



## Chapter VII

# The Sociotechnical Nature of Mobile Computing Work: Evidence from a Study of Policing in the United States

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### Abstract

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*In this chapter, we discuss the sociotechnical nature of mobile computing as used by three policing agencies within the United States. Mobile devices, access, and service were provided via a third generation wireless network to a focal application, Pennsylvania's Justice **NET**work (JNET). JNET is a secure Web-based portal connecting authorized users to a set of 23 federated criminal justice and law enforcement databases via a query-based interface. In this study, we conceptualize mobility and policing as a sociotechnical ensemble that builds on the social-shaping of technology perspective and the tradition of sociotechnical theorizing focusing on the co-design of work practices and technologies to support work. Drawing*

*from the social informatics tradition, we turn a critical, empirical, and contextual lens on the practices of mobility and work. Our analysis of the data leads us to find that the social and the technical are still separate in this mobile work context. This simple view of social and technical as related, but distinct, often leads to problems with collecting and interpreting evidence of ICT-based system's design and use. We further note this over-simplification of sociotechnical action is likely to continue unless more viable analytic approaches are developed and the assumptions of the current techno-determinist approaches challenged more explicitly.*

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## Introduction

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One of the many alluring possibilities of mobile computing is that people will be able to access computing resources while on the move. In organizational contexts, mobile computing (or mobility as we refer to it here) engenders scenarios of increased productivity through instant access to computing resources at any time from anywhere. Here, we explore the sociotechnical nature of this envisioned future for mobility. In the social informatics tradition, we turn a critical, empirical, and contextual lens on the practices of mobility (Kling, 1999, 2000; Kling, Rosenbaum, & Sawyer, 2005; Sawyer & Eschenfelder, 2002).

We first explain why policing is an appropriate domain in which to explore mobility and work. We then conceptualize mobility as a sociotechnical ensemble. In subsequent sections, we lay out the research, outline our data collection and analysis, then present and discuss seven findings. We conclude by focusing on implications regarding sociotechnical analysis.

### Why Focus on Policing?

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There are at least three reasons why policing is an appropriate domain for studying mobility. First, police officer's work has always been highly mobile. It is also knowledge-intensive and pervasive (for more on this, see Manning, 2003). Second, there continues to be great interest in using ICT to better support police officer's information needs. For example, Manning (1996), in his study of cellular phone take-up among police, reported on the long-standing disparity between police officer's information needs and the abilities of the ICT used to provide them that information.<sup>1</sup> Third, policing and criminal justice have long been a focus of academic study and that provides us with extensive literatures on police work, the social norms, informal and formal organizational governance mechanisms, and an understanding of their technological basis (see Klockars & Mastroski, 1991; Manning, 1977, 2003).<sup>2</sup>

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