The Diffusion of Computerized Crime Mapping in Policing: Linking Research and Practice

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Background

While computerized crime mapping has emerged as an important focus of innovation in policing in recent years, there has been little scholarly review of the development of computerized crime mapping as an innovation and the factors that have influenced its adoption in American police agencies. In this paper we examine the diffusion of computerized crime mapping drawing upon a more general approach to the 'diffusion of innovations' pioneered by Everett Rogers (1995).[1] This approach, which has just begun to be applied to innovations of policing, focuses on the process of adoption of new technologies or practices, and factors that have influenced the characteristics of innovations, and the timing and success of their adoption in social systems.

Data and Method

We preliminarily use data from the Law Enforcement Management and Administrative Statistics (LEMAS) survey in 1997 and 1999, and the Crime Mapping Research Center (CMRC) at the National Institute of Justice collected between March 1997 and May 1998 to anticipate the basic pattern of adoption of computerized crime mapping in larger American police agencies. Both of the surveys included the universe of US police agencies with 100 or more police officers. CMRC is more informative as it contains longitudinal information about how long they had been using computerized crime mapping. We generate an adoption curve of the cumulative number of departments that had adopted crime mapping over time based on the CMRC survey data.

We then conducted a small pilot study by randomly selecting 125 police agencies from the LEMAS 1999 survey and surveying those agencies about their use of computerized crime mapping. We collected information about what year they had adopted computerized crime mapping, the reason they initiated such mechanism, and their cosmopolitanism, such as their connections with colleagues and with researchers and their awareness of and involvement with academic activities, based on which we analyze the factors influencing the innovation.

Findings

Findings suggest that larger police agencies have adopted computerized crime mapping in large numbers in the 1990s and that the practice has spread widely and quickly. Such wide spread adoption of crime mapping was preceded by a period of crisis of confidence in standard American policing practices. We also find evidence that research evidence regarding the effectiveness of hot spots policing approaches is linked to hot spots approaches in police agencies with computerized crime mapping capacities. Moreover, we show that departments that were relatively earlier adopters of crime mapping are also more cosmopolitan in their orientation, to have more contact with the research community, and are more likely to be aware of research findings in this area. This supports the position that both basic and applied research about crime places and hot spots played an important part in the process of diffusion of computerized crime mapping.

Implications

Our data suggests that crime mapping adoption in larger departments has likely not yet reached its highest or saturation level of diffusion. Future innovations in crime mapping and indeed in policing more generally are likely to be much more incremental, at least as regards police efforts to prevent and control crime. There is little pressure for radical innovation in a time of optimistic research evidence and declining crime trend. Our data suggests that the diffusion process can be harnessed more effectively by targeting those departments which are likely to be earlier adopters, given scarce resource for disseminating research and creating cooperation between researchers and practitioners. These are not only those who are more open to research and innovation, they are also those department most likely to play leadership roles in the diffusion process.

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[1] Rogers, E. M. (1995). *Diffusion of innovations.* New York: Free Press.