

competition in society. And yet, we should be careful not to be seduced into seeing competition as inseparable from or constituted by organization, although the centrality of organization in this book may give us the impression that this is always so.

The book *Competition: What It Is and Why It Happens* is a timely and welcome contribution to the conversation on competition in society, which has been picking up pace across the social sciences in recent years. The authors have successfully demonstrated that competition is not confined to markets, and they have convincingly argued that the study of competition should not be the sole purview of economists. I expect that this book will engage, provoke and inspire many scholars in the coming years – in the studies of organization and beyond.

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Media Review: Blockchains as the Basis for New Forms of Organizing?

Wenqian Wang, Fabrice Lumineau, and Oliver Schilke

Blockchains: Strategic Implications for Contracting, Trust, and Organizational Design

Cambridge, UK: Cambridge University Press, Elements in Business Strategy, 2022. 75 pp.

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Blockchains: Strategic Implications for Contracting, Trust, and Organizational Design by Wenqian Wang, Fabrice Lumineau and Oliver Schilke provides a comprehensive and insightful analysis of blockchain technology’s strategic implications for organizations. The authors argue that blockchain technology has the potential to significantly alter the way organizations function, highlighting how blockchains can address a range of organizational issues related to both cooperation and coordination. The book is a critical assessment of the research landscape on blockchains, identifies

potential challenges and opportunities associated with blockchains, and demonstrates how the technology can add strategic value to organizing a wide range of business activities, with a particular focus on contracting, trust and organizational design. As the authors state, ‘blockchains can help firms overcome [. . .] enduring organizational challenges in a new way that cannot be fully replicated by traditional solutions’ (p. 2), underscoring the need to carefully examine the impact of blockchains on our understanding of organizations.

As a background, blockchain is a distributed and decentralized database technology that enables the secure and transparent exchange of digital assets between users without the need for intermediaries. At its core, blockchain is a ledger that records all transactions made on the network, which are grouped into blocks and cryptographically linked together in a chain (Lumineau, Wang, & Schilke, 2021). Each block contains a unique digital signature that verifies the integrity and authenticity of the information it contains, making it virtually impossible (or at least very difficult) for anyone to alter or manipulate the data without being detected. Blockchain technology has numerous potential applications across a wide range of industries and contexts (e.g., Goldsby & Hanisch, 2022). For instance, in finance, blockchain-based cryptocurrencies such as Ethereum offer a secure and decentralized means of exchanging digital assets. In healthcare, initiatives such as PharmaLedger aim to leverage blockchain’s transparency and trustworthiness to improve the management of medical data. Meanwhile, supply chain management can benefit from blockchain-based systems such as the Global Shipping Business Network (GSBN), which seeks to enhance logistics operations through a shared ledger system.

The book is an ideal resource for readers who are new to blockchain technology, as it begins with a clear explanation of what blockchain is, including a structured overview of academic definitions of blockchain and technological terms such as various consensus mechanisms required for data reconciliation and the distinction between public and private networks (Chapter 2). It then delves into the theories relevant to blockchains, including transaction cost economics, agency theory and the resource-based view, and how each lens can be used to study blockchains (Chapter 3). This discussion incorporates insights from fields such as finance, operations research, supply chain management, entrepreneurship and innovation, international business, and strategic management. The comparison of various disciplines’ core themes and interpretations of blockchain technology proves particularly illuminating: for instance, how finance frequently regards blockchain as a digital currency, while organizational theory conceives of blockchain as a new form of organizing (e.g., Table 3, p. 17).

Chapter 4 delves deeper into the organizational implications of blockchains. It presents the authors’ critical examination of how blockchains ‘allow for new ways to organize collaborations by altering key aspects of organizational contracts, trust, and design’ (pp. 26–27). Chapter 5 covers common criticisms and limitations of blockchains, including risks of system failure (e.g., through hacks and quantum computing), technological limitations (e.g., the oracle problem, environmental issues and confidentiality), challenges to full decentralization (e.g., concentration of voting power and corporate interests), as well as regulatory issues and ethical concerns (e.g., terrorist financing and accountability). Finally, it ventures into the potential implications of blockchains for collaboration and the development of business models (e.g., artwork investments and cross-border financial settlements). Given its broad coverage, the book is an excellent point of departure for organization and management scholars with an interest in exploring the various facets of blockchains.

One of the book’s strengths is its ability to comprehensively cover the implications of blockchain for governance, particularly contracting and trust, without losing the reader in technical details. In terms of contracting, the book discusses how blockchains provide an alternative method of enforcing agreements that differs from legal contracts. Blockchains enforce agreements automatically through algorithms and protocols, rather than relying on the court system. Relatedly and

importantly, because of the fundamentally distinct logic of enforcing agreements, the book also pinpoints that ‘blockchains are not merely a digital version of contracting’ (e.g., compared to digital contracts through electronic data exchange, p. 29). Such differences can lead to blockchains either replacing or supplementing legal contracts depending on the nature of the collaboration. In terms of trust, the book refutes the widespread view that blockchain makes trust unnecessary or that blockchains are ‘trustless’ systems. Instead, it argues that blockchains change the form of trust from personal to system trust as collaborations mediated by blockchain systems become more impersonal. This requires trust in new parties such as blockchain developers and information providers.

