

Developing Improved Identification Systems: Biometric Systems for
Investigations and Background Checks

National Conference Sponsored by BJS and SEARCH

Beyond The Technology
The Law and Policy Implications of Biometric Use

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I am delighted to be here to join you in this important national conference that we are sponsoring together with SEARCH to continue our ongoing commitment to learn more about the uses of advanced technologies, particularly with respect to identification needs for investigative purposes as well as for background checks. Since 1970, BJS and its predecessor agency have played an important role in partnering with the States and the FBI to computerize criminal history records and enhance their utility and shareability across jurisdictions. We have done this for more than 3 decades with substantial commitments of Federal funds to the States because we know criminals are mobile and we believe it to be a professional responsibility to keep good records of their transactions with the justice system. Many of the national statistics we produce are the direct result of improvements made in criminal records bookkeeping.

A few years back, I approached the CODIS folks in the FBI when CODIS was in its infancy about the possibility of showing, through an analysis of the post-prison behavior of violent sex offenders, that such offenders were both active and mobile after prison discharge. I suggested that if we could track such offenders and their recidivism across States it would be an important element in demonstrating the need for a national repository of biometric information on sex offenders. The FBI, for the first time in my memory, gave us money to carry out such a study.

A few months back, BJS completed a preliminary followup of the post-prison recidivism of more than

270,000 offenders discharged from prisons in 15 States. Each releasee was followed for 3 years but their entire criminal records, both within the State in which they served time and other States where they may have been arrested, were merged together. The 270,000 offenders accumulated 4.1 million arrests before the most recent imprisonment and another 744,000 arrests within 3 years of leaving prison. In other words, we had records of nearly 4.9 million arrests attributable to these offenders, an average of 18 arrests each. The most active 12% of the released prisoners, those with 35 or more arrests on their criminal records, accounted for nearly 50% of all the arrests attributed to the entire cohort. We estimate that during the first year following prison, the released prisoners accounted for 11% of all murder arrests, 10% of all robbery arrests, and 12% of all burglary arrests in the States into which they were released.

Just looking at their records, the 270,000 offenders had arrests for 18,000 murders, 50,000 rapes and sexual assaults, 172,000 robberies, a quarter million assaults, nearly 1 million arrests for drug offenses, and more than 160,000 arrests for weapons offenses. Of the 4.9 million arrests they managed to accumulate on their RAP sheets, about 400,000 were arrests in States other than the State in which they did time. And these are the things they were caught for—would the number of out-of-State arrests be even larger if the seamless sharing of accurate and complete records together with a linking automated biometric measure were the norm? My hunch is there would be many more arrests relative to actual offending if a multitude of biometric identifiers were routinely collected by justice agencies when they have contact with an offender and if such information were properly archived and made accessible for law enforcement purposes.

In statistics, it is always our goal to make a measurement of some phenomenon as close to the phenomenon as we can. It is better, for example, to estimate and describe the crime rate by talking to victims rather than the police since much of what victims experience is never brought to the attention of the police. Similarly, identifying biological material left behind by an offender at a crime scene is a more precise descriptor of who the offender was than can be obtained from an eyewitness or bystander to an incident. This is especially true for homicide, rape, and sexual assault offenses.

Several years ago, BJS produced a study of offenders serving time in State prisons throughout the nation who had committed a violent crime against a child. Surprisingly and most unexpectedly, two out of three offenders serving time after conviction for rape or sexual assault said that the victim had been a child under the age of 18. In a more recent BJS statistical research report using six years of NIBRS data from 12 States, we found that two out of three victims of rape or sexual assault had been a child—in other words, law enforcement data confirm what offenders had self-reported----that is, rape and sexual assault are largely crimes against children. In addition, both NIBRS data and prisoner data confirm that the vast majority, over 90% of the cases from both data sources, involve victims and offenders with a prior relationship. Even when the victim was an adult, 3 out of 4 incidents involve victims and offenders who know one another.

Obviously the nature of victims and offenders in rape/sexual assault cases poses unique problems and opportunities for the collection of biometric evidence such as DNA for investigative purposes. Child victims and potential offenders who are friends and family members make such investigative evidence gathering emotionally difficult. Because of the victim's youth and the closeness of the victim-offender

relationship, the majority of rapes and sexual assaults are never reported to police—BJS data from victims of rape and sexual assault indicate that only about 32% of incidents are reported to police, thus to a very large degree precluding the collection of biometric information about the offender. There is no alternative to the reporting of crime victimization to the police for insuring that both case-related and offender-related biometric information is properly collected, analyzed, and retained.

