

Chapter 7

The Evolution of Web 3 and Decentralized Governance

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ABSTRACT

In this chapter, the authors give a theoretical overview of the landscape of decentralized autonomous organizations (DAOs) as the native organizational structure of Web 3. The authors place this new formation in the existing theoretical framework of transaction cost economics and new institutional economics analyzing their governance from economic and legal perspectives. They argue that DAOs are so-called hybrid organizations, which embrace features from the free market and from hierarchical organizations. DAOs show characteristics of hybrids such as pooling resources, coordinating operations by contracts and facing competition in their coordination. However, their changing nature imposes challenges in their identification.

INTRODUCTION - WEB 3 AND THEIR NATIVE ORGANIZATIONS THE DAOS

In our chapter, we analyze the latest developments in Web 3-native governance, aiming to understand how the initial motivations of the movements that led to the emergence of this system have impacted the new application of democracy and economic freedom, thereby posing new challenges to the concept of governance.

The Web has undergone significant development over the years, through the Web 1, Web 2, and Web 3 stages¹, evolving from a simple collection of static pages to a dynamic platform that enables rich multimedia experiences, social networking and e-commerce, to the point of representing a new model of expression of individual power in an economic and idealistic sense. The term “Web 3” refers to a fresh rendition of the World Wide Web that encompasses principles of decentralization, blockchain technologies, and token-based economics. Coined by Gavin Wood, co-founder of Ethereum in 2014, which is the

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preferred platform for developing decentralized applications that are the foundations of Web 3. As the Ethereum website describes, Web 3 services can be completely dependent on algorithmic settings and peer-to-peer transactions, creating an ecosystem where all participants serve some form of contribution to the overall experience² and participation occurs in a completely horizontal and distributed manner.

The technological innovation was never merely a development that affected computer science but it was embedded within social ideology. Decentralization, in conjunction with cryptography, assumes a pivotal role within the “Cypherpunk movement”³, a collective of activists advocating for privacy, security, and anonymity. Anderson (2022) Emerging in the 1990s, this movement comprised academics, researchers, and hackers who aimed to subvert government surveillance and advance the utilization of cryptography to safeguard individual privacy. Within the framework of system operability’s initial layer, users engage directly with the smart contracts⁴ of a protocol, engendering actions that possess equivalent attributes of censorship resistance, permissionless, and decentralization as the underlying protocol itself. This decentralized paradigm hinges upon the implementation of resilient encryption systems to reconfigure prevailing social, political, or economic disparities, as analyzed by Ramiro and Queiroz (2022). In this context, we can identify the importance of the concept of DAO as a form of relationship management capable of eliminating several of the problems manifested by ordinary legal structures of corporations or associations. As argued by Berg, Davidson and Potts (2019), blockchain technology is primarily an institutional innovation, rather than solely or merely technological.

A DAO operates on the principles of blockchain technology, utilizing predetermined rules and criteria facilitated by the permanent notarization of information. The DAO represents a significant manifestation of decentralization, arising from the foundational principles established by the Cypherpunks and the technological advancements in blockchain that paved the way for the development of Web 3. In contrast to traditional systems that rely on a central authority to record transactions, a DAO functions autonomously, eliminating the need for a manager or leader. Instead, decision-making authority rests within the community, embodying the essence of decentralized decision-making. Furthermore, a DAO can be formulated with diverse objectives, encompassing a collective of investors seeking collaboration, an endeavor focused on providing financial support to a specific entity, or even initiatives involved in cultural exploration or multimedia dissemination. Essentially, it encompasses any form of undertaking characterized by the pursuit of various projects, distinguished by their detachment from a centralized decision-making structure.

While DAOs embody numerous technological and organizational innovations, we argue that the social and organizational principles on which they are based are deeply rooted in broader economic and legal traditions. Accordingly, they can and need to be integrated into existing organizational structures. Why is it beneficial for DAOs and regulators to position the organization on a classical theoretic framework? For DAOs, it helps in selecting the most suitable governance method for their specific institutional structure. For regulators, it serves as an indicative signal that the organizational ecosystem is quite complex, and oversimplified or misinterpreted regulation may lead to market anomalies. The institutional responses observed in the United States vividly illustrate the impact of the differences in interpretation on society and the economy.

However, it remains a question as to what extent legally unregulated and socially undefined entities, which are constantly changing in terms of their number and form, can be categorized and identified. We believe that placing them within a broader interpretative framework and identifying certain characteristics that make them similar to one or another type of organization will overcome the pitfall of creating schematic systems “too early” that cannot be applied to the new or forming elements of a transforming group.

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