DAOs & Co-ops:
How to learn from the past to create
viable economic communities for the future

By Alyssa Yuhas

Abstract

This research explores how decentralized autonomous organizations (DAOs) and Cooperative (Co-op) models can learn from each other to impact the future of community and opportunity. The findings are grounded in human-centred design, systems thinking, foresight and innovation by comparing and contrasting the two models. The insights & accessible pathways uncovered will contribute to creating healthy communities and equitable opportunities as the internet evolves. Furthermore, the results may inspire and guide future community builders and member-centred creators within emergent online spaces. Both DAOs and Co-ops have similar ambitions and starting points, and each has strengths that can complement the other's weaknesses. The goal is to highlight that DAOs and Co-ops have more similarities than differences and can work together to create a more equitable society.

Land Acknowledgement

I acknowledge two lands as I have had the opportunity throughout my academic studies to live and learn in two distinct parts of Canada.

First, I acknowledge that OCAD University is on the treaty lands and territory of the Mississaugas of the Credit First Nation. As a settler on these lands, I recognize that I was located on the grounds of the Anishinabewaki, Huron-Wendat, and Haudenosaunee nations for most of my studies. Today, this meeting place is still the home to many Indigenous people across Turtle Island, and I am grateful to have had the opportunity to work and learn on this land.

Furthermore, in the spirit of reconciliation, I also acknowledge that I spent my time writing and now living and working on the traditional territories of the Blackfoot Confederacy (Siksika, Kainai, Piikani), the Tsuut'ina, the Îyâxe Nakoda Nations, the Métis Nation (Region 3), and recognize all people who make their homes in the Treaty 7 region of Southern Alberta.

As a designer and futurist, I begin this project by acknowledging the lands I am on because the land is what anchors and grounds my work. However, I recognize that land acknowledgement is only a first step in reconciliation and relationship-building with Indigenous peoples. To continue learning, I invite you to self-reflect and explore your locations using tools like native-land.ca or whose.land.

Seek wisdom, not knowledge. Knowledge is of the <u>past</u>; wisdom is of the <u>future</u>.
– Lumbee *(Native American Proverb)*

People Acknowledgment

I want to acknowledge the people who supported me throughout the 3-year process. I am grateful for their interest, support, and encouragement as I stretched and soared each semester.

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Dedication

This project is dedicated to my two sons, Sasha and Nico. You are brave friends, kind leaders, curious learners, and fun makers.

May you create space to learn from the past to build better for our future, both online and off.

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<mark>Definitions</mark>

To begin, below are broad definitions of the two models of focus for this project (Co-ops and DAOs). Further background will be explained in Chapter 1 (introduction) and 2 (Context). A full glossary of terms can be found in the Appendix.

What is a Co-op? Cooperatives, Coops or Co-ops, have been in existence since the 18th century and are businesses owned by the people who use their services. They operate on a one-vote-per-member basis. Their purpose is to meet members' needs, not just earn a return on investment (like traditional businesses).

What is a DAO? As uncovered through my research DAOs are difficult to define. However, this is a broad explanation. DAOs are Decentralized Autonomous Organizations that are managed through blockchain and smart contracts. They are a response to the question: "What if a community owned and operated a business rather than it being a centralized entity like today's corporations." In theory, they provide an accessible form of decentralization and transparency. And in certain ways, can scale more easily than traditional organizations. They are mission-driven and built on community. (OdysseyDAO, 2022)

Chapter 01 / <mark>Introduction</mark>

"It isn't capital that creates economic growth, it's <u>people</u>; it isn't self-interest that promotes the public good, it's <u>reciprocity</u>; it isn't competition that produces our prosperity, it's <u>cooperation</u>." – Nick Hanauer

I am a designer, creative, and a precarious worker. Twelve years ago, I left a secure job at an advertising agency to become a self-employed designer. As I learned through my research, many people drawn to these new economic models have a similar mindset: we were disillusioned with corporate life and believed something better was possible. We believed our energy and output could be better stewarded if we owned our labour.

Nathan Schneider discusses how his work documenting the Occupy Wall Street movement sparked his interest in alternative economies (Schneider, 2018). While reading his personal story for this research, I remembered vividly visiting the camps at Zuccotti Park in 2011 with my partner studying photojournalism. I'm unsure if that moment has been living in my subconscious, quietly influencing my values. Still, I have always believed in the power of community and that if we give hours of our lives to work, we should have agency over creating opportunity. These threads have been woven throughout my career in creative ways: from founding a design conference that connected and made opportunities for *primarily* solopreneurs to opening a co-working space where like-minded people could work and collaborate under one roof. Even as I type this introduction, I realize that the current focus of my research on Co-ops and DAOs is a natural progression in my curiosity toward how we can create opportunity together outside the status quo.

Figure 1. Images of Occupy Wall Street by Shane Yuhas

Broadly, this research aims to increase understanding and accessibility for the next iteration of community building: drawing on emerging opportunities on the internet, learning from established similar models, and uncovering opportunities to create and connect in this new online landscape. I aim to look at two models with commonalities, one with a long history and the other emerging within society. Cooperatives (Co-ops) are an established model built on democratic decision-making and shared platform ownership by workers and users. On the other hand, DAOs *(Decentralized Autonomous Organizations)* have emerged from the

web3 landscape as a new mode of community, democratic organization, and opportunity. There is speculation that the DAO landscape is evolving faster than any industry in history (Aragon, 2022). One year ago, DAOs collectively held $500 million and now command more than $11 billion (Aragon, 2022), and their predicted growth trajectory is exponential. Joshua Tan, mathematician, computer scientist, and expert in online governance, bets that decentralized autonomous organizations (DAOs) and other digitally-constituted organizations will "organize more assets and production than traditional, legally-constituted corporations in the United States" (Tan, 2022).

