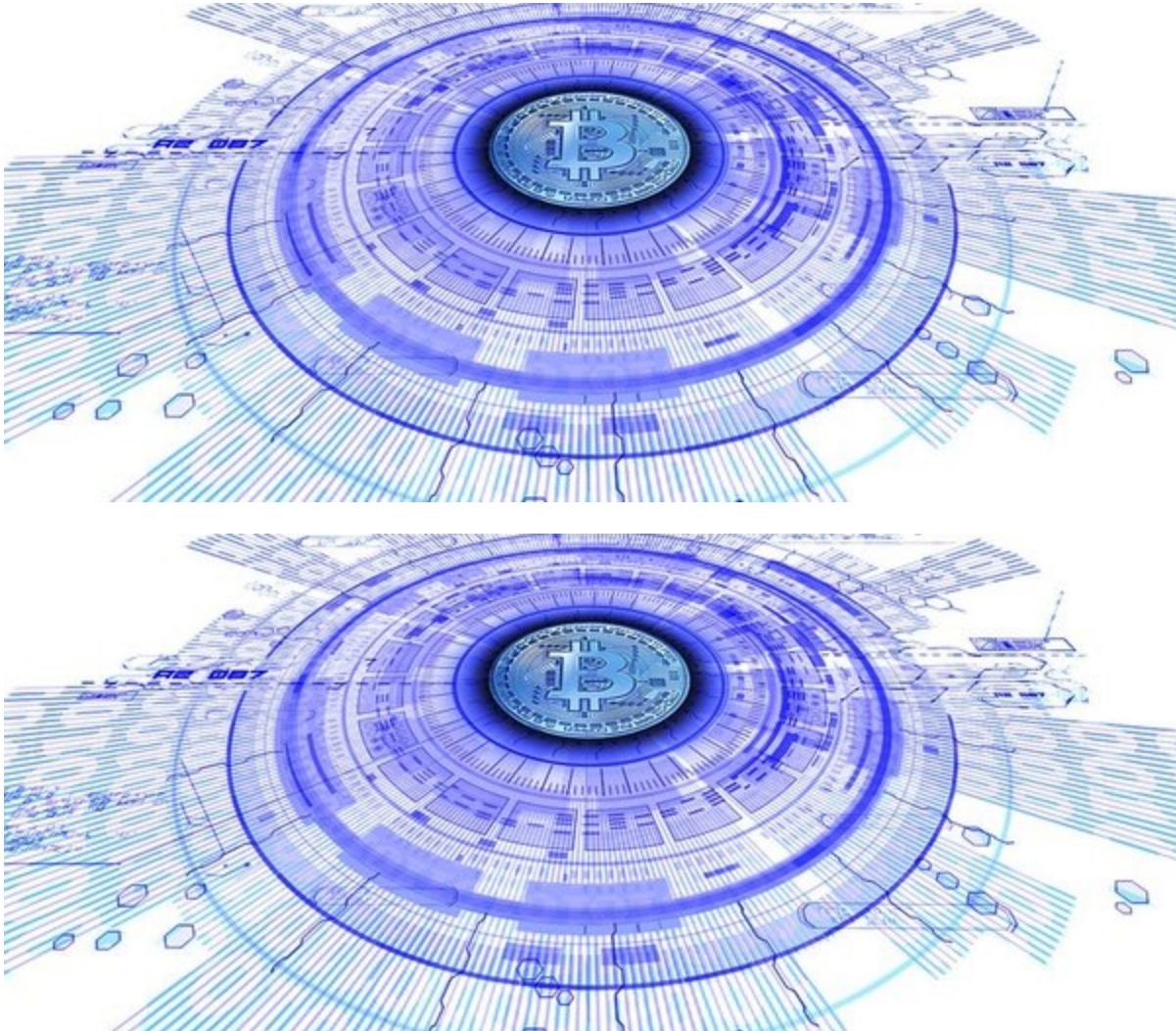


Bitcoin and Blockchain Governance: What It Is and Why It Matters

 bitcoinmarketjournal.com/bitcoin-and-blockchain-governance

May 1, 2019



Bitcoin and Blockchain Governance

Immediately after the American Revolution, democracy was so new that it would have been nearly impossible to design a government that could handle every future contingency. Remember the Articles of Confederation? They didn't work out so well, but the Founding Fathers learned from that experiment and created the model of governance that still exists today.

We often hear the phrase, "If the Founding Fathers were alive, they would" The reality is that we don't know what they would think; we can only speculate. However, they built amending mechanisms into the Constitution through which it could be adapted as new and

unplanned situations arose.

