



LUNDS UNIVERSITET

*Ideologies and Imaginaries in Blockchain Communities : a case study on
Bitcoin & Ethereum*

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VT22

Abstract

Blockchain technologies with its promise of transparency and security have during the last decade created quite the political stir. There exists an abundance of information, hype and research regarding blockchains 'disruptive and 'transformative' potential concerning every industry from finance to food production. However, there is an absence of scholarly attention given to identifying and analyzing the political premises and consequences of blockchain projects. I claim that modern technologies are political infrastructure and that it is crucial to analyze it from a political lens. This is framed in relation to the history of General Purpose Technologies and the concept of Political imaginaries. By using a framework from recent research by Husain et al., I analyze the two largest blockchain projects' political imaginaries. By looking at Bitcoin and Ethereum I conclude that Bitcoin can be categorized according to my model as “crypto anarchists” and “crypto libertarians” whereas Ethereum is more difficult as it is a more sophisticated project. Ethereum belong under “crypto anarchists”, however, have traits from both “crypto libertarians” and “crypto-commonists”.

Keywords: Blockchain, Political imaginaries, Bitcoin, Ethereum, Ideologies, Science and Technology Studies

Wordcount: 8246

1.0 Introduction	
1.1 Problem & Purpose	2
1.2 Question of Issue	3
2.0 Method	3
2.1 Material	5
2.2 Delimitation	6
3.0 Theoretical framework	6
3.1 Ideology of Technology	6
3.2 What type of power is this?	7
3.2.1 Power of political imaginaries	7
3.2.2 Technological Governance and Code as Law	9
3.3 Background to Blockchain and Crypto	11
3.3.1 Categorizing Blockchain Projects	14
4.0 Results	16
4.1 Bitcoin	16
4.1.1 Basic political imaginary	17
4.1.2 Mode of governance	17
4.1.3 Value and incentives	18
4.1.4 Political scale	19
4.1.5 Dominant node of power	19
4.2 Summary	19
4.3 Ethereum	19
4.3.1 Basic political imaginary	21
4.3.2 Mode of governance	23
4.3.3 Value and incentives	24
4.3.4 Political scale	25

4.3.5 Dominant node of power	25
4.4 Summary	25
STS /	25
Result & Analysis	26
References	27

1.0 Introduction

Why question the underlying political imaginaries of technological infrastructure?

Political infrastructure in its many forms deeply impacts our private and public lives as citizens.

This political infrastructure is constantly changing in relation to the tools and technologies available at the time. Some tools that have the power to form a deeper societal shift and create lasting impact on political infrastructure are known as General Purpose Technologies, hereon GPT's(FCC, 2010). Defined in "The IT Law Wiki" as:

"...[technologies](#) that are applicable to virtually any activity, and have the capacity to transform those activities by improving [efficiency](#) or creating opportunities for new ways of doing things."

Previous inventions that are considered GPT's are the railroad, the Internet, computing and telecommunications. We are now in the start of the implementation of another GPT, the Blockchain. The evolution of any GPT comes with a diverse set of political imaginaries(Nowotny 2014, p. 17). Meaning, they all embody the politics and power structures that they are aiming for. As an increasingly large proportion of our lives are lived out online, the companies and the code behind the applications are now, rightfully, standing in the political spotlight.

Blockchain technologies with its promise of transparency and security have during the last decade created quite the political stir. There exists an abundance of information, hype and research into blockchains 'disruptive and 'transformative' potential concerning every industry from finance to food production. However, there is an absence of scholarly attention given to identifying and analyzing the political premises and consequences of blockchain projects. Despite the inherently political nature of these technologies, most of the studies do not discuss the broader, longer term

socio-political implications that these projects would have on society, governance, and politics (Atzori 2015). In fact, many projects in the blockchain space self-diagnose as “apolitical”, deeply connected to ideas of technocracy and cyberlibertarianism(Golumbia, 2015). With 6.6 billion USD spent on blockchain solutions in 2021 and 80.67 million users with some sort of cryptocurrency-wallet it is safe to say it is already serving as political infrastructure and is thus impossible for it to be “apolitical”(Statista,2022).

Author Brett Scott’s concept of the “Techno-Leviathan" highlights: “technological infrastructures do not offer an escape from government, they just offer another, competing, governance system with its own power dynamics” (Scott, 2015, p. 3).

He means we can choose to view rules by code or algorithms as positive or negative, but we must perceive the power built into the usage of a system (Scott, 2015). Similarly Sheila Jaasanoff & Sang-Hyun Kim (2015) provide another clarifying concept with ‘sociotechnical imaginaries’, defined as “collectively imagined forms of social life and social order reflected in the design” (p. 4). It is important to shine light on how blockchain projects contain different in-built features of access, decision-making, and value—all of which influence power relations between individuals and communities. In a society where more and more infrastructure has become digitized, analyzing the political implications ‘built in’ in is key.

1.1 Problem & Purpose

The attention surrounding blockchains potential is fueled by a large diversity of actors that all carry their own agenda. This makes navigating and categorizing this technology unnecessarily difficult, as they are all experimenting with it for different purposes. The potential societal impact some of these technologies might have on our societies is vast and unprecedented like with any GPT. This makes it relevant to perform research in the political vein that can help categorizing and understanding the potential political implications.

1.2 Question of Issue

How are the ideologies and imaginaries surrounding Bitcoin and Ethereum articulated (with its technical design)?

2.0 Method

The analytical goal of this thesis is to look at the ideologies and imaginaries of Bitcoin and Ethereum by looking at how they are articulated in its design as a technical system. To perform this, I will make a comparative analysis of these different blockchain projects. This will be connected to a strand of recent literature where blockchain projects have been treated as political infrastructure and analyzed through an ideological lens (Brody & Couture, 2021) (Husain, et al., 2020) (Golumbia (2015) (Reijers, Coeckelberg, 2018). It is situated within Science and Technology Studies, as well as Sustainability science and traditional Political science, as it treats the power structures embedded in the roles technology takes today. Primarily, the thesis will use dutch researchers Syed Omer Husain, Alex Franklin and Dirk Roep's typology that was published in february 2020. Husain et al.'s framework is "to be used as a tool to be able to cluster and analyze the expressions of political imaginaries intrinsic to the design and operationalization of blockchain projects" (Husain, et al., 2020, p. 379) This works particularly well with a comparative study. In fact, the most indispensable method for studying imaginaries, socio-technical and political, is comparison (Jasanoff & Kim, 2015, p. 24). By combining interpretive and comparative research it helps contouring the imaginaries as well as avoiding the intellectual trap of making assumptions that turn out to be situational and thus irrelevant (Jasanoff & Kim, 2015, p.24). Previously, to do

substantial work with imaginaries, the norm is to do ethnographic work, closely connected to classic anthropology where the researcher inserts herself in the context, doing participatory observation (Husain, et al., 2020, p.384) (Brody & Couture, 2021, p.547). Husain et al. suggests the method of digital ethnography, emphasizing the hybrid nature of blockchain projects, existing both in the material and the immaterial world (Husain, et al., 2020, p.384). Due to the limitations of time and resources it is impossible for me to insert myself in the three different communities, to over time and through participation create a deep understanding of the political imaginaries of. Instead I will analyze primary material in accordance with Brody & Couture’s “ethnographically inspired perspective” (Brody & Couture, 2021, p.548). This means that to some degree the method will be that of a qualitative text-analysis, focused on classification in accordance with Husain’s typology that will take the role of ideal types (Esaiasson et al., 2007, p.238-239).

