


Big Data and surveillance: Hype, commercial logics and new intimate spheres

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Guest lead editors

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Abstract

Big Data Analytics promises to help companies and public sector service providers anticipate consumer and service user behaviours so that they can be targeted in greater depth. The attempts made by these organisations to connect analytically with users raise questions about whether surveillance, and its associated ethical and rights-based concerns, are intensified. The articles in this special themed issue explore this question from both organisational and user perspectives. They highlight the hype which firms use to drive consumer, employee and service user engagement with analytics within both private and public spaces. Further, they explore extent to which, through Big Data, there is an attempt to expand surveillance into the emotional registers of domestic, embodied experience. Collectively, the papers reveal a fascinating nexus between the much-vaunted potential of analytics, the data practices themselves and the newly configured intimate spheres which have been drawn into the commercial value chain. Together, they highlight the need for conceptual and regulatory innovation so that analytics in practice may be better understood and critiqued. Whilst there is now a rich variety of scholarship on Big Data Analytics, critical perspectives on the organising practices of Big Data Analytics and its surveillance implications are thin on the ground. Combined, the articles published in this special theme begin to address this shortcoming.

Keywords

Surveillance, organisational context, intimate spheres, Big Data Analytics, commercial logics, informational trajectory

This article is a part of special theme on Big Data and Surveillance. To see a full list of all articles in this special theme, please click here: <https://journals.sagepub.com/page/bds/collections/hypecommerciallogics>

Big Data Analytics in organisational context

This special theme is drawn from contributions made to a research workshop entitled ‘New Lines of (In) sight: Big Data Surveillance and the Analytically Driven Organization’ held at the University of Stirling in June 2018.¹ This invitation-only workshop was a curated encounter between surveillance, communications and business scholars and was co-hosted by the Centre for Research into Information, Surveillance and Privacy (CRISP)² at the Universities of St Andrews and Stirling (UK) and the Surveillance

Studies Centre, Canada.³ It was supported by the Social Sciences and Humanities Research Council Partnership grant ‘Big Data Surveillance’.⁴ The partnership project aims to understand the link between surveillance and Big Data in three inter-related areas:

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security, marketing and governance. The work presented in this special theme examines marketing and other managerial applications of Big Data. The special theme editors would like to thank the workshop contributors, the Social Sciences and Humanities Research Council, the Surveillance Studies Centre, CRISP, Evelyn Ruppert, Matt Zook, Agnieszka Leszczynski and the anonymous reviewers for their help in producing this special theme.

Big Data and surveillance: Competing logics

When viewed through a surveillance studies lens, Big Data is instantly problematic. In comparison with its predecessors, and by virtue of its pre-emptive impulses and intimate data flows, Big Data creates a more penetrating gaze into consumers' and service users' lives. As Big Data draws on data streams from social and online media, as well as personal devices designed to share data, consumers have limited opportunities to opt out of data sharing as well as difficulty in finding out what happens to their data once it is shared (Ball et al., 2016). In the Big Data era, consumers and service users exert comparatively less control over their personal information flows and their mundane consumption activities become highly significant and subject to scrutiny. Their subjection to the social sorting which results from the classification of those data is comparatively intensified and commercialised. Those companies who are in a position to exploit the value created by Big Data Analytics (BDA) enjoy powerful market positions.

This special theme is concerned with the alignments between corporate and other actors which bring surveillance practices like BDA into being. Addressing the mid-range of BDA – the mesh of organisations which mediate between the end consumer, the organisational and societal context, and the marketer of products – reveals how the influence and power of BDA is far from a done deal. The special theme has a starting point that BDA as practiced can only take place in organisational settings. The dynamics, contingencies and path dependencies found in these settings are only just beginning to feature in both mainstream and critical literatures concerning BDA practices. The commercial logics which drive BDA implementation are seated in promises of seamless improvements in operational efficiency and more accurate decision-making arising directly from the use of analytics. This line of argument is relevant to commercial, public and third sector organisations. As a marketing practice, for example, BDA seek to exploit a wide spectrum of IT innovations to create value from an extensive array of

new data-generating sources used by consumers. The aim is to produce new insight into consumer behaviours and preferences so that they can be better targeted by marketers in real time and that their intentions can be predicted with a greater degree of accuracy (Jobs et al., 2015).