The same can be said for Satoshi Nakamoto, the *creator* of bitcoin. Since we don't know who "he" is, we can only speculate on what opinions he would hold as the blockchain continues to evolve. Although he could not anticipate every future challenge, he did create a form of governance in bitcoin with the potential to adapt, which is an essential quality for any emerging technology.

The Connection between Bitcoin and Blockchain Governance

You may have heard the saying, "What's good for General Motors is good for America." This derived from the many key industries in the U.S. economy (steel, oil, rubber, glass, transportation, finance) that were tied to the auto industry and its flagship company. A similar statement could be made with regard to the relationship between bitcoin and the blockchain industry.

There are many parallels in governance between bitcoin and the United States. It can be argued that they didn't respectively invent either the blockchain or democracy—the key elements of which both are comprised had all previously existed. The shared distinction is that they combined those elements in novel ways that resulted in the first successful and sustained respective examples of each that still exist today.

Just as the United States served as the model for democracy as it spread throughout the world, bitcoin is the model for blockchain governance. Neither is necessarily the best, nor the most efficient. There are many countries and altcoins that have their own variations of governance, and some work better than others relative to their varying needs. In the same way that the stability of the United States government has ramifications in international politics, so does the stability of bitcoin in the blockchain world.

Variations of Distributed Ledgers

Blockchain is a distributed digital ledger technology in which algorithms have replaced a central authority. These ledgers vary based on who can access and validate them, but we will begin our discussion of governance with the form utilized by bitcoin—a permissionless, publicly shared ledger in which multiple copies of the ledger exist, accessible by anyone, and maintained by an untrusted consensus.

The Origins of Bitcoin Governance

Blockchain is inherently decentralized, implying the elimination of a central authority. In the political world, scalability is addressed by changing from a direct democracy in which everyone votes on all issues to an indirect democracy in which representatives are elected to

vote on the issues. This leads to the question of how blockchain governance can work without centralization once a critical size is reached.

The initial vision for bitcoin governance was influenced by the following statement by MIT's Dave Clark of the Internet Engineering Task Force: "We reject: kings, presidents, and voting. We believe in: rough consensus and running code." This is based on the belief that centralization leads to opportunities for exploitation of the system.

The Meaning of Consensus

There is no clear percentage to define consensus. As a compound mathematical inequality, it would be $50\% < C < 100\%$, which is of little benefit, especially since the vision is to reject traditional voting methods. Consensus revolves around the idea of the consent of the minority to be governed by the majority with the belief they will not be exploited, and over time the results of the consensus process will roughly even out.

The consensus algorithm used by bitcoin, which became the initial standard for blockchain projects, is known as proof of work (POW). In POW, miners solve increasingly complex and resource-consuming problems for the right to validate a transaction, which will then be stored in a timestamped block on the ledger. As bitcoin has increased in scale and the blockchain industry has evolved, significant flaws in POW have been exposed.

Just as there are issues with the validity of voting in a democracy (and there are proposed and existing blockchain solutions for improving the voting process by increasing transparency and inspiring confidence), there are also alternative methods to POW for achieving consensus. If you are interested in learning more about the limitations of the existing consensus algorithms and one proposed solution, [click here](#).

Why Does Bitcoin Governance Work?

Trust is essential for commerce. Government can enhance that trust as long as it doesn't overregulate. When regulation is absent, the more that the blockchain ecosystem can self-regulate, the better the results will be.

One of the reasons that the U.S. form of democracy is stable is because it moves slowly. The system of checks and balances prevents any one group from gaining too much power. Through the interaction of its core developers with their Bitcoin Improvement Proposal (BIP) system, bitcoin uses what can be described as a marginal incrementalist approach to implementing strategic decisions. It is for these same reasons that the strength of bitcoin in the stability of its governance structure is also its weakness in that it is neither fast nor efficient.

Ironically, the terms inefficient and ineffective are often used interchangeably, yet it is this inefficiency that leads to the effectiveness of the network in terms of the trust fostered by its stability.



How does Bitcoin Governance Work?

The United States has a tripartite government in which the legislative, executive, and judicial branches all interact to stabilize the democracy. With bitcoin, the three major players are the software developers, the miners, and the token holders (users). The one key difference is that with bitcoin, there is no equivalent of an executive branch to implement emergency decisions in a timely and agreed upon manner.

Theoretically, the bitcoin code should govern itself, but in order to address that claim, one must understand the difference between “rulemaking” and “rule enforcement.” Blockchain *enforces* the rules by eliminating the need for validation by a trusted third party or intermediation; however, the rulemaking is still determined by human decisions. When unexpected situations arise, human intervention is needed.

