonblaming reviews of errors, known as sentinel events reviews, could help identify criminal justice system weaknesses and lead to important reforms throughout the system.

The project in New York City jails is being conducted by the Vera Institute of Justice. The goal is to use a sentinel events approach—bridging the health and corrections staff—to review incidents of self-harm and identify possible solutions that may prevent them from occurring in the future. This project is crucial, not only for improving the lives of inmates, but also for testing this non-blaming, forward-thinking approach in a corrections environment.

Our Sentinel Events Initiative is one example of how NIJ’s research is forward thinking as well as responsive to current events. Long used in aviation and medicine to examine the causes of a negative event, sentinel event reviews are routine, nonblaming reviews by all stakeholders of a bad outcome. In criminal justice, a sentinel event might be a police shooting, the exoneration of a wrongfully convicted person, the release from prison of a dangerous individual, or even a “near miss” that could have led to a bad outcome had it not been caught. We have released two publications that summarize what we have learned so far about sentinel event reviews in the criminal justice system—\textit{Mending Justice: Sentinel}

Event Reviews\textsuperscript{11} and Paving the Way: Lessons Learned in Sentinel Event Reviews.\textsuperscript{12}

Sentinel event reviews were encouraged in the recommendations of the President’s Task Force on 21st Century Policing, and I believe they may be a way forward for improving the entire criminal justice system.

IV. EVALUATING PROGRAMS AND PRACTICES IN COMMUNITY CORRECTIONS

As the nation debates and implements reform efforts in policing and institutional corrections, it is important to recognize that these changes have implications for community corrections, both in the way we, as a society, think about criminal justice and in changing our policies and practices. Limiting our use of incarceration, while a necessary reform, is going to have enormous impacts on our probation and parole systems. These impacts have not yet been fully examined as part of these policy conversations.

To provide more evidence-based information on which community corrections practices are effective, NIJ has supported a variety of evaluations of probation, parole, and reentry programs. For example, the Second Chance Act, funded through the Office of Juvenile Justice and Delinquency Prevention and the Bureau of Justice Assistance, has invested $475 million in local, state, and tribal agencies—providing employment assistance, substance abuse treatment, housing, victims support, and family programs to help break the cycle of recidivism. NIJ is supporting ongoing evaluations of these efforts to determine if they are cost-effective, how they affect recidivism and other outcomes, and how to implement these programs successfully.

NIJ is also focused on identifying best practices for treating and supervising individuals within the community through its evaluations of Hawaii’s Opportunity Probation with Enforcement (HOPE). This program emphasizes the delivery of swift and certain punishment when an individual on probation violates their conditions. The evaluation found that after one year, compared to the control group, individuals in HOPE were 55 percent less likely to be arrested for a new crime, 72 percent less likely to use drugs, and 53 percent less likely to have their probation revoked.\textsuperscript{13} HOPE is now being replicated in four other sites across the U.S. to determine if these impacts translate to other populations and how cost and implementation challenges vary across jurisdictions.

Research is providing critical information to those working in community corrections as states consider reforming incarceration policies. By identifying the most effective ways to monitor an individual in the community, scientific research is supporting the formerly incarcerated to rebuild their lives while promoting public safety.

V. USING RESEARCH TO UNDERSTAND AND PREVENT GUN VIOLENCE

So we have discussed how research can support effective policy changes throughout the criminal justice system, but research is also critical to understanding and responding to current events. One well-publicized example of this, in the last year, is the rise in gun-related homicides in many cities across the United States. In 2015, media reports catalyzed a debate about why gun-related homicides seemed to have increased compared to 2014, and whether the increase was unusual or a statistically expected spike. To answer these questions, I commissioned a white paper by Dr. Richard Rosenfeld to guide future research and data collection around homicides, provide better knowledge about what occurred in 2015, and make recommendations on how we should approach any homicide increases in the future.

Dr. Rosenfeld examined whether there was a historically unexpected rise in homicides and presents possible explanations for the increase across U.S. cities. The prominent explanations for the homicide increase, include:

- The expansion of urban drug markets fueled by the heroin epidemic;
- Declining imprisonment rates; and
- De-policing and the crisis of legitimacy between law enforcement and the communities they serve.

He also outlines several empirical indicators and methods to examine the possible explanations for the 2015 homicide increase as well as the challenges that exist to empirically evaluating these explanations. This is just one of many examples that illustrate the need for research, so that we can respond scientifically to gun-related violence. Such research can help us better understand fluctuations in homicide rates and provide context to better inform policymaker responses to those changes.

Gun violence, whether homicides, violent extremism, or a tragedy like Orlando, has been felt at every level of our society. There is increasing awareness of firearm legislation, and there have been calls for either more or less restrictive firearm legislation to combat gun violence. Unfortunately, little research has demonstrated whether or how firearm legislation impacts violence across spatial

context and time. In 2014, NIJ provided support to Drs. Dana Haynie and Cynthia Colen at The Ohio State University to conduct an unprecedented longitudinal analysis and help fill this gap. Their work looks at state- and county-level measures of firearm-related violence from 1970 to 2010. This research will produce new data and knowledge that answers a timely demand for empirically driven policy recommendations addressing gun violence.