However, the realisation of this 'value' is highly contingent. Work by operations management scholars highlights within-firm variables that are likely to impact value generation from analytics (Mikalef et al., 2019). Personnel management, technology infrastructure and decision-making, culture, platform and skills, and management capability are identified as crucial components (Wamba et al., 2015). All are shown to be foundational to what is termed 'Big Data Analytical capability' (Wamba et al., 2017). Whilst lacking a critical perspective, these studies nonetheless show how BDA is embedded in, and shaped by, competing organisational logics. Forthcoming research undertaken as part of the Big Data Surveillance project sets out the intense organisational politicking which takes place as IT and analytics professionals try to ensure marketing professionals begin to see their practices through a data lens (Hughes and Ball, forthcoming). The sheer socio-technical range and interdependency of these internal variables highlight the two issues with which this special theme is concerned.

The first concerns the power relations and political dynamics of BDA implementation. Adopting, enacting and complying with the demands of BDA strategies involves a rethinking of roles, relationships and identities on the part of those involved in the transformation. Significant pressure and hype have been brought to bear on non-technical organisational constituencies, such as marketers, who have been challenged by the implications of BDA and are required to reconcile their creative, qualitative approaches with an analytical world-view (Merendino et al., 2018). Marketing as practiced differs significantly from its portrayal both in the trade press and in mainstream textbooks, which privileges scientifically rational marketing 'tools' as holding 'the answer' to marketing problems (Hackley, 2003). The work done by marketers constructs markets, enacts consumers and multiple cultural categories, making them, as Aritzia (2014) argues, 'sociologists at large'. Typically, this involves the combination of many different forms of knowledge including that generated by Big Data, to create 'customer insight' (Cochoy, 2008; McFall, 2011). To marketers, insight is something that feels like a truth about the individual and is the product of their professional work. Marketers extensively mediate between a host of elements to define of products and consumers in a way which feels stable (Cronin, 2004b). They enact a heavily stylised, purified consumer, whose attributes

connect a collectivity of consumers to a feature of a good or service. Thus, while hegemonic technical marketing discourses are quite positivist in the connections they make between data, profiling and value creation, there is also a body of research which demonstrates that in many contexts marketers struggle for professional legitimacy and influence and risk anachronisation in the face of analytics (Moeran, 2005). Similarly, in a public service context, managers are increasingly being required to base their policy and operational decisions on new innovative information flows embedded in BDA, and are finding that these new technologically promoted processes are conflicting with traditional long established norms, practices and organisational structures (Webster and Leleux, 2018).

The second concerns how practices associated with BDA extend surveillance into the intimate sphere. Accounts of BDA implementation from the management practitioner literature discuss the surveillance practices allied to Big Data as another facet of operational efficiency and value creation. Erevelles et al. (2016: 899) unproblematically present a case description of Southwest Airlines which exploits consumer voices:

The insight from the speech analytics methods are used to sense unrecognized customer needs, develop a deeper understanding of the main requirements of their customers including claims from disrupted flights, details about reservations, food and beverage preferences, and offering personalized offers, as well as for training service personnel accordingly. The analytics solution of Southwest Airlines allows customer service representatives to understand the nuances of every recorded customer interaction. Different metrics guide service personnel to the best solution in every scenario.

Mikalef et al. (2019) describe how Nedbank, a South African Bank, developed a tool called 'Market Edge' which it then sold to other large retailers. The tool 'pulls together credit and debit card information with geolocation, demographic, and other transactional data, and enables the generation of insight into customers' behavior that would have been very difficult to identify without the tool' (p.5). Ethical concerns are recognised by practitioners, although they are still couched within a value discourse. As Vidgen et al. (2017) note, three of their case studies were concerned with how the data collected could impact customer trust and perceptions of the brand, resorting to an 'ethics committee' as a solution. One of their interviewees said 'it was acceptable for customers to think that their use of data was 'spooky' ('how do they do that?') but they did not want this to tip over into 'creepy' ('ugh, how do they do that?')' (p.633).