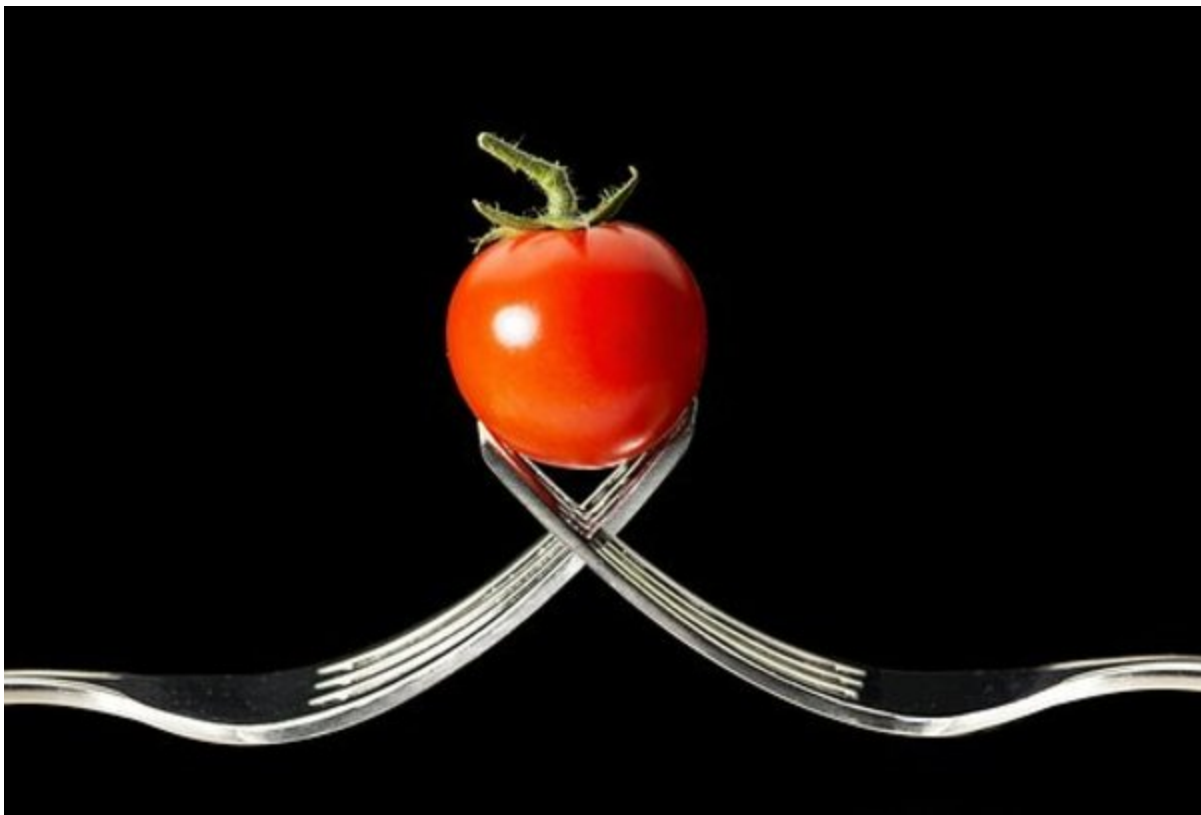
This is consistent with the thoughts on smart contracts vs. legal contracts in the ability of blockchain code to handle routine, predictable transactions while attorneys still have an important role to play in addressing unplanned events.

On-Chain vs. Off-Chain Governance

In any discussion of governance, we must distinguish between who makes the laws and who enforces the laws. Blockchain developers essentially make the laws in the code that they write, but the blockchain itself enforces those laws. The blockchain has no ability to make its own laws without the developer. However, just as there is no governance without the consent of the governed, the developers have no capacity to govern without the consent of the miners and users who choose to adopt a specific software version.

On-chain governance mirrors a direct democracy by placing control in the hands of the users who make decisions by voting. To address issues of scalability, it begins to take on elements of a representative democracy, but in doing so, it still attempts to balance the power to prevent certain groups from acquiring undue influence. On-chain governance has largely been theoretical to date, but Tezos is currently working to implement these measures.

Off-chain governance, the method most closely associated with both bitcoin and Ethereum, is methodical in the balance of power between the leaders of the three main aforementioned parties, but its strategic limitation is that because certain key players exert more influence than others, an inherent degree of centralization ensues. As a result, many smaller players are excluded from the governance process. However, a critical mass of unsatisfied users may initiate a hard fork, which is more efficient than a typical corporate split.



