

Book Review

Data Rules: Reinventing the Market Economy

by Cristina Alaimo and Jannis Kallinikos

Rob Nicholls

University of Sydney and UTS Law

Abstract: *Data Rules: Reinventing the Market Economy* by Cristina Alaimo and Jannis Kallinikos offers an exploration of the societal, cultural, and epistemological dimensions of data, challenging conventional views of data as neutral or merely technical. By introducing original concepts such as ‘data rules’ and ‘data complementarities’, the authors provide a unique perspective on how data reshapes markets, social relationships, and innovation ecosystems.

The book balances historical context, theoretical insight, and contemporary examples, making it a useful resource for interdisciplinary readers. The book leaves gaps in addressing actionable regulatory frameworks or the political dimensions of platform capitalism. The volume represents a useful ‘rounding out’ of the literature in this specialist field.

Keywords: cultural data, data complementarities, data rules, epistemological dimensions of data

Introduction

Data Rules presents an exploration of the social, cultural, and epistemological dimensions of data, moving beyond the purely technical framing often seen in discussions of the data revolution. The book challenges readers to see data not merely as neutral tools or passive resources but as powerful forces reshaping social and economic relationships.

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The Book

Chapter 1

Chapter 1 is called “Introduction: Data and Socioeconomic Transformations” and introduces the book’s main objective. This is to analyse the forces that place data at the heart of modern life and their impact on the economy and society. The authors claim that this objective departs from typical discussions of the data revolution, which often focus on data as a purely technical phenomenon. Instead, the chapter, building on ideas from our conversation history, emphasises the social, cultural, and epistemological dimensions of data and their impact on various aspects of contemporary life.

The authors acknowledge that digital data, due to its inherent qualities of reproducibility and malleability, has expanded the scope and impact of data practices that have long existed in society. However, the chapter cautions against viewing digital data solely as a technological artifact. It argues that understanding the social and economic implications of digital data requires recognising its complex relationship with knowledge, communication, and existing social institutions.

The authors suggest that data rules, alongside market and design rules, are fundamentally reshaping the economy by influencing the creation of new products and services. The emergence of digital platforms and ecosystems is presented as a key example of this transformation, with platforms acting as vehicles for challenging the traditional separation between transactions and social relationships. The chapter argues that understanding data rules is crucial for understanding the broader socioeconomic transformations brought about by the increasing prevalence of digital data.

The chapter concludes by outlining the structure of the book.

Chapter 2

Chapter 2 is entitled “The Epistemic Foundations of Data” and traces the history of data and how it has been linked to cognition and social action. The chapter explores the evolution of data from ancient record-keeping practices to the digital age, examining the multiple ties data have maintained with social practices and institutions.

One important historical example the chapter discusses is the use of clay tokens in ancient Mesopotamia. These served as a form of record-keeping and accounting, demonstrating the long-standing link between data and social organisation. The chapter also highlights the rise of modern statistical practices in the 19th century. This period saw an increased emphasis on measurement and the use of data to understand social phenomena.

The chapter argues that the advent of digital data tends to obscure the historical functions and practices associated with data. The chapter concludes by arguing that understanding the ‘politics of data’, or how data are used to shape reality and influence social action, is essential for understanding the contemporary data-driven world.

Chapter 3

Chapter 3, “The Digital Data Revolution”, focuses on how mechanisation and digitisation have transformed the very nature and function of data. The chapter argues that while data have always been social and cultural artefacts, the advent of digital technologies has led to data being increasingly perceived as purely technical items, obscuring their rich history and complex social dimensions.

The authors argue that mechanical tabulating machines marked a shift towards the formalisation and de-contextualisation of data processing and that this accelerated with the rise of digital computers. Digital data became detached from specific contexts and could be easily manipulated and transmitted across various domains. This process, while enabling new possibilities for data analysis and use, also led to a tendency to view data as raw, objective, and context-free.