Pictured below is Husain’s typology that lays the foundation of this thesis structure :

Table 1

Table 1 Typology of blockchain imaginaries

	Crypto-anarchists		Crypto-institutionalists	
	Crypto-libertarians	Crypto-commonists	Crypto-governmentalists	Crypto-collaborativists
Basic political imaginary	Free-market libertarian political economy	Commons-based political economy	Free-market, government regulated political economy	Commons-oriented, municipalist political economy (hybrid), transnational movements
Mode of governance	Decentralized mass-driven, individualistic	Decentralized collectivist, commons-driven	Centralized, state-run	Partially decentralized, municipal and civil society, transnational institution, and global civic society
Value and incentives	Speed, efficiency, risk, growth	Equality, social justice, ecological (commons goals)	Efficiency, transparency, accountability, growth	Collaborativism, translocalism
Political scale	Global/translocal	Local/translocal	National	Local/municipal/translocal
Implementation process	Start-up/crowdfunded	Start-up/crowdfunded	Government-led	Municipal/citizen-led, institution-led
Dominant node of power	Market, mass consensus	Collective	National government	Municipality/city
Examples	Most cryptocurrencies (Bitcoin, Litecoin EoS etc.), SunExchange, DAOStack, Bitnation, Project Grace-land	FairCoin, Democracy Earth, WePower, RightMesh, P2P Models	E-estonia, GrantSolutions, China’s social credit system, Smart Dubai	Colony, FairBnb, ACT community mobilization, Decode, Berkeley Blockchain Initiative

(Husain et al., 2021, p.381)

Using their typology, I will need to have a certain level of assumptions in common. I will not define their terminology any differently, but will clarify when needed. The most important difference between Husain’s political imaginaries and Jaasanoff’s socio-technical imaginaries is the

explicitness, depth and scope of the term. Furthermore, socio-technical imaginaries are somewhat better suited for analyzing technical projects. When “Political imaginaries” can include anything from ideology to national narratives, Jaasanoffs term is more focused on how it is embedded in material or technical design(Jasanoff,p.20). The reason for presenting Jaasanoffs terminology while using Husains typology is to place my thesis in an academic context that will help with the analysis. If necessary, I will use the concept of sociotechnical imaginaries as complementary tools to deepen the analysis.

2.1 Material

The material used will be academic studies, white papers, cryptocurrency and technology blogs, news websites and other media such as Reddit forums. As this study's aim is to identify and analyze the political premises of blockchain projects, these sources have been used as primary data. This is due to the fact that they are often the only sources where the political imaginaries get articulated (Husain et al., 2021, p. 384). Especially author biases and vision statements are of interest. This material, although not traditional, is increasingly relevant to analyze considering the new political landscape that is a hybrid between the virtual and the real world(Gil de Zuniga, 2010, p. 45). Considering the digital nature of Bitcoin and Ethereum, this is the most essential material.

One thing important to keep in mind is that many people producing material are heavily incentivized depending on which project they personally support. To find the political imaginaries it is necessary to go as close to primary material as possible, hence the heavy use of the official whitepapers in this thesis. A white paper is a document which outlines a problem that the project is looking to solve, the solution to that problem as well as a detailed description of their product, its architecture and its interaction with users(CoinTelegraph, 2022)”. The whitepapers are thus the first text ever published in the project's history, they outline the broad visions, assumptions and

directions and will be the main focus in my analysis. However to accurately contextualize, It is not sufficient with only what the project wishes to accomplish but also how it technically works. To see what the impact of the projects are, I will also use secondary material, such as news sites and forums, to double-check that the claims the projects are doing about themselves are actually accurate. Something that has shown not to always be the case(Brody & Couture, 2021, p. 547)

2.2 Delimitation

Originally, I was going to compare more than only two blockchain projects, but due to lack of time only two will be treated in the thesis. This severely changes the results legitimacy, as the scope has significantly gotten smaller.

3.0 Theoretical framework

3.1 Ideology of Technology

“Those who have not recognised the ways in which technologies are shaped by social and economic forces have not gotten very far” (Winner, 1980, p.122)”

Science and Technology Studies(STS) focuses mainly on the interpretations and narratives about technology. One of the main philosophical issues treated in STS is whether technology, infrastructures, and other material things can be considered independently of social, political, and economic processes. Most of the scholars in the field, like Winner quoted above, believe that it is inherently impossible to separate technology from outer influences. Including M Akrich, who writes that a large proportion of technological design and code involves “inscribing” a certain vision of the world, that in turn contains a “script” of how the technology should be used(Akrich, 2003, p. 208). Jaasanoff and Kim conceptualize this further with the term

“socio-technical-imaginaries' in their book from 2015. Explained as “*collectively held, institutionally stabilized and publicly performed visions of desirable futures, animated by shared understandings of forms of social life and social order attainable through, and supportive of, advances in science and technology*” (Jasanoff & Kim, 2015, p.4).

These socio-technical imaginaries incorporate both popular fiction ideas of technology and institutional narratives of nationhood and citizenship(Coeckeler, Reijers). The fundamentals is that the worldviews, in the shape of ideologies, imaginaries, values, and technological design are mutually shaping each other(Brody, 2021, p.547)(Jasanoff, 2015).

In Husains article, they briefly define their understanding of their term, political imaginaries, as “*a collective structure that organizes the imagination and the symbolism of the political, and therefore, organizes the instituting process of the political as well*” using a definition from Browne and Diehl 2019(Husain et al., 2020, p. 394) This comes quite close to what Sheila Jaasanoff has previously called *co-production* - a sort of predecessor to her later term socio-technical imaginaries. The notion of co-production helps us understand “*how time and space are involved in the formation, or reformation, of conceptual, material, and social orders*”(Jaasanoff, 2015, p. 14). All these terms emphasize how different parameters are mutually shaping each other, how the material world is intrinsically interwoven with the narratives, hopes and dreams of its time and aims to help analyze the interplay.