On the other hand, Co-ops have been in existence for centuries. Many credit the Rochdale Society of Equitable Pioneers with creating the prototype for the modern Cooperative movement. This British Consumer Cooperative was formed in 1844 and wrote a set of principles of cooperation, the Rochdale Principles, a group of ideals for Cooperatives that are still referenced today (Robey, 2022a). However, professor Jessica Gordon-Nembhard writes that Co-ops pre-date even the Rochdale Principles as solidarity networks created by enslaved people for survival and self-sufficiency could be viewed as an earlier iteration of the Cooperative movement (Gordon Nembhard, 2014). As technology and resources have advanced, Cooperatives have continued to evolve and transform into new forms: Platform Co-ops or Digital Co-ops, which are worker Cooperatives organized and governed online. Between 2019 and 2021, worker Cooperatives have grown 30% in the United States (Democracy at Work Institute, 2022) and Canada, the momentum of co-ops has pushed the Canadian Worker Co-op Federation to lobby for a $91-million investment by the federal government along with new tax breaks for worker co-ops over the next five years (Jean, 2022).

Nevertheless, Co-ops and DAOs appear to have more similarities than differences. Both spheres give rise to valuable new tools for human organization, collective ownership, and cultural production (Robey, 2022a). Moreover, DAO Creators, from investors and lawyers to artists and scientists, are emerging with idealist aspirations. Still, the reality for these creators is that starting and evolving a DAO is a complex and confusing endeavour (Aragon, 2022).

There is a lot of opportunity and excitement within this new landscape, but for most people, this developing space is inaccessible, unknown, or mysterious. So, looking at the established and emergent models, this research will explore: **What can DAOs and Co-ops learn from one another?**

In addition, the research also provided observations into the following questions:

DAOs	**Co-ops**	**DAOs & Co-ops**
☐ What is a DAO? What is the history of DAOs?	☐ What is a Co-op? What is the history of Co-ops?	☐ What is the relationship, if any, between the two *(DAOs & Co-ops)*? How are they similar? How are they different?
☐ Why are DAOs emerging now?	☐ What are the strengths and weaknesses of Co-ops?	
☐ What are the strengths and weaknesses of DAOs?		

Figure 2. Secondary Questions

My interest in DAOs and subsequent connection to Co-ops began as an interest in how the internet was evolving. In 2020, I contributed to a project focusing on social media and the evolution of web2 to web3. Through that research, web3 began to enter my focus. So I dove into learning about web3, first what it meant (web3, representing a new iteration of the internet that includes decentralization, blockchain, and token-based economics) and closely watched Bitcoin, blockchain, and non-fungible tokens (NFTs) enter the mainstream dialogue. As I went further down the rabbit hole, I stumbled upon DAOs through a social DAO (similar to an online social club) called *Friends With Benefits* ($FWB) and was intrigued. *"Friends With Benefits is what's known as a decentralized autonomous organization, or DAO — a kind of digital*

co-op that uses cryptocurrency tokens to coordinate access, make payments and vote on group decisions." (Woo & Roose, 2022), This community of like-minded people from all over the world, connected through the internet and blockchain with a vision to foster culture and creative agency (FWB, n.d.). The concept and focus of the community were enough of a catalyst to start the application process. Before gaining access, I filled out an application, introducing myself, my background and experience, my interest, and how I could see myself contributing to the community. A few weeks later, I was accepted and could purchase $FWB tokens to solidify my membership.

Figure 3. Website for FWB (Friends With Benefits) DAO

At the same time, I began to explore the relationship between web1, web2, and web3. With a focus on social media, I worked with Marshall McLuhan's Tetrad of Media Effects in a futures-thinking way. As I connected the tetrads chronologically, I noticed how we were retrieving from the past (web1) because of the frustrations of the present (web2) to create solutions for the future (web3). This notion that future solutions could be found in our past fascinated me. As I was diving deeper into DAOs, I was also working on a project with Ontario College of Art and Design University (OCAD U), where we were researching and facilitating workshops focussed on the co-creation of a Cooperative platform for artists and designers. I was learning more about this new way to organize and distribute opportunity from the ground up and seeing first-hand the vision, coordination, community-building, and structure needed to launch a Cooperative. And through this parallel learning, Co-ops by day and DAOs by night, I began to think that DAOs were a new name for this established model – and the connection to Co-ops was loosely formed. The similarities felt uncanny. However, I found it interesting that the loudest DAO builders were not building off this rich history of learnings, successes, warnings, or mistakes. I then read an article by Austin Robey, a Co-op and DAO builder, who was one of the first to publicly start the conversation around the similarities and the need for collective learning between the two models (Robey, 2022a). This was exciting, and I felt that more could be discovered if DAOs and Co-ops were held together with the goal of learning from each other.

As DAOs lived within this new paradigm of web3, I wanted to immerse myself in its context. Overall, web3 felt very technical, unapproachable, and overwhelming, but entering through the pathway of community-building and community participation through DAOs created a feeling of attainability. As mentioned, my journey continued after I applied and was accepted into the *Friends With Benefits* DAO. I entered the

space, purchasing Ethereum, buying tokens, and joining Discord (the platform they used for regular communication) and accessing the newsletter (the platform they used for updates and highlighting essential things happening in the community); I quickly became aware that the point of entry was still cumbersome and frustrating. I began to journal my personal experience to understand better how I was entering this new space (see Appendix A). For example, it took me 2.5 hours to figure out how to swap my Ethereum to the correct wallet to purchase the tokens needed to access the DAO. A number of $FWB tokens in your wallet opened the Discord channels and newsletter. Once I gained access, I was met again with overwhelm. The busy Discord was overwhelming because of the jargon, volume, and time.

