

Leanne Weber
University of Canberra, Australia

*Crime and punishment in the future internet: Digital frontier technologies and criminology in the twenty-first century* signifies a new departure for Sanja Milivojevic and defines a bold new agenda for criminology. Many readers will be more familiar with the author's contributions to border criminology. Her passion for technology took a backseat in earlier work. But her recent writing, including her previous book (Milivojevic 2019), has linked the fields of technology and border control in innovative ways. *Crime and punishment in the future internet* signals a broader commitment to criminological research on technology that befits the author's recent appointment at the Bristol Digital Futures Institute.

As a border criminologist myself—and someone not known for my expertise or interest in technology—I may be an unlikely choice to review this book. In fact, it was not the words ‘digital’, ‘technology’ or ‘internet’ from the title that aroused my interest but the words ‘frontier’ and ‘future’. Social scientists seldom dare to stray from the security of their empirical data about how the world *is*—or at least appears to be—into the realms of informed speculation about what *might* be at some future point. Having edited a collection myself that invited authors to engage in a thought experiment about the future of border control (Weber 2015), I know that combining empirical grounding with philosophical imagination calls for a fine balance of intellectual bravery and rigour. These attributes are readily apparent in the pages of Milivojevic’s new book.

The opening lines of *Crime and punishment in the future internet* had me enthralled from the outset as I was challenged to contemplate a crime and criminal justice environment of automated interventions, hyperconnectivity and seamless data exchange, in which the prevention and response to crime from policing through to trial and sentencing has been transformed radically. The opening scenario hints at hyper-efficiency in crime investigation and the enticing possibility of moving beyond soon-to-be obsolete
penal institutions such as prisons. But it also invokes a spectre of ubiquitous surveillance and loss of human decision-making and control over increasingly independent and intelligent systems.

*Crime and punishment in the future internet* repeatedly revisits this central tension, eschewing what Milivojevic sees as the false binary between techno-utopia and nightmarish dystopia; instead, the work considers both the hope and risks inherent in our march towards a technological age. Humans are never lost in this narrative but are, in fact, central to it, and a key aim of the book is to help us ‘rethink our role in the techno-social world of offending and victimisation’ (p. 11).

Milivojevic embraces post-humanism as a theoretical framework, thereby placing humans, non-humans and, crucially, the interconnections between them into a position of symmetry and co-agency. The author identifies actor–network theory as one theoretical approach that acknowledges the agency (although not intentionality) of non-humans and integrates both human and non-human ‘actants’ within techno-social assemblages. Milivojevic translates these questions of human and non-human agency into issues of relative power, so that her discussion never loses its critical social science perspective.

The book’s structure is driven by selected digital frontier technologies (DFTs), with chapters about big data and surveillance, artificial intelligence and machine learning, the internet of things, autonomous robots and blockchain providing non-expert readers with a digestible introduction to each technology, while always retaining a human-centred concern about their impacts on people and their behaviour. The question posed throughout is whether the embedding of technology ‘is going to disturb the equilibrium between humans and DFTs to the point that our agency diminishes, while the technology’s impact on our lives, health, and importantly, offending, victimisation and punishment, continues to grow’ (p. 24).

Milivojevic draws on a formidable array of literatures spanning the technical, social, philosophical and ethical dimensions of the topic. Rather than relying purely on the novelty of her subject matter to carry the reader’s interest, she applies a clearly articulated method. The ‘foresight approach’, adapted from science and technology studies, uses ‘path dependency’ to develop empirically grounded, forward-looking scenarios that are ‘plausible’ without purporting to be accurate predictions of the future. The objective, we are reminded throughout, is not to predict but to prepare as best we can for possible futures. Although Milivojevic identifies many positive applications of big data technologies, such as use of facial recognition to identify victims of sex trafficking, a pervasive concern is that over-reliance on automated processes will further reduce the already limited space within criminal justice for the protection of human rights: ‘Once humans are removed from this [algorithmic] process, which is a possibility, protections of human rights and civil liberties will entirely be dependent on smart things’ (p. 31).

Moreover, this level of autonomy raises questions about how intelligent non-human systems might themselves be held accountable for harms they inflict or may, in turn, be in need of rights protection. Lack of space prevents a detailed discussion of the substantive chapters, all of which are packed with fascinating insights and examples. But the chapter on blockchain, which I approached with immense trepidation, warrants a brief mention. It came as something of a revelation that blockchain technology might be the key to achieving accountability in relation to many of the other technologies discussed in the book. While acknowledging that things could well turn out otherwise, Milivojevic argues that the need for human input, or ‘verifications’, at multiple points within the decentralised consensus-based networks that constitute blockchain systems could provide a mechanism to ‘reintegrate the human element in thing-human assemblages’ (p. 113). Whether that capacity is used for good or ill remains a crucial question, and the risks of erroneous or harmful data becoming ‘immutable’ within these systems presents a frightening spectre. Still, Milivojevic sees blockchain as a possible engine-driver for major social transformation, including institutional change that could render calls to abolish national borders or defund the police a reality:

> It is conceivable, however, to imagine future societies with no central authority (law enforcement or border control agency) in crime prevention and control. The network of
distributed ledgers of information about objects and transactions associated with such objects could get us there without the overseeing, central authority. In the distributed, decentralised network, participants would verify transactions and events as they happen. (p. 113)

*Crime and punishment in the future internet* will appeal to a much wider audience than the ‘usual suspects’ of techno-savvy criminologists and social scientists. Its greatest contribution is in opening up this new frontier in an accessible way to those of us less inclined to follow these crucial developments. This is important because, as Milivojevic reminds us, ‘to prepare and make the right decisions, we need to look forward’ (p. 2).

Inevitably in a book of this scope, there are areas that some readers—particularly specialists in some of the featured topics—will feel are underdeveloped. Anticipating these responses, Milivojevic describes the book as a *provocation*—a starting point for ongoing dialogue between engineers, mathematicians, lawyers, ethicists, security experts, scientists and the technology-using public to explore the nexus between DFTs, crime and criminal justice—and she provides an online platform designed for this purpose ([www.crimetechbook.com](http://www.crimetechbook.com)). *Crime and punishment in the future internet* could prove to be a landmark text within criminology—moving beyond more familiar areas of study such as cybercrime and predictive policing to engage with broader questions about the future of crime and crime control in societies radically transformed by human–non-human assemblages. Indulging in a little future thinking myself, I predict that Sanja Milivojevic is destined to be a key actant in leading this research agenda.

**Correspondence:** Professor Leanne Weber, Canberra Law School, University of Canberra, Australia. Leanne.Weber@canberra.edu.au

**References**