The last set of comments infer that new intrusions into the intimate and private spheres of individuals are legitimised by Big Data. As such, we are forced to ask what the 'Big' in 'Big Data' refers to. Whilst the etymology of the term encourages a focus on the volume of data, it refers instead more to the ubiquity of data, the completeness of coverage over contemporary lives. Big Data succeeds in extending the scope of surveillance by co-opting individuals into the de facto surveillance of their own private lives. Through the increasingly embedded role of online social networks and location sensitive mobile devices in social activity, the boundaries between surveillance and the surveilled subject become blurred. Big Data breaks down boundaries between different sources of data, thus allowing the combination of information from different social domains. In democracies, with clearer legal protections of the line between public and private, Big Data extends existing surveillance technologies in its ability to co-opt the key economic actors – the corporations – and thus gain a window into the private (Ball et al., 2016). Big Data practices are also allowing powerful commercial corporations greater access to the machinery of government and public services in that they are being increasingly influential in policy-making and service delivery, as well as getting greater access to data deriving from these organisational entities. The levels of ubiquity in terms of data collection, previously only available in tightly controlled political environments, are therefore now available universally.

A brief guide to the special theme

This theme features six articles, all of which contextualise Big Data hype within and at times counter to business and organisational logics. Three explore how BDA extends surveillance across more intimate boundaries highlighting the emotional registers of consumers (McStay); home automation and household surveillance (Pridmore and Mols) and the surveillance and commercialisation of children via 'Hello Barbie' (Steeves). The remaining articles draw attention to how Big Data practices are produced, reflecting the argument that the enactment of surveillant power using BDA is not a certainty but a negotiated organisational process. They explore how hype and anxiety feature in the implementation of Big Data practices (Darmody and Zwick) and how the reality of delivering BDA in public service contexts is necessarily complex and quite different from the speculative assumptions embedded in the hype (Löfgren and Webster). Organisational processes and the logic of organisational change associated with technological and informational developments are highlighted in the article by Lauer.

In ‘Emotional AI, soft biometrics and the surveillance of emotional life: An unusual consensus on privacy’ Andrew McStay investigates privacy perspectives associated with the emergence of new artificial intelligence technologies and applications. He argues that there is a weak consensus for the requirement to embed privacy and that there is small window of opportunity in the development phase of these technologies during which the principle and practices associated with good privacy can be established and embedded. In the article ‘Personal choices and situated data: Privacy negotiations and the acceptance of household intelligent personal assistants’, Pridmore and Mols use the ‘Unified Theory of Acceptance’ model to assess how users negotiate and make choices about their use of household Intelligent Personal Assistant. This article highlights the complexity of data production at a household level, the opacity of information and surveillance processes in the home, and how these devices produce myopic views of users for platforms. In ‘Hello Barbie, goodbye me: A discourse analysis of Mattel’s conversations with children’ Val Steeves draws attention to the surveillance of children through toys and how this surveillance relationship is intimate and normalises surveillance processes.

Darmody and Zwick in ‘Manipulate to empower: Hyper-relevance and the contradictions of marketing in the age of surveillance capitalism’ explore digital marketing in relation to Big Data, surveillance, automatic computational analysis and algorithmic shaping of choice contexts. They argue that in the Big Data era marketers equate the manipulation of choice contexts and decision-making with consumer empowerment and that this process is reliant on surveillance and massive quantities of consumer data. In ‘Plastic surveillance: Payment cards and the history of transactional Data, 1888 to present’ Josh Lauer provides a historical and informational account of the data processes embedded in the use of payment cards and demonstrates how this is not just a history of innovation and computing, but also a history of Big Data and consumer surveillance. In the article ‘The value of Big Data in government: The case of ‘smart cities’ Löfgren and Webster use the ‘Value Chain’ approach to understand the use of Big Data in public service settings. They highlight how different issues emerge at different ‘links’ in the chain, including issues associated with the quality and reliability of data, from mixing public and private sector data, the ownership of raw and manipulated data, and ethical issues concerning surveillance and privacy.

