

Emerging Regimes of Value in Distributed Autonomous Organisations

Abstract

This discussion paper brings in perspectives from technology, social sciences, and economy to interrogate the emerging forms and meanings of value related to Distributed Autonomous Organisations (DAO). The paper explores the way value determines the social structure and the life cycle of DAOs, and how these, in turn, can contribute to a rethinking of social contract. We explore this process in the context of the wider political economy enabled by Distributed Ledger Technologies (DLT) and Smart Contracts (SC).

In the recently emerging forms of economic reasoning, DAO challenge not only the nature and meaning of ownership, trust, value, and systems of rights between individuals and institutions, but also the very realm of formal economy, which is the way people think about and understand their economic lives. Economic value has been described for a long time as laying at the intersection between on the one hand, the formal (conceptual and normative) economy, and on the other hand, the substantive (practical) economy (Polanyi, 1944). In the context of the recent advancements in distributed computing and the emergence of multiple co-existing economic paradigms, including the virtualization of financial instruments, the commodification of cultural experiences, and the sharing economy with a wide range of affordability and scope, DAOs attempt to integrate the rigour and predictability of formal economics with the flexibility and variation of practical economy.

We start from the observation that much of the ethos of DAOs is about the development and use of machines, transactions, and distributed computing techniques to increase the efficiency, reliability, and trustfulness of human interactions within organisational rule-based structures. The paper will discuss the model of a DAO based on distributed transaction processing using a governed block chain (Lundbæk et. al., 2016). The paper will explore the challenges of this target architecture, including its capacity to integrate change and to interact with the outside world. We will address questions such as: How do DAOs support change management at different hierarchical levels within the organization? How can DAOs and their immutability aspects incorporate the rather implicit dialectical processes our society is built on? How can ambiguity be built in the block chain without necessarily increasing the attack surface or distrust of human participants?

The second part of the paper focuses on the current developments in the Smart Contracts space and interrogates the way different organizations understand to design and attribute value. We will explore the ways in which Smart Contracts enable individuals and organizations to carry out activities of production and circulate objects and services while also co-participating in the design and normalization of ways to regulate the economic and social activities they are part of. We will address questions such as: What are the wider implications of codifying organizational behavior in a smart contract? How could one write such code so that it works outside predictable environments and in inherently unpredictable situations? How can successive modifications to the initial design assure the versatility, tolerance, and compromise that characterize human relations?