Figure 4. "Is it a DAO or…?" meme (source: unknown)

Learning Curve: There is a whole new language in web3 (see Appendix B), and as a non-technical, I needed to be bold about introducing myself or adding to the conversation. I noticed that most people vocal on Discord were technically savvy or had all the web3 slang to contribute.

Volume: Discord's number of channels and messages was overwhelming, and I had to turn off notifications to focus on the other tasks in my day. In addition, I was added to a Google calendar that showed all the online and in-person events I could join. It was exciting to feel the energy through the calendar of events, but with a volume of options, I felt frozen with choice.

Time: This was the defining factor for me because of my season of life most of my time is accounted for with other commitments. The amount of time needed to dive into a DAO, join the conversation, participate in events, meet new people, set up zoom hangouts, and then discover what areas I could contribute – this amount of time was out of reach for me. Further, if I wanted to contribute, it would require additional time. This was an exciting observation before I even began my research, that time was a deciding factor in the level of access to this new online space and community.
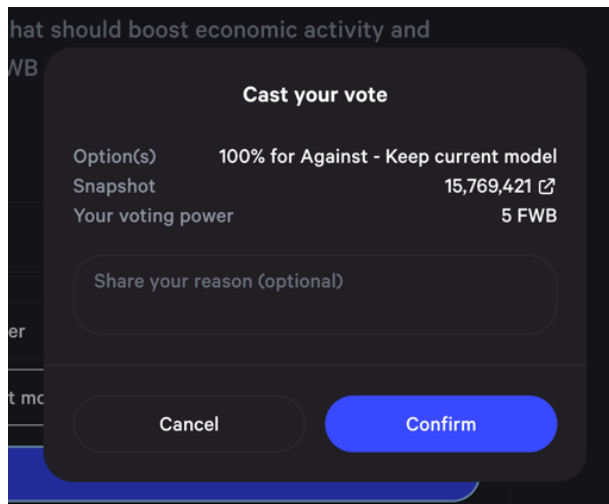
Figure 5. My snapshot vote

Finally, a few months after I was accepted and purchased the tokens to join the community, I was invited to vote in my first vote. Because of the democratic nature of DAOs and the collective ownership, everyone that joins a DAO should have a voice in decision-making. In theory, anyone that enters a DAO should have voting power, but there have been examples where a takeover occurs and the DAOs democratic integrity crumbles. For instance, in 2022, Build Finance DAO "suffered a coup in which one person amassed enough tokens to get a vote passed, then voted to give themselves full control of the DAO, then, using this power, took all of the money." (Ongweso Jr., 2022) Even with the best intentions, democratic governance, and using Blockchain, DAOs can fall victim to "malicious actors" and "hostile takeovers," just like capitalist entities.

The FWB proposal we were voting about was a membership merge, moving from a two-tier membership to a single-tier. This would mean that the membership I had initially bought would be eliminated, and I would have to purchase additional tokens to stay in the community. Members brought this proposal forward within the community who wanted a more streamlined experience, but it was also countered by members who felt that the two tiers created more accessibility, diversity, and inclusivity. The entire community was given the opportunity to cast their vote using a quadratic voting system where voters could indicate the strength of their conviction based on the number of tokens they held within the community. Quadratic voting aims to eliminate majority rule, and instead of just voting in one direction, you can place importance on your vote. The advantages to weighting votes quadratically are that this system "protects minorities, helps balance power against whales, and may better capture community sentiment compared to rank choice voting." (Robey, 2022b) I read the proposal and counter-proposal, and with my voting power of 5 FWB tokens, I cast my vote against moving to a single tier. The vote ended up being "for" moving to a single tier, which meant that the membership tier I had joined would eventually be dissolved—an interesting first experience within a DAO community.

Moving from personal experience and observation to holistic research, we will explore the relationship between DAOs and Co-ops and their impact on society. We will begin by scanning the current technology and societal landscape, exploring the reason for the emergence of DAOs and the factors that have led to their growth. Then we will delve into what is meant by the perfect storm of circumstances that has allowed for the rise of DAOs. The chapter will also explore the influences and trends that have contributed to the growth of this new organizational model. Finally, as DAOs are new and emerging, we will explore how they are defined and what a DAO means.

Next, we will focus on how technology impacts society and examine it through the lens of McLuhan's Tetrad. First, we will define and demonstrate its use in evaluating the impact of technology on society. The chapter will then apply McLuhan's Tetrad to both Co-ops and DAOs, offering insights into how these models impact society and the relationships between the two models, from past to present.

Finally, we will comprehensively analyze the strengths and weaknesses of both DAOs and Co-ops. We will also explore the opportunities for both models to work together and the opportunities for each to succeed on their own. By evaluating the strengths and weaknesses of each model, this chapter will provide valuable insights into building online and offline communities.

Overall, these findings are based on exploring the models (technologies) and their impact on society by examining DAOs and Co-ops. The argument will suggest that by learning from the past, iterating, and experimenting, both DAOs and Co-ops can build upon the successes and lessons learned from each other to create viable economic communities.

The research showed that DAOs and Co-ops have more similarities than differences and can work together to create a more equitable society. Both DAOs and Co-ops have similar ambitions and starting points, and each has strengths that can complement the other's weaknesses.

However, because both models are often marginalized and viewed skeptically, the research suggests that by leaning on the wins of each community and building upon them, both DAOs and Cooperatives can ladder each other up and increase their impact and social proof. Through this exploration, the importance of collaboration between DAOs and Co-ops to achieve their shared goals will become evident.

This research hopes to reduce barriers and provide a better understanding of where the internet is headed by equipping more people with the language and understanding to enter these new online spaces. The ease of effort to launch a DAO is different from the more significant effort to start a Co-op, but there is a lot to learn about how a Co-op organizes and sets up its model for success. And ease of effort does not mean that a DAO grows quickly. Instead, they can achieve their shared goals of equitable and viable economic communities through collaboration between these two models.

