

# Technology in policing, policing in a technological society. Special Issue brief

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## Abstract

Watson and Huey, in a 2020 article in this Journal, point out that there is still little empirical research offering a practice-focused perspective. This Special Issue responds to that call by offering a variety of empirically and theoretically informed studies centred on technology use in the policing of crime, borders and society more widely (e.g. surveillance). Contributions are inspired by Adam Crawford's insightful notion of policing 'as a product of new technologies' and Andrew Barry's reflective analysis of technical practices and devices as integral elements of organising and governing a 'technological society'. These inspirations reflect the interplay of policing requirements and practices, and the development, deployment and governance of technologies. A vital element of understanding and managing policing is the study of how technologies are imagined, adopted and overseen, to contribute to the understanding and anticipation of changing policing practices and needs. Two key elements are addressed in this Special Issue: (a) technological knowledge production, and the shaping of such knowledge in policing practices and institutional cultures, informing discourses on intelligence-led policing and evidence-based policing; and (b) the role of technology in creating legitimacy for policing. Eight contributions provide analyses of 'technology in policing as it happens' in practice-relevant case studies and reflections on developments. They address a broad spread of technologies, including drones, artificial intelligence firearms, forensic applications and social media. In attending to these examples, the authors shed light on vital aspects of policing that have so far been underexplored, using a mix of approaches from the social studies of science and technology, and from sociology/criminology. To ensure accessibility to a variety of reader groups, each article includes a section highlighting lessons learnt for understanding the policing in a technological society. This Special Issue is the first in the *International Journal of Police Science & Management* to bring a comprehensive discussion of technology to the Journal's audience. At the same time, it opens up the Journal's interests in policing to wider audiences, including those in science, technology and innovation studies, as well as criminology, by innovatively merging the interests of the three in the subject of its contributions. Contributing authors analyse and evaluate the opportunities and challenges of technology in policing with those for policing in a technological society. In doing so, the complexity of the relationship of technology and policing is made accessible, evidencing that, as Timmermans and Berg wrote, technology is always 'technology-in-practice'. Context is vital, technology is not necessarily used as intended, and its application cannot be considered neutral but must be understood as in interplay with diverse other knowledge practices (investigatory, prosecutorial, judicial, institutional, societal, etc.). This Special Issue is a starting point and call to continue work on supporting deliberation, widening the scope of perspectives to be involved, and seeking communication and collaboration across institutional and disciplinary boundaries: tearing down forts (silos) and building fords (crossings).

## Keywords

technology, policing, democratic policing, legitimacy, practice

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## Introduction

In a recent contribution to this Journal, Watson and Huey (2020) point to the added complexities that adoption of technology into policing practices can bring. This adoption issue

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is symptomatic of the prominent role of technology in police work. It also calls attention to the centrality of the – systemic, social, institutional, situational – context when it comes to evaluating the usefulness and legitimacy of technologies. Watson and Huey point out that there is still little empirical research offering a practice-focused perspective. This Special Issue responds to that call by offering a variety of empirically and theoretically informed studies centred on technology use in the policing of crime, borders and society more widely (e.g. surveillance). Contributions are inspired by Adam Crawford's insightful notion of policing 'as a product of new technologies' (Crawford, 2011: 148) and Andrew Barry's (2001) reflective analysis of technical practices and devices as integral elements of organising and governing a 'technological society'. These inspirations reflect on the interplay of policing requirements and practices, and the development, deployment and governance of technologies. A vital element of understanding and managing policing is the study of how technologies are imagined, adopted and overseen, to contribute to the understanding and anticipation of changing policing practices and needs. Two key elements are addressed in this Special Issue: (a) technological knowledge production, and the shaping of such knowledge in policing practices and institutional cultures, informing discourses on intelligence-led policing and evidence-based policing; and (b) the role of technology in creating legitimacy for policing.

## Contributions

This Special Issue offers eight accounts of 'technology in policing as it happens' in practice-relevant case studies and reflections on developments. The contributions address a broad spread of technologies, including drones, artificial intelligence (AI) firearms, forensic applications and social media. In attending to these examples, authors shed light on vital aspects of policing that have so far been underexplored, using a mix of approaches from the social studies of science and technology, and from sociology/criminology. To ensure accessibility to a variety of reader groups, each article includes a section highlighting lessons learnt for understanding the policing in a technological society.

