



Blockchains, Smart Contracts, Consensus Trust, and Pluralistic Morality

One of the most interesting recent emerging technologies is blockchains, trustless permanent cryptographic public ledgers underlying digital currencies like Bitcoin. Some of the implications are that in the future, property might be registered and transacted via blockchains as *smart property*, and likewise, agreements, contractual relationships, and governance might be enacted through code-based *smart contracts*.

The key consideration raised by smart contracts and systems of cryptographically-activated assets is whether a new body of law and regulation is required to distinguish between technically-binding code contracts, and more flexible legally-binding human contracts. Contract compliance or breach is at the discretion of human agents in a way that it is not with blockchain-based or any kind of code-based contracts. Further, smart contracts impact not just contract law, but more broadly the notion of the social contract within society. As it could be nearly impossible to enforce smart contracts with law as currently enacted (for example, a decentralized program already launched and running is difficult to control, regulate, or sue for damages), the legal framework is essentially pushed down to the level of the contract. It is not that lawlessness and anarchy would ensue, but that legal frameworks would become more granular and customized to the situation. Parties agreeing to a contract could choose a legal framework just as jurisdiction is selected as a parameter now.

Smart property and *smart contracts* are just one visible dimension of the new kind of decentralized information technology that is blockchains. Blockchains shift communications networks from dumb to smart. *Smart networks* do not merely transfer information technically, they require affirmation via consensus mechanisms. However, in decentralized trust networks, there is the potential issue of the tyranny of a monolithic morality. On the one hand smart network operations coordinated by consensus models is positive, this could be an enforcement mechanism for cooperative bonafide players in a moral society, including friendly artificial intelligence. On the other hand, this is terrifying (or at least potentially liberty-circumscribing or normalizing) in the sense that any one entity might have to depend on the monolithic crowd to conduct even the simplest of network operations, emblematic of the tyranny of minorities and majorities.

In the long-term design space of digital society, technology models are required that are global, public, accessible, and universal in some ways, but also accommodate the rich and diverse pluralistic morality that exists among human communities. The decentralization attribute of blockchains is one way to effectuate this, through reputation communities. The agents vouching for and confirming your reputation should be part of a community in which both you and they participate, where they can be rewarded if they vouch for you correctly. The potential tyranny of monolithic morality can thus be avoided in consensus models by having community peers, geographical or otherwise, vouching for your reputation. These kinds of inclusive pluralistic morality models could be exactly the responsible technology innovation that is required to progress to the next-level stages of advance as a planetary society.