In conclusion, this special theme of Big Data & Society addresses a gap in critical scholarship on Big Data. It explores the links between Big Data, its organisational and commercial contexts and

increasing levels of intimate surveillance. The articles illustrate how business and organisational practices shape and are shaped by BDA and how the producers and consumers of Big Data are forging new intimate and intensive surveillance relationships. In drawing our conclusions, we would comment that in this sense BDA is not as revolutionary as sometimes suggested by vocal advocates. Its implementation and use is embedded within and shaped by powerful institutional norms and processes. As Heilbroner (1967) noted, despite the excitement accompanying new technologies, they are typically incremental, especially when seen in retrospect.


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Notes

1. Big Data Surveillance Workshop, URL: <https://www.sscqueens.org/resources/new-lines-of-insight-big-data-surveillance-and-the-analytically-driven-organization>
2. CRISP, URL: <http://www.crisp-surveillance.com/>
3. Surveillance Studies Centre, URL: <https://www.sscqueens.org>
4. Big Data Surveillance Partnership Project, URL: <https://www.sscqueens.org/projects/big-data-surveillance>

References

- Aritzia T (2014) Housing markets performing class: Middle-class cultures and market professionals in Chile. *The Sociological Review* 62(2): 1–21.
- Ball K, DiDomenico M and Nunan D (2016) Big data surveillance and the body subject. *Body & Society* 22(2): 58–81.
- Cochoy F (2008) Hansel and Gretel at the grocery store. *Journal of Cultural Economy* 1(2): 145–163.
- Cronin A (2004) Regimes of mediation: Advertising practitioners as cultural intermediaries? *Consumption Markets & Culture* 7(4): 349–369.
- Erevelles S, Fukawa N and Swayne L (2016) Big data consumer analytics and the transformation of marketing. *Journal of Business Research* 69: 897–904.
- Hackley C (2003) “We are all customers now” rhetorical strategy and ideological control in marketing management texts. *Journal Management Studies* 40(5): 1326–1352.

- Heilbroner R (1967) Do machines make history? *Technology and Culture* 8(3): 335.
- Hughes J and Ball K (forthcoming) Sowing the seeds of value? Persuasive practices and the embedding of big data analytics. *Technological Forecasting and Social Change*.
- Jobs C, Aukers SM and Gilfoil DM (2015) The impact of big data on your firms marketing communications: A framework for understanding the emerging marketing analytics industry. *International Academy of Marketing Studies Journal* 19(2): 81–92.
- McFall L (2011) A “good, average man”: Calculation and the limits of statistics in enrolling insurance customers. *The Sociological Review* 59(4): 661–684.
- Jobs, CG., Aukers, S.M. and Gilfoil, D.M. (2015) The impact of big data on your firms marketing communications: A Framework for understanding the emerging marketing analytics industry. *Academy of Marketing Studies* 19(2): 81–101.
- Merendino A, Dibb S, Meadows M, et al. (2018) Big data, big decisions: The impact of big data on board level decision-making. *Journal of Business Research* 93(C): 67–78.
- Mikalef P, Krogstie J, Pappas IO, et al. (2019) Exploring the relationship between big data analytics capability and competitive performance: The mediating roles of dynamic and operational capabilities. *Information and Management* 57(2): 1–15.
- Moeran B (2005) Tricks of the trade: The performance and interpretation of authenticity. *Journal of Management Studies* 42(5): 901–922.
- Vidgen R, Shaw S and Grant DB (2017) Management challenges in creating value from business analytics. *European Journal of Operational Research* 261: 626–639.
- Wamba S, Akter S, Edwards A, et al. (2015) How ‘big data’ can make big impact: Findings from a systematic, review and a longitudinal case study. *International Journal of Production Economics* 165: 234–246.
- Wamba S, Gunesekaran A, Akter S, et al. (2017) Big data analytics and firm performance: Effects of dynamic capabilities. *Journal of Business Research* 70: 356–365.
- Webster CWR and Leleux C (2018) Smart governance: Opportunities for technologically-mediated citizen Co-production. *Information Polity* 23(1): 95–110.