Chapter 02 / <mark>Context</mark>

The first era of the internet, web1, was a new frontier and began as an experimental, unpolished, community-governed internet. Web2, which we are just at the end of, built siloed services with ownership and power in the hands of a few large tech companies. What is interesting is that web2 began with good intentions of improving on web1 with new spaces and features for interaction, connection, and community – however, over time, through the network effect, as companies grew (or scaled), these platforms shifted from cooperating with their users to competing with them. They were extracting and becoming less cooperative.

> The Network Effect: *The Oxford dictionary defines it as "a phenomenon whereby a product or service gains additional value as more people use it." Network effects can be harmless at first but can cause concern at scale if platforms enter an "extractive" phase in their lifecycle.*
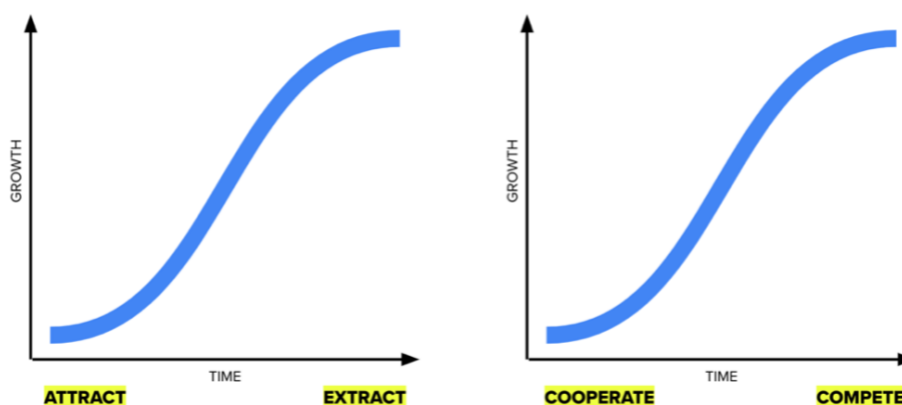
Figure 6. The network effect (AndreessenHorowitz, 2022)

Now, web3 comes in where we are today. And is a response to the extractive and exploitive nature of web2. Web3 is pulling from the best parts of web1 and web2 – its ethos and tech. As I dove more into web3, I was drawn to the philosophy or aspirations of DAOs. Their aim at the root is to gather and organize humans, to create equitable opportunity and experience, and to do this online (Chitra, 2021) – and I continued to read that web3 hinged on community. (*DAOs Are Focused More on Community than Profit. Here's Why*, n.d.)

Web3 directly responds to the problems that emerged from web2 *(data ownership, big tech monopolies, and more)*. Web3 is trying to solve those problems through blockchain technology and decentralization.

	WHEN	ETHOS	CONTROL	EXAMPLE
<mark>web1</mark>	First era of the internet approx. 1990-2005	**Open, decentralized, community-governed**	**The network** *(users & builders)*	GeoCities
<mark>web2</mark>	Second era of the internet approx. 2005-2020	**Siloed, centralized services**	**A few large tech companies**	f
<mark>web3</mark>	Where we are today	**Open, decentralized, distributed**	**The community**	**Bitcoin NFTs DAOs**

Figure 7. Eras of the internet, adapted by Alyssa Yuhas

Along with taking back control from big tech and giving it back to the individual or community. Keep in mind these are hopeful as we are in the early days of web3. There is a need to be cautious about what is being built and who is building it, as many of these aspirations were also felt at the beginning of web2. We ended up with tech oligarchies, loss of privacy and trust, data exploitation, and more. In web3, control is taken back from big tech and hinges on the community. The goal is to take power away from corporations and back to the individual or individuals.

web2 issues	web3 response
Data exploitation	"Trustless" system
Content Ownership	Blockchain and smart contracts
Loss of privacy	Decentralization *(distributing power and opportunity)*
Big Tech monopolies	DeFi *(cryptocurrency)*
Censorship	NFTs and ownership
Misinformation	Tokenization and incentivization
Loss of Trust	DAOs and community organizing

Figure 8. web2 issues and response of web3

This is where Decentralized Autonomous Organizations (DAOs) come into focus. They are emerging as a new model for community building, opportunity, and governance within web3.

> *The decentralized autonomous organization (DAO) model has established a novel mode of participation in online communities. The Web was supposed to usher in a renaissance of organizing people and creative talent. But accompanying this revolution was increased surveillance, data harvesting, and precarious labor.* (Flemming & Djuric, 2022)

What is a DAO?
As uncovered through my research DAOs are difficult to define. However, this is a broad explanation. DAOs are Decentralized Autonomous Organizations that are managed through blockchain and smart contracts. They are a response to the question: "What if a community owned and operated a business rather than it being a centralized entity like today's corporations." In theory, they provide an accessible form of decentralization and transparency. And in certain ways, can scale more easily than traditional organizations. They are mission-driven and built on community. (OdysseyDAO, 2022)

Characteristics of DAOs

Built on blockchain
Capital *(through crypto or tokens)*
Democratic Governance
Mission driven
Community valued\
Distribution

Figure 9. Characteristics of a DAO

There are many types of DAOs emerging – with different goals. Some are anchored on social good, like UKRAINE DAO which allowed anyone to send donations to Ukraine soldiers which is categorized as a Philanthropy DAOs which will enable users to send donations to help people in need quickly. Protocol DAOs are decentralized blockchain networks that enable users to trade cryptocurrencies without reliance on centralized third parties. Education DAOs, such as OdysseyDAO, provide resources and support for people to learn about and participate in the Web3 economy. Media DAOs, such as Decrypt, give users more control over what types of content they see. While many DAOs appear more experimental and

whimsical, like ConstitutionDAO which raised $47 million worth of Ethereum in one week to buy a first edition copy of the U.S. Constitution at auction (they lost the bid). This type of DAO, Collector DAOs, permits users to come together and invest in rare or collectible items. Social DAOs, such as web3 creator DAO, promote collaboration, creativity, and connection. There are many categories of DAOs, with an even wider range of goals, but what is clear is that they all aim (in various degrees) to deploy a decentralized, transparent, and equitable form of governance using blockchain technology.

