

Book Review

DuPont, Q. (2019) *Cryptocurrencies and Blockchains*. Polity.

A deluge in books published on cryptocurrencies, and their underlying blockchain technologies, has mirrored the boom and bust of interest in Bitcoin and its rollercoaster US dollar price. Many of these titles form little more than ‘get rich quick’ and techno-solutionist accounts written by, and for, technology evangelists, or industry practitioners with ‘skin in the game’. Deviating from this flood of largely uncritical publications is a small, but growing, scholarly literature that offers much needed clarity and nuance of the blockchain and cryptocurrency phenomenon. These academic titles are notable for their interdisciplinary character. While economists have commanded (and still command!) much media commentary on Bitcoin dollar price swings; anthropologists (Brunton, 2019), computer scientists (Narayanan et al., 2016), as well as legal scholars (de Filippi & Wright, 2018; Herian, 2018; Werbach, 2018), and media studies scholars (Golumbia, 2016) have all provided insightful analyses.

This new title by Quinn DuPont (2019) reflects the mix of interdisciplinary perspectives informing a nuanced and highly readable account of everything from Bitcoin to smart contracts. Trained in information science, DuPont deftly draws readers through the technical debates and plentiful hype surrounding blockchains and cryptocurrencies by providing realistic impressions of what these technologies can and cannot do. Supplementing the disinterested scholarly observer approach with personal reflections on his own experiences applying these technologies in a digital charity and in trading cryptocurrencies, DuPont situates technical novelty – the blockchain is likened to “distributed version of traditional double-entry bookkeeping” (p. 157) – within “broad applications and implications” (pp. 1–2). The result is a highly insightful guide to one of the most mystifying sets of technologies emerging over the past decade.

Cryptocurrencies and Blockchains not only harnesses the richness of scholarly perspectives found across the budding interdisciplinary blockchain literature, but is informed by a unique blend of media, monetary, legal and social theory. In doing so, DuPont foregrounds blockchains as *social technologies*. While on its own this is far from a novel claim, foregrounding technology as inherently social serves an important reminder that on-going blockchain experimentation cannot – and should not – be regarded as disconnected from society. *Cryptocurrencies and Blockchains* thereby contributes to a longer lineage of scholarship spanning the social sciences and humanities that highlights how technological experimentation both reflects and impacts the societies in which it originates and evolves. Given this fundamentally social nature DuPont rightly warns, “the stakes are high, for potential social good and harm” (p. 212). His stress that “technologies must be handled with care” (p. 23) is accompanied by an emphasis on governance, or what DuPont laments as “the most important and yet critically misunderstood part of the industry” (p. 24). Understood as “the setting of [social, environmental, or otherwise] goals, and the alignment of strategies to accomplish them” (p. 24) governance provides a unifying theme across initial chapters devoted to Bitcoin and digital money that then pivots in chapter four towards blockchains before examining overlapping blockchain applications in finance (chapter five), law (chapter six) and logistics (chapter seven). Blockchain experiments undertaken in, and across, these sectors, which includes everything from privacy-centric alternatives to Bitcoin to novel digital property registries, is evaluated for both actual and potential successes and failures in utilizing new modes of organization to undertake decision-making and achieve common goals in novel ways. In some instances, operational chaos is the

result, such as with the fraught attempts to achieve community consensus in resolving Bitcoin's internal debates. Yet, other outcomes include moves towards professionalization, as well as towards formal integration with existing regulations maintained to varying extents by national, regional and international organizations. Dupont's survey of emerging and potential blockchains application landscape continually stresses the primacy of governance and the need to consider processes of goal-making and decision-making as never secondary, nor as something to be 'escaped' in contrast to the persistent intentions of developers and promoters of blockchain applications from Bitcoin to the more recent smart-contract-based Decentralized Autonomous Organizations (DAOs).

Every book has its limits and *Cryptocurrencies and Blockchains* is marked by a few shortcomings. The coverage of the evolving blockchain landscape might be regarded as alternatively too narrow or too broad. On the one hand, given the varied areas in which blockchain applications are emerging (listed at p. 113), the focus on finance, law, and logistics (all key areas, to be sure) is never quite explained or justified. On the other hand, this still relatively wide empirical coverage ensures that analysis of any one particular set of issues is, or is likely to become, more thoroughly detailed elsewhere (e.g. Fink, 2018; Girasa, 2018). Another substantive issue pertains to the core theme of governance. Given its centrality throughout a book that culminates in a discussion on governance challenges, key theories and insights from the multi-faceted literatures on corporate, environmental, global, non-profit, and regulatory governance might have been further engaged. *Cryptocurrencies and Blockchains* advances the theme of governance beyond being "the buzzword in blockchains today" (p. 197), yet it might have pushed this analysis further by extending the otherwise thorough engagement with a wide array of interdisciplinary literatures to both newer and longer standing debates over (digital and algorithmic) governance.

Such limits, however, merely re-enforce the 'call to arms' that *Cryptocurrencies and Blockchains* provides for scholars to further examine evolving applications of these technologies. DuPont helpfully highlights a number of specific areas where scholarship is required throughout the book (e.g. pp. 26–28). His suggestions, however, tend to stop short of contemplating how *government* as well as local, national, regional and international organizations might engage blockchains. Could the blockchain applications emerging in the logistics industry be applied to government services, in processes ranging from emergency rescue operations to e-voting? How might these, and other blockchain applications, help overcome the lack of trust in government in many parts of the world? Will 'smart-contract' based government systems merely extend, rather than resolve, privacy issues stemming from novel forms of state surveillance? *Cryptocurrencies and Blockchains* provides both an excellent impetus and guide for navigating these questions with a critical eye foregrounding both societal and governance impacts. This book is reflective of a scholarly field that is maturing along with its subject matter.

Malcolm Campbell-Verduyn
Rijksuniversiteit Groningen
E-mail: m.a.campbell-verduyn@rug.nl

References

- Brunton, F. (2019). *Digital Cash: The Unknown History of the Anarchists, Utopians, and Technologists Who Created Cryptocurrency*. Princeton University Press.
- Finck, M. (2018). *Blockchain regulation and governance in Europe*. Cambridge University Press;
- Girasa, R. (2018). *Regulation of Cryptocurrencies and Blockchain Technologies: National and International Perspectives*. Springer
- Golumbia, D. (2016). *The Politics of Bitcoin: Software as Right-Wing Extremism*. Forerunners: Ideas First.

- Herian, R. (2019). *Regulating Blockchain*. London: Routledge.
- Narayanan, A., Bonneau, J., Felten, E., Miller, A. & Goldfeder, S. (2016). *Bitcoin and Cryptocurrency Technologies: A Comprehensive Introduction*. Princeton University Press
- Werbach, K. (2018). *The Blockchain and the New Architecture of Trust*. MIT Press.