What Are Forks?

You have probably heard of forks as the great threat to blockchain governance. To address this threat, we need to explain the differences between soft forks and hard forks. These differences are due to the compatibility of the code they run and their impact on the distributed ledger.

With *soft forks*, the two chains are running different code, but they are still compatible with one another. Soft forks allow for transactions that would have previously not been permitted on the ledger to now be written to it. Soft forks tend to be rather common-sense changes as they require a 95% consensus to be implemented.

Think of soft forks as individual states choosing to follow a few different laws. They are still all within the jurisdiction and enjoy the benefits of the United States. Even though in some states different rules may apply, generally unrestricted commerce and movement of people exists amongst them.

Hard forks occur when the two chains are running code that is incompatible, so as a result, two different chains emerge that are no longer reconcilable. Hard forks are more like the Confederacy seceding from the Union. The changes and resulting differences are so significant that the two groups are no longer compatible. Just as the Confederacy claimed that it was holding true to the original vision of the Founding Fathers, when hard forks occur, in some instances, each side considers itself to be holding onto the true, original vision of the blockchain.

Although forks are not desirable, when they do occur, they can actually validate the viability of a blockchain project by surviving a situation where an impasse exists in which a significant minority view can no longer accept the prevailing situation. In many instances, the issue of who holds true to the initial vision is less relevant in determining what is the true version of the blockchain than which blockchain has the most hash power, or in the case of civil wars, whichever side wields the most firepower.

The Two Most Significant Forks

The two famous examples of forks that tested the viability of the blockchain are the forks that led to Bitcoin Cash (BCH) and the Ethereum Classic (ETC). In each case, both bitcoin and Ethereum not only survived but arguably became stronger as a result. In the short-term, trust was damaged, but in the long run, it persevered.

Although there are differences in the governance structures of bitcoin and Ethereum with Ethereum generally considered to be more centralized, the difference between the bitcoin and Ethereum forks is that the bitcoin forks were about correcting errors that never should have been written to the blockchain, or in the specific case of BCH, increasing the block size.

With Ethereum and the DAO incident, the blockchain transactions were all legitimate according to the code, so when they were reversed, it was initiated by a centralizing authority, the Ethereum Foundation.

Ethereum Classic (ETC) resulted from a minority who considered it to be more important to maintain the decentralization, even if it meant the loss of a significant sum of money. It should also be noted that although Ethereum (ETH) is recognized as the true Ethereum blockchain because ETC broke from the ETH fork, it is ETC that is actually running the original Ethereum code and maintaining the immutable ledger.

The analogy that can be used to explain this fork is the classic political dilemma in which people with strong political leanings must choose between an honest politician from the opposite party or the corrupt politician from their own party. In whom do you place your trust?

Most who grew up in former communist countries will never support the more left-leaning candidate because, for them, the most important goal of the political process is to eliminate any form of socialism from ever taking hold, even if there is a logical reason for it. They see socialism in the same light as the ETC proponents view centralization. In the case of blockchain forks, the key question is, “What is the greater threat: flawed humans or a flawed system?”

As noted In a recent Forbes Article titled, *Bitcoin Cash 2019 Returns Double Those of Bitcoin*, BCH has actually outperformed BTC (up 105% compared to 45%) so far in 2019. Now, according to the blockchain investing thought leaders referenced in the article, there are several logical explanations that would contribute to this, including a lower market cap (\$5.5 Billion vs. \$93 Billion), bitcoin spillover effects, a lower price, and a less developed futures market, but again, both entities not only clearly survived, but they have also thrived after the hard fork.

The Future of Blockchain Governance

According to the World Bank IFC, the majority of corporate blockchain ventures have utilized permissioned or private blockchains to balance the benefits of the distributed ledger with ensuring that they maintain control over their business objectives. This is consistent with the “consensus” opinion from the recent Penn Blockchain Conference that permissioned blockchains are a key step in the progression toward increased decentralization and disintermediation as confidence grows in the emerging blockchain technology.

Just as viable democracies in varying forms promote international trust and commerce and prevent the need for sanctions from the United Nations, the proliferation of effective blockchain governance throughout the world of altcoins and token projects will mitigate the

need for outside government intervention and regulation that could inhibit industry growth. At Bitcoin Market Journal, our goal is to disseminate information to promote effective blockchain governance so that this vision is realized.

To remain at the forefront of the most significant innovations, decisions, and trends impacting the world of altcoins and blockchain, [subscribe to the Bitcoin Market Journal](#) newsletter today.