Promoting of Policy Entrepreneurship Via Legislation and Technology

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The Internet, in its conception, was seen as a vehicle for complete disintermediation and freedom from big government and corporations. In fact, John Perry Barlow, a famous crypto-punk, wrote an article titled "The Declaration of Independence of Cyberspace" back in 1996 to describe how the internet would reshape the government forever (Filippi & Wright, 2019). These ideas were little more than a utopian pipe dream, however, since the internet in fact did not provide all the benefits outlined in the article. Over time, technology companies formed that initially seemed like free and fun applications to use and connect with billions of ideas and people around the world. Many social media and technology companies came and went throughout the years after 1996, but eventually, there were companies that found a way to create immense profit off of an easily spreadable technology like the internet. A free application implied one thing - that the user was the product. These companies were able to warehouse queries and data provided to the web application and sell them to various agencies as a means to create massive profit. The Cambridge Analytica scandal with Facebook was just one such scandal that gave rise to regulations like the General Data Protection Regulation to be passed in the European Union (Schneble et. al., 2018). In this scandal, over 87 million Facebook users had their data sold to political groups as a means of population research. This invasion of privacy was unprecedented and the lack of ethics involved in the social science research is what was concerning to the general public. Big tech companies have gotten even bigger over the years and with companies like Palantir Technologies promoting justice through big data analytics, the internet could end up making government corruption an even bigger problem than George Orwell himself could have imagined. Governments like China are already implementing social credit systems via client-server models that invade personal privacy and reduce an individual to a single score, which is then used against the citizen to limit or grant rights within the country.

This is where blockchain technology comes into the picture. A technology that is, from a technical standpoint, fundamentally a cryptographic database, can provide concepts of trust, trade, and ownership to the internet - concepts which are not currently embedded into the internet's fabric. Privacy can be at the forefront and there will no longer be a need for implicit trust with user data as is the case with the client-server model. Wilson (1980) describes four models of regulatory action in terms of cost and benefit analysis. These models are majoritarian, interest-group, client, and entrepreneurial politics. Based on the original vision of the internet, the promises of blockchain technology, and policies passed by various western states and governments around the world, it is my belief that some governments around the world are trying to promote blockchain technology as a vehicle for enhancing entrepreneurial politics. It is not a mystery that developing blockchain products requires a rather broad and deep skillset and educational background, but if even a few entrepreneurs are able to leverage it as a massive, transnational policy engine, it could change the world in ways the we cannot yet fully understand. This essay outlines why and how blockchain technology is being promoted as a vehicle for entrepreneurial politics by providing two types of reasons - a policy and technology reason. This essay also digs into why western governments are not promoting blockchain as a vehicle for majoritarian, interest-group, or client politics, each with their own respective subsection for dissection.

I. Reason 1 - Promoting of Entrepreneurial Politics via Policy Initiatives

The United States government separates lawmaking and rulemaking as two separate processes. Lawmaking is exclusively performed by the legislative and executive branches of the United States government. The lawmaking procedure sets a general framework of laws for the American people to follow, while also taking care of some indirect matters which many of the American people may not care much about like foreign policy initiatives. The rulemaking procedure (also known as a regulatory framework) on the other-hand, actively promotes public participation, since these policies have a direct impact on the way American people will lead their lives (Rakar & Bojan, 2015). It is also difficult for the US government to ethically be involved with writing laws regarding every aspect of the American people, so the public is welcome to come fill in the gaps for regulations. It is my view that blockchain technology can help greatly augment the lawmaking and rulemaking procedures within the United States, along with enforcement of policies described during these procedures.

Wilson (1980) describes that it is astonishing that legislation which provides benefits to the many at the cost of a small segment can ever be passed at all. Indeed, it is difficult for individuals to regulate or disrupt large industries that are associated with positive value. The beauty of the American political system is that the right policy entrepreneur, by going through the right steps, can actually help pass policies that bring the heat to larger organizations who are performing wrongdoings against widely shared values. While it is easy to bring big tech companies into the crosshairs in this case, blockchain technology can do more than just make tech companies accountable for their breaches of privacy. Each and every company can be required to provide certain data to a governmental blockchain system, which holds each and every company accountable for certain actions, while providing economic incentives for upholding other actions or principles. The right kind of blockchain system/dApp, promoted by the right policy entrepreneur, could help prove transgressions a variety of companies are involved in, either environmental or social.

