

Does the Proposal Matter? A Case Study of Collective Decision-Making in a Decentralised Autonomous Organization

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Abstract

This paper turns attention to the democratisation of work through the case study of a new type of firm that has come into existence within the previous decade, the decentralised autonomous organisation. Until now, scholars have mainly documented the historical context and theoretical ideology of the worker-managed firms that originated from the opposition to the capitalist systems. In this present paper, I propose to analyse a case study devoted to a particular decentralised autonomous organisation, referred to as ABCD, which was started in opposition to the capitalist system and what it is attempting to build, Web 3.0. If ABCD has been grounded on the narrative of the democratisation of work, I will hypothesise that, on the contrary, there is a minority of individuals who have control over the collective decision-making processes in the decentralised autonomous organisation. To investigate this subject, I will draw on discourse network analysis with the qualitative foundations of political claims analysis. This research will therefore suggest that indeed, a minority of six individuals in an organisation of four thousand four hundred do have control over the decision-making processes. I will notably demonstrate how the individuals in the organisation use the notion of the spirit of capitalism as well as autochthony to accumulate influence over the collective decision-making processes. In other words, ABCD reflects a wider phenomenon in which capitalism becomes so complex that it incorporates the criticisms levelled at it. Within ABCD, this phenomenon is facilitated by particular individuals who have established themselves as leaders by virtue of their tenure within the organisation. These findings may be linked more broadly to the primitive accumulation of symbolic power as well as the impact of autochthony in the origins of hierarchy.

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Section 1 : Introduction

The 19th century witnessed the emergence of new forms of work organisation linked to the emergence of a new economic model, capitalism. This economic system is characterised by the fact that capital, the source of income, and the means of production and exchange do not belong to those who use them through their own labour (Piketty, 2020). However, the emergence of capitalism was also accompanied by a number of protests, notably environmental and social protests (Rosenthal et al., 1985). Those criticisms of capitalism also are reflected in scientific literature, with some authors choosing to theorise about potential economic alternatives. One of these alternatives is the democratisation of work as the hierarchy and the individualism of capitalism was widely criticised (Rosenthal et al., 1985). One of the main criticisms of capitalism concerns the strong hierarchy that exists between those who own the means of production and those who are reduced to selling their labour. The concept of democracy may be summarised as a form of government in which sovereignty belongs to the people (Dahl and Shapiro, 2021). Applied to the world of work, the idea of the democratisation of work refers to the idea that workers would hold equal power in the administration and management of the company (Wolff, 2012).

The democratisation of work has consistently remained prevalent in political thought, discourse, and action for over two centuries. Among those who have taken part in this debate were some of the most recognized political thinkers of the 19th century, such as John Stuart Mill and Karl Marx, to the prominent democratic thinkers of the 20th century, with the likes of Sidney and Beatrice Webb, John Dewey, Carole Pateman and Robert Dahl. Such a corpus concerning the democratisation of work calls for reform in human rights, property rights, and a global transformation to the present system of production. This transformation has been attempted in many parts of the world including, but not limited to, Russia, China, Germany, Hungary, Italy, Spain, Argentina, Brazil, Chile, Guyana, Bangladesh, Congo, United States and Mexico (Ness & Azzellini, 2011; Plys, 2016; Sirianni & Bayat, 1993). In all these different locations, the democratisation of work has had many institutional forms, such as worker-owned cooperative firms, trade-union representation, co-determination mechanisms as well as workers councils.

Yet these debates on the democratisation of work in a capitalist world are by no means a passing fad. On the contrary, as capitalism has developed considerably over the course of the twentieth century, it has also raised new debates about the democratisation of work. The emergence of the internet as a workspace in the twenty-first century is leading to an extension of the forms of domination engendered by capitalism and, by the same token, opening the path to new debates. With the emergence of the internet as a new workspace, new initiatives are also being developed to build alternative workspaces to capitalism based on democratic principles. Among these initiatives is the decentralised autonomous organisation which will be the subject of this research and is a particularly recent case as this form of organisation has emerged within the past decade. I will give below a more detailed explanation later within this discussion of the decentralised autonomous organisation, but for now I will now provide a brief explanation of this notion. The decentralised autonomous organisation is an online organisation in which the actors each have an equal amount of authority and capital gained from their labour. This has emerged as a new business model within the last decade that has been made possible via the internet as a workspace. The number of individuals working within these new decentralised autonomous organisations can vary from one company to the other, as can the specialties of each decentralised autonomous organisation can vary from consulting to web designers. In this research, I propose to study one particular decentralised autonomous organisation, referred to as ABCD for anonymity. ABCD is a decentralised autonomous organisation that specialises in web development. The goal of the organisation is to build the Web 3.0, which is a new version of the web, and will be discussed further below.

1.1: Research Question

As it will be discussed below in the literature review, there has been much work on the importance of the role of a manager, the role of the architecture of hierarchical multi-level firms, as well as worker-managed firms. However, some crucial aspects have not been answered by the scientific literature. Notably, what appears to be missing is the underlying social structure of worker-managed firms, specifically in the case of the decentralised autonomous organisation. As previously noted, the worker-managed firms are horizontal, with the decentralised autonomous

organisation being defined as non-hierarchical. However, this claim does not give an accurate portrait of how the existing real-world networks are socially constructed in a decentralised autonomous organisation. If the worker-managed firms are built to be an alternative model to capitalism but end up reproducing the dominating mechanism inherent to capitalism, then these firms may appear just as a more subtle extension of capitalism. Therefore, this research will investigate the nature of this non-hierarchical structure, specifically in the collective decision-making process of a decentralised autonomous organisation. In this view, my research question will be:

Are decentralised autonomous organisations truly democratic? That is to say, do all employees have equal influence in the decision-making process within decentralised autonomous organisations?

1.2: Object of Study

I will now explain in further details the organisation ABCD, a decentralised autonomous organisation. This decentralised autonomous organisation first began on September 3, 2021. Live streamed on Youtube, one individual walked through the process of how to make their own non-fungible token, colloquially referred to as an NFT, that would allow them to join this new decentralised autonomous organisation. An NFT is a digital asset that is made in digital code that can be art, collectibles, or in-game items (Nadini et al, 2021). This specific NFT was a picture that was entitled Devs for Revolution. If someone were to make this NFT, they would become part of the organisation. At the very conception of the decentralised autonomous organisation, the intention of the decentralised autonomous organisation is to be set apart from current systems, and to inspire a type of revolution. On the NFT's that each person were to make in order to join the organisation were the words that inscribed the reason for this new decentralised autonomous organisation *"Developers around the world are tired of working and contributing their time and effort to enrich the top 1%. Join the movement that is community owned, building the future from the ground up"*. With this same revolutionary intent, the organisation links itself to similar rhetoric used in the criticisms of the capitalist system in the 2011 occupy movement (Roberts, 2012). If one were to join in this movement, the individual would have an

ownership in the organisation, instead of a capitalist class owning the organisation. The process for joining this organisation was not difficult as creating this NFT did not require individuals to write any of their own code. Thus, unlike most companies, one did not have to apply or interview for a position within the organisation. The code itself used to create this NFT was not written by anyone attached to the decentralised autonomous organisation, as it used open sourced code created by another organisation. In other words, the creation of this document was not their own. They copied from someone else's code and used it for their own purposes. While livestreaming, the individual describes their use of open source technology, *“And when you think about open source, and how open smart contracts are, you can basically go into someone else’s project and copy their code. And that’s what I did. The only thing I changed really is the colors, so instead of having the black background and the white foreground, I did vice versa.”*

The first proposal began with all members having the opportunity to vote on the mission, values, and the purpose of the organisation on October 15, just a month and a half passed the initial creation of the decentralised autonomous organisation. While the initial entry into the organisation for each actor was tied to the notion of a rejection of the capitalist system, as well as an attempt to bring about a revolution as each individual had to have the same NFT as described above, this proposal was the first instance of the democratisation of work. This first proposal outlined the mission of the organisation, with three individuals who put forward the proposal as to *“accelerate the education and impact of a new wave of web3 builders”*. With the proposals passing by a margin of 441 out of 443 votes in favour, there is a clear establishment not only of the desire to build the Web 3.0, but to bring an entry point for individuals to do so within the decentralised autonomous organisation. If an individual desires to step away from the capitalist system but they do not have the current skills to build the technology required, this organisation is attempting to establish itself as the place to be for people to build those skills.

As I was in the process of gaining information concerning ABCD, several elements came to light. Firstly, I discovered that a few authors are critical of the idea that decentralised autonomous organisations are truly democratic (De Filippi et al., 2021; Zwitter and Hazenber, 2020), as either a certain actor or group of actors may have central control over the organisation. This is directly opposed to the notion of the decentralised autonomous organisation, as will be discussed further below. Also, I noticed an instance in which a member of the organisation was

criticising the organisation as not being truly a decentralised autonomous organisation, but one in which a few individuals were enriching themselves off of the labour of others. Therefore, my hypothesis is as follows:

There is a minority of people who control the collective decision-making process in the decentralised autonomous organisation, ABCD.

This hypothesis is pivotal in order to understand if this specific type of worker-managed firms, the newly created decentralised autonomous organisation, does indeed increase the democratisation of work. As a matter of fact, if a minority of people control the collective decision-making process of a decentralised autonomous organisation, then the democratic dimension is compromised.

1.3: Literature Review

The form of the democratisation of work that will be of interest for this research is that of the worker-managed firm, specifically the new sub-type of firm categorised as the decentralised autonomous organisation. Worker-managed firms are defined as firms in which the workers have direct control of the firm (Wright, 2010). To understand worker-managed firms and its place in the literature, it is important to be aware of the opposing arguments given for the role of managers and the role of hierarchy in the architecture of organisations. We will also focus on the particular type of firm that is the object of the case study, the decentralised autonomous organisation, as well as describe the history of Web 3.0 that it is the technology this organisation is attempting to build. But first, we introduce the decentralised autonomous organisation of our case study and specifically demonstrate how this organisation first took form.

1.3.1: Worker-Managed Firms

Firstly, the literature on the democratisation of work that concerns the institutional form of worker-managed firms can be insightful into the nature of the research and this case study. Worker-managed firms are directly tied to the organisation of the workplace in which the ownership of the means of production is in the hands of the labour, not the capital class (Plys,

2016). The worker-managed firms are both a response to the criticism as well as an attempt to create an alternative to the capitalist system, which is described in further detail below, making it one of the more influential and important attempts to increase the democratisation of work (Wolff, 2012). Theoretically, worker-managed firms re-organize production from a hierarchical model to a horizontal model, in which workers own, operate, and manage their labour collectively without a manager or capitalist in control of their labour. Thus the elimination of the wage relation between workers and capitalist while also providing the workers with higher earnings. This is in comparison to workers within the hierarchical firms who have been increasingly forfeiting control of the labour process (Braverman et al., 1998). Worker-managed firms allow for the workers to remain in control, with the agency to determine the quality, quantity, design, and organisation of their work (Sirianni & Bayat, 1993). This is in juxtaposition to literature's argument for the role of the manager within the firm.

Moreover, there are many characteristics that good managers possess which the management literature points to as essential to the success of a firm (Plys, 2016). Managers fill the role of supervising the workers by assuring the work gets accomplished, giving feedback to the workers, and monitoring the progress of the employee for the firm (Hemphill, 1959; Pheysey 1979). In this supervising role, they can also build connections inside the existing firm, provide long-range planning, and disseminate information from those in higher positions within the hierarchy (Mintzberg, 1979; Sayles, 1964). These managers function as spokespersons of specific organisational groups within a firm. Indeed, they allocate resources, manage disruptions, and maintain workflow by planning, controlling, and directing subordinates (Hayles, 1986). It has been argued that good managers can also help provide employees with a sense of joy, engagement, and creativity by giving workers tasks in which they excel, allowing workers to take risks and praising or rewarding them when they succeed (Amabile & Kramer, 2011). Managers also have the ability and control to taper this sense of enthusiasm of the workers. When workers are intensely interested in an assignment, they may be at risk of underperforming in other tasks they value less. Thus, it is suggested managers can and should assign tasks that are interesting to workers in between tasks that are viewed as tedious (Shin & Grant, 2019). However, if managers can convince their subordinates that their tasks are prosocial and their

work is “meaningful”, it can increase the persistence and performance of the workers, which in turn increases the profits of the company (Grant, 2008). In all these different forms, it is commonly conceived that managers help to maximise the efficiency of the workers and of the firm.

