**Predictive Policing**

The field of policing has changed a lot over its history. Crime has evolved and becomes increasingly complex, and thus the police have changed their strategies in combating crime. Policing has gone from just reacting to crime, to crime prevention and prediction. The proactive, smart, and effective policing is preferable to being reactionary to crime. In the past century, many methods have been developed to help the police respond efficiently and effectively to criminal acts. Also, predicting when, where, and who is more likely to commit a crime (Perry et al., 2013). This is called predictive policing. Predictive policing has recently gained much popularity, and many television shows being created about it.

The shows, in this case, being more bizarre than what happens in reality. In the past decade, many police departments have been gradually adopting it and have proved to be more efficient than traditional policing methods. The police departments use a mixture of technology and predictive analysis to find opportunities against criminal activities. By reviewing various journals on predictive policing, this paper will offer a close examination of what predictive policing is, the various techniques and technologies used in predictive policing. In this paper, we are also going to analyze the relationship between agency policy and adoption of technology

**Literature review**

**Predictive Policing**

Reference

Perry, W., McInnis, B., Price, C., Smith, S., & Hollywood, J. (2013). Predictive policing: The role of crime forecasting in law enforcement operations. <https://doi.org/10.7249/rr233>

Abstract

We shall use this book to get insight on what predictive policing is, and the process of predictive policing. The work defines predictive policing as the application of analytical techniques, especially quantitative techniques, to help the police forecast potential targets, therefore, intervene, prevent, or solve crimes. The research concludes that predictive policing is very effective in solving crimes, and it allows the police to make better use of limited resources.

Critique

The research 2013 research by Perry et al., captures the essence of predictive policing. Their conceptualization of predictive policing is broad. It not only focuses on predicting the place in which crime might be committed but also focuses on identifying the perpetrators behind criminal activity by the use of technology and prediction models. Predictive policing involves the use of quantitative techniques to forecast activities of crime (Perry et al., 2013). It also helps the police solve crimes that have already been committed but not solved. The predictions made by the tools can offer guidance in the decision-making process of law enforcement agencies.

Another reason their concept of predictive policing is correct is their reliance on forecasting and not a prediction. Though used interchangeably, the terms prediction and forecasting are different. Forecasting is considered to be objective and scientific (Perry et al., 2013). Therefore, forecasting can be reproduced and is free of individual errors and bias. Forecasting has a clear way of showing how a decision was arrived at. Prediction, on the other hand, is subjective in nature. It is mainly influenced by the individual's intuition making a prediction, making it hard to reproduce, and prone to errors and bias (Perry et al., 2013). Because of its scientific focus, it is possible to conduct an error analysis with forecasts.

On the other hand, it is not possible to do this with predictions. Perry et al. (2013) make a clear distinction between the two terms. However, they continue to note that it is because people in the law enforcement industry refer to these techniques as predictive policing and not forecast policing that they use the term prediction.

**Components of predictive policing**

Reference

Bachner, J. (2013). Predictive policing: preventing crime with data and analytics. IBM Center for the Business of Government.

Abstract

This report describes the critical methodologies of predictive policing as the analysis of space, the analysis of social networks, and the analysis of time and space. The analysis of space is the identification of hot spots for criminal activity. The crime hotspots are identified based on previous crimes' locations and the environmental characteristics that make a particular area risky. The analysis of time ad space involves utilizing temporal crime patterns to forecast time and the resources required. Social media analysis, on the other hand, focuses on the identification of persons of interest.

Critique

The report is very detailed on the methodology in predictive policing. The report identifies three methodologies; the analysis of space, time analysis, and the analysis of the social networks. These methods have been known to identify criminal hotspots, forecast the time when criminal activities are likely to be committed, and the probable perpetrators of criminal activity. Various police departments leading in the field of predictive policing have used the methodologies to identify criminals such as traffickers, people in organized crime, among other big criminals (Bachner, 2013).

Also, the report is detailed in describing the three methodologies and the technology involved at each phase. It helps understand how police departments use predictive policing to identify, mitigate, and solve the crime (Bachner, 2013. It also adds to how the police departments decide the number of resources to allocate to various field activities and investigations.

