

Predictive Prosecution: Part I¹

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Note: This is Part I of a two part series on Predictive Prosecution. This essay details the history and current implementation of predictive prosecution. Part 2 will explore the impacts and future of predictive prosecution.

Predictive prosecution—data-driven policies that shape prosecution strategies—exists in an experimental phase. This Essay seeks to raise preliminary questions about an obviously nascent experiment. But, the questions are real, and will need to be answered soon. The hope of this brief Essay is to set forth the basics of predictive prosecution while the second part will explore possible impacts, raise questions, and plan for the future of predictive prosecution.

Introduction

Police in major metropolitan areas now use “predictive policing” technologies to identify and deter crime (Huet). Based on algorithmic forecasts from past crime patterns and individual criminal risk factors, police claim to be able to identify places and persons more likely to be involved in criminal activity (Adams; Goode; Gordon; Economist). This data-driven approach impacts police patrols, investigations, and public health— like

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strategies to disrupt and monitor forecasted criminal activity (Bond-Graham & Winston (b); Buntin).

The early success of predictive policing has led a few prosecutors' offices to adopt quasi-"predictive prosecution" strategies. Predictive prosecution involves identifying and targeting suspects deemed more at risk for future serious criminal activity, and then using that information to shape bail requests, charging decisions, and sentencing arguments. The potential problem, however, is that the data used to inform predictive prosecution strategies may be subject to the same vulnerabilities currently limiting predictive policing. Data can be bad, biased, or based on erroneous correlations (Logan & Ferguson). Data-driven justice challenges values of transparency, accountability, and autonomy (Ferguson (a)). And, while these problems matter when it comes to questions of where to send a patrol car, or even whom to investigate, they matter much more when data directly impacts a prosecutor's decision about individual liberty.

Fortunately, prosecutors, more so than police, may have the institutional capacity and power to ensure an equitable and accountable use of predictive technologies. Prosecutors, due to their ethic "to do justice," may be in a better position to ensure that issues of accuracy, transparency, validity, error, and exculpatory information are addressed before widespread adoption (Green). Prosecutors may be able to capitalize on the innovation of predictive analytics and promote stronger accountability mechanisms that could benefit the entire criminal justice system.

The Influence of Predictive Policing on Predictive Prosecution

Predictive prosecution is an outgrowth of the reported success of predictive policing. Predictive policing involves the use of data collection and analysis to predict areas of crime and individuals involved in crime (Pearsall). The generic term "predictive policing" encompasses a variety of different techniques, proprietary products, and tactical uses. Predictive-policing technologies are shaping police strategies in a diverse list of places, including major cities like Los Angeles, New York City, Chicago, Philadelphia, Miami, Seattle, Kansas City, and Memphis, and smaller cities like Reading, Pennsylvania and Alhambra, California (Geography & Public Safety (a); (b); Berg; Vuong). The federal government has funded pilot programs (Beiser), and large and small companies are competing for city contracts (King; Reyes).

A. *A Brief History of Place-Based Predictive Policing*

The algorithmic approach to crime prediction was based on decades of social science research showing that certain property crimes encouraged similar crimes in a predictable manner (Bowers & Johnson). A burglary in one neighborhood might encourage additional burglaries in that same neighborhood (Ratcliffe & Rengert). An auto theft at a particular time in one area might suggest future thefts in the same area (Koehn). The reasons for such a “near repeat phenomenon” or “boost theory” have been debated, but the correlation of additional crime around the same area has been regularly demonstrated (Bernasco; Bowers & Johnson; Johnson; Chainey et al.; Johnson et al.). Building off this insight and adding lessons learned from environmental criminology (Yerxa), hotspot policing (L. Kennedy et al.), and crime mapping (Harries; Paulsen & Robinson; Ferguson (b)), academic researchers developed place-based predictive software to predict certain property crimes (Beiser).

