



Overview of NIJ Portfolio: Social Science Research on Forensics

Presented at the Topical Working Group

1/23/13

Katharine Browning, Ph.D.

**Office of Research and
Evaluation, NIJ**

Overview

- Why do social science research on forensics issues?
- NIJ's evolving research portfolio in this area
- Mission for this meeting

Forensic Science Boom

- President's DNA Initiative - more than a billion dollars towards improving the use of DNA in the criminal justice system (training, capacity enhancement, etc.)
- Improved technologies and enhanced expectations have led to push to:
 - collect more and more evidence at crime scenes
 - test more and more evidence in the crime lab

Forensic Science Flux

- Paradigm shift as DNA becomes the “gold standard” in forensics
- 2009 NRC report – Strengthening Forensic Science in the United States: A Path Forward
- DNA – presents new challenges for resource tight criminal justice system

Social Science Research on Forensic Science

- NIJ initiated program of research in 2004
- Focus on social science questions relating to use of forensics in investigations and prosecutions and the implications for crime laboratories

Types of Questions We Ask

- So What?
- Are we “doing more justice” as a result of advances in forensics?
 - Catching more bad guys/girls and not catching the innocent
- Is forensic evidence being utilized as effectively and efficiently as possible?
- What are the potential implications of new policies and procedures?
- What is the impact on law enforcement, courts, and corrections of forensic advances?

Start Up Challenges

- Lack of individuals with expertise in both social science and forensic science
- Lack of baseline data
- Advocacy groups framing issues

Three Waves of Research

- Wave 1 – 2005 and 2006
 - Basic questions including impact of backlog reduction, use of DNA in property crimes, and use of forensics in criminal justice processing
- Wave 2 – 2007 through 2009
 - Focus on emerging issues
- Wave 3 – 2010 to the present
 - Build on previous research

Key Findings

DNA and Property Crimes

- RCT in 5 jurisdictions
- Primary findings:
 - Twice as many suspect identifications, arrests, and cases accepted for prosecution
 - Suspects identified by DNA had twice as many prior felony convictions
 - Evidence collected by forensic technicians no more likely to result in suspect identification than evidence collected by patrol

Impact of Federal Casework Program

- Multilevel design including case studies 8 jurisdictions (4 local, 4 state)
- Primary findings:
 - From 2002 to 2005, backlogs grew considerably despite influx of funds due to
 - Increase in DNA submissions and staffing shortages
 - Overall decrease in backlog for violent crime and an increase in the backlog for non violent crime

Forensic Evidence Projects

- Goal of the projects:
 - estimate the percentage of crime scenes from which each type of forensic evidence is collected
 - describe and catalog the kinds of evidence collected at crime scenes
 - track the attrition of forensic evidence from crime scenes through laboratory analyses, and then through subsequent criminal justice processes
 - identify which forms of evidence contribute most frequently (relative to their availability) to successful case outcomes
- Two awards
 - Joe Peterson, California State LA
 - Tom McEwen, Institute for Law and Justice

Forensic Evidence Projects cont.

- Combined total of 5 jurisdictions
- Notable findings:
 - Forensic evidence most often collected in homicide and sexual assaults, much less so for other offenses
 - Most frequently collected evidence includes fingerprints, firearms, and DNA
 - Forensic evidence associated with arrests but evidence often not analyzed prior to arrest
 - Two or more forms of individualizing forensic evidence in cases lead to higher levels of convictions

Forensic Evidence Projects

Research Recommendations

- How does unexamined evidence and other tangible evidence work with traditional investigative procedures to lead to arrests?
- Would faster analysis of forensic evidence increase its value in investigations?
- To what extent is NIBIN contributing to investigations and prosecutions?
- How important is the organizational placement of evidence collection units?
- Additional cost studies are needed to examine the value of forensic investigations.
- Additional research is needed on sexual assault kit backlogs and the role that this evidence plays in sexual assault investigations.

Wave 2 Studies

- 2007 Survey of Law Enforcement Forensic Evidence Processing (FY2007)
 - Found that an estimated 14% of unsolved homicides and 18% of unsolved rapes had forensic evidence that had not been submitted to a crime lab
- Controlled Substances Case Processing Study (FY 2007)
 - Jurisdictions vary considerably; drug analysis often not needed charging decisions or plea negotiations (results of field test often used)
- Improving Investigation Outcomes (FY 2007)
 - Team approach and facilitation of communication between criminal justice components useful in solving problems

Wave 2 Studies

- Collecting DNA from Juveniles (FY 2008)
 - 30 states collect DNA from juveniles; most have expungement provisions but few occur; number and characteristics of juveniles in DNA databases cannot be determined
- 2 Evaluations of the DNA Unit Efficiency Program
 - Overall found that efficiency can be improved in innovative ways beyond capacity enhancement but these improvements often meet with considerable implementation challenges

Mission of this meeting

- Help us determine if we are asking the right questions and identify additional research questions for the upcoming 5 – 10 years
- Help us think through current trends and issues to identify priorities going forward
 - Is the forensics boom a bubble?
 - In times of tight resources, what information is needed to help jurisdictions be more efficient with forensic resources while still achieving their primary missions – public safety and justice?
 - How can we move towards more meaningful measures of hit outcomes?
 - Others?

Questions?

- For more information, contact Katharine Browning, 202-616-4786 or katharine.browning@usdoj.gov