3.2 What type of power is this?

3.2.1 Power of political imaginaries

The historical evolution of any general-purpose technology, comes with a set of political imaginaries (Husain, et. Al, 2020, p. 380)(Nowotny 2014, p. 17). Taking the internet as an

illustrative example, author Shoshanna Zuboff gives an historical account of how the internet evolved into its current form, and describes the complex development in her book “The Age of Surveillance Capitalism”. According to Zuboff, the neo-liberal ideas dominating the western world in the post-cold war era laid the foundations for what the internet has become today(Zuboff, 2019 p.38-40). The internet's current ideology thus originated from the free-market dogma that came as a defense against the threat of totalitarian and collectivist ideologies in the late 70’s(Zuboff, 2019, p.38). This seemingly benign reaction against totalitarianism eventually developed into a belief where the market ideology became the neutral, apolitical good, resulting in shareholder value maximization becoming the objective function of any company(Zuboff, 2019, p.41). Without these political imaginaries embedded in the first engineer's mind and consequently - code, it would have been impossible for a few companies to currently own such a large proportion of the internet of today.

Steven Luke's well known concept of the three faces of power become relevant here, explained as

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- Decision-making power
- Non-decision-making power
- Ideological power.

(Lukes, 2005)

GPT’s carry all three. Exemplified by the internet in recent history once more, the first face, decision-making power, can be exemplified by Paypal's decision of blocking Russian transactions during its invasion of Ukraine. Making their policy preferences clear through political action(Lukes, 2005, p.15). The second face, non-decision-making power is described as what sets the agenda and makes certain themes illegitimate for discussing in public forums, exemplified by Facebook’s decision on what type of information is acceptable for their roughly 3 billion users(Statista, 2021)(Lukes, 2005, p.20). Blocking politicians and certain types of news actively

changes the information fabric of the world. The third face, ideological power, is more intangible, coming closer to the terminology of STS. Described as the power of influencing people's wishes and thoughts with the capacity of even making them go against their own self-interest it can be seen exemplified by the mechanisms behind google behavioral surplus and the Cambridge analytica scandal.

Coming back to blockchain, one event that was important for the transformation of the political imaginaries and made way for the introduction of Bitcoin was when the world's major payment companies imposed an economic blockade towards the website Wikileaks in the year 2010(Coeckelberg, Reijers, p. 120). This showed that the assumed neutrality of the financial institutions was illusory(Coeckelberg, Reijers, p.120). Together with the 2008 crisis, it formed a significant shift, where a critical mass lost belief in the systems. Bitcoin was then launched as an alternative “trust-free” system by decentralizing power and delegating the trust that had previously been given to legal authorities to the authority of the blockchain protocol(Coeckelberg, Reijers). The narrative that has entered the scene since is based on the ruins of the conventional financial system(Coeckelberg, Reijers, p. 120). But, the new one comes with its own set of socio-technical-imaginaries. This, in turn, have consequences for society at large.

3.2.2 Technological Governance and Code as Law

Assuming that all technology is part of an ideological performance, it means that politically and technologically, blockchain is not a “clean slate”. Depending on the interpreter, the technology gets assigned different roles. Taking Bitcoin as an example, In Karlstrøm's book “ Do Libertarians Dream of Electric Coins? The Material Embeddedness of Bitcoin” it gets described as a “libertarian dream”(Karlstrøm [2014](#)). On the contrary in “The Politics of Bitcoin: Software as Right-Wing Extremism” author David Golumbia connects Bitcoin to right-wing politics(Golumbia, 2016). Later, writer Brett Scott labels it as “conservative libertarian”(2016).

Different academic opinions aside, blockchain technology has been most commonly favored by groups advocating for cooperativism and decentralized networks as a way to have functional governance without establishing hierarchical bodies(Brekke, 2021, p.4). Blockchain to them represents a materialist solution to governance, erasing subjective decisions and human weaknesses. Materialist governance can be described as “...engineered, encoded, and inscribed to take place independently of active subjective consideration.”(Brekke, 2021, p.4). Thus moving toward self-governed networks.

Brekke points out that it is important to remember that these roles have been assigned to the technology as a result of human interpretation. They mean that the blockchain itself can't “speak” or “intend” materialism, cooperativism, right or left libertarianism any more than a hammer(Brekke, 2021, p.4-5).

On the other hand, Wessel Reijers and Mark Coeckelberg mean that blockchain is more than a “hammer”since it has become a powerful narrative and governance ideology because it promises automated governance through code(Coeckelberg, Reijers, 2016 p.).

The notion of “Code is law”, refers to how governance by technologies or materialist governance effectively makes software coding a form of law. Our current legal system is enforced “ex-post”(after the event) through state intervention, while in materialist governance it is built-in the system, enforced “ex-ante”(before the event) through code(De Filippi and Hassan 2016). This means that the founders, designers, and controllers of the system have power as they can choose to implement or remove different interactions and processes that affect its users. The code thus has significant human and social-institutional dimensions that are often overlooked. There are many risks associated with outsourcing responsibility to code, exemplified by the discussion surrounding AI(Hedlund, 2020). When Hanna Arendt presented the banality of evil in 1964, one of the enabling factors at play was “the rule of nobody”, what she described as a bureaucratization of humans, making them “mere cogs in the administrative machinery”(Arendt, p.). When blockchain

projects have gotten hacked, and users for example have lost assets - as was the case in Ethereum in 2015, there was no one that could be made responsible apart from the software itself.

An often debated example easily connected to these themes of encoded imaginaries and outsourced responsibility is the discussion surrounding AI (Hedlund, 2020). Hedlund writes about the grayzone that appears when the basis of accountability is autonomy. Many of these AI technologies can from a technical standpoint take autonomous decisions over things such as healthcare and recruitment(Hedlund, 2020, p. 552-553). But any technology needs to be programmed, and the programmers, architects and founders all come with their own agendas that consciously and unconsciously affect the code. This has received most attention in the debate over existing gender and racial biases in AI(Boulamwini, 2019).

By actively working with the concept of socio-technical imaginaries it could potentially make it easier to discern biases or other tendencies before launching technologies. These types of analyses could be seen as a preventative measure that could help create a more conscious and deliberate technology. Because of the blockchains capacity to challenge authority and to control interactions through crypto economies, on-chain governance and smart-contracts it is relevant to analyze some of their inherent narratives through a political lense. (DuPont 2014, p. 7).