The chapter argues that this narrow perception of digital data overlooks their continued role as knowledge artefacts. Instead, data are shaped by social practices, institutional contexts, and the choices made during their production and interpretation. The chapter concludes by advocating for a more nuanced understanding of digital data that recognises both the continuities and discontinuities introduced by digital technologies.

Chapter 4

The fourth chapter has the title of “The Data Life Cycle”. It examines the process by which data are created, standardised and aggregated into objects that take on novel social and economic lives. This chapter analyses the decisions made in data production, arguing that these choices shape the meaning and use of data.

The authors emphasise that data are not simply ‘out there’ but are actively ‘made’ through a series of choices and classifications. Data production involves selecting and defining what counts as a relevant event or property, and this selection process reflects the social and organisational contexts in which the data is produced; examples are provided.

The authors introduce the concept of ‘data objects’, which they describe as recurring arrangements of data that serve specific knowledge-making and use purposes, and they

provide examples. These data objects enable new knowledge and organisational processes around virtual representations of machines, such as digital twins.

The chapter concludes by arguing that understanding the data life cycle and the choices made in data production is crucial for understanding the social and economic implications of data. The authors suggest that the value of data is not inherent, but rather emerges through processes of negotiation, legitimisation, and embedding in market mechanisms.

Chapter 5

Chapter 5 is called “Technologies of Difference: Excursus on Surveillance” and examines the debate surrounding data regulation and concerns about surveillance in the digital age. The chapter argues that simply regulating data as technical elements is insufficient and overlooks the complex roles data play in society. Instead, the authors advocate for understanding how data intertwine with innovation, value creation, and societal wellbeing to develop more effective regulation strategies.

The authors argue that data are not neutral representations of reality but active forces shaping personal and institutional relationships. This perspective challenges the notion of a clear separation between data tracking and the broader social practices that generate data.

The authors argue against viewing data as purely technical or simply as commodities to be traded. They emphasise the need to recognise data’s diverse functions, including their role in forming new types of markets and mediating social and economic interactions on platforms. In contrast to Zuboff (2018), the authors suggest that the focus on surveillance as a primary concern often obscures the broader socioeconomic implications of data-driven platforms and ecosystems.

The chapter concludes by calling for a more nuanced approach to data regulation that recognises the multifaceted nature of data and their role in shaping social and economic relations. It suggests that effective regulation requires a deeper understanding of how data are implicated in processes of innovation, knowledge creation, and value generation within the digital economy.

Chapter 6

Chapter 6 is “Decentering Organizations: Data, Knowledge, and Institutional Change”. It examines how the increasing prevalence and use of data is transforming the nature of organisations and challenging traditional theories of the firm. The chapter argues that the influx of external data, coupled with the ability to repurpose data across domains, is leading

to a “decentering” of organisations. This means that organisations are more reliant on data and knowledge from external sources.

The chapter examines the implications of these developments for organisational knowledge and capability development. The authors argue that the ability to repurpose data across domains is leading to a more fluid and dynamic understanding of knowledge.

The authors argue that organisations are increasingly engaging in more open and collaborative forms of innovation and value creation, relying on external data and expertise to complement their internal capabilities.

The chapter concludes by discussing the implications of these developments for the future of organisations. The authors suggest that the decentering of organisations is likely to lead to the emergence of new organisational forms, such as platforms and ecosystems, which are better suited to managing the complexities of a data-driven world.

Chapter 7

Chapter 7 is called “Platforms and Ecosystems” and examines the growing research on digital platforms and digital business ecosystems.

The authors discuss the management and innovation literature, which understands platforms as product configurations with a stable core and variable peripheral components. Next, the chapter explores the concept of ‘multisided platforms’, which are exchange systems marked by the dynamics of network effects and the ability to manage large user populations. These platforms often blur the boundaries between traditional market mechanisms and organisational structures. The chapter argues that these platforms heavily rely on data to manage user participation, create value, and coordinate interactions. Finally, the chapter examines research on digital business ecosystems, which are cross-industry networks of loosely coupled organisations. It contrasts the emphasis on ‘complementarities’ in ecosystem literature with the focus on ‘network effects’ in platform literature. The chapter suggests that the distinction between these concepts becomes blurred in the context of data-driven platforms and ecosystems, where value creation arises from the complex interplay of user interactions, data flows, and technological capabilities.

