Leveraging DAOs To Change Corporate Governance: The Case for Colorado Policy To Promote DAOs

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The state of Colorado has embraced blockchain technology for quite some time now. Between the years of 2018-2022, the state of Colorado has been involved with around 9 bills to try and stimulate blockchain research and education in and around this technology. Colorado's recent interest in article 12 of the Unified Commercial Code is also another indication of Colorado's interest in blockchain technology. However, there is a new kind of disruptive organization that, while looks promising, will require legislation from the state of Colorado in order to make a reality. The Decentralized Autonomous Organization (DAO) is a disruptive kind of organization that operates solely based on the principles of lex cryptographica (Filippi & Wright, 2019). Essentially, DAOs are fully fledged organizations that operate solely based on smart contracts, blockchains, and the transacting members' data. Despite the infamous TheDAO hack in 2016 on a famous venture capital decentralized application (dApp) on the Ethereum blockchain, the state of Wyoming has gone ahead and made it easier for Decentralized Autonomous Organizations to try to form, innovate, and get off the ground. The blockchain community is still hopeful that DAOs can change corporate governance for the better and create new kinds of relationships between shareholders, managers, creditors, and laborers that are not as hierarchical. How exactly these relationships aught to be governed is a tricky question, however, and care should be made to try and stimulate innovation in answering this question. Unfortunately, it will take more than just technical expertise to answer the governance question around DAOs and social scientists may need to lend a helping hand. This paper will attempt to convince the state of Colorado to follow in Wyoming's footsteps and presents reasoning as to why the state should try and promote innovation within the DAO development space. This paper provides multiple sections to try and convince the state, including a description of what DAOs and why they matter, a description of how DAOs aught to be governed, presents relevant policies and government initiatives around the United States that are relevant to the DAO discussion, as well as some guidance towards how Colorado should proceed with enacting policy regarding DAOs. A discussion about both scalability and confidentiality challenges of blockchain-based transaction systems are outside the scope of this paper, as these are technical challenges that are important to each and every blockchain application. This paper solely focuses on DAOs, governance, and policy.

I. What Exactly is a DAO and Why Should We Care About Them?

From a basic definitions point of view, Filippi & Wright describe DAOs as follows: not necessarily having an owner, relying on a digital currency account to fund its own operations, utilizing deterministic or sophistical AI-enabled smart contracts to operate, being difficult to change after being deployed, and having the ability to distribute various kinds of internal capital in the form of tokens. DAOs are essentially powered by blockchain technology and have the ability to challenge existing organization structures of corporate governance. DAOs are still a type of firm that is governed by the principles of transaction cost economics, however they are radically different from traditional, human-run and hierarchical firms. Since a DAO's governance is accomplished via smart contracts and the blockchain data structure, there is native element of transparency that is usually not present in traditional companies. A board of directors or management team do not make all the decisions within the company. These top-level members of the hierarchy of the firm usually rely on market signals or managerial commands to perform their duties. Instead, DAOs utilize voting systems and group consensus to make decisions. Digging into Coase's theories a bit, DAOs could greatly reduce the managerial costs involved with running a company. Since managers would no longer be needed to manage group activity, operations and management costs could go down significantly.

While this type of firm is radically different from firms that have existed before, there is an example of such a firm that has been in production. In April 30th, 2016, there were 11k members and $150 million raised for a project known as TheDAO on the Ethereum blockchain (Liu et al., 2021). This was the first time the term DAO had really been used in the blockchain space, and the goal of the firm was to be a decentralized venture capital firm on the blockchain. All of its rules were written in code and it used a form of plutocratic governance, where any user that invested into the fund had the right to vote, in proportion to their holdings. By June 18th of the same year, less than two months after its release, a hacker used a recursive call vulnerability to steal a significant portion of the coins within the fund. Contributors were eventually given their money back, but it was a difficult process to go through. While the first experiment with TheDAO was a failure, there interest in these forms of organization is at an all time high in 2023. A number of companies are coming about and research into the future and viability of this technology/form of governance looks promising.