Protocol	The Uniswap platform enables users to trade cryptocurrencies without any involvement with a centralized third party. Uniswap describes its blockchain as a public good.
Philanthropy	UkraineDAO uses the ENS domain, ukrainedao.eth, to send donations to Ukrainian soldiers.
Educational	OdysseyDAO Web3 learning community helping one million people join the Web3 economy.
Media	Decrypt is another media DAO example that empowers users to vote on what types of content they want to see.)
Collector	ConstitutionDAO in an attempt to buy the United States Constitution. Remarkably, ConstitutionDAO raised $47 million worth of ETH in one week to try to buy a first edition copy of the U.S. Constitution at a Sotheby's auction.
Social	web3 creator DAO focused on building community and fostering creativity. Access to Friends With Benefits is 75 $FWB tokens, and once admitted, members have full access to connect with builders, artists, and creatives, and attend exclusive events.

Figure 10. DAO examples

The definitions and purpose of a DAO vary according to the context. OdysseyDAO, a web3 learning community, defines a DAO as a " community owned and managed by its members." Kelsie Nabben, an ethnographer of decentralized technology communities, sees the complexity of a DAO and broadly describes them as a "multi-agent system, working towards a shared objective" (Nabben, 2022a). Nabben also emphasizes the importance of the history of DAOs and links the emergence to the founding of The Cypherpunks Mailing List in 1992, an online space for discourse for "anarchists, utopians, and technologists". Being a Cypherpunk "offered a sense of belonging, an alignment of purpose, and a shared identity" (Nabben, 2022b) – which could be viewed as similar sentiments to DAOs. Nathan Schneider, professor of media studies at the University of Colorado Boulder, believes DAOs represent "an opportunity to reimagine how human beings play and work together" with the likely results of sharing "power and wealth more equitably" (Schneider, 2023). Chase Chapman, Governance Researcher at Metropolis, sees DAOs as "digital cities" where "people congregate, chat, build, and work alongside one another" (Chapman, 2022), while Kevin Owocki believes "blockchains are a foundation upon which we could build solutions for [social and environmental challenges]" (Owocki, 2022). Austin Robey sees DAOs as "better at enabling collective ownership at scale" (Robey, 2022a).

The DAO landscape is diverse, complex, and rapidly evolving. The opportunities presented by DAOs have created an environment ripe with potential for innovative applications. As the technology matures, more complex problem-solvers and community-builders will likely turn to DAOs as a viable alternative for ownership and decision-making processes (Marin, 2022). There is speculation that the DAO landscape is evolving faster than any industry in history (Aragon, 2022). One year ago, DAOs collectively held $500 million, and now command more than $11 billion (Aragon, 2022) and their predicted growth trajectory is exponential.

As I was diving increasingly into DAOs and web3, I saw similarities with another established model, the Cooperative (Co-op). Where DAOs are emergent organizations using new, hyped technology, Co-ops, on the other hand, came to mind as they have a history of practice and are a mature, tested model of community building, opportunity, and governance.

DAOs may appear like Co-ops because they are decentralized entities based on collective decision-making. However, DAOs are driven primarily by code (blockchain). In contrast, Co-ops involve human decision-making and engagement. DAOs also require no physical infrastructure and can operate without borders, whereas Cooperatives are rooted in one location. There is also growing concern about the legal form of DAOs as "it remains unclear what the nature of their member-liability is, thereby creating significant risk for members" (See et al., 2022). Yet Cooperative organizations must comply with specific regulations depending on the jurisdiction. DAOs rely heavily on technology and digital assets, while Cooperatives rely on the collective effort of members.

"Distributed Autonomous Organizations are novel but not new." (Flemming & Djuric, 2022) Despite their differences, DAOs and Co-ops share similarities. For example, they offer more equitable employment as private shareholders or venture capitalists do not own them. Both DAOs and Cooperative organizations also provide an alternative to traditional corporate structures, offering increased autonomy for members and more transparent and distributed decision-making processes.

Through blockchain technology, DAOs offer greater autonomy, transparency, and efficiency in managing funds and resources. Co-ops struggle with scale and bureaucracy but remain the historic model for collective ownership and decision-making. The Rochdale Principles continue to provide the framework for successful Co-ops, while DAOs use code-based smart contracts as the basis of their organizational structures. The code for a DAO becomes the coordination mechanism, where these smart contracts interact automatically with the Blockchain. Smart contracts are trustless because they automatically execute actions when specific parameters are met, so they do not need to trust humans to behave a certain way. At the same time, the Rochdale Principles are the way Co-ops are codified and are based on human interaction and trust within the cooperative community.

What are Co-ops

Cooperatives, Coops or Co-ops, have been in existence since the 18th century and are businesses owned by the people who use their services. They operate on a one-vote-per-member basis. Their purpose is to meet members' needs, not just earn a return on investment (like traditional businesses). These seven principles are called the Rochdale Principles and are the standard for Co-ops today, even though they were created in 1844.