However, the report is not exhaustive in the methodologies used in predictive policing. The report only focused on hot spots for criminal activities, the time most likely for criminal activities to happen, and the perpetrators' identification. This leaves out the methods used to predict the victims of crime. The methods for identifying victims differ a little from the methods used to identify perpetrators. To identify potential victims, predictive policing uses advanced identification models for crime hotspots. It then proceeds to identify the people who live or frequent the places. The method then uses additional techniques to identify people in these areas who are at risk of criminal activities.

**Community policing**

Reference

Pearsall, B. (2010). Predictive policing: The future of law enforcement. National Institute of Justice Journal, 266(1), 16-19.

Abstract

Predictive policing is not meant in any way to replace traditional policing techniques. The work explains that predictive policing borrows from conventional policing. Berry reports that it predictive policing is not meant to be stand-alone. It depends heavily on community policing to succeed.

Critique

According to Pearsall, community policing is vital for the success of predictive policing. This is true since predictive policing is mainly about the analysis of data. This data is collected from various sources, such as social media, police data, and feedback from people living in crime hotspots such as reports of criminal activities. The community needs to trust the police that they will use the data they provide in the right way. According to Pearsall, police departments must assure communities that predictive policing does not infringe on their civil rights and liberties. The report recommended that it is important that the departments involve communities in the setting up of privacy policies. Police departments also need to thoroughly train their personnel on how to use predictive policing properly while continuously enforcing accountability.

Pearsall was right to insist on the vital importance of community policing in predictive policing. Incorporating community policing in predictive policing removes possible friction between the police department and the community. As we have seen, predictive policing relies heavily on data. If the data collected is wrong, there is the risk that the forecast given by the methodologies in predictive policing will have errors. Thorough training of personnel on the role of community policing in predictive policing is also important to maintaining law and order (Pearsall, 2010). Incorporation of community policing is important to ensure that people's rights and liberties are not being infringed. Also, it will deal with issues such as the unjust profiling of people, such as the racial profiling of young black men by the police.

**Technological innovations in predictive policing**

Reference

Byrne, J., & Marx, G. (2011). Technological innovations in crime prevention and policing. A review of the research on implementation and impact. Journal of Police Studies, 20(3), 17-40.

Abstract.

In the rent past, technological innovations have led in the frontier of strategies in the prevention of crime and the control of crime. The paper categorizes technological innovations into two major categories: hard technologies, material-based technologies, and soft technologies, which are information-based.

Critique

Technological innovations have been many. They have changed the way law enforcement agencies are organized. The innovations have also changed how the agencies operate (Byrne & Marx, 2011). For instance, the introduction of telephones introduced massive changes in the police department. People would now call the police. As a result, the police were now faced with a new challenge of having many cases than they would. It also led to the restructuring of the police department to adjust to this new technology.

Today, the number of technological inventions have sky-rocketed. Law enforcement agencies have not been left behind. Some governments have been funding these innovations. According to the paper, the U.S Office of Community Oriented Policing Services Program gave grants towards the acquisition and implementation of technologies in support of predictive policing (Byrne & Marx, 2011). Though the specific technologies vary from one agency to another, technologies common are CCTVs, mobile data centers, automated field reporting systems, computer-aided dispatch systems, record management systems, and automated fingerprint identification systems.

Hard technologies are used to prevent crime and collect data, which is then analyzed by soft technology to forecast criminal activities. Some of these hard technologies include CCTV cameras. CCTV cameras are used both for the prevention of crime and for providing data for analysis. For many criminal activities, if offenders realize CCTVS installed, they do not commit the crime. If a crime is committed and captured by CCTV, the data is analyzed for facial recognition and other details.

The information-based technologies involve the use of information strategically to predict, prevent crime, and improve the police department's performance-for instance, the use of threat and risk assessment instruments, to predictive policing technology such as mapping systems and crime analysis systems (Byrne & Marx, 2011). The paper conducted proper research on technological innovations in predictive technology.

**Policy strategies and technology adoption**

Reference

Strom, K. (2017). Research on the impact of technology on policing strategy in the 21st century, final report. Report, Department of Justice, September.

Abstract

This paper emphasizes the interdependence of technology and policing. According to the article, police departments use big data, mobile and wireless technology, advanced analytics, and other technologies to improve their efficiency, better use of resources, and improve outcomes. Strom also says that the increased public attention on law enforcement agencies, their tactics, and outcomes has also contributed to the agencies' adoption of technology. The paper attempts to find out how and why police departments choose to implement the technology.