The focus in the economic literature on the organisational structure of a firm is one designed to maximise efficiency using a hierarchical system (Coase, 1937; Garicano, 2000; Radner, 1993). These firms are described as multi-level hierarchies which are information flows between actors in the network. They have a tree-like, top-down structure, which originates at one single actor and then branches downward towards a series of levels to the final actors at the very bottom. When connecting all the actors together there is created a chain of command from the top down that is unambiguous, with the multi-level hierarchies declared to be almost as efficient as possible (Dodds, Watts, Sabel 2003; Newman, 2019). This network structure has also been argued to optimise a firm's ability to exercise control (O'brien & Williamson, 1976), gather knowledge (Garicano, 2000), and distribute the cost of processing information (Bolton & Dewatripont, 1994). Nevertheless, this assumes that a firm's task is decomposable into smaller parts and that each of these smaller parts can be completed independently and in parallel with each other (Simon, 1962). Most firms task's are large and ambiguous, not easily decomposable, in which the problems that are being solved change on the same time scale as the production itself, with new knowledge being gained through the attempted production (Burns & Stalker, 1994). These problems thus would require a collective group that both monitors and designs the solutions based on information-rich flow between the collective collaboration of individuals, teams, and sometimes other firms, thus suggesting that the top down tree like structure may be suboptimal (Helper et al. , 2000; Krogh et al., 2000).

Thus, we could describe worker managed firms as non hierarchical organisations within which the collective collaboration of individuals is required and may be more optimal than a hierarchical structure. Such organisations are created as an attempt to propose an alternative economic model to capitalism.

1.3.2: Decentralised Autonomous Organisation

Scholars have defined a decentralised autonomous organisation as a “non-hierarchical organisation that performs and records routine tasks on a peer-to-peer, cryptographically secure, public network, and rely on the voluntary contributions of their internal stakeholders to operate, manage, and evolve the organisation through a democratic consultation process” (Hsieh et al., 2018). Organisation theory has plentiful literature on several kinds of decentralised organisations dating back to the 1960’s (Beckhard, 1966; Freeland & Baker, 1975). However, the current meaning of a decentralised autonomous organisation has its roots in the earlier concept of a decentralised autonomous corporation, which appeared a few years after the origination of Bitcoin in 2008 (De Filippi et al., 2021). In this recent form of decentralised autonomous organisation, individuals use Web 3.0 technologies, such as blockchain and smart contracts, which allow for the work of the internal stakeholders to complete these tasks as well to record the votes of the democratic voting process online. Decentralised autonomous organisations often divide the organisation's labour amongst themselves and deploy smart contract code onto the blockchain that obstructs any decentralised autonomous organisation’s transactions without the expressed approval of multiple parties, thus no one person should be able to control the use of the smart contract (Khan et al., 2021). A smart contract is a contract that is digital and written in code. This code will run automatically once the specified individuals have signed the digital contract. As smart contracts are code that is designed to be tamper-resistant and self-enforcing, problems can arise if there are bugs within the code, issues with the agreement of the terms of the contract, or regulatory concerns of the contract (Cong and He, 2019). The first widely recognized decentralised autonomous organisation, named “The DAO”, lost roughly 50 million USD of their total 150 million USD due to an individual's exploitation of a bug within the code of a smart contract (De Filippe and Hassan, 2018). However risky, these smart contracts are used commonly in decentralised autonomous organisations, although not exclusively. Reijers, Wuisman, Mannan, De Filippi and colleagues (Reijers et al., 2018) distinguish between “on-chain” and “off-chain” governance in the governing structure of decentralised autonomous organisations in which the democratic process and voting decisions do not need to always be inscribed to code in smart contracts that will be automatically deployed on the blockchain, thus some decisions can take place “off-chain”. As the decentralised autonomous organisation’s

governance and structure are non-hierarchical, authors have put forward the notion that decentralised autonomous organisations could be used for economic decentralisation in ways that would implement more democratic and participatory potential forms of governance (Allen et al., 2017; Atzori, 2015).

1.3.3: Web 3.0

Many of the decentralised autonomous organisations that exist online are able to do so via Web 3.0, and the blockchain and smart contract technology that allows them to do so. Thus the new form of worker-managed firm, the decentralised autonomous organisation, is quite reliant on this technology. As discussed above, ABCD is both using and attempting to build upon Web 3.0. To better understand the ABCD, it is necessary to understand where this Web 3.0 is genesing from. In 2004, Tim O'reilly, who popularised the term Web 2.0, explained at the first Web 2.0 conference that the Web was changing during the early 2000's from one based on hypertext to one that harnessed the new forms of participation that allowed for the co-creation of information, social networking, and greater user experience (Barassi and Treré, 2012). According to O'reilly, this new version of the Web allowed for the utilisation of the "collective intelligence of crowds to create value"(O'Reilly, 2005, par 25). Previously to this was use of what is now referred to as Web 1.0, which can be roughly defined as the platform on the Internet through which information could be published in a static form roughly from late 1980's to the early 2000's (Choudhury, 2014). Scholars have agreed on the importance of the Web 2.0 platforms on society, such as Instagram, YouTube, and Twitter, and their ability to offer users the chance to become prosumers (Bruns, 2008). Some scholars have argued even further that the technology that allows for the interactive features of Web 2.0 gives rise to the unprecedented levels of democratic opportunity for individual participation and empowerment (Reynolds, 2006). However, with the emergence of greater information flow throughout these networks, there have blossomed newer and more capable tools for surveillance, exploitation of free labour for commercial profit, and the increasing privatisation of social spaces that exist online (Zimmer, 2008; Zuboff and Schwandt, 2019). Therefore, many scholars have argued that the online economy of Web 2.0 is not linked to democracy, but linked to neo-liberal surveillance, corporate control, and exploitation of labour (Everitt and Mills, 2009, Van Dijck and Nieborg, 2009). In

this manner, these authors link Web 2.0 to the concepts of capitalism and the exploitative nature it produces.

The notion of Web 3.0, as it is imagined by web developers and business models, is often associated with the notion of the Semantic Web, which was first coined in 1999 by Berners-Lee, one of the creators of the world wide web (Barassi and Treré, 2012). The idea put forward by Berners-Lee was the enabling of machines to “talk” with one another and create meaning from semantic data (Floridi, 2009). Thus, while some of the technological framework and of the interactive nature of the Web 2.0 remains, new technological advancements of the Web 3.0 for peer-to-peer distribution of information without the centralization of data centres or single points of control (Sandbeck et al., 2020). While the Web has allowed for peer-to-peer transmission of data, the collection, storage, and profiteering from many of the Web 2.0 platforms centralised much of the data (Ragnedda and Destefanis, 2020). Opposed to this centrality, the Web 3.0 used blockchain technology, which is a distributed database or ledger that is shared across the digital network. There is no central database, single authority, or host computer in which all of the information is stored, instead every node in the network consistently updates while also maintaining the distributed database independently (Sandbeck et al., 2020). Web 3.0 also commonly uses the new technology of smart contracts, originally theorised in 1997. Smart contracts are a cryptographical technology that allows users to input data or a value and receive a finite item as an output. Smart contracts are self-enforcing agreements in which the implementation of the agreement by computer code enforces the rules of the contract (Ragnedda and Destefanis, 2020). Thus, once deployed on the blockchain, these smart contracts are designed to be hard to alter, adapt, or reject (De Filippi et al., 2021).

Thus, ABCD is situated within the Web 3.0 space. The mission of ABCD is to build the technology that will have no central control or single authority over the information on the web. This is quite similar to how ABCD is intended to function as a decentralised autonomous organisation in which there is no central authority. Instead, ABCD is to be a non-hierarchical collaborative collection of individuals who own and operate the organisation.

Section 2 : Theories and Concepts

To begin, one may observe the relevance of the topics of power and opinion in the grand theories in sociology. In Hume's observation into the "*ease in which the many are governed by the few*", it is not through force but through the mechanism of opinion in which governance is founded by the few, from the "*most despotic and most military governments, as well as the most free and most popular*" (Hume, 2018). Here one can see the similarities to Marxist concept of false consciousness (Eyerman, 1981). When the capitalist class uses the power gained from control over the means of production to dominate the working class, the capitalist class will then shape a false consciousness. Through this form of domination, a false consciousness is created in which individuals in the working class of society hold beliefs and values that are not in their own best interests, but rather in the interests of those who hold power over them. Moreover, the capitalist class can accomplish this feat through the control of societal institutions, whether that be media, education or religion. Bourdieu expands this concept even further through the concept of doxic submission in which individuals and groups conform to social norms and values without questioning their legitimacy or authority (Bourdieu, 1994). These beliefs and norms are then reinforced and internalised through the different forms of social and cultural capital, from education to media to family upbringing. Individuals are unaware of the internalisation of beliefs and values which influence their thoughts and actions when the doxic submission is taking place. The individual assumes and accepts these beliefs to be natural, further limiting the ability to question the legitimacy or authority of the dominant group. This subjugation is a symptom of the manifestation of symbolic power exercised by the dominant group. Symbolic power is the ability of the dominant group to impose certain beliefs, values, and norms as being legitimate (Bourdieu, 2018). Furthermore, an innovative analysis could be drawn by associating the thoughts of Bourdieu and Marxism. Indeed, taking together, Bourdieu's concept of symbolic power and Marxist concept of superstructure, as the latter refers to an imposition of social norms and values upon a system (Marx, 1977), could give an interesting reading of the decentralised autonomous organisation that is our case study, that is built to be an alternative model to capitalism but may end up reproducing the dominating mechanism inherent to capitalism.

2.1: Three Faces of Power

For further focus on the specific theories relevant to the research, the theoretical relations between power and the decision-making process must be addressed. According to Dahl (1957), those who have more power also have more influence on the decisions that are made and the outcomes that result. However, this power is not being held in isolation, but is consistently being negotiated between the different actors and groups. This power dimension can thus be defined as the ability to influence decisions and outcomes. As individuals are negotiating this power dimension, the decision-making ability of individuals is then a reflection of the differences in power in these negotiation processes. Therefore, decision-making is not merely rational deliberation, but it is shaped by power relations between different groups and individuals. Bachrach and Baratz refer to this notion as the “first face” in which power can be seen in the ability to influence both the decision making and outcomes (Bachrach & Baratz, 1962). However, these two authors expand this work by noticing a more subtle use of power which is glimpsed in the ability to create barriers that disallow certain groups from the decision-making processes. This is where the “second face” of power that Bachrach and Baratz put forward can be made visible. Importantly, as argued by Brubaker (2015), there is not only a categorisation in which individuals categorise themselves and others in terms of similarities and differences. There is also a variance within these groups concerning the distribution of levels of more or less belonging. That is, within a group that an individual may belong to, there is not always an equal distribution of who belongs to this group and there may be variances within this categorisation as well. This categorisation process allows for the exclusion both between groups and within groups of the decision-making process, which allows a dominant subsection to maintain the parameters for who is and who is not part of the decision making process. These two faces of power will be of use in my analysis of voting decisions of the decentralised autonomous organisation.

Secondly, the affiliation between power, opinion and the decision-making process can be addressed through Lukes’ concept of the “third face” (Lukes, 2021). This furthering of the concept of power is what Lukes refers to as the three-dimensional approach, a more subtle

approach to power that does not reject the first or second face. However, Lukes extends the concept of power to include the notion in which one dominant group or individual is able to shape people's beliefs, values and perceptions so that they are less likely to resist or challenge the existing dominant group. This ability to shape either the beliefs, values or perceptions gives an individual or group unique power over the decision-making processes as it allows for the ability to obscure the control these individuals may have. According to Lukes, this allows them to then use this power to shape the decision-making processes in a way that would be best for the dominant individual or group. By integrating these concepts, I will use the three dimensional approach in order to avoid the pitfalls of only examining the first or second face. Instead, this approach to power will help increase the perception into the social structures that shape the decision-making process in ABCD, the decentralised autonomous organisation. This three dimensional approach allows for the consideration of the social forces presented by Marxism's false consciousness or the use of Bourdieu's symbolic power.