Two articles engage with social media as communication technology, and the role these can have for negotiating legitimacy of policing. David Czudnochowski and Franziska Ludewig investigate the impact of social media on the external image of German police authorities. In doing so, they analyse the communication and legitimacy concepts of police forces in the use of social media. Liam Ralph and Paul Robinson review existing literature on the police use of social media in connection to a democratic model of policing. They argue that democratic policing online is currently hampered by aspects of the nature of

social media, police organisations' approaches to social media, and the limited levels of police and citizens' readiness to engage with each other online.

Four articles look at the role of forensic genetics in policing, scrutinising different intelligence and evidence-generating technologies in comparison with other elements of knowledge production and legitimacy building. Rafaela Granja reflects on the role of the citizen in forensic genetic genealogy (FGG), a field that, she argues, has emerged out of an amateur hobby to become a generative space for a new type of forensic work. At the same time, FGG is highly dependent upon citizens' willingness to make their DNA available for law enforcement searches, rendering the adoption of this technology into policing a precarious issue of both knowledge and legitimacy. Margaux Coquet and Nuria Terrado Ortuno interrogate forensic DNA phenotyping and biogeographic ancestry testing, two genetics intelligence tools, from a legal perspective, arguing that these can perpetuate stigmatisation in the modern penal system. They support their argument with a consideration of weaknesses in existing governance systems for technologies in policing. Roos Hopman and Ryanne Bleumink unpack and link together two face-making technologies: the established composite drawing and the emerging forensic DNA phenotyping. They analyse the views of forensic agents and investigative logics, showing that each technology is (and remains) innovative in its own ways. Paying attention to taken-for-granted, mundane practices, they suggest, can help approach emerging ones. Matthias Wienroth and Nina Amelung scrutinise forensic DNA phenotyping and the fingerprinting database EURODAC in two exemplary German serious crime investigations. They argue that different meanings, materials and competences of biometric data technologies circulate between the policing of crime and the policing of migration with the aim of generating legitimacy for technology uses in both. In doing so, these circulations contribute to entrenching worrying notions of the 'crimmigrant'.

And finally, two articles focus on widget-type technologies as they emerge and are imagined for policing. Jenny Maria Lundgard analyses her observations of drone testing in the Norwegian police with particular focus on how drone use can impact on the regulatory framework for policing, the functions of the police officer and police operations. As such, the article offers some key lessons for the potential adoption of drones into operational policing. Focusing on a lower point of technology readiness, Mehzeb Chowdhury imagines the development of AI firearms in the context of officer-involved shootings. By examining existing policing technologies, he provides an overview of advanced computational and sensor systems, the risks and dangers of these mechanisms, as

well as their potential benefits and drawbacks to estimate whether AI can power a transformation to a smarter, more efficient firearm.

## Reflections

This Special Issue is the first in the *International Journal of Police Science & Management* to bring a comprehensive discussion of technology to the Journal's audience. At the same time, it opens up the Journal's interests in policing to wider audiences, including those in science, technology and innovation studies, as well as criminology, by innovatively merging the interests of the three in the subject of its contributions. Contributing authors analyse and evaluate the opportunities and challenges of technology in policing with those for policing in a technological society. In doing so, the complexity of the relationship of technology and policing is made accessible, evidencing that technology is always 'technology-in-practice' (cf. Timmermans and Berg, 2003). Context is vital, technology is not necessarily used as intended, and its application cannot be considered neutral but must be understood as in interplay with diverse other knowledge practices (investigatory, prosecutorial, judicial, institutional, societal, etc.). The analyses in this Special Issue confirm that, as Ulucanlar and colleagues have shown for the healthcare sector, technology 'adoption processes are strongly socially mediated by technology identities' (Ulucanlar et al., 2013: 103). Such identities emerge in the expectations and experiences of stakeholders, informed and bounded by systemic and institutional forces (policies, practices, cultures, etc.). It is insufficient to consider scientific and technical capabilities alone for policing (or any technology-applying domain). It is vital to understand the social practices of learning, using, overseeing that influence the role and impact of technologies in policing, for police stakeholders as much as for other professional groups in security and criminal justice contexts and for citizens.

Beyond further evolving those elements of the debate, the Special Issue's authors provide empirical and conceptual foundations for developing coherent, principled and practice-relevant deliberation about the reliability, utility and legitimacy of technologies (Wienroth 2020) in the context of democratic policing. This Special Issue invites

readers to continue work on supporting deliberation, widening the scope of perspectives to be involved, and seeking communication and collaboration across institutional and disciplinary boundaries: tearing down forts (silos) and building fords (crossings).


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