II. How Should DAOs be Governed?

This section provides both a technical perspective and a social scientist's perspective on how blockchains aught to be governed. Simply using principles of tech is not enough for creating DAOs, since if existing organization structures are simply being mimicked with blockchain technology and innovations in tech, the full capabilities of the technology are not being leveraged. It is through the social scientist's perspective that we get better insight into how we can architect and design a DAO that promotes the key tenants of blockchain - decentralization, democratization, and (re)distribution.

A. The Technical Perspective

The current market for blockchain apps and DAOs indicates a countervailing trend (Liu et al., 2021). This means that for every product proposal or innovation that comes up, there is a corresponding counter-trend or application that tries to take a blockchain product in a completely different trajectory in terms of governance. Depending on the specific implementation details, you can essentially create any kind of blockchain app. One the one hand, you have Monero, a cryptocurrency that uses ring signature-based encryption to completely anonymize all transactions on the public ledger, while on the other hand there are currencies like Bitcoin which pseudo-anonymously post all transactions on the distributed ledger for everyone to see. This same idea applies to DAOs, which can either promote existing hierarchies found in businesses, or promote a governance structure that is completely non-hierarchical. Currently, the blockchain market is incredibly stratified and has all sorts of products popping up, which can be confusing to consumers. By pushing forward regulations within Colorado slowly, the state can take charge and try to steer the technology in a way that prevents tech stratification and promotes the original, purest ideals of blockchain technology mentioned earlier. The details of the technical implementation matter when it comes to creating the right kind of governance structure.

Another technical facet of blockchain governance that Liu et al. try and address is the comparison between on-chain and off-chain governance. The ability to store things both publicly and privately on the blockchain has lead to a number of legal problems that need to be addressed. The current dominating theory of governance, agency theory, could come into conflict with how data ends up being stored on blockchains, be it on-chain or off-chain. Off-chain data storage still needs to potentially help members of the network make good discussions, but the risk of hard-forks makes it so that storing all data on-chain can be risky. Hard-forks should generally be avoided, since it can cause a stir in the community, so the balance between data availability for decision making, protection of privacy, and sanity of end-users could be difficult to manage. It's important the stress the need for gradual improvements in this space to determine what this balance should be.

B. The Social Scientist's Perspective

Jones (2019) describes decentralization as a new form of liberalism. Through three principles discussed in the social sciences, actor-network theory (ATN), multiplicity, and prefigurative politics, Jones describes what decentralization means in the political context. He also describes how most DAO projects encourage both decentralization and liberalism. Since liberal or Neo-liberal politics are now favored in many countries around the world, including the United States, the ideas the DAOs bring to the table could be seen favorably by the general public and many other nations around the world that ally with the United States. DAOs have the potential to be emancipatory to the people involved, while also getting the crypto-market out of the constant barrage of boom-bust cycles and get-rich-quick schemes the market currently faces.

Jones continues to argue that our understanding of money is what enabled the modern world to transition from the absolute monarchy-based governance systems of the past to our current form of bureaucratic governance. Jones quotes the Japanese philosopher Karatani directly here regarding what a bureaucratic system of governance fundamentally is - "jurisdictions clearly defined by regulations, a hierarchical system of official ranks, appointment by contracts entered into voluntarily, promotion determined by a regularized system of rules, specialized training, and salaries paid in cash" (p. 482). This system of bureaucracy is so ingrained, that is can be considered the boundary condition of all modern democratic politics - it is a challenge/boundary to overcome. The modern state of bureaucracy is bound together by the concepts of nation, state, and capital - a trinity that Karatani refers to as a Borromean knot. Only when either two of these concepts are strengthened, can the third be dismantled. Blockchain is capable of disrupting all three of these concepts within the Borromean knot. Through DAOs, it is possible for the world's governance structure to move beyond capitalistic bureaucracy and into a new kind of sharing economy.

III. Relevant Policies Outside Colorado Related to Blockchain and DAOs

Current developments in the blockchain policy/regulatory space have been particularly noteworthy. In 2022, the Uniform Commercial Code added article 12, which went ahead and provided consumer protections for an new asset called the controllable electronic record (CER) (UCC 2022 art. 12). This amendment didn't define a whole lot, which leaves space for innovation - the words blockchain, distributed ledger, and public/private key are not even mentioned. Instead, it protected all intangible and rivalrous assets that allow the owner of the asset to legally transfer ownership of said asset to another person or entity. Since no such asset has existed in history, it was necessary to define a new asset such as the CER. The state of Colorado has already adopted UCC article 12, which will help bolster consumer rights with regards to blockchain technology as well as bring more confidence to consumers to engage with DAOs.