Looking at policies various states within the Unites States passed between 2019-2022 regarding the promoting of blockchain technology for Environmental, Social, and Governance (ESG) endeavors, only one policy passed tried to limit blockchain technology in any way, and it wasn't even aimed at preventing blockchain innovation (NY 2022 SB 6486). This policy simply halted mining operations within the state of New York that utilized Proof of Work (PoW). Miners are not innovators, but rather profiteers who are leaving a massive carbon footprint. The other 8 policies were aimed at trying to fund innovation, research, and education regarding the technology. One bill aimed to try and fund the building of a blockchain learning center within a community college (NM 2021 HB 296). Making it possible to learn about blockchain technology in a school without strict admissions requirements is the definition of empowering the people. Another bill aimed to educate a large number of agricultural professionals and business owners about the potentials of blockchain technology disrupting the agricultural industry (CO 2022 HB 1053). America is looking to empower people to embrace and innovate with this technology, and the proposed bills prove this.

It's worth noting the European Union (EU) and their efforts to try and preserve the right of data ownership with the GDPR regulation. An IEEE publication stated: **"**GDPR's primary

goal is to give back power to the data subjects on their own data," (Bayle et.al., 2018, p. 2). This policy is not necessarily directly promoting blockchain technology, but it is trying provide privacy and ownership in an era of the internet where that is still not the norm. Intermediaries are given implicit trust over your data and there needs to be an proper trust protocol developed that solves this issue of data ownership and privacy.

II. Reason 2 - Promoting of Entrepreneurial Politics via Blockchain Technology Itself

Blockchain technology comes in all shapes and sizes with a variety of differing and oftentimes completely apposing applications. Some applications promote money laundering and complete privacy, like the cryptocurrency Monero, while others promote a more transparent and auditable system. This section describes how exactly blockchain technology itself could potentially help promote policy entrepreneurship and why investment from governments into researching the technology is so important. This paper describes two major affordances blockchain technology brings to the table when it comes to enhancing entrepreneurial politics - incentive structures to promote ethical participation within the network as well as privacy-preserving federated learning/aggregations (abv. FL) to ethically collect data from users. The policy entrepreneur who develops such a blockchain application could collect data from companies and users in an ethical way, which could then be utilized to sway the attitudes of third parties like congress or writers, whose viewpoints are needed for creating the necessary policy changes.

Incentive mechanisms in blockchain are meant to curb unpredictable behaviors that could occur in such a large-scale transaction processing system. Designing a incentive mechanism to regulate entity behavior becomes essential to improve the system performance. Han et. al. (2023) provide a novel taxonomy of blockchain incentive mechanisms according to blockchain versions, incentive forms, and incentive goals. The types of incentives the blockchain can provide are defined as either monetary or non-monetary. Monetary incentives regulate entities from an economic perspective, while non-monetary incentives can be broken down into credit-based, reputation-based, or gamified incentives. Goals are also important when defining an incentive mechanism, and the paper describes two types of goals - promoting system participation or promoting cooperation with other nodes. Policy entrepreneurs in the blockchain space will have to carefully decide what what type of incentive they are going to provide with users as well as what the ultimate goal of the policy engine ought to be.

Combining federated aggregations and blockchain technology is a fairly new concept, but there has been research going on to try and explore how privacy preserving aggregations or machine learning can take place more efficiently and in a decentralized manner (Zhu et. Al., 2022). The challenge of replacing a centralized aggregator with a decentralized aggregator is a problem that will take time to properly implement, since smart contract development is still in its infancy. The research by Zhu et. al. describes a novel approach to FL, where the centralized aggregator is replaced with a distributed hash table and the encryption protocol for the private data being pushed to the blockchain uses a double-masking then encrypt approach. More research is necessary, but this method looks promising and could be a step in the right direction for making productionized FL a reality. Leveraging people's private data in machine learning models or aggregations for policy initiatives could allow policy entrepreneurs to securely leverage all sorts of private data for a variety of policy initiatives. Users who have their PII

securely stored on blockchain servers could also get a monetary or non-monetary payout from the built in incentive mechanisms for providing their private data for various policy initiatives.