We are also supporting research to look at the criminal justice response to gun-related crimes. A recent award to the University of Missouri, St. Louis, will create an integrated database to track information on firearms offender outcomes from arrest through sentencing. The research team will then use that data to examine possible disparities in the criminal justice response to gun-related crimes committed in racially and socioeconomically diverse neighborhoods.

But we also need to think about the tools law enforcement are using to respond to gun violence. ShotSpotter and other gunshot detection technologies have long been used to support the response, investigation, and prevention of gun violence and related crime. But there have been few evaluations of their use and impact on desired violence reduction outcomes. NIJ has recently funded the Urban Institute to examine:

- How law enforcement deploy gunshot detection systems;
- To what degree does it reduce response time, enhance investigations, and reduce gun violence;
- If the technology resulted in spatial displacement of the crime or a diffusion of benefits; and
- The cost effectiveness of the technology.

The results of this evaluation will help law enforcement officers better understand how the tools they use affect their investigations.

In response to the President’s Plan to Reduce Gun Violence, NIJ is holding a Gun Safety Technology Challenge to conduct an objective demonstration through testing and evaluation of the reliability of firearms and firearm accessories available today that are typically known by various terms such as smart guns, user-authorized handguns, childproof guns, and personalized firearms. These firearms or firearm accessories utilize integrated components that exclusively permit an authorized user or set of users to operate or fire the gun and automatically deactivate it under a set of specific circumstances, reducing the chances of accidental or purposeful use by an unauthorized user. It is anticipated that the results of the challenge will provide a basis to improve the general understanding of whether the addition of a gun safety technology does or does not significantly

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reduce the reliability of the firearm system compared to existing firearms. I believe that this is the first effort to apply a methodology to provide a rigorous and scientific assessment of the technical performance characteristics of these types of firearms.

VI. MOBILIZING RESEARCH TO PROTECT OUR STUDENTS

I’d like to turn to another area that has received much media attention: campus sexual assault. In January 2014, President Obama established a federal interagency task force, the White House Task Force to Protect Students from Sexual Assault, and launched the national “Not Alone” campaign, which is focused on the prevention and response to sexual assault on U.S. college campuses.

This growing attention has enacted widespread responses from colleges and universities across the U.S. and attracted media attention—but it has also sparked a debate on the commonly used statistics around campus sexual assault. Some discussion suggested that the problem of campus sexual assault may be exaggerated or inaccurate. There are a number of challenges to measuring the prevalence of sexual assault on college campuses, which also contribute to differences seen in prevalence rates of campus sexual assault.

NIJ set out to address this gap by conducting a systematic review of empirical findings on prevalence of campus sexual assault. One of our social scientists, with two research assistants, recently published their findings in *Trauma, Violence, and Abuse*. They found that despite discrepancies in prevalence findings, a substantial proportion of college students experience sexual assault. The prevalence of different forms of sexual assault may vary from campus to campus; therefore, they recommend that prevention and intervention strategies should start with a detailed understanding of the specific needs of a campus population. NIJ hopes to build on this work through a collaboration with other federal agencies to fund a nationally representative, longitudinal study examining risk for, experiences with, and recovery after interpersonal victimization among college-aged individuals.

This research is not only important to protect our students, but also to provide justice to victims of sexual assault. These multidisciplinary projects are improving

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our understanding of the complexities of sexual assault cases and providing law enforcement with the tools they need to solve them, while providing universities with the evidence-based knowledge they need to prevent sexual assault on campuses.

Another way we are seeking to keep our nation’s students safe is through the congressionally mandated Comprehensive School Safety Initiative, which is building knowledge about the causes of school violence and ways to keep schools safe. Since 2014, NIJ awarded more than $130 million to support 50 research projects and programs to improve school safety. This year, Congress has authorized $75 million to continue our investments in this area of research.

The Initiative offers us another great opportunity to form partnerships and cross disciplines. We have partnerships among schools, scientists, law enforcement, mental health professionals, technologists, and others. Such multidisciplinary collaboration will lead to innovative approaches to the challenges faced by our schools, whether it is teen dating violence, bullying, or gun violence, and lead to the development of evidence-based programs to keep our students safe and our schools focused on investing in the next generation of leaders. As you can see, in almost every arena, there are examples of how research is helping to guide policies that improve public safety.

VII. THE ROLE OF SCIENCE IN ADVANCING CRIME AND JUSTICE

Before creating new legislation, purchasing new technology, or instituting new policies, it is important for policymakers and criminal justice practitioners to understand the pivotal role science plays in criminal justice reforms. Scientific evidence is critical to the national conversation on criminal justice issues. It is necessary to advance a fair justice system, and researchers and practitioners play a key role in that transformation.

As the Director of the National Institute of Justice, I am committed to supporting the use of science by criminal justice practitioners and policymakers. Research questions must respond to the needs of the field, inform policies and practices, and capture the realities of the criminal justice system. Practitioners and policymakers need to see what is occurring in their communities reflected in research studies, and the findings must apply meaningfully to the challenges they face. I am also committed to translating research—that is, getting the findings into the hands of practitioners and policymakers and describing the implications for them specifically. How we present scientific findings to an elected county councilmember may be quite different from how we present it to the academic community.

Just as science has advanced our society in an array of realms—engineering, medical technology, and space travel—it can advance policing, corrections, and every other aspect of crime and justice. Science provides us with an opportunity to apply evidence-based knowledge to crime control and prevention, improve our effectiveness and advance justice in the United States. Thank you.