2.2: Considerations on the Notion of Capitalism

It is important to understand what Boltanski and Chiapello (2005) label "the spirit of capitalism" for the further analysis of this case study of ABCD. The next three paragraphs will be dedicated to the analysis of Boltanski and Chiapello's theory. This spirit of capitalism is the ideology that both supports people's commitment to capitalism and what makes that commitment so appealing. In the system of capitalism, there is the consistent stressing of the requirement of unending accumulation. This capital is disconnected from material forms of wealth and is increased only through the process of continuous circulation and reinvestment. Therefore, due to this abstract nature, this spirit of capitalism can aid in furthering the continuation of the accumulation process. However, in the system of capitalism, individuals are threatened by the consistent competition concerning the actions of other actors. Due to this consistent concern of competition and self-preservation, there is the perpetual motivation for the accumulation process. For the many individuals in this system which have little or no capital, they make their money through the selling of their labour instead of the fruits of their labour. They do not own the means

of productions and are thus dependent upon the capitalist and their decisions who do own the means of production. As the capitalist accumulation process requires a high level of commitment from many people, both the wage-earners and the capitalists, only a few individuals in this system have a high probability of making a profit. For the wage earners who are consistently subordinate in the hierarchy created by capitalism and have lost the ownership of the fruits of their labour, as well as the capitalists who are consistently stuck in the ceaseless process, it is easy to understand how many individuals may find the lack of desire to enter this system as well as the potential development of antagonistic feelings towards capitalism. This can be a difficult situation and challenging problem when many economies require a considerable amount of commitment from employees. Thus, the qualities of commitment are dependent on economic incentives as well as competitive advantages that may be obtained.

For Boltanski and Chiapello (2005) the notion of the spirit of capitalism, the ideology both entices and supports the commitment to itself, allows for the ability to analyse within the same dynamic both the changes in capitalism and as well as the criticisms of it. Criticism itself is a stimulant for changes in the spirit of capitalism. The amorality of capitalism means that the spirit of capitalism cannot be based entirely on what capitalism itself alone can offer, which is the capacity for accumulation. However, capitalism cannot help but be at least partially oriented towards some fulfilment of the common good, as it is this consistent striving that motivates individuals to have the required commitment to the process. Therefore, capitalism needs its critics who are able to give it the moral foundation which it cannot provide by itself, and whose criticisms enable it to absorb certain justice enhancing processes for which it otherwise would ignore. Capitalism is then able to not only survive but become even more robust through its ability to neutralise the anticapitalist critics in this assimilation process, thus producing a more effective version of capitalism.

Three important dimensions of the expression of the spirit of capitalism are seen and can be classified within the notions of excitement, security, and fairness. As the arguments for the justifications of a strong commitment to capitalism are heavily shaped from economic theory, they may be inaccessible to most individuals if used in their original form from the economic literature as they can become both stagnant and too general in nature. This leaves little room for the necessary ability to compel individuals to undertake a particular career or lifestyle. This also

does not give someone the argumentative resources to respond to the criticism that is levelled at them for the extreme commitment they need to give of themselves to within the capitalist system. The spirit of capitalism cannot be made firm if the justifications do not offer the individuals both the capabilities to be aware of the issues as well as giving individuals a framework for living in the system that they can act upon. The dimension of excitement is important to the spirit of capitalism as it indicates what is exhilarating about taking part in the processes, how this can lead to individuals flourishing, and how it can generate a keen interest in others. This dimension can often be tied to the forms of liberation capitalism claims to offer. Secondly, an important expression of the spirit of capitalism is within the notion of security, as capitalism is argued to offer security for all those involved within the processes, as well as those they may care about. Lastly, the arguments offered in the spirit of capitalism are also expressed with the notion of fairness. These arguments are intended to demonstrate that capitalism is not only supportive of the common good, it is as well consistent with a sense of justice.

It is through this notion of fairness that the spirit of capitalism may intertwine and embed so well the role of criticism. To inscribe a certain perception of fairness, a test is often used to play the role of measurement of certain ideal fairness. Although numerous different types of tests exist, the notion of test might be best summarised as being the ordering of systems and values that are both relevant and legitimate to analyse people, things, and circumstances (Boltanski and Chiapello, 2005, pg. 171). However, criticism is also directly linked to fairness, as it is the very nature of criticism itself that is the distinction between a desirable state of conditions and the real situation itself. Then for any criticism to be valid, it must be able to substantiate itself, as it is focusing the attention on the normative basis on which it lies. These criticisms are directly linked to the testing of the situation and lead to two clear options in which individuals or groups may respond. The obvious responses to criticism can either be the acceptance of the criticism and the adjustments to the test that are demanded, or the outright rejection of the criticism and the continual usage of the tests. However, a third response can occur in which instead of either accepting or rejecting the criticisms, an entire new test may be created in order to circumvent the criticism. This process of creating a new test can create a new conception of fairness which incorporates within itself a new perception of fairness and might also be used as a way to stifle the very criticism it circumvents.

2.3: Autochthony

Autochthony can be defined as the “*belief that a place belongs to its original inhabitants and that they are then more entitled*” (Martinovic and Verkyuten, 2013). There has been an increasing abundance of discourses of autochthony, claims of an original belonging to a ‘group or territory’, in many parts of the world (Hilgers, 2011). The amplification of land and political conflicts, urbanisation, and decentralisation in the process of globalisation have prompted the rising use of arguments that intend to discriminate against a particular section of the population in their access to resources. The question of autochthony has been playing a large role in the public space, whether concerned with land ownership, settlement history, burial places, election of candidates, or an individual's ability to vote or run for office (Geschiere, 2005). This rising level of rhetoric of autochthony has been an effect of globalisation, rather than merely a response to it (Geschiere, 2009). The international institutions that highly encourage policies both of administrative deconcentration and urban development have led to the struggle between autochthon and allochthon. However, the question of autochthony is embedded in a specific history, thus connection to certain features is context dependent (Hilgers, 2011). Thus, while international institutions, their policies and implementations are related to autochthony, it is an overall simplification that discounts the embeddedness of the context dependent nature of autochthony that can take multiple forms with particular paths. These multiple forms allow for autochthony to be found in greater regions of social organisation and are a helpful tool in the analysis of the decentralised autonomous organisation.

Even before the period of globalisation, distinction between “conquerors” and “autochthon” has been a tool of categorization to establish a hierarchy that would determine the distribution of who would have certain rights and access to resources (Hilgers, 2011; Mbembe, 2001). The principle of autochthony, at its most generic level, is the differentiation between “firstcomers” and “latecomers” and has been highlighted often to indicate the role it plays in the social organisation over particular urban areas as it becomes more populated and dense (Kopytoff, 1987). Firstcomers would specify the allocation of spaces that newcomers could

occupy, and were in charge of certain practices that allowed for the coordinated coexistence amongst the group. Particularly in societies whose wealth was highly dependent on the number of people, the differentiation between the firstcomers and latecomers was not an exclusionary method, but intended to mark and maintain the social organisation of the society (Hilgers, 2011). In such instances when a particular society would want a passing individual or group to stay and merge with themselves, the collective group could give cultural responsibilities or resources. The giving of these resources to the new individual or group caretakers often led to a transition into which group were the “true autochthons”. Thus, this shift in symbolic authority from one group to another demonstrates the order of migration to a specific region recognized by the collective group is one based on power relations between those who compose the group (Geschiere, 2009). While some authors claim the the discourse of autochthony is empty of content because it can be adaptive and unstable (Ceuppens and Geschiere, 2005), others argue this adaptive nature can give autochthony both legitimacy and the ability to play the role of capital that can be invested, valued, and profited from (Hilgers, 2011).

It is important to note for this study that autochthony can be used as capital, and thus can be seen and analysed through the source, the resources, and the possessors of this capital (Hilgers, 2011; Portes, 1998). As autochthony is dependent on the hierarchy it establishes within a given space of relationships, in order for this capital to exist, this hierarchy presumes that a collective group existence is thought to have been made possible by different groups contributions (Hilgers, 2011). The different positions that each person or group inhabits in this hierarchy is what defines as well as attributes the degree of autochthony that one individual or group may have and implicitly indicates the contribution of each to the success of the collective group. When competition develops over access to socially valued resources, such as land, work, markets (Bates, 1974), autochthony can give access to these resources due to the dense network of relations that it creates and the legitimacy it may give, dependent on the degree one group or individual may have as well as other sources of capital. When the levels of education, economic, and social capital are equal amongst groups, the degree of autochthony can make the difference in the competition for resources. While the social effectiveness is highly contextual, it is important to note that within each circumstance the possessors of this capital can only invest their autochthonous capital at a symbolic level.

The process of the vote can have a stabilisation effect on autochthonous capital (Hilgers, 2011). In some countries, the method goes so far as the constitution is altered to ensure that the only candidates that could run for office are those recognized as autochthonous as well as the voting rights of the constituents (Dorman, 2014). However, autochthony does not always go so far, and has been used as bargaining power for those with the highest levels of autochthony to rally a group to a political movement or to certain political actors. Due to the relational nature of autochthony, the well-established networks that individuals with the highest autochthony can access offers them the ability to make the connection between those in positions of governing as well as those governed. Being recognized as one of the only routes, if not the only route, gives the autochthonous further legitimacy in their autochthonous status as well as increase in the value of their autochthonous capital (Hilgers, 2011). In these circumstances, autochthony acts as a form of social capital as it encourages participation in both management and debate.

Section 3: Methodology

3.1: Research Design

The use of a case study has been implemented for the design of this research. The research investigates the collective decision-making and voting outcomes of a worker-managed firm, which self-classifies as a decentralised autonomous organisation. ABCD, the specific organisation chosen, has four thousand, four hundred members. ABCD was chosen precisely because this organisation is made up entirely of web developers and the goal of the organisation is to build Web3, what they hope to be the next stage of the world wide web. Individuals within ABCD then may most likely be aware of any central authority emerging within the organisation, as the goal of ABCD was to build a system in which there was no central authority or group of individuals controlling the Web 3.0, as discussed previously in Section 1.3. This decentralised autonomous organisation ABCD has also been selected for this research because of its recognition as instrumental amongst other decentralised autonomous organisations. Thus, a singular case study will be used to maximise the depth of the investigative research, in which the use of cross-sectional survey would not allow, taking into consideration the time constraints of the research. This allows for the ability to grasp the more subtle mechanism that takes place within the organisation, specifically with consideration to the “third face”.

3.2: Access, Sampling and Collection

Access and collection of the data on discourse and voting outcomes for the organisation are available via snapshot.org, which is open and available to the public, as well as the forum that is linked to each proposal that contains the discussion of each proposal, which is also open and available to the public. The sample of the data include 32 proposals and votes from the organisation ranging from November 2021 to March 2023 as well as all the comments surrounding the proposals.

3.3: Data Analysis

I use discourse network analysis, with the support of political claims analysis, to best implement a three-dimensional approach in understanding collective-decision making in the case study of ABCD, a decentralised autonomous organisation. Political claims analysis has been used to study social movements and protest in an attempt to highlight the dynamics between the changing alliances between actors during political conflict. The unit of analysis were the political claims, instead of the protest of the political conflict. In this method of analysis, each instance when an actor makes a claim, this statement or action is manually coded with various other variables including the actor, content, addressees, opponent, and the aims. This approach has been used for furthering research in many topics, some of which include: the relationship between violence and discourse (Koopman and Olzak, 2004), investigate timelines of social movements and policies (Beyeler and Kriesi, 2005), and Europeanisation in mass media (Koopmans and Statham, 2010). However, when quantifying the data in this approach, it often scores actors and content on a one dimensional scale. To further expand the dimensionality, dynamics, and understand the underlying structures, the implementation of discourse network analysis can lead to additional insights into the decision-making processes of ABCD (Leifeld, 2017). This informs a better understanding of the research into the organisational structure of the firm and the hierarchical system that may be present. The visualisation of the network can more readily reveal information such as the embeddedness of the actors. Discourse Network Analysis combines social network analysis to a qualitative, category based analysis of content in order to understand in greater detail the dynamics and the important properties at play within the organisation ABCD. This methodology can use multiple types of qualitative, category based analysis, from narrative policy framework (Jones and Macbeth, 2010) to critical discourse analysis (Fairclough, 2013). However, the approach most suited to this specific research is Political Claims Analysis due to the encompassing nature of focus on both the actor and the content. This methodological design, with its uses of the qualitative and quantitative approach, is key to understanding the research hypothesis in which a minority of individuals control collective decision-making processes. This control is made visible through the ability to influence the decision-making processes. I define the ability to influence the decision-making

processes as the use of any of the three faces, as described above in Section 2.1, in which an individual or group may influence the decision-making processes by either influencing the proposal and the outcomes, the ability to deny individuals from making proposals or voting on proposals, or to obscure the influence a dominant individual or group may have over the decision-making by shaping the perspectives of individuals in ABCD.