3.3 Background to Blockchain and Crypto

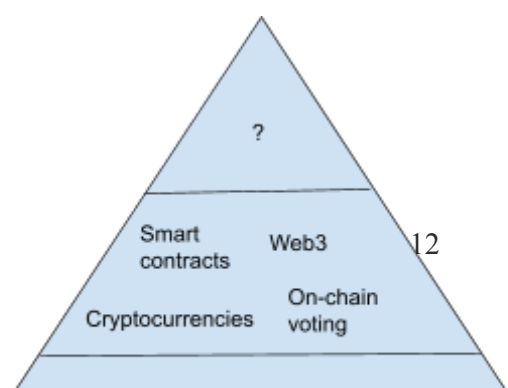
In order to understand what political imaginaries and visions lie within the ideas of these blockchain projects it's important to understand the technology that enables it. A blockchain is, in a nutshell, a shared cryptographic register. It records transactions between parties in a permanent and verifiable way without needing any central or intermediary authority(Husain, et.al. 2020, p. 379-380). It involves creating a chain of records, or “blocks” that are cryptographically linked to each other. Technically it is impossible to retroactively modify one of the blocks without altering the whole chain offering quite the promise for accountability and transparency(Brody & Couture,

2021, p.548). Another word commonly used for blockchain technology is Distributed Ledger Technology or DLT(Johnson, 2018).

Blockchain technology became globally known through the launch of the cryptocurrency Bitcoin in 2009. Believed to have been founded as a reaction to the 2008 banking crisis, the Bitcoin project attempted to create an incorruptible monetary service to offer a solution to a broken system(Charan, 2021)(Feuer, 2013)(Korhonen & Rantala, 2021). Due to the lack of time and scope of this thesis it is impossible to give a thorough historical overview of the different key-factors, technologies and events affecting the development of blockchain and later on, crypto. For this I refer to Iakovlev & Kruglova(2021), Vitalik Buterin(2014) and Melanie Swan(2015).

Important to note is that Satoshi Nakamoto, the anonymous person or team behind the launch of Bitcoin in 2009, remains unknown. Something that would further indicate that the driving force behind the project is indeed the ideology not the market cap. In a New York Times article from 2013 writer Eva Plosky is quoted saying “...bitcoin isn’t merely money; it’s “a movement” — a crusade in the costume of a currency”(Feuer, December 2013). So what type of movement is this? Already in the 1980s, David Chaum, the developer of one of Bitcoin’s main predecessors called Digicash, argued that the rise of decentralized applications (which the blockchain enables to build) could bring about major global changes by solving (ethical) problems of mass surveillance, online participation and democratic governance (Chaum 1985, p. 1044).

An illustration given by Brett Scott in 2016 explains how the blockchain technology works :
“It could almost be imagined as a spreadsheet that is gradually built by new cells being chained on. A blockchain database continues to be built and maintained so long as the software continues to be run. Thus, unlike a centralized database held by a single entity, it continues to stay “alive” even if individual participants pull out (or go bankrupt, for



example). It creates an indelible record, resistant to tampering by any individual party.”(Scott, 2016)

In the underlying blockchain technology the ‘blocks’ can carry any type of information, but the most popular use has thus far been cryptocurrencies such as Bitcoin. In crypto, all parties utilizing the software agree on giving it a specific monetary value and exchange it with each other for goods and services exactly like with paper money. The major difference is that these exchanges and the value of each Bitcoin are not decided upon or managed by any central authority(like a bank) but are done collectively through consensus, always “peer-to-peer” without the need of a third party to enforce or guarantee their value. Thus, they are self-contained, only following the market's demand and supply(Husain, et.al. 2020, p.383)(Miscione & Kavanagh, 2015). This quality makes it popular with groups aligned with libertarian and anarchist ideals(Brody & Couture, 2021, p.).

Defining what the blockchain is and how it separates from political projects such as Bitcoin is unfortunately not straightforward. The terminology is often incorrectly used interchangeably as the industry is still in the early stages. In the literature the words Bitcoin and blockchain can refer to any of the following three parts of the concept: the underlying blockchain technology, the protocol through which transactions are executed or the cryptocurrency(the money)(Swan, 2015, p.ix). In the image below, it shows how the cryptocurrencies and ecosystems are based on blockchain technology, but not the same thing. I will use blockchain project, to refer to Bitcoin and Ethereum, to clarify that they are complex enterprises, part technology, part ideas. Ethereum refer to themselves as ‘ecosystems’, demonstrating the more organic nature of the project. They have their native token, or cryptocurrency, ETHER or ETH for short, but this is not, unlike bitcoin, the main proposal of the projects, only one of the many features of the project.

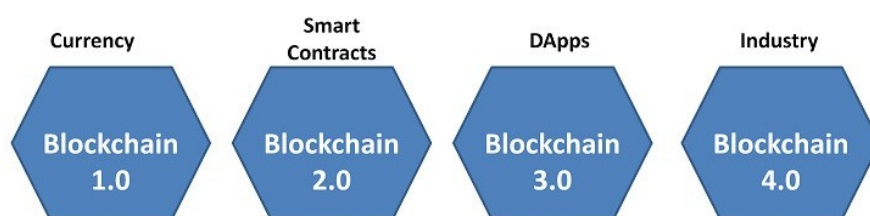
To be even more general, all of the projects building on blockchain technology could be thought of as new vehicles helping us overcome the limitations of time and space, where ‘anything of value’ (money, votes, contracts) can be transferred globally much faster, more efficiently, and in a more decentralized manner than previously possible (Husain, et.al. 2020, p.382-383). Similar to other GPT’s such as telecommunications, the internet or the railroad.

Apart from cryptocurrencies, the blockchain protocol allows for the creation of what is called smart contracts - including property right contracts and insurance contracts—systems for distributed governance like voting systems and decentralized governance of companies and organizations (also called Decentralized Autonomous Organizations or DAOs) (Antropulus & Wood, p.xxvi 2014). Some other examples on how it has been used is in food-production (IBM, 2022), diamond supply chains (DeBeer, 2018), personal identification documents resulting in no need for physical copies - important for ex. refugees (Dhameja, 2019), in the art-world as certificates (CNN, 2021), to record land registries and licenses in corrupt countries (Kshetri, 2018). Conventional political and financial powers have also started to use blockchain technologies, like the state of New York which has issued a BitLicense for companies dealing with Bitcoin (New York State Department of financial services 2015) and the Santander bank which is investing in blockchain innovations (Williams-Grut 2015). Hence, blockchain technologies are not only influencing the ways we understand and use money and contracts, but also the governance of our societies (Coeckelbergh, Reijers, 2016).

3.3.1 Categorizing Blockchain Projects

Melanie Swan (2015) writes in her book “Blockchain: Blueprint for a New Economy” about the evolution of Blockchain in terms of Blockchain 1.0, 2.0 and 3.0. Since then the industry has developed further and now also includes Blockchain 4.0 as illustrated below by IBAX

Academy(2021)(Brody



& Couture, 2021, p.546).