Biometric data on offenders is critical, particularly given the high mobility of offenders and the incredibly prolific criminal careers of ex-prisoners as shown in our recidivism work. In addition, those matters which are brought to the attention of police are the most serious in terms of injury and victim consequences. Livescans today have reduced from days and weeks to minutes the time required to do a record check—what is so central however is how good that check is. What fraction of all records of some biometric characteristic can actually be checked? For fingerprint-based systems, we estimate that roughly 42 million of the 65 million prints of individuals can be accessed in one way or another for a background check. But we do not know about the coverage or accessibility of other types of biometrically-based records.

In 2000, BJS conducted its second DNA Forensic Laboratory Survey. We identified 110 publicly funded law enforcement laboratories in 47 States that perform DNA typing and analysis. Since the first survey in 1997, the amount of work received by these labs has grown by more than half—casework related samples increased 51% and convicted offender samples rose 53%. What is most heartening, however, is that the amount of work completed for case samples increased 73% and work completed on offender samples grew a remarkable 231% over the 3-year period of the study. In 2000, these

DNA labs reported 893 employees, a 33% increase since 1997. But even with the improvements in staffing and productivity, nearly 16,000 casework samples were backlogged and more than 265,000 convicted offender samples were still backlogged.

The findings from labs meshes with the data from prosecutors offices nationwide. A 2001 BJS survey of local prosecutors revealed that about two-thirds of the more than 2,100 local prosecutors offices nationwide had used DNA evidence in a case during the preceding year. The most frequently cited problem with the use of such evidence was not the improper collection or even the inconclusiveness of the results—far and away the biggest problem in prosecuting such cases was the “excessive “ delay in receiving the results from the DNA lab. This coincides with the data from labs about backlogs of case and offender samples.

Aside from fingerprints and DNA, BJS’s recurring Law Enforcement Management and Administrative Statistics Program or LEMAS provides some data from police departments nationwide which are relevant to assessing the extent to which facial recognition, digital imaging and video cameras are in use by local law enforcement.

A great deal of attention has been focused on the ability to identify individuals using digital imaging and video technology. Video cameras can make a record to identify individuals and place them in a particular time-space context. Of particular interest is the use of video cameras in concert with facial recognition software that takes measurements from digital images and matches them against a database of known or wanted offenders, either "real-time" or during later review. An important question is the

extent to which local agencies are using these technologies and could potentially contribute to national data resources. According to the LEMAS data, nearly half of all local police departments, employing 61% of all local police officers, regularly used video cameras in 2000. Overall, local police departments had about 35,000 video cameras in operation.

About 3 in 10 local police departments, employing 65% of all officers, regularly used digital imaging for mug-shots. This included more than half of all agencies serving 10,000 or more residents, and about three-quarters of those serving 250,000 or more residents. Provided some level of standardization, these digital images could contribute substantially to national data resources for facial recognition. In addition, sixteen percent of local departments, including roughly half of agencies serving 50,000 or more residents, used digital imaging technology for suspect composites. Use of digital imaging in this context increases the ability to quickly disseminate suspect composites to other agencies, and may also contribute to facial recognition databases.

In summary, what I am suggesting is that 3 things must obtain for a credible biometric identification system to exist whether based on fingerprints, DNA, facial recognition, or retinal or iris scans:

- 1) Victims have to report their victimization so that relevant biometric evidence can be gathered from the victim and crime scene and such evidence should also be directly gathered from those persons who share a prior relationship to the victim. A major effort to improve victim reporting to police will stimulate demand for the collection of more biometric evidence and of course the associated the burden of processing that evidence.

2) Because of offender mobility and commitment to the continuation of a criminal career, any biometric collection program must be national in scope with the sharing of information from both case samples and offender samples. Investigative and background checks which can only access part of the potential repository of biometric data will have limited value. A major contingency to accomplishing this is not just the development of agreements to share and uniformly format shared information, rather, the most significant problem is overcoming the backlog of case and offender samples to be analyzed and typed and to expedite the transmittal of accurate and complete information to be used by those trying cases. There must be a timeliness built in to the acquisition, analysis, and posting of biometric information to a central database or repository.

3) There must be a predisposition among law enforcement at all levels of government that multiple identification technologies should become as commonly used and accessible as fingerprint records to identify individuals, regardless of whether it is for a background check for employment or a criminal check in connection with a pretrial release decision or the investigative determination that the same criminal has committed crimes in multiple locations.

I have intentionally not mentioned here the applications of these technologies to homeland security issues. There are many here who are more knowledgeable than I am about that set of applications and they will be speaking about these concerns. I do think, however, there is much that we will learn from the evolving homeland security challenges that will wind up with very practical applications to the work of criminal justice agencies and vice-versa. These are two components of public safety which clearly rely upon many of the same methods and technologies.

I want to thank the SEARCH staff and the BJS staff who have worked so hard to make this national conference a reality. Again, let me thank you all for coming and please feel free to grab BJS staff (please stand) who are here to talk about our grant programs to assist States and localities to improve criminal records systems nationwide and our program of criminal justice statistics.

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