Analysis of the proposals were split into two different categories, proposals that made it to the stage in which all of the organisation would vote and the proposals that failed to make it that far in the process. In deciding how the organisation is operated and managed, any individual or group of individuals can make a proposal on their public forum. If the proposal has at least one hundred votes with a majority in support, then it moves to a second stage in which everyone in the organisation can again vote on the proposal via the website snapshot.org. The proposals that failed to make it to the second stage, with a vote on the website snapshot.org, were categorised as failed proposals. While there may be hierarchies in some worker-managed firms, as this is a decentralised autonomous organisation that is defined to be non-hierarchical and to operate, manage, and evolve the organisation through a democratic consultation process, then, in accordance with Political Claims Analysis, each proposal was combed through to identify the claims that were made that focused on the particular issue of centralization of either economic or authoritative power as well as identifying the individual that was the claim maker of the specific claim. As this organisation began in opposition to the capitalist system, it is important to note whether claims were made that allowed for this opposition to continue or if certain individuals were able to use the claims and the proposal processes to create an organisation in line with the capitalist system. While this focus on economic capital may not fully answer our hypothesis, which is centred around the supposition that a few individuals have greater control over the decision-making processes in the decentralised autonomous organisation ABCD, it may give insight into two possibilities, how certain individuals have come to accumulate a greater level of power or how the organisation stayed a decentralised autonomous organisation. Furthering the insight into the qualitative nature of that claims and the possibility of the spirit of capitalism and autochthony emerging in the discourse, claims were also identified that expressed the ideological reason behind each of these occurrences, allocating these into four different categories of either excitement, security, fairness or autochthony. To specifically measure autochthony, a claim then

contained that a certain individual or group were the original inhabitants of ABCD and that they are then more entitled, then it would be marked as autochthonous. The claims were also marked to identify who were the object actors of the claim makers, to note exactly who would be the beneficiaries of the claims. Lastly, the date of each claim was noted as to understand the chronological developments of the organisation. Thus, to measure the influence in decision-making, each claim was classified by the proposal, the claim maker, the issue, the object actor, and the ideological reason for the proposal that may increase or decrease an individual's or group's level of influence according to the three faces of power, as described previously in Section 2.

I use this information taken from the political claims analysis in building the network of proposals, specifically creating the proposal as a directed bipartite network. A bipartite network is a network that uses two different types of nodes and the edges run only between the nodes of different kinds; the edges do not connect two of the same type of nodes together. The use of bipartite networks has been common in the study of networks, representing actors' relations in films, who likes which books in a community, or which group of people attended the same events (Newman, 2018). For this analysis, the two types of nodes will be the proposals and the individuals of the organisation. This can allow for the creation and separation in the network between the actors making the claims and the proposal which the organisation votes upon. By separating the two, it can be easier to see two important dynamics that happen in the proposal processes, which highlights the creation of a proposal, and the outcomes of acceptance or rejection of a proposal. As for the directed nature of the bipartite network, in a directed network a node has two degrees which is calculated based on the amount of in-going edges connected to a node, in-degree, and the out-going edges connected to a node, out-degree (Newman, 2018). To highlight the different aspects of the creation of a proposal, for each node representing the author of a certain proposal, each directed edge from the author points towards the proposals and can be represented by the different types of claims found from the political claims analysis that were made in the proposal. Through this method, not only could this network distinguish between who was authoring the proposals and who was not, but also the dynamics between which of the claims most frequently were used in composing the proposals by which actors. This importantly makes prominent the aspect of the creation of proposals, but to understand the outcomes of the

proposals and how they affected the individuals in the network, the proposals also had a directed edge that pointed towards who exactly were the object actors, thus representing the individuals who would benefit from the passing of the proposal. This can inform a better understanding whether or not proposals that only benefit certain individuals are accepted or rejected, or if proposals only pass that keep the organisation non-hierarchical and the workers remain in full control of the operations, management, and evolution of the organisation. As each proposal is identified, both those that make it to the voting stage and those that do not, I also use all these different categorizations to identify what might be the factors, if any, in the proposals ability to make it to the voting stage. Through this approach, I can measure the amount of influence individuals may have over the proposal processes and measure the ability for individuals or groups to influence proposals and outcomes. This also allows me to measure if there are barriers that disallow individuals to be a part of the proposal processes and therefore the decision-making processes.

Analysing the comments surrounding each of the proposals was also used to better understand the collective decision-making processes and the dynamics in the discourse between individual members of the organisation. This allows for a further measuring of influence over the decision-making processes, as this allows the measurement of the possible negotiating of influence over decisions and their outcomes between the actors in the organisation of ABCD. The ability to measure the claims of the comments is also how I measure the claims that are used to shape the perceptions of members of ABCD. Again each proposal's comments, both those that made it to the voting stage and those that failed to make it that far, was combed through in order to discern the nature of the interaction between individuals in the organisation concerning how the members of the organisation responded to the proposals. In these comments, it was identified who was the source of the claim and to whom was the person the claim was delivered to as the comments were conversational and addressed to other members of the organisation. As the issue of the centralization of economic or symbolic power would go against the very claim of a decentralised autonomous organisation, claims were identified by this issue and were also marked if they were in favour or against this centralization of control. As the concern of the hypothesis remains in addressing whether a few individuals had control over the collective decision-making processes, it was important to note if and how often individuals in the

organisation would respond if this were to take place. This can measure then whether the negotiations of power were taking place or if the claims that allowed for the centralisation were obscured and used to shape individuals perceptions in ABCD. Another marker to which each claim was also categorised was whether the claim was in support of the proposal, was against the proposal, or claim was not specifically either and thus left null. Lastly, each claim would be marked if it were a critic of the proposal and if this criticism led to change. This could give a glimpse into which specific claims and which claims makers may be given more authority. Thus the claims were each categorised by the specific proposal that the claim took place, the claim maker, who the claim was directed towards, the issue, whether they agreed with the issue, critic of the proposal, whether that critic led to change, as well as whether or not the claim approved of the proposal.

Using this information I was able to construct an actor-to-actor directed network. Instead of a bipartite network that was used for representing the network of the concerning the proposals, as the comments were directed between the different actors in the organisation, I used a one mode directed network in which the nodes only represent the individuals in the organisation and the edges are the claims that are connections between the different actors. As these claims are each directed at different actors, the edges are directed and point from the claim maker to the individual whom the claim maker is addressing.

The use of the Jacomy et al. (2014) ForceAtlas2 algorithm was implemented to better understand the actor-to-actor network and the dynamics of how individuals were responding to the proposals that were being made. Unlike the bipartite network that would give a semblance of structure to the network, ForceAtlas2 is a community detection algorithm that was used to allocate the positions of the individuals and the structure of the network. This is a specific type of community detection algorithm that is force-directed. In this approach, the nodes behave as charged particles in the repulsion processes, pushing each other away with a force dependent on the degree of the node, while the edges in the network act as the attractors, springs that attract the two nodes they are connected to. While the repulsion and attraction of each node follows these physical system laws, adjustments were made to include the nodes that were weaker in degree so that they wouldn't be pushed out completely if there were nodes with high levels of

degree and thus is represented by $F_r(n1, n2) = \frac{(deg(n1)+1)(deg(n2)+1)}{d(n1, n2)}$, the deg represents the degree of a node, the number of connections it has, and the d represents the geometric distance between nodes. This then will give a geometric layout of the network that attempts to remove any bias as this network configuration is only dependent on how connected the individuals are, which individuals interact with each other more frequently, and how central some individuals may be within the network based upon their connections.

As the degree measurement only counts and rewards a node a score for every neighbour it has and the incoming or outgoing nature of that relationship, the use of different, more sophisticated centrality measures were used to deepen the understanding of the network. In many networks, a node's importance in the network increases by having connections to others that themselves are important. To measure this dynamic in the network, we use the PageRank centrality method (Brin and Page, 1998). The PageRank algorithm, while made famous as Google's initial search algorithm (Brin and Page, 1998), has been used to study opinion formation in social networks (Kandiah and Shepelyansky, 2012), networks of co-authorship of research (Yan and Ding, 2011), as well as competition in online social networks (Sánchez, 2010). The centrality that is measured through this approach is that an individual's centrality score is derived from their network neighbours and is proportional to their centrality divided by their out-degree. Through this method, individuals in the network that point to many others pass only a small amount of centrality to each other, even if the centrality of the individual is quite high. This prevents the bias that may arise because certain individuals with high in-degree point to many other individuals in the organisation, causing other individuals' centrality to rise. As this method bestows higher levels of centrality if it is pointed to by others with high centrality and mainly focuses on the direction of the edges between individual members of the decentralised autonomous organisation, another approach is used to better understand the centrality of an individual when it comes to the distribution of how well connected they may be in the network. Thus, Closeness Centrality is also applied to find the mean shortest-path between the individuals in the organisation (Bavelas, 1950; Newman 2018). Shortest-path in this instance refers to the smallest number of edges along a route that runs from node to node amongst edges. In many social networks, the individuals with higher Closeness Centrality scores, and thus the greater

number of shortest paths, more commonly have their opinions spread through the network at a faster rate than others and they also have better access to individuals in the network (Parau et al., 2017). Lastly, calculating the Betweenness Centrality (Freeman, 1977) is applied to all individuals in the network. The measurement of Betweenness differs from the other measures of centrality as it is not particularly a measurement of how well-connected certain individuals are in a network. Rather, it measures how often a node falls “between” other nodes if the information in the network is flowing through the shortest path (Freeman, 1977). While not all information flows through the shortest path in real world networks, it is a good measure to understand the influence certain individuals have in the flow of information in the network (Newman, 2018). As there can be individuals with low levels of degree and be connected to neighbours with low levels of degree as well, however they still may have a high betweenness centrality score because they are the only ones that are a bridge between groups in the network. These measurements of centrality are rather important to our research as the decentralised autonomous organisation should not have any individuals within the organisation that have greater levels of centrality in the information flow within the network while discussing the proposals and can thus have greater levels of ability to influence the discourse in the decision-making processes.

In the analysis of the decision-making processes with ABCD, there are six actors that play a pivotal role in the administration of ABCD and will be introduced here. In the organisation of ABCD, there are six individuals who are referred to as **Core Team members**. These six individuals are the first leaders of the different departments of the organisation, in which they refer to as guilds. These six individuals were among the first contributors to ABCD and claim to be the creators. However, it is not possible to actually verify the veracity of the last information, but I will consider the claim of being the creator of ABCD as a data of my analysis. They became leaders because very early after the creation of ABCD they proposed a proposal stating that they would be leaders of their own respective guilds. This proposal was accepted by all other members.

I will now provide the definition of economic capital and how I measure it within the case study of ABCD. Economic capital is made up of all the goods that can be valued in monetary terms, including both an individual's assets and his or her income (Bourdieu, 1986). Applied to my analysis, economic capital refers to the cryptocurrency and the United States

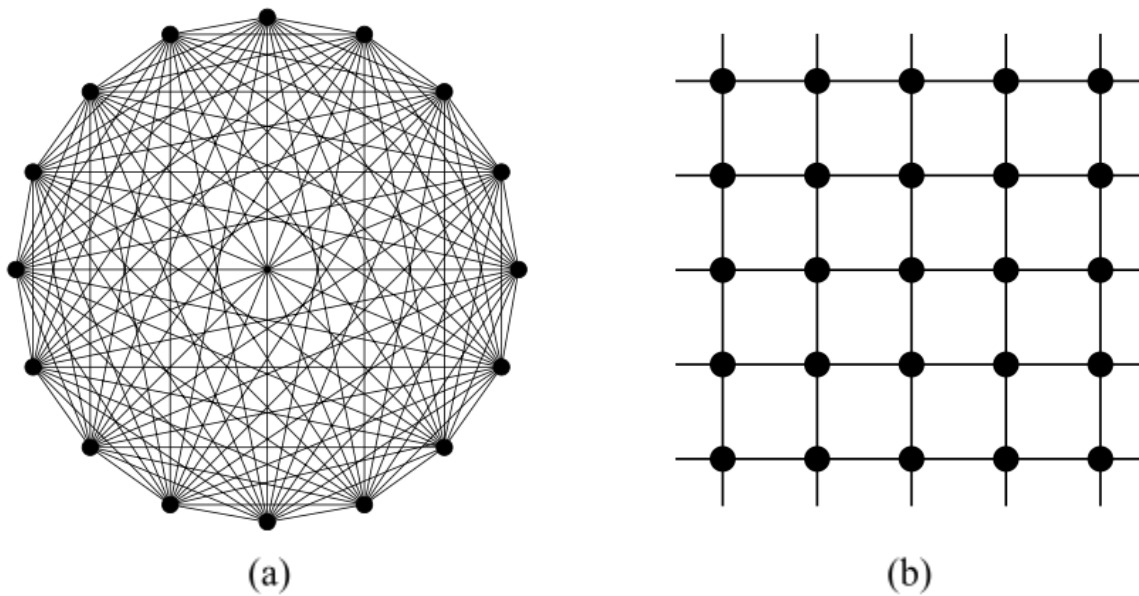


Figure 1: Two Regular Networks. The figure (a) on the left depicts the regular network in which every node is connected to every other node, allowing for all possible edges to exist within the regular network. The figure (b) on the right depicts a regular network in which every node has 4 connections, which can be described as 4 regular network. (Newman, 2018)

Dollar, referred to in the organisation and this analysis as USD, that individuals accumulate within the organisation of ABCD. Cryptocurrency is a digital currency that can be traded on digital markets (Chuen et al., 2018). Thus, I measure the economic capital individuals accumulate by the cryptocurrency and the USD that is accumulated through the proposals.