At a conceptual level, the book could have been more explicit in its examination of the various ways in which blockchain can be understood, including as a technology, a form of governance, a new form of organizing and a business model. Although the authors briefly touch on these concepts (e.g., in their section on ‘creating new business models’, pp. 48–49), a more detailed analysis of their constituent parts, boundaries, and interconnections is necessary to comprehend when and why blockchains transition from a technology to a governance mechanism, and eventually to a form of organizing or a business model. Such analysis could help address common criticisms concerning the differences between blockchains and other databases such as ERP systems, as well as how blockchain-based decentralized autonomous organizations (DAOs) differ in their governance and organizational principles from other new forms of organizing such as digital platforms and online communities (e.g., Bailey, Faraj, Hinds, Leonardi, & von Krogh, 2022; Splitter, Dobusch, von Krogh, Whittington, & Walgenbach, 2023). For instance, with regard to governance, it might have been worthwhile to contrast blockchain as a form of digital governance with previously discussed concepts of analogue network governance (Hanisch, Goldsby, Fabian, & Oehmichen, 2023). In terms of organizational structure, Table 6 contrasts the main differences between traditional and blockchain-based organizations, but the authors could have made clearer how this distinction can inform the choice of each organizational form to achieve specific ends. Perhaps disentangling when blockchains become governance mechanisms, forms of organizing and business models is beyond the book’s scope, leaving ample room to clarify the conceptual foundation of blockchains in future research (e.g., Beyes, Chun, Clarke, Flyverbom, & Holt, 2022).

From an empirical perspective, it would have been beneficial to provide a more detailed discussion of potential data sources and appropriate methods related to the study of blockchains. While the book includes examples of prior research that has utilized methods such as interviews, surveys and analysis of company reports (e.g., on pp. 22–24 and in Table 5), a comprehensive table outlining potential data sources, measures, as well as previously studied antecedents, consequences and dimensions of blockchains would have greatly facilitated future research and helped to identify any gaps in the current literature. Additionally, clarifying the most valuable research methods, whether qualitative studies, quantitative studies, or alternative methods such as action research, experiments and simulations, for specific types of unanswered questions would have been valuable information to include, especially given the novelty of the phenomenon. Despite these omissions, the book provides a useful collection of prior empirical studies that can serve as an inspiration for blockchain researchers.

The criticism should not obscure the book’s many merits. Of particular interest to organizational scholars is a captivating discussion that explores the implications of blockchains for organizational design. Chapter 4.3 briefly revisits the definition of organizations and the key challenges of organizing (i.e., task division, task allocation, provision of rewards and provision of information, p. 35) before moving on to explain the potential for blockchain technology to significantly alter the organizational structure, particularly by driving the decentralization of organizations. The authors illustrate how blockchains can introduce a departure from traditional hierarchy-based organizations, and how they enable the rise of new organizational forms such as DAOs, which are non-hierarchical organizations that perform and record routine tasks on a peer-to-peer, cryptographically

secure, public network, and rely on the voluntary contributions of their internal stakeholders to operate. In their most radical form, DAOs can operate without the need for ‘managers or owners’; instead, ‘people work with peers following transparent rules contained in codes and algorithms’ while ‘DAOs use tokens to incentivize participants to do their jobs’ (p. 36). The authors are careful to note that DAOs will ‘not crowd out all traditional organizations’ because they ‘exist for reasons other than minimizing cost, e.g., pooling resources, consolidating power, and sharing identity’ (p. 38). This analysis encourages readers to revisit fundamental questions about what constitutes an organization and what its role is.

Overall, *Blockchains: Strategic Implications for Contracting, Trust, and Organizational Design* is a comprehensive and accessible examination of the impact of blockchain technology on organizing economic exchange. The book presents a useful extension of the authors’ other works in the area of blockchains and digitalization (Lumineau et al., 2021; Lumineau, Schilke, & Wang, 2023) by focusing more strongly on cross-disciplinary research and integrating an organizational design perspective. In addition, the book embeds the discourse on blockchain within the established discussions on governance (e.g., the role of smart contracts and system-level trust) and fundamental organizational issues, including task allocation and division, reward distribution and information flow in the context of DAOs. This volume provides a holistic integration of various conversations that have often taken place in parallel in siloed disciplinary discourses (e.g., finance, supply chain management and organization studies). The authors should be applauded for their efforts to condense the scholarly conversations on blockchains into a concise, well-structured and highly readable format. They do an excellent job of translating complex concepts into easy-to-understand language, making the book accessible to readers with varying levels of technical expertise. Finally, the book’s discussion of blockchains culminates in an agenda in three key areas of organizational research, namely contracts, trust and organizational design, which provides manifold suggestions to facilitate scholarly understanding of such a disruptive technology from an organizational perspective. In conclusion, the book offers broad yet specific insights into the implications of blockchain for organizing, making it a valuable resource for anyone interested in the potential of this technology.

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