

Chapter 8

Surveillance Technologies in Public Service Implications for Street– Level Bureaucrats

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ABSTRACT

This chapter discusses the utilization of surveillance technologies by street-level bureaucrats. It examines the emergence of AI-powered surveillance technologies that have significantly enhanced surveillance practices across public services, such as policing, urban management, border control, and public health surveillance. This chapter addresses these technologies' opportunities and risks, including power imbalances, privacy concerns, and ethical considerations, including algorithmic bias and misclassification problems. Analyzing selected public service use cases, it assesses how these surveillance tools have reshaped the roles of street-level bureaucrats. Furthermore, this study outlines the transition of street-level bureaucrats from screen-level bureaucrats to street-level algorithms, with a particular focus on the phenomenon of 'street-level surveillance.' The findings presented in this chapter aim to contribute insights for policymakers and street-level bureaucrats, aiming to encourage the responsible use of AI-powered surveillance in public services and open public spaces.

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INTRODUCTION

In recent years, there has been a growing academic and policy interest in the digitalism of public administration. Contemporary technologies, especially artificial intelligence (AI), have begun driving innovation in the public sector and policy-making (Wirtz & Weyerer, 2019). In a new phase of *Digital Era Governance* (DEG), (see Dunleavy, 2005; Dunleavy et al., 2006; Dunleavy & Margetts, 2010) this new technology-enabled transformative shift in public administration continues to manifest itself in various applications. One of the emerging applications of AI in the public sector is biometrics, which refers to the use of biological or behavioral characteristics to identify (1:N) or verify (1:1) individuals (Sundararajan & Woodard, 2019). Biometric technologies, such as facial recognition, fingerprint scanning, and iris recognition, have been greatly improved by AI algorithms, specifically deep learning (Alay & Al-Baity, 2020; Kuehlkamp et al., 2022; Minaee et al., 2023). In recent years, there has been growing interest in ‘surveillance technologies’ utilization in various public services, from policing (Keenan, 2021), urban management & smart city applications (Clavell, 2018), border management (Noori, 2022), and public health surveillance (Kitchin, 2020).

The rise of contemporary technologies has brought with it opportunities as well as risks regarding power imbalance, privacy infringement, and misuse consideration (Uzun et al., 2022). Surveillance technologies are undoubtedly one of the most controversial but pervasive among emerging technologies (Gates, 2011). In today’s ‘surveillance society,’ instead of the traditional panoptic model of “*one looking at many*,” we now live in a world where “*many are looking at many*.” The rise of computerization and the widespread use of information and communication technologies (ICT), along with ‘datafication’ and ‘dataveillance,’ has revealed the limitations of traditional surveillance while also expanding or even eliminating these limitations. Indeed, concepts such as the *surveillance society* and *surveillance capitalism* have long constituted a central topic of discourse within the social sciences (Lyon, 2001; Wood & Ball, 2006; Zuboff, 2015, 2019).

In the 21st century, public service sectors such as governance, healthcare, and law enforcement are increasingly adopting highly integrated surveillance technologies that come with the ‘*normalization of surveillance*’ and ‘*biometric state*’ consideration. Key examples of these surveillance technologies include contact tracking apps, AI-powered facial recognition cameras, digital health records, mobile health applications, and wearable health devices. Additionally, the advancement of biometric technology has further complicated the relationship between surveillance, digital competencies, and emerging technologies. As we move into the era of AI-powered surveillance, the concept and terminology related to surveillance have also evolved. Digital technologies now allow for unprecedented monitoring and control.

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