These measurements of the organisation ABCD will be used as a test for the hypothesis. If ABCD is a decentralised autonomous organisation, then the proposal network and the comment network should firstly be regular networks. A regular network is a network in which each node has the same level of degree as every other node, as seen in Figure 1 (Newman, 2018). For the proposal networks, this indicates that each individual is authoring the same amount of proposals and an equal distribution of beneficiary from proposals. No individual or group to a greater or lesser extent should be authoring or benefiting from proposals. For the comments network, a regular network would indicate that no one individual or group are central figures in the flow of discourse surrounding the proposals. However, as our hypothesis proposes that there are central figures who have greater amounts of control in the organisation over the collective decision processes, we put forward that both networks will not look as such and a minority of individuals have greater degrees of centrality in both the networks. Using the political claims analysis, we also propose that these individuals with greater degree in the proposal networks are

the individuals using the proposals and demonstrating the third face of power, that is, they use the proposals to legitimise their symbolic power and use their symbolic power to control the proposal processes through both the first face and second face in which not only would they be able to influence decisions and the outcomes, but they will also be the dominant subsection which maintains the parameters for who is and who is not part of the decision making process.

3.4: Ethical Concerns

While this data is open to the public, for ethical reasons, the data concerning the actors' discourse and voting outcomes for both organisations will be anonymized so that no information will be disclosed on the actors involved and that it will be impossible to identify any actor. The same will apply to the company themselves which will also remain anonymous for ethical purposes.

Section 4 : Findings

4.1: Accumulation of influence over the decision-making processes

First, beginning with distribution of the members within the organisation and the dynamics between their status and proposals is insightful to understand the centralization that occurs within the organisation. Within the time frame of analysis, from the first proposal on October 15th, 2021 to the last day of their second “season” on February 28th, 2023, there were a total of 32 proposals made concerning the governance of the organisation. Of these 32 proposals, 23 of them were elevated to be voted upon by the entire organisation, while 9 did not make it to the voting processes as seen in Figure 2.1 below. From the analysis concerning both the authors of proposals, as well as the beneficiaries of the proposals, there were 6 individuals who called themselves the Core Team with the greatest density of action. Out of all the members of the organisation, these six individuals of the Core Team had the highest level of degree, as seen in Figure 2.1 by the size of the nodes, with those representing the Core Team in blue. This indicates just how intensely the individuals were central in the proposal processes, as the authors and the beneficiaries. In Figure 2.1 (a), one can see directly how each Core Team member had much more activity in the authoring of proposals in the proposal process. For each of the 23 proposals that made it to the voting stage, there was at least one Core Team member attached as an author to the proposal. There were no proposals that made it to the voting stage that were made by a regular member alone of the organisation. Importantly, each of the 23 proposals that reached the point in which it would be voted on by the entire organisation passed. Each proposal did so by at least a 90% margin. Only two proposals passed with less 95% approval, all others passed above this threshold. Thus, every proposal that made it to this voting stage was widely accepted throughout all of the organisation and if one had the ability to get a proposal to this voting stage, it passed.

The failure of a proposal to make it to the voting stage was not solely defined by the authorship, as some of the Core Team proposals also failed to make it to the voting stage. However, rather distinctively, out of the 9 proposals that did not make it to a vote, 4 of these failed proposals would later become encapsulated into a portion of a proposal that did make it to

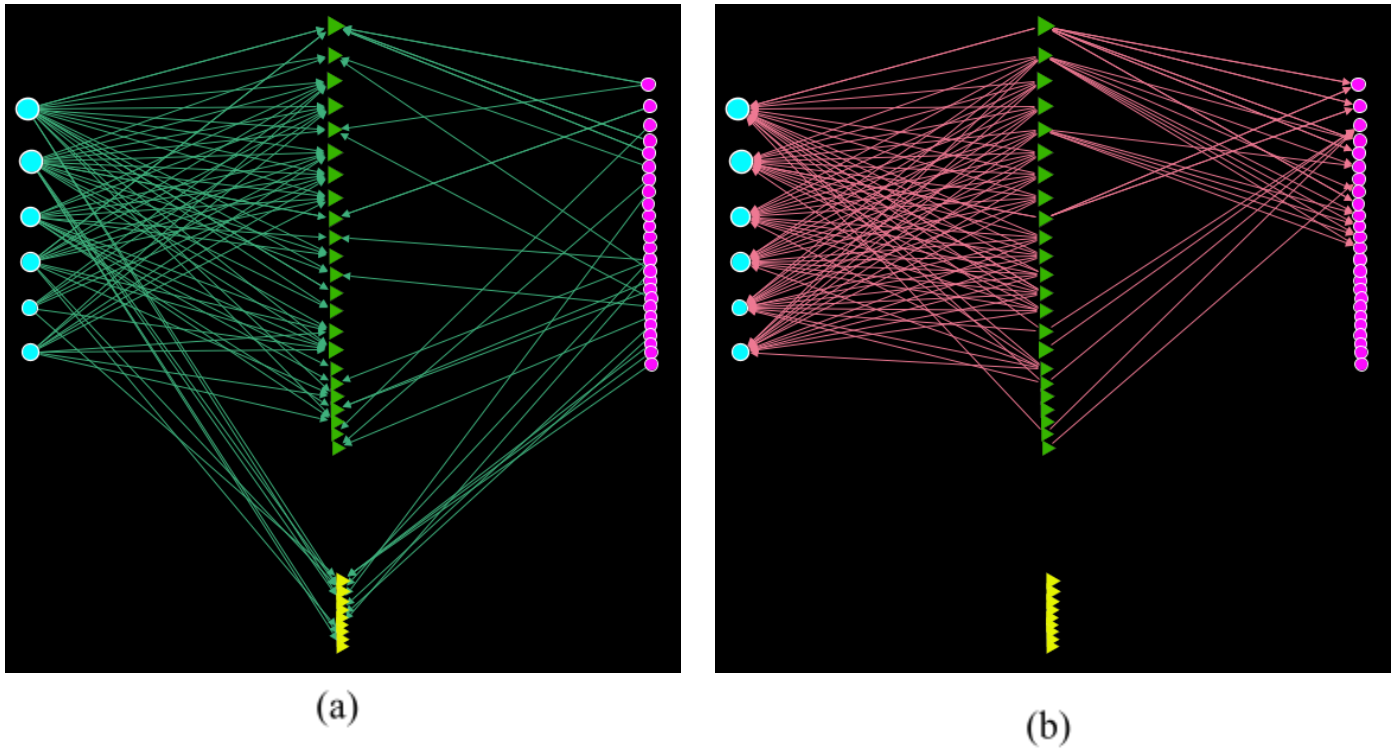


Figure 2.1: Bipartite Proposal Network. In this network, each of the nodes are relatively sized by their degree. The shape of the nodes indicates whether they are people(Circles) or they are proposals(Triangles). The color of the circular nodes indicates whether they are part of the Core Team(Blue), or regular members(Pink). The color of the triangular nodes indicates whether the proposals made it to the voting stage and passed(Green) or whether they failed to make it to the voting stage altogether(Yellow). In (a), the directed edges of the network(Green) are connecting the individuals in the network that are authors with the proposals that have written. In (b), the directed edges of the network(Red) are connected the proposals with the individuals that are the beneficiaries.

the voting stage. Each of these 4 were authored by at least one, if not multiple, Core Team members. Indicating that while the authorship of a proposal may not directly allow for it to make it to the voting stage, the ideas contained in any proposal put forward by a Core Team member would, with these ideas also becoming widely accepted and supported by the majority. Another proposal authored by a Core Team member that did not make it to the voting stage was due to the claim that “*this proposal has been discussed and nodded along to widely*”, as said by the author of the proposal in the only comment. This proposal allowed for the “extension of the off-season” as the key performance indicators that the Core Team had promised to deliver did not come to fruition. This proposal would grant the authority for the Core Team members to continue being the leaders in their respective guilds. The guilds were different departments of the organisation that members could join and which “*will initially have no defined hierarchy beyond its ‘Leader’*” according to the proposal that originally allowed for these six individuals of the Core Team to have this authority. This failed proposal allowed the Core Team to continue to work on the key

performance indicators they had not achieved and to continue to play the role of “Leader” in the organisation. In this instance, the organisation clearly failed in the most basic nature of a decentralised autonomous organisation as the management and operations of the organisation were not done through a democratic process, but through the authority of one Core Team member. Out of the remaining 4 of 9 proposals that failed to make it to the voting stage, 3 of these were authored by regular members of the organisation. This indicates that if any individual that was not a Core Team member wanted to make a proposal and have the ability for it to take part in the collective-decision making processes, they would need to somehow gain the approval and the partnership of a Core Team member. Therefore, a Core Team member is much more important in the collective-decision making processes and has much more influence over the first face of power and second face, as they have the ability to influence decisions and outcomes as well as create barriers for any regular member to create a proposal.

Not only are the six Core Team members most often the authors of proposals, they are also most often the beneficiaries of proposals, as seen in Figure 2.1 (b). Out of the 23 proposals, 18 go to benefit at least one individual of the Core Team, while only 9 proposals benefit at least one member, and only 2 proposals which benefit a member solely. Thus, only 2 out of the 23 proposals benefit members of the organisation without a Core Team member also receiving some benefit from the proposal. In Table 1, displayed is the authoritative power that certain individuals accumulated as the beneficiaries of the proposals throughout the period of analysis, in chronological order, listing the event as well as the recipients. The authority gained in each of these instances from the proposals, was never the crux of the proposal. As is the nature of symbolic power, the authority gained from each of the proposals were always subtle, cloaked as the natural, obvious necessity, and apolitical in nature. The symbolic power that was accumulated through these proposals happened continuously over time. It was not one major instance, but a cumulative process in which the six individuals of the Core Team were able to gain greater levels of authority over those in the organisation and within the proposals processes.

Table 1: Authority gained from Proposals. This table describes the authority that was given to certain individuals throughout the proposal processes.

Date	Description of Event	Actors Title and ID
Oct 29, 2021	The Decentralised Autonomous Organization forms 6 groups/"guilds" with 6 individuals as "guild" leaders within their groups, referred to as the Core Team	6 Core Team, ID # 2, 10, 41, 154, 82, 23
Dec 28, 2021	The Core Team is established as the Founders of the organisation and receive 50,000 units of the cryptocurrency while other members receive 750 units.	6 Core Team, ID # 2, 10, 41, 154, 82, 23
May 26, 2022	The six Core Team/ "Founders" become the only 6 "Champions" that can allow a proposal to be processed for a vote by the organisation. However, a proposal still needs to have at least one hundred votes in the forum before it can go on to become available for a vote by the entire organisation.	6 Core Team, ID # 2, 10, 41, 154, 82, 23
July 17, 2022	The 6 Core Team as well as 4 "Early Contributor" Members are authorised the ability of allocating the budget, requiring anyone in the organisation who wants to be paid to submit a request to them	6 Core Team, ID # 2, 10, 41, 154, 82, 23 4 Members, ID # 26, 118, 152, 157
Aug 11, 2022	Three individuals become the Directors of the "Foundation", the legal entity that represents the organisation as an organisation within the Cayman Islands. Two of these Directors are not part of the organisation and are residents of the Cayman Islands. These three have full control over the organisation's implementation of proposals, the signing of contracts, as well as interaction with financial services.	1 Core Team, ID # 2
Dec 12, 2022	The Six Core Team members can process any proposal for a vote by the entire organisation, as long as 3 of the 6 approve of the proposal. Also, instead of individuals casting one vote per proposal, an individual can vote by spending any amount of cryptocurrency they have either in support or against a proposal. Instead of the amount of people supporting a proposal, proposals can now either pass or fail based on the cryptocurrency accumulated.	6 Core Team, ID # 2, 10, 41, 154, 82, 23