Cooperative Principles

1. **Open, voluntary membership**
2. **Democratic control**
3. **Member economic participation**
4. **Autonomy & independence**
5. **Continuous education**
6. **Co-operation among Cooperatives**
7. **Concern for community**

Figure 11. Rochdale Principles

The Rochdale Principles have existed since the fall of the Soviet Union when they were established as an alternative to state-owned enterprises. They are regarded as the founding principles of modern Cooperatives. They were established by a group of weavers in Rochdale, England in 1844 for their Cooperative venture and have since been adopted as guidelines for successful Cooperative efforts. The seven principles include open and voluntary membership, democratic member control, economic participation of members, autonomy and independence, education and training for members and the wider community, cooperation among Cooperatives at all levels, and concern for the community. Though the principles were created in the 1800s and amended by the International Cooperative Alliance (ICA) in 1937, they are still regarded as the litmus test for "is it a Co-op?".

Jessica Gordon Nembhard, in her book Collective Courage: A history of African American Cooperative Economic Thought and Practice, explains how the needs of members are the backbone of Cooperative formation:

> *The member-owners form the business for a particular purpose: to satisfy an economic or social need, to provide a quality good or service (one that the market is not adequately providing) at an affordable price, or to create an economic structure to engage in needed production or facilitate more equal distribution to compensate for market failure.*

Co-ops must operate democratically, according to the set of principles that include open membership, equal voting rights for each member regardless of how much is invested, returns based on use, continuous education, and concern for the community. According to the International Cooperative Alliance (ICA) *"Cooperatives are based on the values of self-help, self-responsibility, democracy, equality, equity, and solidarity"* as well as accountability and transparency. They operate on a synergy of economic, social, and ecological sustainability.

Like DAOs, there are many types of Co-ops – all formed for a particular purpose: to satisfy an economic or social need, to provide a quality good or service *(one that the market is not adequately providing)* at an affordable price, or to create products or facilitate distribution because of market failure. Learning more, I am amazed at how many Co-ops are right in front of our faces – and often are not advertised as Cooperative models. With Co-op's 200+ years of existence, they have evolved and transformed into various forms, from traditional Co-ops, like credit unions or food Co-ops, to platform Co-ops, which are organized and governed online (Robey, 2022a). There are 3 significant categories of Co-ops: member-owned, producer-owned, and consumer-owned (or a combination of all three).

The Co-op examples, shown in Figure 13, highlight historical and modern forms of Cooperatives, described here as traditional and platform. For example, traditional Cooperatives are those that are member or worker-owned and could be financial Cooperatives (like credit unions), agricultural Cooperatives (like Ocean Spray), or retail Cooperatives (like REI and Home Hardware). While still relatively new, Platform Cooperatives have already seen success with companies such as Stocksy United, Up & Go, FairBnB, and Ampled. Platform Co-ops are differentiated from traditional Co-ops due to their reliance on a website, mobile app, or protocol to facilitate the sale of goods and services (Scholz, n.d.). In addition, both traditional Co-ops and platform Co-ops are not owned by shareholders, but instead owned by their members.

Figure 12. Co-op examples

Studies have shown that Co-ops are typically more productive & economically resilient than many other forms of enterprise. The United Nations has recognized the viability of the Co-op model as Co-ops are more productive and resilient than many other enterprises (United Nations, 2014). Cooperative businesses are typically more productive and economically resilient than many other forms of enterprise, with twice the number of Cooperatives (80%) surviving their first five years compared with other business ownership models (41%) according to data from the United Kingdom (Co-operativesUK, 2019). In addition, their tight connections with the community create many economic and social advantages as "a network of [reciprocal and] trust relationships which reduce asymmetric information and opportunistic behaviour" and allow "more efficient economic exchanges and activities" (Gordon Nembhard, 2014).

With 3 million Co-ops worldwide, Cooperatives contribute to sustainable economic growth and stable, quality employment, providing jobs or work opportunities to 280 million people across the globe. In other words, 10% of the world's employed population is in a Co-op. Studies have shown that Co-ops are typically more productive & economically resilient than many other forms of enterprise (International Cooperative Alliance, n.d.). Cooperatives have been embraced in various countries worldwide including the United States, Italy, Canada, and Spain. For example, in northern Italy's Emilia Romagna region, two out of every three people are Co-op members and Co-ops produce around 30 percent of the region's gross domestic product (GDP) (Duda, 2016). The Mondragon Cooperative Corporation, based in the Basque region of Spain, is one of the largest worker Cooperatives in the world with over 80,000 employees and seventy-six percent of those who work are owners (Romeo, 2022). It has survived seventy years and achieved tremendous success, particularly in job creation and employee well-being, especially during the pandemic. In the United States, between 2019 and 2021, worker Cooperatives have grown 30% (Democracy at Work Institute, 2022). In Canada, the momentum of co-ops has pushed the Canadian Worker Co-op Federation to lobby for a $91-million investment by the federal government along with new tax breaks for worker co-ops over the next five years (Jean, 2022).

However, Trebor Scholz, associate professor at The New School, notes that Co-ops have had a branding problem (Scholz, n.d.) and advocates for platform Co-ops which use technology and digital platforms. And when looking at the Co-ops of Italy's Emilia Romagna region, they are quick to note that "Co-ops aren't magic" as there is a lot of "room to fail and room to do better" (Duda, 2016). It is important to note

that Co-ops still function within a capitalist system, and as Noam Chomsky (2012) notes some sacrifices and compromises are made to succeed within the system. He states, referring to the Mondragon Cooperative Corporation:

> *…it's in a market system and they still exploit workers in South America, and they do things that are harmful to the society as a whole and they have no choice. If you're in a system where you must make profit in order to survive.*

Even with critique, Co-ops are an essential response to the top-down, limited accountability, hierarchical structure of a corporation, and now DAOs are emerging as a new Cooperative alternative, that through blockchain may answer some of the limitations of Co-ops – like Co-op's rigid governance and their difficulty to scale. DAOs could be an exciting evolution for equitable work and opportunity. And while DAO Creators are emerging with idealist aspirations, the reality is that starting and evolving a DAO is complex and confusing. With most not knowing which door to open or which path to take. This new web3 landscape has little regulation, guidelines, education, and can feel like the "wild, wild west".