Initial pilot projects in the Los Angeles Police Department (LAPD) eventually developed into a commercial business to sell the predictive software (Rubin). Currently, more than half a dozen predictive policing companies, including large corporations like IBM, Hitachi, and Motorola, are competing for business (Chammah). These first predictive technologies have different names and different theories, but share five commonalities. The technology involves crime data, time, location, an algorithm, and a theory about why a particular area has a heightened likelihood of criminal activity (Chainey et al.; Turkel). Place-based algorithms have been used to target property crimes and violent crimes (Caplan et al.). Many questions still remain about the application, effectiveness, and promise of the technology. But, as LAPD Commissioner Bratton stated in 2016, “Predictive policing used to be the future, and now it is the present” (Black).

B. *The Development of Person-Based Prediction*

Person-based approaches to crime arose independently of predictive policing and were largely based on a public health model of targeting crime (Braga et al. (a); D. Kennedy et al.). For decades, sociologists identified the reality that a small subset of individuals in any community committed the vast majority of crimes (Kennedy (a); Braga; Papachristos et al. (a)). Police recognized that targeting those individuals could result in a disproportionate reduction of crime rates (Davey (b); Guarine). For violent crimes, researchers studied shooting victims and, by tracking their social networks, could identify likely future victims or criminal actors (Papachristos et al. (c)). The theory

behind this approach was that most shootings involve a social network of retaliation between rival groups (such as gangs, neighborhood crews, and drug dealers) who respond in relatively predictable ways (MacDonald (a)). A shooting of a gang member would lead to a retaliatory act. That act, in turn, would continue the cycle of violence. Professor David Kennedy demonstrated that by targeting youth violence through a public health model, police could dramatically curtail shootings (Kennedy (b); D. Kennedy et al.). Andrew Papachristos, Anthony Braga, and David Hureau investigated similar social network intervention strategies between rival gangs (Papachristos et al. (b)). Other scholars have investigated this same social network phenomenon.

The best known person-based predictive policing system involves the Chicago Police Department. The Chicago Police Department developed a data-driven process to identify the most likely offenders of violent crime (Gorner). Entitled the “Heat List,” the concept is to identify young people who might engage in violence or be victims of violence and intervene before the violence occurs. This identification is conducted by police officers (called District Intelligence Officers) who evaluate past criminal activity, whether the target has been identified as part of a gang audit, whether the target has been placed on the “strategic subjects list” (“SSL”) (Chicago P.D. (a)).

Once identified and placed on the “Heat List,” a team of police officers, social workers, and community leaders conduct a “custom notification” which involves a face-to-face meeting and the delivery of a custom notification letter (Gorner). This letter details the individual’s prior contacts with the criminal justice system, as well as potential future consequences for any continued criminal activity (Chicago P.D. (a)). These custom notification meetings usually involve home visits. Essentially, the young person is offered a choice: take advantage of social services to prevent involvement in future violence or face additional law enforcement surveillance—and perhaps punitive consequences. Currently, the Chicago Police Department includes over 1300 names on its Heat List (Davey (a)).

This suspect and social network–focused approach to policing has—under different names and different programs—been adopted in Kansas City, Boston, New Orleans, Los Angeles, and other cities (Braga et al. (b); Goldberg; RT; Palantir Technologies). Juvenile courts have also begun to consider implementing similar identification processes for troubled youth (Rao). The open question, however, is how the algorithm scores the criminal record, connections with associates, and intensity of

criminal history, among other considerations. With few exceptions, the types of identification mechanisms have not been validated through scientific methods.

C. Early “Predictive Prosecution” Models

The efficacy of predictive policing remains both alluring and unproven. Significant research studies have yet to be conducted in any systemic way. Questions remain as crime rates have fluctuated in cities using the technologies (Huet). Yet, despite the unknowns, prosecutor offices have embraced the insight that predictive analytics and information sharing can identify risk factors in a community and improve the prosecutorial function (MacDonald (a)). The same broad tactical shift toward proactive law enforcement has thus begun influencing proactive prosecutorial strategies. As the former head of the Manhattan Criminal Strategies Unit stated, the change is as much one of philosophy as technology (O’Keefe & Chicon). The goal is to focus on crime, not cases. “Intelligence- driven” prosecutions seek to take already existing information in prosecution offices, organize it, manage it, and deploy it to target those most at risk of driving crime in a community