Also, as of June 2023, the SEC has come after both Binance and Coinbase for operating as unregistered securities exchanges, brokers, and clearing agencies (U.S Securities and Exchange Commission, 2023). This accusation has come into place because these companies were not operating transparently, despite being crypto companies, and were selling what many investors consider to be securities. The reason that it is important to highlight these accusations is that because of the Securities Acts of 1933 and 1934, even tokens issued by DAOs, especially if they are given economic rights, could come under fire. This is why it is important for the state of Colorado the try and put laws in place that protect CEOs or founders from damages if they were to decide to create a DAO company. This is where one of Wyoming's recent bills will need to be addressed.

In 2021, Wyoming passed the bill titled Decentralized Autonomous Organizations Supplement (WY 2021 SB 38). This bill protects all DAOs that are formed by founders within the state of Wyoming as limited liability companies (LLCs). With this bill, the state recognized that DAOs are not strictly governed by the management team or founders, so only joining members who act illegally will be liable and not the DAO's founders. Since DAOs are now allowed to incorporate as LLCs within the state of Wyoming, they must simply follow the state's laws and are free from accusations from the SEC. However, since this law is new, the legal implications are still unknown. There is still a lot of room for innovation regarding DAOs and it is unclear how bad actors will exactly be punished for going against a DAO's terms of service.

IV. How Colorado Should Proceed

There is a recent bill in particular I would like to highlight, as it directly relates to DAOs. The state of Colorado passed a bill in 2022 to expand the kinds of collateral the state treasurer is allowed to leverage regarding state capital financing (CO 2022 SB 25). The bill describes security tokens in particular, where their use in state financing is to be explored so that the state can broaden the ways in which they can repay their obligations. This is a proper use-case for a DAO application, that can bring in voting systems to transparently and democratically help the state issue these tokens to help repay debts.

How exactly should the state of Colorado go about this, though? For one, the state could copy Wyoming and simply define DAOs as LLCs, but there is another way that I think would work better particularly for the state of Colorado. Since this state has the concept of the co-op or Limited Cooperative Association (LCA), the state should possibly attempt to label all DAOs founded within the state of Colorado as an LCA (Radebaugh & Muchnik, 2021). The cooperative or LCA in Colorado already shares many of the values that a DAO holds, so this is the most ideologically aligned framework for regulating DAOs within the state of Colorado. Since the LCA is a combination of an LLC and a corporation, it is similar to Wyoming's approach to regulating DAOs and providing business owners protections, but differs in that distribution of returns is based on patron activity. The ability to control how returns are given to patrons could be particularly useful to business owners, because the DAO founders could leverage the innate incentive mechanisms within blockchain to try and promote growth in the network. This greater control over incentive mechanisms found in the LCA could prove to help grow these new DAOs faster than an LLC could.

V. Conclusions

Trying to develop a DAO from a purely technical perspective is a grave mistake. Simply modernizing existing forms of governance with blockchain technology will likely progress the world into more of a surveillance state, rather than create a world based on the idealist views of the blockchain movement - decentralization, democratization, and (re)distribution of data and decision making. It is through the ideas of social scientists like Karatani and Jones that we should try and architect the DAO. The DAO should be seen as a means of bringing an end to bureaucratic, capitalist system of governance. By trying to design DAOs as systems that undo the Borromean knot - nation, state, and capital - we will move more in the direction of realizing a better form of governance. By understanding money even better, through blockchain, we could further society even more and progress to the sharing economy. The state of Colorado has already been involved with trying to spur innovation in the blockchain space through policy initiatives, and with Wyoming already legalizing DAOs, the state of Colorado should follow. By defining a DAO is an LCA, founders of DAOs could get legal protections from lawsuits, while also getting help to grow the company, innovate, and experiment.

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