III. Counter 1 - Blockchain Tech Regulation Isn't Promoting Interest-Group Politics

Blockchain technology is meant to disintermediate and prevent the need for as many intermediaries in business. Many policies promoted by interest-group politics puts an intermediary body between two companies to help manage tensions in business operations. For example, the Interstate Commerce Act of 1887 made the government involved with fixing rates for railroad companies in order to prevent monopolies. Also, labor legislation such as the Wagner Act put the government in between workers and businesses to protect workers' rights. Many other labor legislations, such as the proposed Labor Reform Act of 1977, tried to strengthen unions as an independent intermediary between workers and businesses. While these policies were maybe needed at the time, blockchain technology could do away with the need for unions or other governmental intermediary endeavors for price-fixing. While many may call for the need to unions to protect workers' rights, these policies innately greatly help one entity at the cost of another. Do we help workers at the cost of a business, which could potentially go bankrupt (losing all the jobs in the process), or help a business at the cost of workers' rights? If blockchain technology were to be fully developed, there would be a way for the network to directly connect workers and employers - no more need for labor unions or employment agencies. There could be rapid and efficient wage adjustments, as workers and employers could negotiate wages directly based on the supply and demand economics. Transparent and auditable systems could also do away with the need for government price-fixing, as companies can be held accountable for their business practices through the audit trail they leave behind. Interest-group politics is clearly the least benefited by blockchain technology, as blockchain tries to do away with many of the concepts that these policies bring to the table.

IV. Counter 2 - Blockchain Tech Regulation Isn't Promoting Majoritarian Politics

Examples of majoritarian policies such as the Social Security Act of 1935 can certainly be implemented in a blockchain system. Many of these policies, including forcing or incorporating the draft, could also be implemented via blockchain systems, but blockchain technology simply doesn't provide many affordances for majoritarian politics. Since these policies are fairly blanketed and apply to everyone in the nation, they don't need much data to enforce. Existing legal frameworks can handle majoritarian policies quite well, since there is little element of personalization involved with such policies. Also, due to the incredibly transparent nature of these policies, there isn't much hidden from the public when it comes to enforcing majoritarian policies, especially in the west. Concepts like transparency, integrity, and privacy don't really matter when these laws are innately transparent and apply to every individual in the nation. This is why I argue that western regulations are not trying to encourage majoritarian politics via regulatory efforts.

V. Counter 3 - Blockchain Tech Regulation Isn't (Really) Promoting Client Politics

Client politics is more aligned with blockchain technology initiatives than either interest-group or majoritarian politics, but not nearly as much as entrepreneurial politics. Client politics is riddled with backstairs intrigue, quiet lobbying, and quick passage with minimal public discussion. Blockchain technology and transparent transactions could make these lobbying endeavors more visible to the public eye. Also, cash subsidies are a part of client politics, so

encoding these subsidies in smart contracts could promote a fair and equitable release of these subsidies to the right individual. The biggest reason why client politics isn't really benefited by blockchain technology, though, is that the coalitions that form are usually small and independent entities. Licensed professionals like doctors and accountants are relatively smaller groups who don't necessarily benefit as much from internet technologies of scale regulating their professional obligations or rights directly. Traditional legal frameworks can more or less take care of these communities, at least initially while the technology is in its infancy, since they are smaller in size and laws do not need to change quickly or on a whim based on real-time data. Yes, organizations and professionals need to be regulated in the public's interest, and blockchain technology can help with that, but existing laws do a pretty good job of that in western nations as it is.

VI. Conclusion

Blockchain technology is still in its infancy, but recent regulations in the west have seemingly been pushing blockchain technology to help promote entrepreneurial politics. The United States government wants private enterprise to be heavily involved with the rulemaking process and blockchain technology could create a new era of policy entrepreneurs who leverage the blockchain to convince the media and congressional leaders to take legislative action against large corporations who seemingly have infinite lobbying power. America is among one of the few countries in the nation that this might be possible. Both America and EU have passed policies to promote innovation of blockchain technology and prevent unethical exploitation of private data respectfully. Applications built via blockchain technology have the power to reshape entrepreneurial politics through its built in incentive mechanisms and privacy preserving aggregation methods through federated learning. These apps can be shown to the right people to help make a case to enact certain policies. The current regulations for blockchain technology have not been promoting it for use in interest-group politics or majoritarian politics. Interest-group-based policies always bring an independent, third-party intermediary in the mix, which comes into conflict with one of blockchain's innate goals, which is disintermediation. Policies from majoritarian politics are overarching and not necessarily the most data-driven, so existing legal frameworks work just fine Client politics could benefit from blockchain technology, especially in corrupt or third-world countries, but countries like the United States don't really need blockchain to augment these types of policies much, as existing legal frameworks work just fine as well. Scaling the ability for people outside of legal process to be involved with policy decisions through data-driven, decentralized applications could change the world of entrepreneurial politics for the better.

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Historic bills all came from the Wilson (1980) reading from chapter 10