(Image from IBAX Academy, 2021)

Bitcoin is generally considered connected to Blockchain 1.0, Ethereum to 2.0 and a project by the name Polkadot to 3.0, which makes it increasingly relevant to analyze the political imaginaries that define the three different projects (Brody & Couture, 2021, p.546)(Coincu.com, 2021). Thus they also become symbols of different stages in technological development, something that might be reflected in their respective imaginaries.

In Husain's typology(table1), Blockchain projects are categorized in two main categories, either as Crypto-anarchists or Crypto institutionalists(Husain, 2021, p.381-382). Both categories are then divided into two more specific subcategories, as pictured below. Bitcoin is already placed on their scheme, which helps with my operationalization of their typology adding accuracy to my analysis of Ethereum.

Table 1 Typology of blockchain imaginaries

	Crypto-anarchists		Crypto-institutionalists	
	Crypto-libertarians	Crypto-commonists	Crypto-governmentalists	Crypto-collaborativists
Basic political imaginary	Free-market libertarian political economy	Commons-based political economy	Free-market, government regulated political economy	Commons-oriented, municipalist political economy (hybrid), transnational movements
Mode of governance	Decentralized mass-driven, individualistic	Decentralized collectivist, commons-driven	Centralized, state-run	Partially decentralized, municipal and civil society, transnational institution, and global civic society
Value and incentives	Speed, efficiency, risk, growth	Equality, social justice, ecological (commons goals)	Efficiency, transparency, accountability, growth	Collaborativism, translocalism
Political scale	Global/translocal	Local/translocal	National	Local/municipal/translocal
Implementation process	Start-up/crowdfunded	Start-up/crowdfunded	Government-led	Municipal/citizen-led, institution-led
Dominant node of power	Market, mass consensus	Collective	National government	Municipality/city
Examples	Most cryptocurrencies (Bitcoin, Litecoin EoS etc.), SunExchange, DAOStack, Bitnation, Project Grace-land	FairCoin, Democracy Earth, WePower, RightMesh, P2P Models	E-estonia, GrantSolutions, China's social credit system, Smart Dubai	Colony, FairBnb, ACT community mobilization, Decode, Berkeley Blockchain Initiative

3.3.2 Table 1

Before starting with the categorization, I'd like to briefly mention the definition of imaginaries.

Sheila Jasanoff, explains in her book from 2015 :“Imaginaries...encode not only visions of what is attainable through science and technology but also of how life ought, or ought not, to be lived; in this respect they express a society’s shared understandings of good and evil.”(p.4).

To look at how they are expressed by looking at what is implied, what direction it can be seen going in, and who profits.

To clarify, the analysis needs to be explained with two levels, the most basic one focuses on what is actually inscribed in the code - what the technology de facto enables. The other is the interpretations that actors with different interests impose and use the technology for. The concepts in STS, like Husains typology and Jaasanoffs terminology, help with explaining the in-between, and the movement from one to the other. To analyze succesfully, it is thus important to try and get the “big picture”, looking both at what its advocates are using it for and on what is actually enabled in the software itself.

4.0 Results

4.1 Bitcoin

The majority of research that has previously been made has focused on Bitcoin as it simply has existed longer (Swan, 2015, p.ix). It is more complicated to analyze than Ethereum, that have public founders, spokespersons and statements - something that Bitcoin does not have. Apart from the anonymous Whitepaper, released in 2008, there are no official publications. The webpage Bitcoin.org, was originally created by the founders of the project, and is still serving as the most reliable source of information about the project, with contributions from the maintainers and developers of the Bitcoin code (Bitcoin.org, 2022). Nevertheless, whoever wrote the website makes a point of expressing that ““Bitcoin.org is not Bitcoin's official website. Just like nobody owns the email technology, nobody owns the Bitcoin network. As such, nobody can speak with authority in the name of Bitcoin.” (Bitcoin.org, 2022a). However, there are currently only 5 people that have access to and are upgrading the “Bitcoin-core” code of Bitcoin, indicating some degree of centralisation (Hernandez, 2021) (Bitcointalk.org, 2017). This shows that what the technology enables, and what its advocates suggest, differ.

On the website and in the whitepaper it is made clear that despite Bitcoin rising to official status in many ways, such as El Salvador from October 2021 accepting Bitcoin as legal tender, it still falls under Husain's definition of “Crypto-anarchists” in contrary to “Crypto-institutionalists” (Livni & Lopez, 2021) (Husain, 2021, p.382). It can be seen as a tool used by crypto institutionalists, in the shape of a nation-state, or a bank, but as it's core function and purpose is to create a different

world, with the technology taking over roles the formal political structure previously had, it categorizes under “Crypto anarchists”(Husain, 2021, p.383)(Livni & Lopez, 2021).

4.1.1 Basic political imaginary

The basic political imaginary of Bitcoin can most accurately be found in the White Paper anonymously released in 2008. In the Whitepaper, the founder/s criticize the current financial system as one where “a certain percentage of fraud is accepted as unavoidable”(Nakamoto, 2008, p.1). As a solution to this problem they present Bitcoin as a tool because “What is needed is an electronic payment system based on cryptographic proof instead of trust”(Nakamoto, 2008, p.1). The belief is thus that it is possible to create a new system that is better than the previous. This new infrastructure is based on trusting actors will act in accordance with the logic of the system as long as it is in their own self-interest(Nakamoto, 2008, p.4). The authors write, after explaining how the incentivization will work technically that : “...a greedy attacker...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”(Nakamoto, 2008, p.4).

Basing a global system on the belief that actors will act in their own self-interest is in line with classic libertarian ideology and economic rational-choice theory(Archer & Tritter, 2000). It follows Friedrich Hayek’s thoughts in believing that markets, not formal political structures, are the foremost way of wielding power and gaining legitimate knowledge(Vanberg, 2016). In Husains typology, Bitcoins political imaginary in its most basic form consequently falls under the Free market political economy(Husain, 2021, p.382).

4.1.2 Mode of governance

The mode of governance in Bitcoin is in Husain's typology categorized as Decentralised mass-driven, individualistic. The word governance in this context I will operationalise quite simply as management and control. The Bitcoin project is decentralized to the degree that anyone in the world willing to contribute to the software, and the project can do so (Bitcoin.org, 2022c) (The Guardian, 2021). However, to upgrade the network, a simple majority of the network's "miners" need to approve the proposal (Armstrong, 2016). To mine bitcoin and consequently become a miner, you need to solve complex mathematical puzzles. The computers that are capable of effectively solving these have shown to be very energy-consuming. According to the Cambridge Bitcoin Electricity Consumption Index (CBECI) bitcoin mining consumes more energy annually than the whole country of Norway (CBECI, 2022). The number of votes each miner gets is proportional to the amount of computing power they add to the network (Armstrong, 2016). This ensures the votes can't be faked, but the computational power has tended to be concentrated in big "mining farms" in countries where electricity prices are low. Until November 2021 the majority of the mining occurred in China, but due to a surge in electricity prices the most mining currently takes place in the United States, Russia and Kazakhstan (Statista, 2021).

