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Ethical Considerations of Blockchain: Do We Need a Blockchain Code of Conduct?

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The FinReg Blog

Commentary by faculty and affiliates of the Duke Law Global Financial Markets Center

Ethical Considerations of Blockchain: Do We Need a Blockchain Code of Conduct?

By Guest Blogger | January 21, 2020

0 Comment

Courtesy of [Michele Benedetto Neitz](#)

Blockchain technology is not as decentralized as we think. From the outset, the original innovators of blockchain viewed the technology as an opportunity to solve the “problem” of government oversight over economic activities. A truly decentralized, immutable ledger, would remove the potential for human shortcomings and state control, impacting everything from money and health care to supply chain management and electronic voting.

But as states begin to adopt regulations governing cryptocurrencies and other uses of blockchain technology, it is becoming clear that the libertarian ideal of blockchain was just that – an ideal. There are already examples in which human decision-making has counteracted the immutability of some blockchains. In short, there appears to be a movement toward centralization within this decentralized technology.

This movement has profound consequences. As my recent [article](#) examines, whenever human decision-making processes are in effect, the possibility of ethical concerns arise. Ironically, it is exactly this type of flawed human process that blockchain was designed to solve.

Are Blockchains Truly Decentralized?

Proponents of permissionless blockchains argue that decentralization is critical to the vision of this type of blockchain. For example, although consensus may ultimately create a centralized viewpoint, Ethereum is intended to be architecturally decentralized. However, the Ethereum core developers have an outsized influence over the decisions made on the Ethereum blockchain.

Two recent examples illustrate the power of these “agents of influence.” In 2016, the infamous hacker of the DAO on the Ethereum platform exploited a vulnerability to drain almost a third of the \$160 million in Ether raised by the fund. In response, Ethereum’s seven core developers [proposed a hard fork](#) to reverse the transaction and restore the funds. The majority of Ethereum miners adopted this solution and changed Ethereum’s code, thereby modifying what was thought to be an immutable blockchain.

This extraordinary remedy was created by a small group of people advocating successfully for the hard fork. Nearly two years later, a developer company named Parity left a bug in its smart contracts on the Ethereum platform. The bug enabled a user to accidentally take control of hundreds of wallets containing millions of dollars’ worth of Ether. When

the user tried to return the money by deleting the code that had transferred ownership, he permanently “froze” \$300 million worth of Ether. The owners of the frozen currency justifiably pushed for a hard fork in this case, arguing that this event was similar to the DAO hack. However, Ethereum’s core developers decided against a hard fork in this case, instead electing to leave the \$300 million locked.

The hard fork in the DAO case, and the lack of a hard fork in the Parity bug case, are instructive examples of the power of a small group of people to influence decisions on a blockchain platform. In the first situation, the core developers influenced the return of millions of dollars to the proper individuals. In the second situation, the core developers influenced the decision to allow millions of dollars to be locked away. Those decisions were made not by math or algorithms, but through the influence of a small number of core developers. The human intervention in the process raises ethical concerns. If the management of public blockchain platforms is so strongly influenced by a small number of core persons, we should ask whether they will bring their biases and conflicts of interest to the blockchain. These issues are not limited to permissionless blockchains, as demonstrated by permissioned blockchains such as Facebook’s Libra.

[Libra’s White Paper](#), published in June 2019, describes the company’s intent to design and govern Libra’s ecosystem for the “public good.” Although all consumers would be able to use the currency, Libra’s governance and control is reserved for those selected by Facebook to be a part of the Libra Association. While the Libra Association intends to eventually transition to a permissionless blockchain for Libra, that reality is still years away.

The Libra Association also prompts an obvious question: who will be part of the Association, and therefore be able to join the Council and/or the Board to make decisions for the blockchain? Unlike the culture at Ethereum, which is open to any code developer, membership in the Libra Association requires an elite set of credentials. Libra’s developers argued that limiting Founding Member status to organizations with established reputations makes it less likely that those members would act maliciously. However, one need not look too far to find “established” companies embroiled in corporate scandals. How can we know whether Libra’s Founding Members suffer from biases or conflicts of interest that will affect the blockchain, including the hot topic of whether Facebook will truly refrain from connecting spending power with identity data?

It is difficult to reconcile the power of the Libra Association’s elite Founding Members with their goal of a “decentralized” blockchain. In the face of global criticism, more than half a dozen Founding Members have left the Libra Association in the last few months. Regulators worldwide have threatened to ban the currency until Facebook addresses regulatory concerns. With the success of Libra hanging in the balance, Facebook and the Libra Association should recognize the need for ethical standards as it develops this new currency.

The Ethical Concerns of Centralization and the Path Forward

Ethical issues can occur whenever humans are involved in decision-making. This is the reason that many professions—such as law, medicine, and accounting—create ethical standards of conduct. Blockchain technology, though still a new field, has the potential to be as impactful upon people’s lives as these established fields. For example, if Libra succeeds, it will potentially touch the lives of billions of people around the world. Accordingly, it is time to have the debate over the issues raised by human-influenced decisions in blockchain platforms.

When biases affect the decision-making processes of individuals in positions of power, the consequences can harm all of society. Although explicit bias may be easy to identify, it is harder to recognize the implicit biases that all persons possess. These biases especially impact snap decisions made quickly without much forethought. The human agents in a

blockchain platform, such as the Ethereum core developers or the members of the Libra Association, may also have biases. For instance, if they hold implicit biases against a certain group, these biases may result in members giving more weight to member suggestions than non-member suggestions.

The same is true for conflicts of interest— there is simply no way to know whether the people influencing the code design underlying permissioned and permissionless blockchains truly have the best interest of the users at heart. This is an acute problem for Facebook’s Libra, given Facebook’s checkered history when it comes to protecting users’ data.

It therefore makes sense to consider the creation of an ethical code of conduct for agents of influence in the blockchain space. Numerous states are moving quickly to develop regulations to govern blockchain technology, and it is worth debating whether these regulations should include ethical codes of conduct. Indeed, some blockchain technologists, including Ethereum engineers, are not waiting for government regulation and are actually creating their own codes of conduct.

There will certainly be challenges to implementing a blockchain code of conduct. Some would argue that there is no need to have a code of conduct for permissionless blockchains, since currency miners could just walk away if they do not like what is happening on a particular chain. Moreover, given the libertarian origins of blockchain, there would likely be a strong backlash. Blockchain developers who embrace the libertarian ideal will argue that implementation of a common standard goes against the very freedoms that make blockchain a revolutionary technology.

There are also issues of effective enforcement of ethical standards in this new field. For example, will developers lose their place of influence if they act in a biased manner or have conflicts of interest? How would the Libra Association handle a founding member with a conflict of interest? Jurisdictional challenges also exist, since blockchains are global and one country or state’s laws will not apply universally.

These challenges are not insurmountable, and we could look to other professions to find the path forward. But at a minimum, it is time for us to debate the need for ethical rules tailored to this new technology.

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