Book Review

Tkacz, Nathaniel (2022) *Being with data: The dashboarding of everyday life*, **Polity Press.**

Nathaniel Tkacz's *"Being with data: The dashboarding of everyday life"* explores how people encounter and experience data. The book does so by zooming in on one particular format of data that has invaded our everyday life: the dashboard. Issues related to the datafication and dashboarding of everyday life have been highlighted over the last decade, which emphasizes the timeliness and importance of this book. Especially for the public sector (because of open government trends), where many administrations increasingly make government data available to citizens via dashboards.

The book is organized through three main parts in addition to the introduction and coda. The first chapter entails a historical archeology of dashboards, beginning from the horse and carriage, and ending with the business intelligence and analytics industry. The two subsequent parts represent more contemporary in-depth case studies of humans interacting with dashboards. Chapter two explores dashboards in a UK hospital and how these shape cognition and act as cognitive actors. Chapter three takes the reader to a Brazilian situation room where the author demonstrates the epistemic qualities and consequences of dashboard data being continuously in motion.

The author begins by taking the reader along for a run. The reader is invited to glance with him at the running dashboard interface on his smartwatch, noticing his speed and heartrate fluctuate along a 5-km parkrun in the English Midlands. A recognizable setting for many that clearly illustrates the omnipresence of data and the dashboarding of everyday life. This scene also underpins the relevance and timeliness of the book. To understand our 'datafied' societies, we need to turn our attention to the ways in which this data is formatted (in dashboards) and the ontological, cognitive, epistemological, and political consequences of this formatting.

The rest of the introduction unpacks what dashboards are, and particularly why it can be helpful to understand dashboards as formats (rather than for instance mediums). Tkacz explains "A format is an arrangement, a way of arranging things" (p. 14). Thus, the book positions itself as addressing how dashboards arrange elements and structure data through processing, storage, and display. In doing so, Tkacz borrows from, and relates to the broader body of literature, such as Latour and Callon's (1997) work on the performativity of formatting, and Poovey's (1998) epistemological accounts of double-entry bookkeeping (which is seen as the precursor to the dashboard). To conclude the introduction, Tkacz draws on the notion of culture to explain how dashboards facilitate certain ways of being (with data). Dashboards carry along in their format traces of longer cultural legacies. And thus, Tkacz sets out to unpack these legacies, doing so first through an archeology of dashboards.

Having explained his intentions in the Introduction, Tkacz presents his format archeology as what feels like a museum tour. We begin on a coupé horse-drawn coach by Brewster & Company. The early dashboards were screens on carriages. They served as a protective separation of the driver from the mud dashing up during long journeys. Thus, separation and movement are the dashboard's most primitive qualities – to which Tkacz routinely returns throughout the book. As suits a good museum guide, Tkacz occasionally lets himself digress. For instance, into the Latourian *modern* qualities of *passengering*, first in carriages and later in trains, explaining how railway travel helped prepare the conditions for the rise of the cinema. And with this we move back to the key observations: movement offers new perceptual contexts. While the passenger gazes upon cinematic landscapes, the driver's gaze is purposeful.

The museum tour moves on passing a Benz Patent Motorwagen, a Daimler Motor Carriage, a famous Model T Ford, a luxurious Rolls-Royce Phantom I, and the elegant Citroen DS. The dashboards have been relocated in motorized vehicles, to protect the driver from the engine. Along with this relocation the dashboard takes up different functions. Driving motor cars required knowledge about the engine that would be communicated through the dashboard. Separation remains a key element, but Tkacz pays most attention to movement and what he calls 'driverly perception'. The specific perceptual activity that is privileged by the dashboard: brief moments of glancing, followed by attention to the road. Driving is referred to as a 'complex everyday task', made possible by the dashboard. Driving is about cognitive distribution, "doing things without thinking so that thinking can occur elsewhere" (p. 65).

Rather than another vehicle, the next encounter is with a 1950s businessman and his 'tableau de bord'. The dashboard is uncoupled from vehicular travel and has found a new home in the upper echelons of company life. Tkacz notes an interesting juxtaposition (which he could have explored further). On the one hand the act of driving (with a dashboard) is mundane which anyone can do. But in the boardroom the dashboards represent an important tool for the manager. The separation dashboards so importantly bring is no longer between the driver and the environment, but between the manager and the work floor. The capability to drive is simply not for anyone anymore. Maneuvering into classic management studies on Balanced Scorecards, Key Performance Indicators, Decision Support Systems, and Business Analytics, Tkacz introduces the concepts of decision ontologies. The dashboard both enables a way of seeing an organization (as compromised of decisions) and creates the organization so that it conforms to this way of seeing.

It is a shame that the dashboard is not taken out of this managerial context. Dashboards are not isolated to managerial boardrooms. Following Open Government trends, government organizations increasingly create dashboards to convey public information to citizens in an attractive and interactive way. Can this be understood as putting citizens back in the metaphorical driving seat, affirming narratives of citizen empowerment through open data? How does this relate to the decision ontology of the dashboard? But of course, any good book raises at least as many questions as it answers. In this chapter Tkacz shows he is erudite, which helps ground and position the book carefully in a multitude of scholarly histories and traditions. At times, this does render the chapter conceptually heavy. The reader is reminded to take their time with this book. No running in the museum.