Consequently, to significantly participate in the development of the project, the users need to "mine". The threshold of participation is thus higher than advertised in the Whitepaper and on Bitcoin.org.

The project's mode of governance is thus in theory decentralized, mass driven, and individualistic but has shown to have significant tendencies of power concentration undermining the ideal. In Husain's typology there is unfortunately no "scale" of decentralization under crypto-libertarians, but had it existed, bitcoin would score lower.

4.1.3 Value and incentives

The values and incentives are also most accurately presented in the Whitepaper and under the category “Innovation” at Bitcoin.org. Speed and efficiency are two values explicitly expressed on several occasions (Nakamoto, 2008, p.1) (Bitcoin.org, “innovation”). As for risk, in contrast to Ethereum that express the objectives to “experiment”, Bitcoin is portrayed as a low-risk project (Ethereum.org, 2022a), (Brody, Couture, 2021, p.552). The focus expressed is repeatedly on the reliability and security of the technology, and what it enables (Nakamoto, 2008, p.8) (Bitcoin.org). Growth on the other hand, is on the website frequently pointed out as a key-objective, focusing on the many ways it can be incorporated into businesses, personal lives, other technologies, and so on (Bitcoin.org, innovation). A deeper analysis of the political imaginaries of the project will be executed in the second part of the thesis.

4.1.4 Political scale

Political scale I have defined as the extent of the possibility of political implications, or simply put - how impactful is the project's potential? As of now, Bitcoin has, among other examples, been recognized as legal tender in nation states (El Salvador), actively incorporated in banks investment programs, and been used for significant political donations not previously possible. The news site Coindesk reported on the 9th of March 2022 that Ukraine had received around 100 million dollars in crypto donations since the start of the Russia-Ukraine war on the 24th of February 2022 (Coindesk). When other donation sites, such as Patreon, are legally obliged to not accept any donations that could lead to investment in military equipment, the non-regulatory nature of cryptocurrencies makes this possible (Patreon, 2022). The political scale of Bitcoin, and indeed any cryptocurrency, is thus vast, unprecedented and global.

4.1.5 Implementation process

The implementation process of Bitcoin is not crowdfunded but can reasonably be classified as a start up, as it is a project founded by entrepreneurs who want to develop a product for which they believe there is demand(Grant, 2021).

4.1.6 Dominant node of power

As previously explained, Bitcoin is run on mass-consensus only to a certain degree. However - due to the tendencies of power centralisation as a consequence of Bitcoins reliance on high levels of electricity to maintain the network the “mass-consensus” does not include every participant. In terms of decision making power it is not deeply decentralized, but in terms of keeping the network running, it is. The dominant node of power is only mass-consensus to a certain extent. In terms of the market, it decides the value of the currency, and the relevance of the project and accordingly can be seen as a node of power.

4.2 Summary

Table 1 Typology of blockchain imaginaries

	Crypto-anarchists ✓	Crypto-libertarians ✓	Crypto-commonists	Crypto-institutionalists	Crypto-collaborativists
				Crypto-governmentalists	
Basic political imaginary	Free-market libertarian political economy ✓		Commons-based political economy	Free-market, government regulated political economy	Commons-oriented, municipalist political economy (hybrid), transnational movements
Mode of governance	Decentralized mass-driven, individualistic ✓		Decentralized collectivist, commons-driven	Centralized, state-run	Partially decentralized, municipal and civil society, transnational institution, and global civic society
Value and incentives	Speed, efficiency, risk, growth ✓		Equality, social justice, ecological (commons goals)	Efficiency, transparency, accountability, growth	Collaborativism, translocalism
Political scale	Global/translocal ✓		Local/translocal	National	Local/municipal/translocal
Implementation process	Start-up/crowdfunded ✓		Start-up/crowdfunded	Government-led	Municipal/citizen-led, institution-led
Dominant node of power	Market, mass consensus ✓		Collective	National government	Municipality/city
Examples	Most cryptocurrencies (Bitcoin, Litecoin EoS etc.), SunExchange, DAOStack, Bitnation, Project Grace-land ✓		FairCoin, Democracy Earth, WePower, RightMesh, P2P Models	E-estonia, GrantSolutions, China's social credit system, Smart Dubai	Colony, FairBnb, ACT community mobilization, Decode, Berkeley Blockchain Initiative

Bitcoin categorizes, not surprisingly, neatly under “Crypto-libertarians”.

4.3 Ethereum

While the concept of blockchain was first implemented in Bitcoin to maintain cryptocurrencies, Ethereum implemented the technology in new areas (Brody & Couture, 2021, p.548). Ethereum is, in their own words the “worlds programmable bitcoin”, or a “world-computer” (ethereum.org, 2022b) (Antropulus & Wood, 2019, p.25-26). First introduced by programmer Vitalik Buterin in a whitepaper named “*A Next-Generation Smart Contract & Decentralized Application Platform*” in 2014, Ethereum was officially founded in 2015 by 8 co-founders (Buterin, 2014). In 2022 only Buterin is still associated with the project.

Ethereum proposes a wider range of uses of blockchain that goes beyond cryptocurrency transactions.

Two of the main features are the possibility of executing smart-contracts on-chain, and the ability to host decentralized applications, or “dApps”. The logic of smart-contracts is somewhat similar to that of a virtual vending-machine. They are computer programs that automatically execute a transaction on the blockchain

following predefined terms(Brody & Couture, 2021, p.548-549). They are noticeable as it is an effective way to exchange anything that holds value, such as property contracts or shares, without needing a third party for legitimization(Brody & Couture, 2021, p.549). The dApps, are similar to Apple iOs or Android apps but decentralized, making it close to impossible to ever shut them down(Antropolus & Wood, 2018, p.268). These features make it more plausible to imagine a political reality where middle-men and institutions are not needed, and information is always accessible, out of reach from political censorship. These are noticeable anti-institutionalist ideas in Ethereum's proposal. Thus, the political qualities of Ethereum clearly puts them in the “Crypto-anarchist” category(Husain et al., 2021, p.382).

The primary material of Ethereum is larger than Bitcoins, and there are many speeches, papers and blog posts where they express their political and technical goals. The many co-founders have all expressed different interpretations and ideas for how their vision of the project would be, which complicates it further. To avoid confusion I will primarily use the material that most accurately depicts the design features of the project - the various whitepapers. I will also use public statements explicitly from ethereum, and the introductory information offered on the official website, ethereum.org. Similarly to Bitcoin, the website is open-source, open for anyone to contribute. It differs, as there is an explicit team dedicated to maintaining and developing the site(ethereum.org, 2022a). Another large difference is that where Bitcoin is officially claiming to be a mere technology, Ethereum.org explicitly says : *“Ethereum is a big thing: it includes a community, a technology, a set of ideas and ideologies, and more.”*(ethereum.org, 2022a).