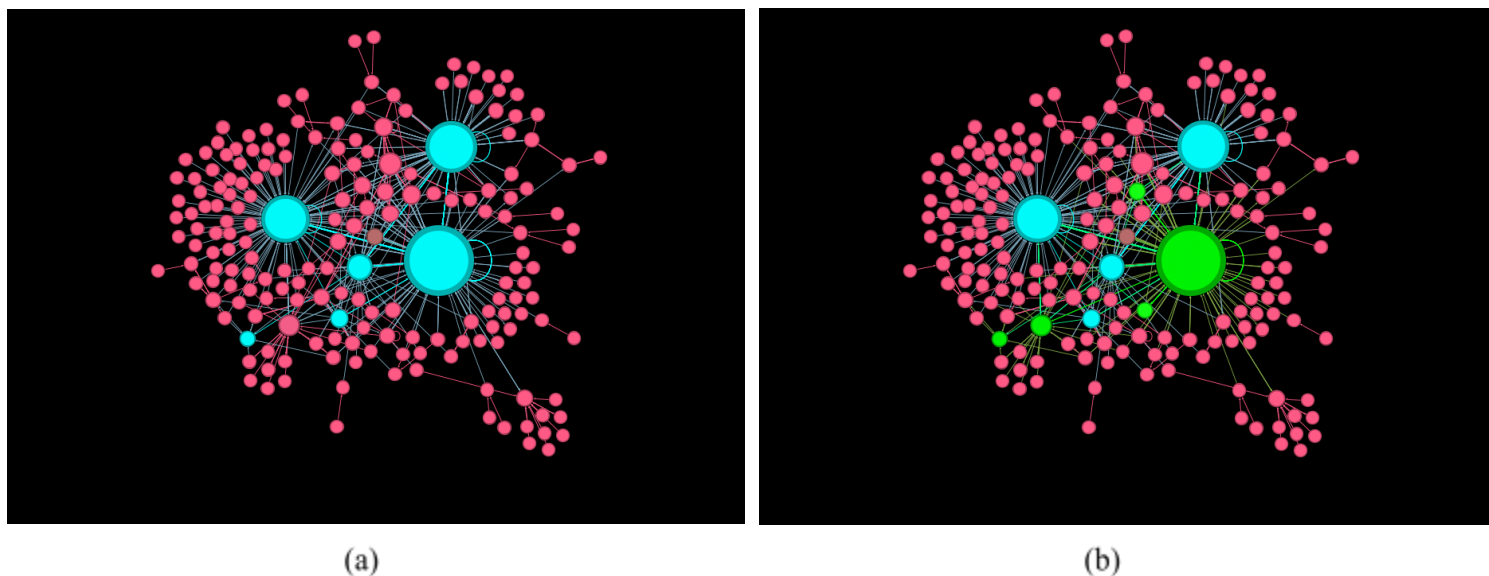


Figure 2.2: Comment Network of Actors in the Organization and their Payment. In both images, all the actors that spoke in the discourse of comments are on display. The distribution of the network is done through ForceAtlas2. The size of the nodes indicates the degree distribution and each node is proportional to their degree, with larger nodes having larger degree. In (a) the nodes color are distributed by those earning 15 crypto per hour (Pink) and those earning 2085 per month (Blue). In (b), node color is also added to the network in order to display the members who earn USD per month.

In Figure 2.2, the economic distribution is on display, both in terms of the cryptocurrency and the USD amount that individuals would be paid. While all members are paid 15 units of the cryptocurrency per hour, the six Core Team are each allotted 2085 units of the cryptocurrency per month. In December of 2021, all regular members received 759 units of cryptocurrency while the six Core Team individuals were allotted 50,000 units each. They would also receive a consistent distribution for 2 years of 2085 units per month in order “*to have committed members helping lead and structure DAO operations and governance. Incentivizing these members is key to this goal*”, according to a Core Team member, ID # 10. In order for a member to earn the equivalent cryptocurrency that a Core Team member is given for being a Founder, they would need to work a total of 35 hours per week for 4 weeks. Importantly, the distribution of cryptocurrency given to the Core Team was through a smart contract. Thus, once this was deployed, this self-enforcing contract would automatically distribute cryptocurrency to the Core Team. This is not the case for all other members of the organisation who would have to submit a budget plan to the Budget Stewards composed of the Core Team and 4 other members of the organisation who received their authority because of their early contributions to the organisation. If approved, then a payment of 15 units of cryptocurrency per hour would be distributed to the individuals. However, individuals in the organisation could not use this cryptocurrency as a

currency until August 26, 2022, in which the cryptocurrency was made public and then available for sale onto the cryptomarket. The price initially was valued on the market starting at \$.65 USD per unit of cryptocurrency, this however dropped rather quickly and within a week lost half its value. The price continued to fall and finally came to stabilise within the month of December around \$.15 USD per unit of cryptocurrency. As each of the members' labour is tied to the value of the cryptocurrency, this is especially important to note. The conversation to USD is used because, while not all members of the decentralised autonomous organisation are from the United States, the six Core Team individuals all live in the United States and this would be the most probabilistic first metric of conversation they would use. According to the U.S. Bureau of Labor Statistics(2022), again using US statistics as this is the most probabilistic metric the Core Team would be familiar with, the average salary of a Web Developer is \$78,300 per year, with an average salary per hour \$37.65. In comparison, if a member of the decentralised autonomous organisation would work 35 hours a week for a year, they would be paid \$3,780 per year, with an average salary per hour of \$2.25. This requires an extreme commitment to the organisation for all regular members if they would try to make a liveable income through working in this decentralised autonomous organisation.

However, not all individuals were paid in cryptocurrency in the organisation. There are 5 individuals who were also paid in USD during this time period of analysis, as seen in Figure 2.2(b). Two individuals on the Core Team and one member were paid \$10,000 USD per month from February 2022 until July 2022, and one of the same individuals again from the Core Team and two other regular members were paid \$8,000 USD from July 2022 until January 2023. This economic feature, both in terms of cryptocurrency and in actual USD paid to the few members, is important to note in relation to the proposal process due to the nature of how voting changed on Dec 12, 2022, as seen in Table 1. This change allows individuals to vote with as much cryptocurrency as they desire to either pass or stop a proposal as the outcome of the vote is based not upon the amount of people who voted for a proposal, but the amount of cryptocurrency that is accumulated either for or against the proposal.

The distribution of the members within the organisation and the dynamics between their status and the comments surrounding the proposals is insightful to understand the centralization that occurs within the organisation. This comment network is larger than the proposal network and comprises 188 nodes representing the individual in the organisation who commented on a proposal and 617 directed edges representing both the direction of the discourse and with whom the discourse is directed to. Through the use of the ForceAtlas2 algorithm, the network can be seen not to be a regular network, with each node having the same degree. Instead, what is revealed is the network follows closer to the hypothesis in which a few characters play central roles. From Figure 2.2 (a), there is a clear indication of how sparse the network is as well as the central role that a few Core Team members play within this sparse network. With the mean degree in the network being 3.282, three of the Core Team members are extreme outliers with high levels of connection with the degrees of 137, 152, and 226. As these Core Team members played such central roles in the network, importantly they also were the ones who most frequently issued claims in support of the idea of accumulation of economic and symbolic capital as well as most likely for their critiques of proposals to lead to change. However, these critiques were all of a technical nature and did not criticise in the comments the accumulation of capital.

As seen in Figure 2.3 below, the three Core Team members, the same as three with the highest degree centrality, are extreme outliers in the organisation. According to the PageRank centrality measure, which demonstrates how the Core Teams claims in the comments network were not only more frequent, but also accumulated more discourse as who these individuals communicated with would have a higher probability of engaging in the discourse. Thus, these Core Team member's voices were not only much more likely to be heard by individuals within the organisation as they were connected to more people, their ideas were much more likely to be engaged. This is not so for the vast majority of members whose voices would go ignored and had a much lower probability of getting any type of response. Therefore, in the comments surrounding proposals and whose ideas may have more influence, these three Core Team members had a much higher ability to influence the discourse. In terms of Closeness Centrality, it is the three individuals of the Core Team who have the highest degree of centrality. Not only are they more likely to be engaged in discourse, as viewed according to the PageRank, but also

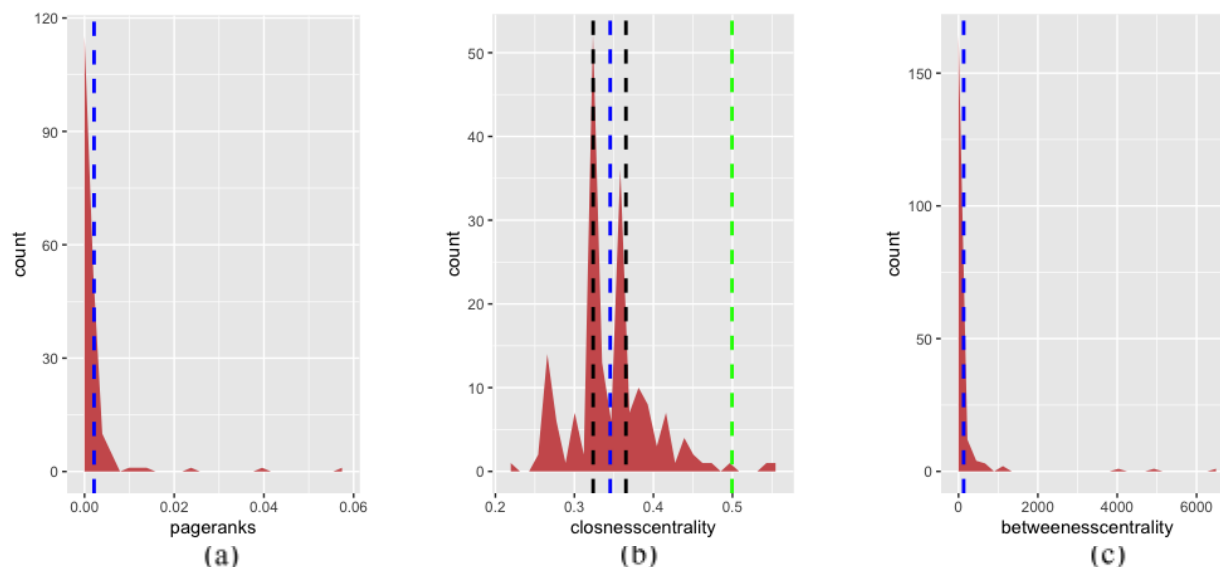


Figure 2.3: Distribution of Centrality. These three graphs display the Page Rank, Closeness Centrality, and Betweenness Centrality. Each measurement score composes the x axis and the y axis is composed of the count of how many individuals received such a score. In all graphs, the blue dotted line is the mean centrality score. As seen in (a) and (c), the distribution of both Page Rank and Betweenness Centrality are heavy tailed. In (b), while closer to a normal distribution, the black dotted lines represent the 1st and 3rd quartile, while the green dotted line represents the 99% quartile, which is composed of the 3 Core Team members.

the much higher levels of Closeness Centrality indicate they have the greatest ability to spread ideas through the network. While this measure of centrality has a more even distribution than both PageRank and Betweenness Centrality, it was again these Core Team individuals who had the greatest amount of ability to influence the discourse as their messages were much more likely to spread. Importantly, this demonstrates the lack of discussion that did not happen only between regular members and the extremely limited ability for individuals to have discourse without the Core Team individuals. As for the Betweenness Centrality, what arose once more was that the three same Core Team individuals were again extreme outliers with a separation between the individual Core Team with the third highest score having three times the amount as the individual with the fourth. Therefore, if an individual wanted to make a claim that was actually engaged within the discourse, or had their ideas spread through the network or just passed between different groups in the organisation, the highest chance of any of their claims being able to accomplish this would be through the three Core Team members.

Through the analysis process, the hypothesis concerning whether a small minority of individuals who control the collective-decision making process through discourse is quite correct. The measurement to test whether the proposal network was a regular network failed, in which clearly the centralization of authorship occurred in the proposal network with six

individuals of the Core Team authored the vast majority of proposals. This testing revealed more of the first face of power in which a few individuals or one group in particular have greater ability to levels influence proposals and their outcomes emerged. We were able to better understand the research question and the varying degrees by which centralization occurred in six individuals in the organisation who were able to accumulate greater levels of symbolic power and were able to control not only which proposals would be voted upon, but also how the organisation was operated, and who would get paid for their labour we were able to see the third face of power. Equally, the measurement to test whether the comment network was a regular network failed, in which 3 individuals of the Core Team had the greatest level of centrality in terms of the level of connections, PageRank, how close they are and well-connect with other individuals they might not be directly in communication with, Closeness Centrality, as well as the amount of betweenness in which the easiest way for individuals to connect with others or share information would be to go through these three individuals, Betweenness Centrality. This position they played in the network was not marginally better than other individuals in the organisation, but each of these individuals were drastic outliers with far beyond levels of centrality than other regular members of the organisation by two of the three different measurements of centrality.