The chapter concludes by highlighting the lack of attention to data and data technologies in mainstream research on platforms and ecosystems.

Chapter 8

Chapter 8, “Data and Ecosystems”, extends the arguments made in previous chapters, claiming that the dynamics of digital business ecosystems are significantly shaped by what the

authors call ‘data rules’. The chapter posits that data rules, alongside market rules and design rules, play a pivotal role in shaping the structure and behaviour of ecosystems.

The authors emphasise that understanding the relationships between actors in an ecosystem requires moving beyond traditional economic notions of complementarity. The authors introduce the concept of ‘data complementarities’, arguing that data can create value-reinforcing synergies that go beyond the traditional distinctions between generic and specific resources. This concept builds upon the previous discussions about the malleability and repurposability of data objects, highlighting how data can be used in unforeseen ways to connect actors and resources across different domains.

The authors provide several examples to illustrate the concept of data complementarities. The chapter also discusses the role of data objects in shaping ecosystem dynamics. The authors argue that data objects serve as crucial building blocks for ecosystems. The minimalist and adaptable nature of data objects allows them to represent a wide range of entities and facilitate interactions within complex and constantly evolving ecosystems.

The authors conclude by advocating for a shift in the regulatory approach to platforms and ecosystems. They argue that current regulatory frameworks often focus too narrowly on algorithmic systems and fail to recognise the intricate relationships between data, algorithms, and ecosystem dynamics.

Chapter 9

The book ends with a chapter called “Epilogue”. This summarises the book’s key arguments and explores their implications for understanding the transformative impact of data on the market economy and society. The chapter echoes a consistent theme: data are not simply neutral tools or passive resources; they are powerful forces that are reshaping social and economic relations in profound ways.

The authors critique the limited attention given to data in existing research on platforms and ecosystems. They argue that much of this research focuses too narrowly on business models and economic outcomes, failing to grasp the broader societal implications of data-driven technologies. They call for a ‘social science of data’ that moves beyond the technical aspects of data science and examines how data are implicated in processes of knowledge production, social control, and cultural change.

Contributions and Readership

Contributions

From the perspective of readers of the *Journal*, the key contribution of *Data Rules* is its exploration of the social, cultural, and epistemological dimensions of data, moving beyond the purely technical framing often seen in discussions of the data revolution. The book challenges readers to see data not merely as neutral tools or passive resources but as powerful forces reshaping social and economic relationships.

However, in doing so, *Data Rules* effectively forecloses addressing some of the issues associated with the regulation of platforms and businesses with network effects. The call for a ‘social science of data’, which addresses social, cultural, and political implications of data-driven technologies, seems to miss the political implications of platforms and networks.

Target readers

The book challenges readers to move beyond simplistic understandings of data as purely technical entities and engage with the broader social, cultural, and epistemological implications of the data revolution. As such, it may justify a place on a bookshelf. However, I think that I would want Zuboff ([2018](#)) and the following books nearby:

- *The Tech Coup: How to Save Democracy from Silicon Valley* by Marietje Schaake ([Schaake, 2024](#));
- *Feeding the Machine: The Hidden Human Labour Powering AI* by James Muldoon, Mark Graham & Callum Cant ([Muldoon et al., 2024](#));
- *Technofeudalism: What Killed Capitalism* by Yanis Varoufakis ([Varoufakis, 2024](#));
- *Broken Code: Inside Facebook and the Fight to Expose Its Toxic Secrets* by Jeff Horwitz ([Horwitz, 2023](#));
- *How Big-Tech Barons Smash Innovation—and How to Strike Back* by Ariel Ezrachi & Maurice E. Stucke ([Ezrachi & Stucke, 2022](#));
- *Big Tech and the Digital Economy: The Moligopoly Scenario* by Nicolas Petit ([Petit, 2020](#)).

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