David Spinks, a leader in online community building, notes that with DAOs "the introduction of blockchain shouldn't, in theory, change how community ownership is done, and yet many people in web3 are starting from scratch. We need to avoid reinventing the wheel."

As we move through each iteration of the internet, we have progressed to a network effect breaking point where we have locked in users and created an extractive economic landscape. A response to this moment is the emergence of web3 and decentralized technologies which aim to create a more equitable system. One solution is enabled through Decentralized Autonomous Organizations (DAOs), a new and exciting model for community building, opportunity, and governance. While DAOs have the potential to be revolutionary in terms of their implications on society, they could also benefit from learning from a mature governance model, the Co-op. The history and success of Co-ops can provide lessons for the design of DAOs and ensure they are not repeating past mistakes. Though DAOs and decentralized technologies open exciting opportunities for an equitable society, they can also learn from experienced models. Through this research and methodology, the aim is to uncover how DAOs and Co-ops can learn from each other and understand their impacts on society in the future.

Chapter 03 / <mark>Methodology</mark>

The methodology for this research was rooted in exploration (divergence) and discovery (convergence). Using a multi-method qualitative study, I drew on aspects of personal ethnography, qualitative inquiry, and design-led synthesis. The rationale for this approach was to look at various levels of the problem: near (my personal experience), middle (an individual's experience), and far (the collective or societal experience).

- **Autoethnographic research** through personal reflection as I am navigating the web3 space.
- **Qualitative inquiry** through interviews that comprise semi-structured questions and one-on-one exercises with Co-op and DAO experts and members.
- **Design-led synthesis** using McLuhan's Tetrad for analysis along with other methods that center the human (and the collective).

My research question:
What can DAOs and Co-ops learn from one another?

To acquire the information required to answer the research question, the following research methods were proposed and organized into 3 sections: *Context, Interviews, and Findings.*

01 Examining <u>context</u>
02 <u>Interviewing</u> experts and members
03 Synthesizing the data into <u>findings</u>

01 CONTEXT
Examining context through secondary research along with DAO & Co-op certification course.

To begin, I conducted secondary research to identify knowledge gaps, keep informed on changes to the landscape, and build on trends/insights discovered in primary research (see Appendix C). The secondary research focussed on understanding the topics of web3, community, internet, influence, DAOs, and Co-ops. I identified prominent authors, speakers, and builders in the DAO and Co-op space who have contributed to knowledge sharing. In addition, I completed a Web3 DAO & Co-op Certification Course *(Crypto, DAOs, and Co-ops: The Future of Work and the Internet?)* through The Platform Cooperativism Consortium (PCC) and The Institute for Technology and Society of Rio (ITS Rio) which allowed me to have access to academics already researching in the Co-op and DAO arena. As a result, I was able to dive deeper into the academic understanding of Co-ops and DAOs along with their history. Through this course, I received a certificate of completion from the ITS Rio and Platform Cooperativism Consortium.

02 INTERVIEWS
Talking to DAO and Co-op experts and members and aggregating the data.

Once I felt more confident in my knowledge of the Co-op and DAO landscape, I entered the primary research field when I began interviewing DAO and Co-op members. I hoped to understand, capture, and explore the current members' behaviours, perspectives, and experiences and their thoughts on applying, joining, and contributing to these communities. Through interviews, I wanted to learn how these two spaces are similar and different from a member perspective – and how they may learn from each other as successful DAOs and Co-op. I also hoped to talk to experts in the field with their own findings and perspective on the historical and emerging models.

I conducted semi-structured one-on-one interviews with two types of participants: experts, who had been published in the field, and DAO or Co-op members. Interviews supplemented the secondary research, data analysis and case study analysis. I conducted eight interviews with experts and members involved in building and participating in DAOs and Co-ops. Based on the participants, I expected to capture a rich scope of data across the emerging landscape of DAOs and the existing model of Co-ops. Eight interview participants could be categorized as member, expert, or both. The sample size also reflects the capacity and resources available over the project's duration. Participants were connected to DAOs or platform Co-ops through entrepreneurship, membership, or employment. The goal was to balance the sampling of members based on DAO or Co-op composition (age, gender, location, years of membership, and degree of participation). Participants were invited from specific networks, industries, and organizations affiliated with Platform Co-ops (like Ampled and Stocksy) or DAOs (like FWB, Krause House, SuperBenefit DAO, and RnDAO) and other relevant groups.
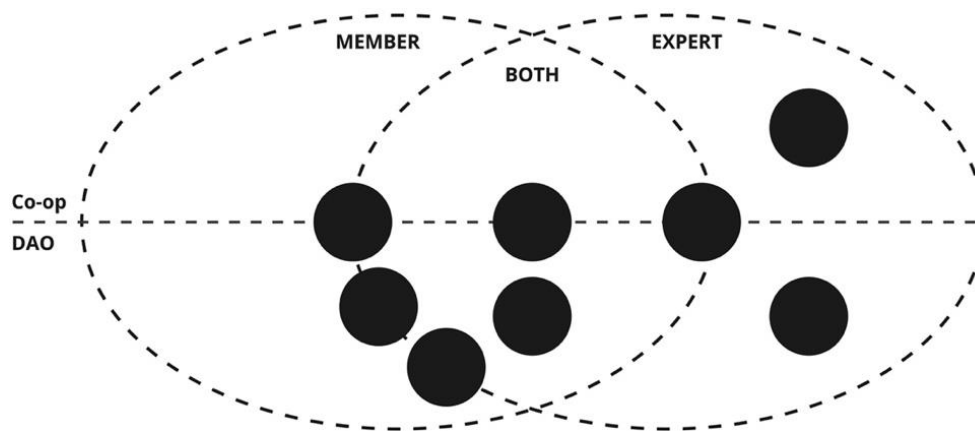

Figure 13. Interview sample (Was the participant a DAO or Co-op expert, member, or both?)

