Chapter 5
The Real Blockchain Game Changer:
Protocols and DAOs for Coordinating Work to Provide Goods and Services

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ABSTRACT

The single critical output of a blockchain is creating trust where previously impossible. While this feature delivers compelling value for many use cases (bitcoin for money, standards setting and data sharing for permissioned blockchains, audit trails and protection against liability in supply chains), the most novel use case has been something unexpected: the birth of a new type of social structure to provide goods and services. The early examples of this new type of social structure have shown themselves to be incredibly effective at providing those services to their users.

INTRODUCTION

Many historical developments, whether technological or social, were relatively unappreciated in their early days. Their utility is compared against the existing order of things: steam engines against animal-drawn carriages, paper money against gold, and so on. Eventually, their paradigm-shattering nature

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becomes evident to all, and a rough transition takes place. Blockchain technology seems like it is on the verge of that same transition.

When Bitcoin was first revealed in 2008, its potential was visible to only a tiny group (Nakamoto, 2009). Over the last ten years, Bitcoin slowly gained ground, and in the process, it birthed generalized Blockchain Technology (BT). What was challenging to see in 2008 is now on the edge of clarity: BT is a dramatic technological step into the future because it enables social coordination that would be otherwise impossible (De Filippi, 2016).

The single critical output of a blockchain is trust, upon which social coordination is built, provided that a specific set of rules have been followed (as determined by the consensus algorithm), you can be confident that information in a blockchain is accurate, and you can audit the entire history of additions and changes to that information (Namasudra et al., 2020; Zheng et al., 2018).

While this feature delivers compelling value for many use cases (Bitcoin for money, data sharing for permissioned blockchains, audit trails, and protection against liability in supply chains), the most novel use case was something unforeseen: the birth of a new type of social structure to provide goods and services (Li, 2019). Automated and decentralized protocols were generated within a network that controls transactions, but the individuals do not even need to know or speak to each other, as their trust in the system is on a token-based incentive scheme (Voshmgir, 2020). These social structures are generally called protocols or Decentralized Autonomous Organizations (DAOs) in the blockchain community, and they have a unique advantage over previous social structures (clans, empires, and corporations) in producing wealth. DAOs are the highest form of a smart contract. They are run by rules created by members through a consensus process, which are then written into a set of contracts run through a computer code, thus, enabling the automated management of a distributed organization (Sims, 2020).

Traditional Organizations and DAOs

Until today, only a few major social structures have contributed to the material advancement of humankind. First among them is the family, which grows until it becomes the clan and then the tribe before hitting the limits of its ability to coordinate work. The tribe is based primarily on blood relationships and the trust that comes from looking out for oneself. It fails to effectively coordinate work for those outside the tribe (Greif, 2006; Werbach, 2018).

The second central structure is the state, which lays claim to sovereignty over a place or a group of people. Urbanizing tribes formed states which could coordinate a far greater number of people under their codified laws, caste structures, and unified ideology. Most of written history is the history of states and their competition for power and resources (Biersteker & Weber, 2011).

The third primary structure is the corporation, which aligns a core group of contributing stakeholders (the shareholders) to achieve specific material aims. The shareholders contribute capital, which they use to contract labor to produce some good or service sold for profit to consumers (Maher & Andersson, 2005). The corporation is a relatively recent development, becoming a standard institution only over the last 300 years. The corporation's age begins with the age of exploration (Weber, 1978; Pomeranz, 2001).

The development of each social structure unleashed a torrent of materially creative forces for humankind. The tribe was able to support more sophistication and technological development than a bunch of families could. In turn, the state organized far more labor and specialization of labor than any number of tribes could. Finally, the corporation and multinationals organize labor far more efficiently and at a grander scale than states do (Morgan, 2009).