4.3.1 Basic political imaginary

Looking at what Ethereum de facto enables is a good starting point for unraveling their basic political imaginary. In terms of design, it can be categorized as a “Turing-complete” virtual machine, in the sense that any kind of problem can be solved by the machine itself(Brody & Couture, 2021, p.550)(Buterin, 2014, p.1). This is, according to scholars Ann Brody and Stéphane Coutoure, connected to the nature of the Ethereum programming language Solidity, written by ethereum co-founder Gavin Wood. Solidity is scripted to minimize

user constraints, making it easier to experiment and enables different preferences and directions to co-exist(Brody & Couture, 2021, p.550).

Brody and Couture conclude that : *“This promotes a broader ideological orientation than what is permitted by Bitcoins limited programming language which is primarily intended for financial transactions.”*(Brody & Couture, 2021, p.550). The nature of Solidity is thus a core-feature that enables flexibility and ensures Ethereum follows Buterin's vision in the white paper as being *“open-ended by design”*(Buterin, 2014, p.34). The flexibility of this makes it harder to outline what the software de facto enables, making it increasingly relevant to look at the outspoken directions the project is moving towards.

In the original whitepaper, Buterin writes *“What Ethereum intends to provide is a blockchain with a built-in fully fledged Turing-complete programming language that can be used to create "contracts" that can be used to encode arbitrary state transition functions, allowing users to create any of the systems described above, as well as many others that we have not yet imagined, simply by writing up the logic in a few lines of code.”*(Buterin, 2014, p.1). The politically relevant key themes here are the possibility to encode arbitrary state transition functions, that users can themselves create any of the systems and the emphasis of what we have not yet imagined. These are all quite “commons-based” principles, although focused on the individual(Husain et al., 2021, p.381-382). The project's focus and aim is presented further on ethereum.org under “What is ethereum” divided into 6 main themes:

- Banking for everyone
- A more private internet
- A peer-to-peer network
- Censorship resistant
- Commerce guarantees
- Compatibility for the win

(ethereum.org, 2022b)

Whereas the categories Banking for everyone, a more private internet and censorship resistant can be read as explicit critique towards current systems, the other three are more implicit. For example, the phrasing of “a *more private internet*” clearly indicates that the current internet is not seen as private enough expressing

values of wanting to improve the individual's privacy rights. Commerce guarantees seeks to create a “*more level playing field*”, where A peer-to-peer network ensures that “*You don't need to go through intermediary companies*” indicating that this is something undesirable(ethereum.org, 2022b). Buterin emphasizes this in the whitepaper as well, presenting the three different types of applications ethereum provides(Buterin, 2014, p.19). They are financial applications, semi-financial applications and finally applications that are “not financial at all” such as online voting(Buterin, 2014, p.19). This shows that the project is indeed a hybrid, with the belief that it is possible to improve an individual's self-sovereignty through technology. These ideas are more closely connected to what Golumbia called “Cyberlibertarianism” or classic techno-utopianism than Husain’s “Free market political economy” or “Commons-based political economy” (Golumbia, 2015, p.120)(Husain et al., 2020, p.381-382). However, based on Husain’s typology, both are expressed within Ethereum. The focus on building, privacy, peer-to-peer and banking for everyone reveals how Ethereum is committed to more than a market investment logic, going in the direction of Crypto-commonists. Yet, there are still prevalent parts of the ecosystem relating to currency and economics that can be closely connected to classic libertarianism, much like in bitcoin. For example, Ethereum's native currency, ether, holds significant monetary value¹, and is used as “gas” for everything that happens in the ecosystem(ethereum.org, 2022c). Ethereum partly takes the collectivistic, collaborative approach in how it expresses its goals of co-creation(ethereum.org, 2022a). Despite this, ethereum is foremost used as a financialization tool and has an individualistic market-oriented approach to economic organization and mode of governance in the sense that it is based on individuals using this currency in a parallel world (Husain, et al., 2020, p.383)(Brody & Couture, 2021, p.557). Effectively, ethereum can thus be classified as “crypto-libertarians” with the basic political imaginary being that of a “Free-market political economy”. In the future, if they manage to fulfill their vision of becoming a “world computer” or as they say themselves bigger thing than it could change into Husain's other category of “Crypto-commonists”.

¹ 21 March 2022 at 15:06 one ETH had a value of \$2909.47

4.3.2 Mode of governance

Ethereum uses “off-chain governance” in contrast to Bitcoin’s non-existing governance. Off-chain governance “*is where any protocol change decisions happen through an informal process of social discussion, which, if approved, would be implemented in code*”(ethereum.org, 2022d). In short, this means that the decision making process is to some degree opaque as it happens through an informal process. Nevertheless, there are internal processes in place to ensure a fair outcome. There are three main actors in the Ethereum governance system, users, miners and Ethereum Core Developers(ethereum.org 2022d). To do changes or develop Ethereum, an EIP(Ethereum Improvement Proposal) must be passed. Once an EIP has been suggested, the Ethereum core developers act like politicians in the sense that they ‘listen’ to the ‘citizens’ of the network on social channels to ensure that there exists popular support for the EIP before passing it. There are mainly two different types of decision categories passed on Ethereum, “soft forks” and “hard forks”. With a soft fork, miners and users can use both old and new versions of the software whereas after a hard fork, those who don’t update their software are forced to split from the network(Coen, 2021). In May 2016 there was a hard fork implemented the Ethereum protocol, resulting in the Ethereum blockchain splitting in two, Ethereum Classic(ETC) and Ethereum(ETH)(Brody & Couture, 2021, p.555). This hard fork was implemented after a hacker had stolen around 80 million dollars worth of cryptocurrency. The community that continued with Ethereum Classic was closely connected to the imaginary of “code as law”, whereas the people behind what became Ethereum were committed to experimenting and trial and error(Brody & Couture, 2021, p.555). Ethereum’s governance has a flat hierarchy to the degree that anyone who is technically minded can suggest an EIP, not different from how citizens can suggest referendums. This does not make it decentralized as the decision makers are a few Ethereum core developers. As the example with the hard fork split in 2016 suggests, even when the community can not reach consensus, the core developers hold power to implement new structures. It can thus not be categorized with Husain’s typology as it is not Decentralized, mass-driven, individualistic, nor Decentralized collectivist, commons-driven. It could closest be categorized as “centralized, state-run” under crypto governmentals, however, it is not a state and consequently has to be excluded from this category altogether.