In terms of economic capital, there was also a centralization occurring amongst the six Core Team members, especially in terms of the cryptocurrency they were accumulating. While initially the accumulation of this economic capital did not appear to be directly correlated with the collective decision-making of the organisation, as noted earlier, votes became to be tabulated not based upon the amount of persons in favour or against, but on the amount of cryptocurrency in favour or against. As the six Core Team members were initially given more than 66 times the amount as a regular member of the organisation in cryptocurrency and were able to accumulate this cryptocurrency without labour, they had a drastic advantage in terms of deciding what the outcomes of proposals would be, furthering the display of the first face. Disregarding the extravagant amount initially given, an individual would have to spend at least 35 hours a week labouring for the organisation to have the same amount of voting power. However, as the six Core Team individuals were the majority in a group that decided who were to be allotted payment in cryptocurrency and who did not, the six Core Team had an oversized advantage as

well in deciding the allotment of the resources that an individual in the organisation may accumulate to even try to match one of the Core Team's voting power. This would require such an intense amount of hours per week to gain the necessary amount of cryptocurrency and, if it was not used for voting power, the cryptocurrency received in exchange for their labour would give little in terms of economic value. Thus an individual would most likely require the need for another full-time job in order to have a liveable wage. In this circumstance, an individual would need to have two full-time jobs in order to even have the same voting power that one of the Core Team members earns from the fruit of labour. Although, this was not the case for all individual members, as three members were elevated in status to "operators" and were receiving at least \$8,000 USD per month according to this status. While this could allow for the accumulation of the cryptocurrency for these three individuals and then give them the option to use these resources as voting power, again, this could only happen if and only if they were to be granted this cryptocurrency resource by the Core Team as they had the authority over the allocation of this resources.

4.2: The mechanisms of accumulation of influence

How this centralisation was able to materialise in which six individuals in the decentralised autonomous organisation were able to have such great control over the decision making-processes can be seen through the mechanism of the spirit of capitalism, especially noticeable in the dimensions of excitement, security, and fairness, as well as the incorporation of criticisms. As seen in Figure 2.4, the Core Team used these dimensions quite frequently in their proposals. These were not used just one time, but as a consistent ideological explanation for the actions that allowed for the accumulation of capital within the organisation, which originally began in opposition towards the capitalist system. As the centralization that occurred in a decentralised autonomous organisation is antithetical to its very name, the expression in the discourse of the proposals of excitement, security, and fairness were vital in allowing for the buy-in of individuals to vote for in favour of these proposals.

One can see the expression of excitement that occurred in a proposal that certified individuals would only be paid 15 units of cryptocurrency per hour, while the Core Team continues to collect 2085 per month. As seen in Table 2 row 4 below, according to Core Team ID #2 *“Get [cryptocurrency] flowing in the hands of contributors”* who are estimated to make an average 2,400 units over a 4 month period, however this *“could be much larger for people who were contributing more. This is a good thing as it further decentralises Governance power into the hands of people contributing the most.”* Not only does this claim offer the excitement of having the cryptocurrency “flowing in one's hands”, as if this is not a payment for the labour of individuals, but this cryptocurrency is framed as a natural resource that courses to the individuals who are “contributing” more and allows those to blossom into having more governance power. The Orwellian doublespeak, in claiming that somehow decentralisation occurs when the governance power can be concentrated in the hands of those that are contributing the most, is importantly including the awareness of criticism that the governance process which is currently in use in the organisation is hierarchical. The criticism of the Core Team having authority over all other members of the organisation almost entirely comes from the Core Team, and it is always used in this manner to both give a moral basis for the accumulation of capital as well as a tool for the use of misrecognition to give the appearance that no capital or authority is being gained or

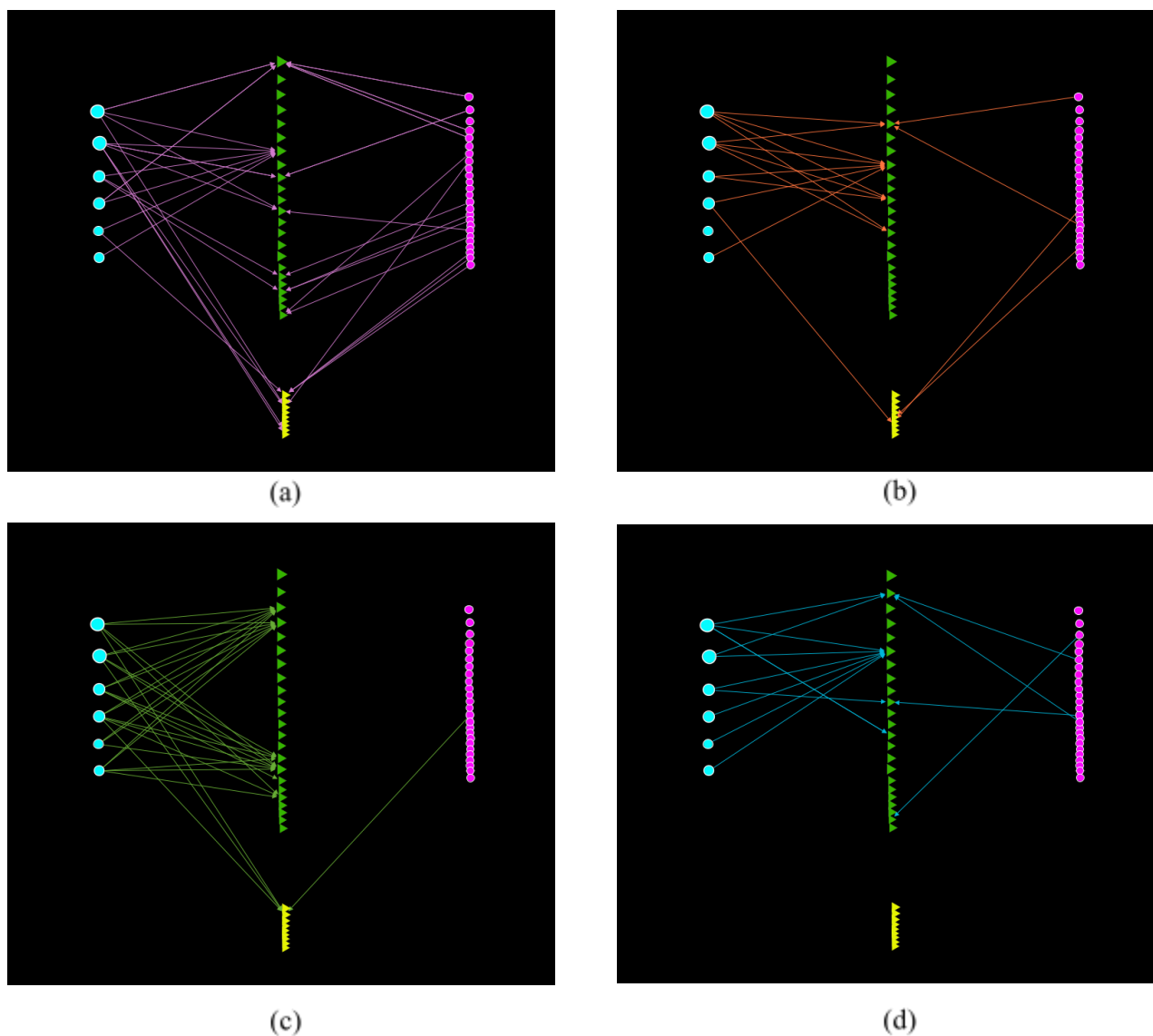


Figure 2.4: Bipartite Proposal Network. These graph's layout is the same as the previous Figure 2.1, however, in this graph the edges represent the different expressions of the spirit of capitalism as well as ideology of autochthony. In (a), the edges are “fairness”. In (b), the edges are “excitement”. In (c), the edges are “autochthony”. In (d), the edges are “security”.

used. This proposal is embedded with excitement as it is a method for increasing the economic capital of individual members while also including a method for increasing one’s “governance power” to a greater degree than others in the organisation.

In Table 2, one can see further specific examples in which the Core Team has over the period of analysis consistently used the expression of the spirit of capitalism as the one of the key mechanisms which were laced into their proposals to justify the accumulation of symbolic

and economic capital. This allowed for the six individuals to have greater control than all others over the decision-making processes.

Table 2: The Core Team’s use of the Expression of the Spirit of Capitalism.

Date	Mechanism	Claim	Claim Maker Role
Nov 25, 2021	Excitement	<i>“For our community to thrive, realise its potential and deliver on this mission, we need to lay the right foundations for growth and have the resources to bootstrap operations and retain a team where needed”</i>	Core Team
Jan 4, 2022	Security	<i>“We acknowledge this doesn’t comply with specific terms laid out in the Season 0 proposal, however it’s clear this timeline was overly ambitious and we believe it more important we’re able to lay solid foundations for future Seasons”</i>	Core Team
Feb 22, 2022	Security	Two Core Team members and One member <i>“continue to play central roles in the progression and early success of Developer DAO. Presently, they each dedicate full-time hours to the DAO unpaid. In order to maintain our momentum into Season 1 and beyond, this proposal is to reward their efforts from the DAO treasury”</i>	Core Team
Feb 24, 2022	Excitement	<i>“Get [cryptocurrency] flowing in the hands of contributors” which “could be much larger for people who were contributing more. This is a good thing as it further decentralises Governance power into the hands of people contributing the most.”</i>	Core Team
May 31, 2022	Fairness	<i>“When the proposal was being contemplated, the price of GTC was \$10, at the time of the passing of the P9 proposal, the price of GTC had dropped to \$6, almost half the value. The spirit of P9 was that GTC would trade at around \$10 and thus the Retained Core Staff would receive a compensation of roughly \$10,000 per month (\$10 x 1000GTC). The current price of GTC is now \$2.33 meaning that the projected monthly income for Retained Core Staff has fallen from \$10000 to \$2330.”</i>	Core Team
Aug 8, 2022	Security	The creation of The Foundation <i>“provides limited liability to DAO participants for the actions of the DAO. Without a legal entity, participants may be individually held liable for anything the DAO as a whole does.”</i>	Core Team
Jan 12, 2023	Fairness	<i>“We need the Governance and organisational Structures in place for Contributors to more freely create value for the DAO, its Members and the ecosystem, as well a more equitable and fairer distribution of resources and value” as the previous form of organisation “failed to serve the vast majority of members who are not Contributors to the DAO itself. It also failed many important Contributors who were not fairly rewarded in Season 1.”</i>	Core Team

Table 2 above displays claims in which were imbued with the expressions of the Spirit of Capitalism in the proposal processes, the claim makers role in the organisation, as well as the dates as these types of claims were consistent of the period of analysis.

The use of autochthony also played a vital role in the processes of accumulation in the organisation. Focusing on the specific instances in proposal 5 focus a spotlight into the effective role of autochthony in the organisation which aided the six individuals ability to control the decision-making process. It is in this proposal 5 which the six individuals of the Core Team, who were the leaders of the different “guilds” in the organisation, first claimed that they were the “founders” of the organisation. On December 28, 2021, this claim that the six individuals of the Core Team were making was the justification for why they deserved to each have 1% of the cryptocurrency, and the regular members would receive a possible total of 759 units of cryptocurrency, with a group of individuals who they would validate as “early contributors” receiving a possible 10% that they would “*figure out at a later date*”, according to Core Team ID 2. Importantly, the use of percentages instead of actual units received hides the fact that the six individuals, who are claiming they first established this area and contributed most to the organisation, are receiving 100,000 units of the cryptocurrency, with 50,000 being given to them initially, and 50,000 given to them every month for two years, while the regular members only received 759 units. Framing the comparison of 1% to 759 units allows for the Core Team to take advantage of the cognitive bias of individuals. In this way, the regular members would be tempted to believe they would prefer the higher number value of 759 units. This mechanism is due to the fact that individuals use a heuristic in which they would want the higher number of the two possibilities (Tversky and Kahneman, 1974). However, they are not realising that the greater amount of these two options is actually the lower percentage number. Thus, individuals often fail to measure how much the 1% actually represents in similar circumstances (Thaler and Sunstien, 2008). The “early contributors”, of whom each individual had to be validated as such by the six individual “founders”, would later go on to receive a greater amount of cryptocurrency than the regular members, but it would still take years for them working 35 hours a week to earn as much as the six individual “founders”. Thus, through the use of autochthony, the individuals were able to gain economic resources through the passing of the proposal which legitimised their claims, further cementing their autochthony as the first settlers.

