Chapter 3.28
From CCTV to Biometrics through Mobile Surveillance

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INTRODUCTION

Surveillance is the act or process of observing, tracking, or recording personal details for the purpose of exercising control over the individual or population being watched. Control in this context can mean many things, from directly influencing the behavior of the observed to the use of gathered information for the purpose of management or governance.

Mobile surveillance can be defined as two distinct, yet related, practices. The first is the ability to observe the physical movement of an individual through space. This is most often accomplished through documenting their interaction with a surveillance network. The object of surveillance is tracked from one node of the network to another, providing a record of behavior. The second practice is often referred to as dataveillance, or the ability to monitor an individual's behavior through studying a trail of personally identifiable data, including credit card purchases, mobile phone calls, and health records.

Mobile surveillance employs an array of technologies including video and photography cameras, visual recognition software, radio frequency identification (RFID), global positioning receivers (GPS), information and communication technologies (ICTs), and biometrics. Examples of mobile surveillance networks include the dense deployment of closed-circuit television (CCTV), video, and photographic technologies in a distinct geographic space to monitor activity, the tracking of automobiles and mobile phones via GPS, and radio frequency sensing that records motion as identity chips pass through a distributed network of receivers. As these networks proliferate, individuals are the exposed to overlapping layers of surveillance. Although many of these surveillance networks are deployed for limited purposes, the increasing ability to save and store personally identifiable information in searchable databases, and the ability to mine information from multiple sources raises privacy concerns for the individual. This is especially true in advanced capitalist societies that rely on sophisticated data gathering

to track, model, and predict consumer behavior, as well as for citizen management.

BACKGROUND: SURVEILLANCE, BUREAUCRACY, AND THE STATE

Surveillance has been an integral part of human social interaction since the need for oversight and management of collective endeavors was first realized. As the scope and complexity of these endeavors grew, the need for more reliable information increased accordingly. Surveillance has long been an important method for dealing with risk (Lyon, 1994, 2002, 2003a, 2003b), as the advanced knowledge of aberrant behavior can help minimize the threat or upheaval caused by the unusual events or actions. Therefore, surveillance is often a positive feature of governance, allowing those in power to manage against risk in order to protect public welfare. Nevertheless, surveillance regimes are also employed by the state out of a "desire to more completely manage populations (Lyon, 2003b, p. 20)," identifying and sorting out individuals who's behavior is deemed threatening to the majority. It is of little surprise that the fields of law enforcement and national security and intelligence gathering are the sites of some of the most sophisticated surveillance practices as well as the targets of social concern over privacy and the power of the state.

In Discipline and Punish, Foucault (1977) examines the rise of the surveillance society by utilizing Jeremy Bentham's Panopticon prison as a model for the exercise of power in modern society. The architecture of the Panopticon exerts power over the incarcerated body by making it constantly visible to an invisible central observer. The prospect of persistent observation is used to ensure compliance with the disciplinary rules of the institution, therefore making the simple awareness of surveillance a means of exerting power over the watched individual.

Foucault (1977) notes the historic extension of surveillance architecture from the prison to other social institutions such as schools, hospitals, mental institutions, and the workplace, which increasingly relied on the specter of persistent observation in order to exert control over their subjects. In addition to the direct surveillance enabled by panoptic architecture, the rise of bureaucratic organizations, especially in the West, lead to an institutionalization of mechanisms for the capture, retention, and processing of personally identifiable data.

The direct and indirect surveillance employed by public libraries in Victorian Britain (Black, 2001) serves as a historical example of this phenomenon. Libraries have been at the forefront of efforts to manage, catalogue, and retrieve information since the sorting, and storing of information is central to their mission. To this end, libraries have employed increasingly sophisticated surveillance mechanisms to track, record, and monitor the habits of their users and their interaction with the library's collections. While the hierarchical systems of knowledge and the tracking of library users' habits employed in Victorian libraries did not necessarily originate as a means of coercive control but often as an effort to provide enhanced service, their existence often placed the librarian in a position of social power over those observed (Black, 2001, p. 74).

Surveillance is a central feature of the rational bureaucratic organization in modern society, and the explosion of surveillance is intertwined with the historical development and growth of bureaucratic organizations (Beniger, 1986; Dandeker, 1990; Foucault, 1977; Giddens, 1987; Lyon, 1994; Weber, 1968). Dandeker describes the symbiotic relationship between capitalist organizations and the modern state, declaring that their activities are focused on both the internal exigencies of managing a system of administrative control over subject populations and the problems attendant upon monitoring and managing external relations with other organizations. This theme has been central

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