We leave the museum behind and are in chapter two introduced to Florence, the CEO of a large UK hospital. After discussing the history of the dashboard as a format/formatting device, the next question is "what kind of formatting is going on when dashboards and their supporting systems are actually incorporated into organizations" (p. 109). The dashboards format, and are formatted, by their cognitive contexts of use, within 'cognitive assemblages'. But what is cognition? Tkacz explores this at length with a pleasant chaotic energy – from Hayles' (2017) cognition as information interpretation and connection with meaning, to conscious and nonconscious cognition, to Lacan and modes of awareness (Hassin et al., 2006), all to eventually return to the matter at hand: the dashboard. In this instance the Qlik dashboards used in Florence's hospital in the UK.

We learn about Qlik's associative approach to data and dashboarding, that "works how the brain works" (p. 114 and 119), making it easy to process information. Tkacz takes the reader along to a Qlik training session, where we learn about Qlik's attention to specific forms of information visualization, which is also linked to notions of user-centered design. Qlik's dashboards are designed to be inconspicuous and almost imperceptible. The dashboards are designed for seeing through, not looking at, for reaching out or across the cognitive assemblage. This could have been explored further, by placing the dashboard in more general current discussions on (formatting) functions of technology. For instance, LeCompte's (2019)

notion of '*Cyberdasein*', modelled after Heidegger's phenomenology (Feenberg & Hannay, 1995), to describe the user who is one with his surroundings through technology, and thus is able to reach beyond the physical boundaries of the space they are in. Dashboards seem to enable this same way of being with data. This 'seeing through' dashboards may have even been linked to open government discourses of transparency and accountability, allowing citizens to 'see through' government. Qlik's training concludes with the claim to "match the way people think" (p. 130) with their visualizations, Tkacz corrects that these dashboards rather encourage certain ways of thinking.

The remainder of the chapter is spent unfolding this formatting of cognition. Dashboards format users as drivers, encourage related modes of perception, reproduce human thought into the specificities of decision-making, and by doing so facilitate a blurring of nonconscious and unconscious cognition. This relates to the automaticity, and habituality, of driving (and decision-making). Certain knowledge is tacit, or internalized, and dashboards 'reach in' in similar ways. Dashboards expand unconscious modes of awareness. The cognitive nonconscious enters the realm of the habitual. But what are the broader implications of this habitual decision-making/driving? This question is left for the reader to ponder, as we slowly leave the hospital for a next adventure.

In chapter three, we pass through an access-controlled glass door entrance in Brazil. We immediately set our sights on the 'Telão' or 'Big Screen' in the situation room. We have by now established that data is a matter of formatting, and we will now explore the ramifications of this formatting. For this purpose, the chapter takes a deep dive into the epistemologies of data. Beginning with the data-information-knowledge-wisdom pyramid, Tkacz quickly jumps to the more interesting discussions such as Chris Anderson's (2008) 'End of Theory' prophecy, and its commentaries by Rob Kitchin (2014), Kate Crawford and Danah Boyd (2012), Kenneth Cukier and Viktor Mayer-Schonberger (2013), and others. Tkacz does not only provide a clear and concise overview of these debates on the epistemology of (big) data, but also aspires to contribute to the discourse with his attention to format. He posits that data's epistemological qualities are a result of formatting. The work of formatting is making data amenable to different ways of knowing.

He embarks on this journey by providing several detailed accounts of how decisions are made through the Telão dashboard data. This section is reminiscent of Latour and Woolgar's (1986) *Laboratory Life*, but rather than adhering to a sociology of facts, the reader is privy to a sociology of decisions. This is a completely different kind of truth, that Tkacz marvelously juxtaposes with Foucault's (2002) archival knowledge and Latour's (1992) (arti)factual truth. Dashboard knowledge is temporary and uncertain, it does not need to 'hold', it just needs to be there and be useful. Dashboard data's time-value and decision-value trump its truth value. This could have been an entry point for a more critical discussions, such as 'decision-value to whom?' It is also almost surprising, and at least slightly disappointing, that Tkacz does not take this opportunity to link the popularity of the dashboard format to the condition of postmodern liquid life, rife with uncertainties and risk, demanding continuous decision-making. But even without Baumann and Beck references, Tkacz does succeed in his initial aim, to show that the relation of being with data formatted through a dashboard, is widespread and worthy of sustained attention.

In the concluding part, Tkacz arrives at the point announced throughout the book by a variety of allusions. Dashboard data is data in motion, and we need to regard the consequences of being (and driving, and cognizing…) with this uncertain and contextual knowledge. Encouraged by an encounter with a befriended sociologist, he also tries to make amends for his lack of (explicit) reflection on the power dynamics in formatting. For a book that sets out to study how dashboards arrange and separate, one might expect the power-dynamics of this arranging and separation to have taken more of a center stage throughout the book (or perhaps this is only the expectation of sociologists). Tkacz of course did not

completely ignore this, touching briefly on the role of experts, and software-companies and the inherent politics in formatting cognition. But if the book has any shortcomings, this is potentially one.

The book is addressed to all social scientists, but policy scholars probably have a special duty to read it. As Tkacz writes: "data are now at the heart of our global digital economy, transforming everything from how we perceive the value of a professional athlete to the intelligence-gathering activities of governments" (2022, p. blurb). Although dashboarding may not be the only one way of formatting public sector information, it is likely to be the most common way at present, and not only for intelligence-gathering or decision-making, but increasingly for citizen communication in the context of open government. Tkacz's book not only serves as a source of inspiration to further unpack these pressing questions of formatting data, but more generally as an inspiration for how to format a good social science book: enticingly, engagingly, and eloquently.

Shirley Kempeneer
Tilburg Law School, Tilburg University
Tilburg, The Netherlands
E-mail: S.Kempeneer@tilburguniversity.edu

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