Critique

According to the paper's findings, the adoption of technologies that will assist in policing is expected to increase. The technologies which are expected to grow most rapidly is the adoption of predictive analytics software. According to the study, 15% of all law enforcement agencies had the plan to acquire predictive analytics software very soon (Strom, 2017). This is true since there is a continued focus on the tactics employed by the agencies in investigations and solving criminal activities.

The paper also found a relationship between the number of technologies and agency chooses to use, and their policing strategies-agencies that are aligned closely with intelligent policing and community policing used more technology. On the other hand, agencies aligned to problem-oriented policing and professional policing used less technology (Strom, 2017). The findings are correct since policing strategies influence the adoption of technology. The policing strategy determines the focus of an agency. Agencies that focus on professional, and problem-oriented policing are likely to use classical methods in policing. Most of these agencies are small and do not face much public criticism.

In contrast, large agencies have a high tendency to use predictive analytic technology (Strom, 2017). Their resources are ordinarily scarce when compared to their large areas of jurisdiction. Therefore, to be more successful, they have to use forecasting rather being reactionary when it comes to crime. Also, large agencies get deeper scrutiny when it comes to their activities and the results of these activities.

**Overview statement.**

Law and order must be maintained for a society to be prosperous. The proactive, smart, and effective policing is preferable to being reactionary to crime. In the past century, many methods have been developed to help the police respond efficiently and effectively to criminal acts. Also, predicting when, where, and who is more likely to commit a crime (Perry et al., 2013). This is called predictive policing. Predictive policing has recently gained much popularity. More police departments have been gradually adopting it and have proved to be more efficient than the traditional policing methods. The police departments use a mixture of hard (material) technology and predictive analysis to find opportunities against criminal activities (Byrne & Marx, 2011). Predictive policing involves the use of quantitative techniques to forecast activities of crime. It also helps the police solve crimes that have already been committed but not solved.

It is important to note that because people in law enforcement refer to these techniques as predictive policing and not forecast policing, predictive policing is not called forecast policing (Perry et al., 2013). Predictive policing involves forecasting and not a prediction. Forecasting is considered to be objective and scientific (Perry et al., 2013). Forecasting can be reproduced and free of individual errors and bias; thus, it has a clear way of showing how a decision was arrived at. Prediction, on the other hand, is subjective (Perry et al., 2013). According to Perry (2013), it is mainly influenced by the intuition of the individual making a prediction, making it hard to reproduce, and prone to errors and bias.

Predictive policing has four methodologies. According to Bachner (2013), the methodologies combined will help identify the hotspots of crime, the probable times that crime will be committed, the offenders, and the likely victims of criminal activity.

The methodologies, however, are not sufficient to ensure efficient predictive policing. As we have seen, predictive policing majorly relies on the data collected. If the data has errors and biases, the forecast results will have errors, which will make the methodology ineffective and counter-productive in the use of resources. Therefore, predictive policing needs to be mixed with community policing for it to be effective (Pearsall, 2010). Incorporating community policing in predictive policing removes possible friction between the police department and the community.

Technological innovations have shaped the structure of law enforcement agencies. The innovations, both material and information-based, have been very useful in predictive policing. Some of the hard innovations include installing CCTVs whose data have been critical in predictive policing. According to Byrne & Marx (2011), soft technologies or information-based technologies involve the use of information strategically to predict, prevent crime and improve the police department's performance.

According to the findings of the paper, technologies that are expected to increase rapidly are the adoption of predictive analytics software. According to the study, 15% of all law enforcement agencies had the plan to acquire predictive analytics software very soon (Strom, 2017). There is a relationship between the technology used by an agency, the agency's size, and its policing strategies-agencies that are aligned closely with intelligent policing and community policing used more technology (Strom, 2017). On the other hand, agencies aligned to problem-oriented policing and professional policing used less technology.

Finally, from the review, it is evident that predictive policing's use increased the efficiency and effectiveness of law enforcement agencies. It enables them to predict crime hotspots, the time a crime will be committed, the probable perpetrators, and the possible victims.