4.3.3 Value and incentives

In the whitepaper Buterin writes : *“The intent of Ethereum is to create an alternative protocol for building decentralized applications, providing a different set of tradeoffs that we believe will be very useful for a large class of decentralized applications, with particular emphasis on situations where rapid development time, security for small and rarely used applications, and the ability of different applications to very efficiently interact, are important(Buterin, 2014, p.13).* It thus expresses explicitly that the incentives of the project are speed, efficiency and growth. Ethereum aims towards providing a superior service. However, as noted in the chapter with political imaginaries, ethereum emphasizes common-goods values such as banking for everyone, and becoming a “world computer” as well(Antropolus & Wood, 2019, p.25-26),(ethereum.org 2022b). In research from Brody & Couture they use the Flichy’s(2007) concept of “mask ideology” to explain Ethereum's imaginaries. They mean that the common-based concepts of community and co-creation are used to “mask” and legitimize the project that is still mainly used as a financial tool(Brody & Couture, 2021, p.557). It has qualities from both the “crypto-libertarians” and the “crypto commonists”, but based on Brody & Couture’s assumption, it falls further under crypto libertarians than crypto-commonists.

4.3.4 Political scale

Similarly to Bitcoin ethereum is explicitly striving towards being a global service. Technically, the only thing you need to significantly participate in the ecosystem is an internet connection. The implications of having a service that effectively can take the place of political institutions and financial services in terms of smart-contracts and dApps are undoubtedly global. The nature of Ethereum being programmable by anyone who is technically literate enough enforces this.

4.3.5 Implementation process

Ethereum can be defined as both a crowdfunded project and a startup as it was founded through a crowdsale.

4.3.6 Dominant node of power

As previously discussed in the governance chapter, Ethereum carries some level of centralization as the Ethereum Core Developers hold more power. In the whitepaper, Buterin is aware of the risk of scalability as the project grows. *“Ethereum is likely to suffer a similar growth pattern, worsened by the fact that there will be many applications on top of the Ethereum blockchain instead of just a currency as is the case with Bitcoin, but ameliorated by the fact that Ethereum full nodes need to store just the state instead of the entire blockchain history. The problem with such a large blockchain size is centralization risk.”* (Buterin, 2014, P.33). The dominant node of power is currently relatively centralized, and not based on the market or mass-consensus. Ethereum thus fails to live up to the criteria suggested in the typology.

4.4 Summary

Table 1 Typology of blockchain imaginaries

	Crypto-anarchists ✓		Crypto-institutionalists	
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Mode of governance	Decentralized mass-driven, individualistic ✓	Decentralized collectivist, commons-driven ✗	Centralized, state-run	Partially decentralized, municipal and civil society, transnational institutions and global civic society
Value and incentives	Speed, efficiency, risk, growth ✓	Equality, social justice, ecological (commons goals)	Efficiency, transparency, accountability, growth	Collaborativism, translocalism
Political scale	Global/translocal ✓	Local/translocal	National	Local/municipal/translocal
Implementation process	Start-up/crowdfunded ✓	Start-up/crowdfunded	Government-led	Municipal/citizen-led, institution-led
Dominant node of power	Market, mass consensus	Collective	National government	Municipality/city
Examples	Most cryptocurrencies (Bitcoin, Litecoin EoS etc.), SunExchange, DAOStack, Bitnation, Project Grace-land ✗	FairCoin, Democracy Earth, WePower, RightMesh, P2P Models	E-estonia, GrantSolutions, China's social credit system, Smart Dubai	Colony, FairBnb, ACT community re-organization, Decode, Berkeley Blockchain Initiative

Ethereum in contrast to Bitcoin does not fulfill Husain's criteria to be categorized as crypto-libertarians.

However, they are categorized as more crypto-libertarian than anything else. Much of Ethereum's official communication and self-description move in the direction of crypto-commonists, still, as the typology does not allow for nuance or any "cross-fertilization" between categories, this is the end result.

5 Result & Analysis

How were the ideologies and imaginaries surrounding Bitcoin and Ethereum articulated with its technical design? While Bitcoin categorized as crypto-libertarian in accordance with the typology Ethereum was harder to categorize, as it is a more sophisticated project, created years after bitcoin, naturally with more features and a deeper imaginary. Husain's typology thus failed to capture the nuance of the different projects, but it managed to draw the general outlines of belonging. As for

political imaginaries, Ethereum can be interpreted as having a stronger sense of community, and general “goodwill” than bitcoin. They move towards “crypto-commonists” in a few categories. They state to be more than a mere financial project, exemplified by depicting itself as a “world computer” or a “big thing”(Antropolus & Wood,2019)(ethereum.org 2022a). This is mainly due to two factors. One being that it is, at the end of the day, still a company and needs branding. A more benevolent interpretation would be that it is a deeply ideological project trying to make their way towards a decentralized structure. To do this they need to first move through the development phase of traditional finance. In the whitepaper, Vitalik expressed reservations regarding the centralization risk as the project grew, something that can now be seen to be true. Other projects, that are building on the innovation of ethereum, would be of further interest to analyze here to see how they have dealt with the centralization problem and how the political imaginary has changed accordingly. Originally, my plan was to have a second part of the analysis, focused only on political/socio-technical imaginaries and how they were implicitly expressed - moving away from Husain’s typology. Unfortunately due to lack of time it could not be done, however, as preliminary research the findings in this thesis can give an indication on what might come.

In future research, a deeper ethnographic study as suggested by Husain would be relevant to continue working and categorizing different blockchain projects more accurately. Another typology, or a deepening of Husain’s that would be more focused on the nuances of the projects would serve even better when trying to categorize different ecosystems. Because of the different nature of Bitcoin and Ethereum it is important to use tools designed specifically for this. However, in Husain’s typology they expected “most cryptocurrencies” to fall under the categorization of crypto-libertarians which can from my findings, preliminary, be concluded not to be the case(Husain, et al.,2020, p.381). This can be connected to Bitcoin being Blockchain 1.0 and Ethereum 2.0. Had I had the time to analyze Polkadot, which is usually connected to blockchain 3.0, the conclusion would have gotten more accurate. For now, Husains typology is a relevant categorization tool that serves useful for categorizing different use-cases of blockchain, but it falls

short in its ability to differentiate between blockchain projects that are closer together. Simple projects can be caught up with this typology, but more sophisticated ones do not get represented. Future research using “mask ideology” similar to that of Brody & Couture can be useful here. It can better highlight the difference between what the projects are and how it depicts itself. Something that I unfortunately could not bring up in this thesis further are the different governance structures and political experimentation happening on-chain. This type of experimentation would be of particular interest as it is a direct product of different political outlooks and would be a very accurate indicator of political imaginaries.

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