Searching for Trust

Searching for Trust explores the intersection of trust, disinformation, and blockchain technology in an age of heightened institutional and epistemic mistrust. It adopts a unique archival theoretic lens to delve into how computational information processing has gradually supplanted traditional recordkeeping, putting at risk a centuries-old tradition of the "moral defense of the record" and replacing it with a dominant ethos of information-processing efficiency. The author argues that focusing on information-processing efficiency over the defense of records against manipulation and corruption (the ancient task of the recordkeeper) has contributed to a diminution of the trustworthiness of information and a rise of disinformation, with attendant destabilization of the epistemic trust fabric of societies. Readers are asked to consider the potential and the limitations of blockchains as the technological embodiment of the moral defense of the record and as a means of restoring societal trust in an age of disinformation.

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Blockchain Technology in an Age of Disinformation

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For Sasha

The theory of the future belongs to history
—*(Novalis (1772–1801),* Notes for a Romantic Encyclopaedia)

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Preface

The impetus for this book came about on May 15, 2015. I happened to be reading the news that morning as I bused into work. An article picked up from the Reuters newswire caught my eye: "Honduras to build land title registry using bitcoin technology" (Chavez-Dreyfuss, 2015). It was from that point that I fell down the rabbit hole of blockchain and distributed ledger technologies. What this article signalled to me was that blockchains were moving into the mainstream of recordkeeping. As an archival scientist – someone who studies the theory and application of recordkeeping and long-term preservation of records – this seemed like a development I should investigate further. And investigate it I did, publishing in early 2016 an article on the plans for the application of blockchain technology in Honduras (Lemieux, 2016c). Although I was skeptical about these plans, I also recognized the potential of blockchain technology to return something lost and for which many had been searching amidst the mass "datafication" of records in our current age of disinformation: epistemic trust. Blockchain's "immutability," or what recordkeepers might better recognize as intellectual and material "fixity," stands in opposition to the malleability and manipulability of information that is so often exploited in disinformation campaigns and cases of fraud.

Another impetus for writing this book arose from what I observe as the puzzling absence of archival knowledge among those involved in the design and operation of the blockchain and distributed ledger systems that purportedly seek to offer trustworthy records and recordkeeping. I have observed multidisciplinary conference after conference on blockchains and distributed ledgers call for input from computer scientists, engineers, economists, and social scientists, but not once has such a conference called for input from archival scientists. I can only surmise that this oversight is due to a lack of knowledge of archival science, perhaps understandable given the discipline's smaller

scholarly "footprint" compared to these other disciplines. Thus, in this volume I aim to make an initial foray into contributing an archival perspective to the ongoing discourse on blockchain and distributed ledger technologies with an illustration of how an archival theoretic analysis of blockchain and distributed ledger systems can provide a useful lens when considering the design of such systems vis-à-vis the goal of achieving epistemic trust.

Though I began writing the book with this pragmatic and instrumental objective in mind, over the course of writing I came to see that a greater contribution from archival science to understanding blockchain and distributed ledger systems – or, rather, ecosystems – in an age of disinformation comes from the discipline's enduring presupposition that records of all types, including distributed ledgers, are deeply involved in the construction of our social worlds and, as such, offer a means to enter into and understand the life world of those responsible for records creation and keeping. From this archival vantage point, a study of blockchains and distributed ledgers – in which epistemic trust figures as a central problematic – can impart a view of our own life world in microcosm, from which we might learn something about the origins and possibilities for resolving the socio-epistemic challenges of our present times.

Given these goals, I have chosen to organize this volume into five parts. Part I comprises an introductory chapter that discusses what blockchain technology is and how the "immutability" of the distributed ledger takes shape through the interaction of social actors and technical components. Part II delves into the concept of trust, discussing the tight coupling that exists between epistemic trust and societal trust. Part III then moves on to how societal and epistemic mistrust is a defining feature of the age of disinformation. In Part IV, I focus on the topic of blockchain and distributed ledger systems as solutions to problems of epistemic mistrust. And, finally, in Part V, I explore the idea of blockchains and distributed ledgers as microcosms that provide windows into our own socio-epistemic challenges in an age of disinformation.

While primarily intended for philosophers and designers of blockchain and distributed ledger technologies who are unfamiliar with archival science theories, principles, and practices, I also hope that this volume might offer archival theorists and professionals new insights as well. Specifically, I hope to provide a perspective on archival ideas that illustrates how they can inform thinking about novel blockchain and distributed ledger technologies. Very often the flow of ideas runs into archival science from other domains of discourse rather than the other way around. As I hope this volume will demonstrate, archival science can be as enriching of other domains as it is enriched by them.

For those studying the social and epistemic problems of disinformation, I hope that this volume serves to highlight the importance of a deeper

exploration of records and recordkeeping systems, such as distributed ledgers, as sources of evidence supporting truth claims, as well as the potential value to be gained from using archival science theories, principles, and practices to interrogate how such sources come into existence, how they might be authenticated, protected, and preserved, and what they reveal about the challenges of our current times.

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