

Bitcoin as Social Systems Theory N Gallant

The most important step of economics in the form globally social theory might have been the following paragraph:

“... The incentive may help encourage nodes to stay honest. If a greedy attacker is able to assemble more CPU power than all the honest nodes, he would have to choose between using it to defraud people by stealing back his payments, or using it to generate new coins. He ought to find it more profitable to play by the rules, such rules that favour him with more new coins than everyone else combined, than to undermine the system and the validity of his own wealth.”

- S Nakamoto, *Bitcoin: A Peer-to-Peer Electronic Cash System*

Whether many like it or not, the value of digital currency is real. They can currently be traded for fiat and thus have a social value on the same scale as hard money. The individual price of tokens are merely a measure of the overall use and utility of the currency relative to itself and are arbitrary in understanding the fundamental driving force of the value of the tokens. This driving force can be quantified and qualified through understanding our economy as mainly a system of continually affirming the shared monetary ledger as it is in our best economic interest. In the modern capitalist society, the economic ledger is upheld by banking institutions attempting to keep the proper balances by law and through a personal incentive to keep the trust of the people. We might transition then into a new age whereby we intentionally create artificial social systems which encourage positive behavior that aligns philosophically with our goals as a society.

The example of Bitcoin is evidence of this principle in action. The genius of blockchain/Bitcoin is that it takes a specific goal, and makes it the economic interest of a population to achieve that goal. In the case of Bitcoin the goal is the very maintenance of a transaction ledger. As time progresses, the transaction-based blockchain remains a methodology for securing the value of tokens which hold some other intrinsic value. The tokens may be the precise entities which are the goal of the blockchain, as is the case for Bitcoin, which aimed to create virtual money. However, a utility value may be given to the tokens which is used in exchange for other goods through a contract. This “contract” is one of the precise methodologies by which new behaviors can emerge from the development of advantage-based systems. Blockchains are continually developed which utilize this utility token protocol, but the application of the shared ledger protocol extends much further in influencing human behavior through economic advantage.

Another example of applied social system theory enabled by the internet is explaining the failure of p2p systems. While this can also be considered a marketing and law failure, functionality and usability were also major reasons for its demise. We can explain its failure through economic and technical reasoning. As torrenting relies on consistent piecing together of spread information verifiable by a hashed checksum, the checksum itself can easily, intentionally be reconstructed with fake, empty data. As the economic interest of the record and movie labels effected by the torrenting is inequivalent to the cost to attach a torrenting

network, they can simply purchase the computational power to become the majority seeders of the files and corrupt them.

In a more extreme note:

The rational, logical decisions of people might be coerced to for bad through economic scheme, and we must develop our own systems of doing good first.