While still in the very early stages, two distinct predictive prosecution models have been developed. Here I describe them as the “Enforcer Model” and the “Investigator Model.” Neither, to be clear, involves pure algorithmic or machine predictions. Just as predictive policing is more of a risk identification tool than a predictive guess, so, too, predictive prosecution seeks to proactively identify risk factors (areas and suspects) in a community and direct attention to those problems. Predictive prosecution involves data-driven, information-sharing innovations, but not pure algorithmic judgments about places or people. As will be discussed, some blending of predictive policing techniques and predictive prosecution techniques may occur in the future, but currently the prosecution side has relied on more human rather than algorithmic predictions.

I. Enforcer Model

The Enforcer Model arises from person-based predictive policing strategies. In this model, prosecutors play a role of enforcing warnings made to those predicted to be involved in criminal activity (especially violence). In some cases, this prosecutorial enforcement might be indirect, but in other cases, the prosecutors might directly and personally provide verbal notice of harsher enforcement penalties.

For example, the Special Order detailing the process of custom notification in Chicago makes explicit reference to prosecutorial involvement. The Custom Notification Letter will be used to inform individuals of the *arrest, prosecution, and sentencing consequences they may face if they choose to or continue to engage in public violence*. The letter will be specific to the identified individual and incorporate those factors known about the individual inclusive of prior arrests, impact of known associates, and *potential sentencing outcomes* for future criminal acts (Chicago P.D. (a)). The procedures and policy behind custom notification, thus, encourage prosecutors to follow through on the charging, bond, and sentencing warnings provided in the custom notification letters.

Prosecutors play a more direct enforcer role in other gang violence reduction strategies (MacDonald (b)). One strategy that has been adopted by law enforcement is called “focused deterrence” (Papachristos & Kirk). Focused deterrence involves a targeted message to a small percentage of the population that prosecutors, police, and community members know who is engaged in violence and that they are committed to stopping it.

For example, Chicago has developed a broad Gang Violence Reduction Strategy that identifies gang members through “gang audits” and the SSL (Chicago P.D. (b)). Identified targets are then invited to “call-in” meetings with prosecutors, police, and community members. For example, if a young man is identified through a gang audit, the SSL, or some other targeting measure, and asked to participate in a community forum, it is not uncommon for a prosecutor to be present. These call-in meetings serve as a “scared straight” warning for individuals placed on the Heat List (Eligon & Williams) The prosecutor symbolically and sometimes literally describes the consequences for failing to heed the warning to stay away from crime.

As described above, prosecutors, as enforcers for predictive policing techniques, remain in a fairly typical prosecutorial role with one exception: the enforcement threats are influenced by predictive data. Clearly, prosecutors have long held community meetings. Prosecutors have long held “scared straight” talks in community forums (M. Fan). Prosecutors have long stood arm in arm with police to send a message that criminality will not be tolerated. The difference here is that the targets of the community forum, and thus the subjects of harsher punishment, were originally identified by predictive policing techniques and other data-driven mechanisms. If those algorithmic or social network correlations are in error, then the subsequent harsher punishment may be unjustified. Evidence is very clear that arrest records are filled with mistakes

(Attorney General; Faturechi & Leonard; Simon; Duggan). Similar problems exist with gang databases and offender registries (Howell; Wright; *Herring v United States*). If those “Heat Lists” are found to be flawed, then not only police surveillance, but prosecutorial judgment becomes distorted.

The Chicago Tribune interviewed a young man, Robert McDaniel, whose name appeared on the Heat List because a friend of his had been shot (Gorner). Mr. McDaniel’s prior record consisted of a single misdemeanor conviction and a few minor arrests (Gorner). But, by being placed on the list, Mr. McDaniel was now associated with the worst of the worst. An enhanced sentence predicated in part on a connection to a Heat List that later turns out to be unwarranted would be a real unfairness to someone like Mr. McDaniel. If the prosecutor does not take on an independent duty to double check the data, then the harm from such a prediction could be significant.