As the social effectiveness of autochthony as capital is highly contextual, it is crucial to note the preceding events of this proposal. Importantly, it was on September 5 that individuals were first able to first join the organisation, with the first proposal concerning the mission and the values of the organisation taking place on October 15th. It was on October 29th in which a proposal was authored by and gave the six individuals of the Core Team leadership control over each of the guilds as *“guilds will initially have no defined hierarchy beyond its ‘Leader’ ”*. Incorporating the criticisms of this centralization of control in a decentralised autonomous organisation, the leadership these six comprising the Core Team had attained was said to be *“not a permanent setup, but allows us to move forward”* as *“decentralised governance is a spectrum”*. This aspect of the spirit of capitalism in incorporating criticism into the accumulation process is what allowed there to be an initial hierarchy in the first place, although if the claim makers were to be believed, it was only intended to be temporary. However, just two months later, this non-temporary measure of hierarchy became the foundation upon which these individuals justify their claim of autochthony in proposal 5. These claims of autochthony and the hierarchy which separated the founders from the early contributors to the members, was based upon an organisation that had only been in existence for 4 months. Those claiming the highest degree of autochthony, the greatest initial contributions, were only given autochthony through the incorporation of the criticisms they made of the hierarchy in previous proposals. However, this was not the only form of criticism that emerged from this accumulation. A member in the comments criticised these greatest initial contributions. This critic pointed out all the work that these six had done was free to do and could take less than an hour's time, and if this was a decentralised autonomous organisation, the organisation should give all members equal distribution of the cryptocurrency. The first to respond are the Core Team individuals who do not address this criticisms but instead begin to criticise the individual member's character and identity of belonging as a troll who *“has not participated in any of the community discussions, building, or voting up until this point, and I'm also wondering if they are even a member of the DAO”*, according to Core Team ID 23 . It is through the use of autochthony that the Core Team are able to both gain and also silence the criticisms of the accumulation of capital and autochthony these newly claimed founders received. Importantly, this was one of only three instances in which individuals that were regular members of the organisation criticised the

legitimacy of the authority of the Core Team. The two other members' criticisms were met with not only silence from the Core Team but from other members of the organisation as well. Thus demonstrating the perception of the Core Team authority amongst all members of the organisation as legitimate, natural, and apolitical.

In proposal 5 was the first emergence of the claim of a higher degree of autochthony, and as seen in Figure 2.4 (c), this would go on to be used quite frequently in the proposal process. This accumulation of capital and centralization within the organisation allowed the Core Team to continue to remain in hierarchical positions in their guilds, decide who gets paid for their labour, who can make proposals, and what are the outcomes of proposals. It wasn't until Jan 2023, a little over a year after the proposal 5, in which the organisation voted to change the structure and completely remove the notion of guilds as it *“failed to serve the vast majority of members who are not Contributors to the DAO [decentralised autonomous organisation] itself. It also failed many important Contributors who were not fairly rewarded in Season 1”*, Core Team ID 2. However, the new structure that was put in place was one in which while there were no guilds, but there were still leaders who decided on which proposals could be voted upon by the organisation. Instead of responding to the criticism by agreeing and distributing the “rewards” to those who were not fairly compensated, the Core Team created a new test in which they can circumvent the criticism that they themselves made against the old test they had created. In this new test, both the new leaders and any new proposals would no longer be decided by a vote in which each person only has one vote and the outcome would be decided by the amount of people in favour or against, but by the amount of cryptocurrency backing whether for or against a leader or proposal. Because the Core Team in proposal 5 were able to secure so much economic capital in terms of cryptocurrency, even with this new change in Jan 2023, each of the proposals and all of the new leaders were chosen by which direction the Core Team voted with their abundant use of cryptocurrency. This was all made possible by the amount of economic capital and symbolic power the Core Team were able to create based on the initial claims of autochthony.

Section 5: Conclusion

Through our findings I was able to answer my research question in that not all decentralised autonomous organisations are truly democratic. ABCD, a decentralised autonomous organisation, was not truly democratic as there were individuals in the organisation which had greater levels of influence in the decision-making processes. ABCD was an organisation which once started as a decentralised autonomous organisation with the intent of opposing the capitalist system and creating “*movement that is community owned, building the future from the ground up*” actually became centralised with six individuals having control over the decision making processes. Worker-owned and managed firms are intended to be horizontal, striking at the heart of the capitalist system. However, in this particular case study, this new worker-owned and managed firm that was started as non-hierarchical organisation that was supposed to be operated, managed, and evolved through a democratic constitutional processes quickly became a capitalist organisation with six individuals owning the fruits of the labour and the rest of the organisation toiling away, selling their labour for a cryptocurrency. The six individuals were able to accumulate the symbolic power to control this democratic constitutional process in order to switch the organisation to a system in which it was originally opposed to. This was accomplished through the mechanisms of the expressions of the spirit of capitalism in both excitement, security, and fairness for the accumulation of capital as well as the incorporating the criticisms to either justify the accumulation or with the changing of the tests that were being criticised to new ones that further allowed for control over the decision making processes. With autochthony having great ties to the expression of fairness, the use of autochthony as capital was also influential at the beginning of this transition to justify the accumulation of symbolic power as well as economic power.

The transition to the capitalist organisation and the accumulation of economic capital was quite surprising and went beyond what was hypothesised as a method for controlling the decision-making processes. While it was expected that the networks would have a heavy tail distribution, as most real world social networks do (Newman, 2018), I did not expect in my

findings to see this transition as the very organisation itself has the acronym DAO, decentralised autonomous organisation, in its name. An individual could not join the organisation without knowing it was a decentralised autonomous organisation. Also, in both the processes of advancing a proposal or voting on a proposal, one would see the name of the organisation on the website in which proposals were being made and voted upon. Thus, while at the same time a proposal was being made that would allow for centralisation of economic and symbolic power these six individuals were beginning to accumulate, one would see the decentralised autonomous organisation right above the proposal. Therefore, I did not expect it to happen for the centralisation of economic capital to occur and if it did occur for these proposals to pass, let alone for them to pass so easily and quickly in the time periods of analysis with more than 90% support in favour of this accumulation for the few who composed the Core Team. As the organisation began as one in opposition to the capitalist system, with the claim of “*developers around the world are tired of working and contributing their time and effort to enrich the top 1%*” Core Team ID # 23, this transition took only four months from the time of this claim. This centralisation was also antithetical to what each individual in the organisation is trying to build, the Web 3.0, that is, they are everyday attempting to build a technological system without a central point of control and used smart contracts to distribute the economic capital to the Core Team but did not use them to distribute to regular members.

This research is limited as this form of analysis closest measure of the belief of individuals in the organisation was through the claims made and the outcomes of the voting of proposals. I did not measure to understand if the six core team members were intentionally trying to control the decision making processes. Thus I was limited in our approach and cannot say if individuals in the organisation truly did believe that “*decentralised governance is a spectrum*” and that the organisation they were a part of was decentralised. I cannot know if they intentionally set out to claim to be anti-capitalist, owned and operated by all the individuals in the organisation in a non-hierarchical structure, while fully aware that six individuals were co-opting the criticisms of capitalism to become the capitalists within this small organisation. Nor can I say if the Core Team knowingly used the mechanism of proposals and voting in order to deceive individuals within the organisation into believing they were in a decentralised autonomous organisation that sought to fight the capitalist structure nor can we say how

internalised were the beliefs of those within the organisation that they belonged to such an anti-capitalist structure.

While the analysis may not have had the depth of measurement required to assess the internal beliefs of individuals, one of the strengths of this study, due to the online nature of the organisation, is that it is only through written digital discourse in the proposals and comments that individuals interact in this system in the collective decision making processes of the organisation. For anyone taking part in the organisation, this was the only format they themselves would have to understand the previous proposals and the discourse surrounding each proposal that was voted upon and which failed to make it to the voting stage. These proposals were not presented face-to-face nor recorded online in any video format, but were all digital, online posts in which it was only the written discourse in the proposals and the comments surrounding them that individuals would be able to understand and participate within the collective-decision making process of the organisation. On their website to learn about the processes, it would take them directly to the website in which proposals had to be made, which was very data collected and analysed. As the proposal process was intended to be the place in which the collective decision-making of the organisation took place, this is the exact data that every individual of the organisation not only had access to, but was what they themselves would need to use in order to understand the processes of collective decision making.

This particular case study in which a few individuals were able to accumulate control over the collective decision making process may also give insight into the larger sociological literature concerning the primitive accumulation of symbolic power. As the organisation was newly formed in a virtual space, beginning as a decentralised autonomous, the expressions of the spirit of excitement, security, fairness and autochthony provided the mechanisms to allow the accumulation of authority seen as legitimate while the use of criticism allowed for the misrecognition that no power was being wielding. Just as Loveman (2005) points to the state's primitive accumulation of symbolic power can be linked to the state's abilities for administrative growth, so too were the six individuals of the Core Team able to accumulate symbolic power. It took 6 months before the first vote for a specific form of administration, which became the operations team consisting of two of the Core Team and one regular member, to be given the authority to manage all operations within the organisation. However, this form of administrative

action had already been put in place as the operation team would take on “*the tasks and responsibilities the original Core Team has been taking on by default*”. Thus they could legitimise their claim through the passing of the proposal and point towards the vote of all of the organisation as the reason for this authority, while at the same time revealing the symbolic power of the Core Team in their administrative tasks as they already were executing this “by default”, or that “which goes without saying” (Bourdieu and Wacquant, 1992, pg. 162). It was the role of autochthony and its effective use that had given the six individuals the role of the Core Team that allowed for them to play the initial administrators of the organisation. As Hilgers(2011) points out, the effective use of autochthony as capital can be dependent on the levels of distribution in a group of social, economic, or symbolic capital. In an organisation which was first established as a decentralised autonomous organisation that is supposed to be non-hierarchical and in opposition of the capitalist system, any claims of authority and hierarchy from the use of economic capital would be criticised. However, the six individuals claimed autochthony and institutionalised their positions as founders, giving them their legitimacy of authority and the power over administrative functions. This allowed for this claim of autochthony to be the ideological power that instigated the accumulation of symbolic power. Thus autochthony as capital may play a role in the accumulation of symbolic power, in some specific circumstances as the social effectiveness of autochthony as capital is highly contextual.

These findings also appear to support the Gould (2002) theoretical work on the origins of hierarchies as the actor-to-actor network of the discourse surrounding the proposals is concurrent with this particular model’s predictions. In Gould’s model, the emergence of hierarchies originated from the prominence which is given to individuals because of an abstract position they play within a group rather than the immediate observable action or behaviour of the individual, thus the accordance of status to the individual (Gould, 2002, pg. 1147). As individuals like to be connected to others they find attractive, but they do not like to be connected with individuals who do not reciprocate the attachment, so too do individuals like to receive connections that they do not repay as their attachments both signify and contribute their status. This can create a cascading asymmetry in social networks in which Gould predicts 1) asymmetry in social relationships is proportional to the difference in choice status between pairs of actors 2) all else equal, if the pair of actors are similar in status they will also be similar in patterns of attachment

they make towards others, 3) for all of the actors in the network, the sum of the out-degree of all actors is proportional to, but more evenly distributed, than the in-degree of actors. All three of these predictions do apply in the actor-to-actor network within our data in relation to status specifically given by degree of autochthony. This use of autochthony allowed for not just an emergence of hierarchy within the network, but established the individuals with the greatest degree of autochthony to be central figures within the network and to do so by having the highest degree of centrality by a wide margin. Although we must caution that from the data, one cannot presume to know the preferences of each individual and the status that they find most attractive, which is part of the basis for Gould's theory as the status is linked to attraction and those who hold it. However, these findings may possibly support the notion that the use of autochthony as capital can be extremely beneficial in the initial stages of a group formation, for as the emergency of hierarchies unfolds, autochthony can allow for specific actors to play extremely disproportionate roles within the network.

While this particular case study may not reveal how a decentralised autonomous organisation may play the role of striking at the heart of capitalism, it does offer a glimpse into the particular intertwining of the spirit of capitalism and autochthony into the processes of collective decision-making. Ethnographic research into decentralised autonomous organisations may be completed in order to further these findings and to increase the understanding into the primitive accumulation of symbolic power as this research is limited by its methodological approach and the data only focusing on the online rhetoric of individuals within the organisation during the collective decision making processes. As decentralised autonomous organisations have only appeared within the last decade, this newly created type of organisation may offer opportunities for the larger study of the democratisation of work in the specific context in which the democratic processes and the interactions between individuals colleagues occur almost entirely online. While ABCD may have a minority of individuals having more influence in the decision-making processes, it is not the sole decentralised autonomous organisation. This online dimension may allow greater access for the participation of those who spend so much of their time with little to no say in their work and with no ownership of the fruits of their labour to enter into the democratisation of work.

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