2. Investigator Model

The Investigator Model of predictive prosecution involves a more organic prosecutor-led information-sharing system. Such a system, like the Crime Strategies Units (CSU) being developed in Manhattan, San Francisco, Philadelphia, and Baton Rouge, is data driven and targets identifiable criminal actors (MacDonald (a); Brown). These systems are not based on algorithmic judgments, but on data of actual crime patterns in a city (Brown). Using data, prosecutors identify geographic areas of concern based on reported shootings, thefts, or particular types of crime. Suspects are identified as being engaged in violence or gang activity based on past criminal activity (MacDonald (a)). These individuals are monitored through social media and traditional law enforcement surveillance. The predicted targets are then prosecuted using available prosecutorial leverage to extract enhanced pleas or sentences from those identified (MacDonald (a); Brown).

In general, this type of intelligence-driven prosecution involves five modifications from the traditional police-prosecutor relationship (Brown; MacDonald (a)). First, prosecutors identify geographical areas of concern based on reported crime patterns in a city. The focus is again on crime, not cases, meaning even unsolved crimes also capture the attention of prosecutors. Second, prosecutors identify individuals who are considered the crime drivers in a community and include them in an “arrest alert system.” These individuals become the “primary targets” of prosecution, under the theory that by removing these violent actors, overall violence levels will fall. As will be

discussed, the arrest alert system triggers heightened attention for a prosecutor to incapacitate these predicted bad actors through existing legal mechanisms. Third, less traditional data points enter into the calculation of whom to target. Social media posts, a past lack of cooperation with police, status as a victim of violence, and other less formal bits of information are included in the risk assessments of whom to target. Fourth, the information sharing between police and prosecutors is prioritized and strengthened (McKinley). Intelligence-driven prosecution is not just about being smarter, but developing actionable intelligence about crime patterns in an area. Finally, all of this information about past criminal activities is memorialized in a searchable dataset for future action.

This focus on incapacitating “primary targets” has significant practical effects on traditional prosecution practices. Routinely now, if someone listed in the CSU arrest alert system is arrested, even for a low-level offense, the full power of the prosecutors’ office is directed against them (Brown). First, the targeting system impacts bail decisions, as prosecutors might be instructed to ask for higher bail for those identified in the arrest alert system (MacDonald (a)). Before the arrest occurs, CSU drafts particularized bail applications on predicted individuals advocating for strict bail positions (McKinley). Second, targeted individuals could face enhanced criminal charges in order to maximize prosecutorial leverage (MacDonald (b)). This means that prosecutors would be instructed to seek the maximum charges justified under law (McKinley). These initial charging decisions obviously impact later plea deals and impede plea negotiations as defendants face much harsher potential punishments (Fox). Sentencing decisions can also be ratcheted up as prosecutors seek to ensure the maximum penalty possible (Gorner). Maximum sentences on minor crimes result in extended incarceration. Even after convictions and sentencing, prosecutors have been known to weigh in on parole decisions and requirements of release (Fox).

Before moving on to discuss the future of predictive prosecution, it must be made clear that much of what is being proposed is not fundamentally all that new. Police and prosecutors have long kept detailed dossiers on potential suspects (Logan). As Wayne Logan and I have written about, our current data-driven criminal justice system has roots in 18th century innovations. Data in the form of arrest logs, arrest warrants, offender registries, biometrics, and a host of court and community supervision records has long been available to police. Further, police have recognized the need to identify and target potential “bad apples” since before there were police forces (Logan). This

information has regularly been shared with prosecutors who have built similarly extensive investigative files on potential offenders. Predictive prosecution is merely an innovative way to identify and predict likely targets through the use of better data-sharing technologies.

Nevertheless, the impact of predictive analytics and social network technology on law enforcement and prosecution is real and needs to be examined. Predictive policing has gained a foothold in police administration. Predictive prosecution is only a few years behind. And so, the promise and perils need to be addressed as the technology and methodologies develop.

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