Interviews ran for approximately 45 minutes. All interviews were confidential but not anonymous. The data is reported in a synthesized, aggregated form that is de-identified from participants to ensure the anonymity and confidentiality of their responses. These interviews took place concurrently over virtual applications to ensure a broader geographic perspective. The interviews were screen-recorded to facilitate analysis afterwards. Discussion guides were prepared to direct these conversations toward research goals and outcomes.

03 SYNTHESIS
Developing a visual coding system to identify patterns and insights from the data collected.

After each interview, I used a template in the collaborative "whiteboard" program Miro to visually code each interview (see Appendix D). I gave each participant their own colour and template, and from the transcript, I added their insight to the following areas:

- Quotes *(this area housed any notable quotes from the conversation)*
- Links mentioned *(often the participant would share links, books, articles, and YouTube videos that I wanted to read or watch after)*
- Keywords *(I created a word cloud from the keywords that emerged for each participant, this allowed me to have a visual snapshot of what we talked about)*
- Themes *(I added overall themes, information, and insights)*

- Journey Map *(As I began interviewing, I noticed that each participant had a story or inflection point on how they started focussing on DAOs, Co-ops, or both – I wanted to capture this journey)*
- Question: In your opinion, why are DAOs emerging now? (*This was a notable question that I wanted to ensure I could easily compare and group the answers for all participants*)
- Mindsets and Behaviours *(This area captured the attitudes and behaviours that began to emerge as I talked to each participant about experiences within these two models)*
- Strengths/Gains and Risks/Pains
- Opportunities
- McLuhan's Tetrad *(for either Co-op, DAO, or both)*
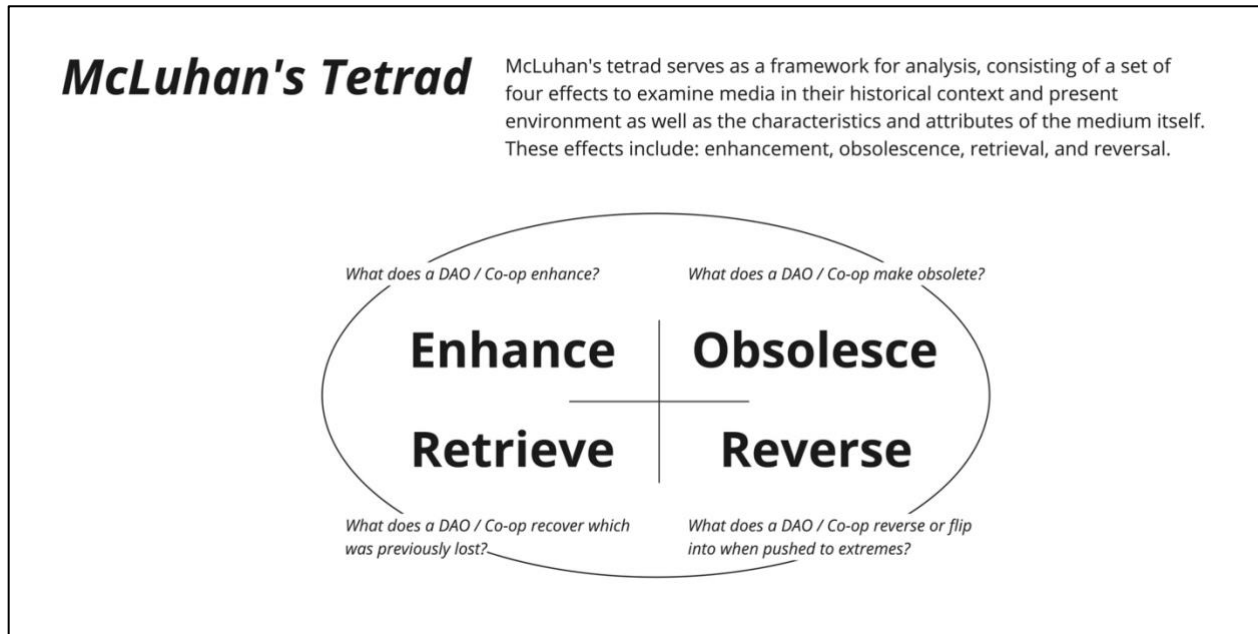
Figure 14. McLuhan's Tetrad exercise, adapted by Alyssa Yuhas for interview sessions

The exploratory research methodology employed helped gain a deep understanding of the world of DAOs and Co-ops. It involved collecting insights from experts in the field and those with experience within DAOs, Co-ops, or both. Using semi-structured interviews combined with exercises like McLuhan's Tetrad, the outcome was gaining an in-depth understanding of the topic and its impacts. In addition, visual coding and mapping techniques were used to synthesize the data collected from each interview and draw insights when patterns, trends, and opportunities were identified. Through this methodology, I was able to achieve a holistic understanding of the current landscape of DAOs and Co-ops and uncover opportunities for further research and exploration.

Chapter 04 / <mark>Scan: Technology and society</mark>

Figure 15. Drivers of Change contributing to the emergence of DAOs

Multiple factors are converging which impact the emergence of DAOs. One factor is technological innovation. DAOs are emerging through the increasing popularity and adoption of blockchain technology, among other enabling technologies. "DAOs, which have been described as "financial flash mobs" or "group chats with bank accounts," and are amo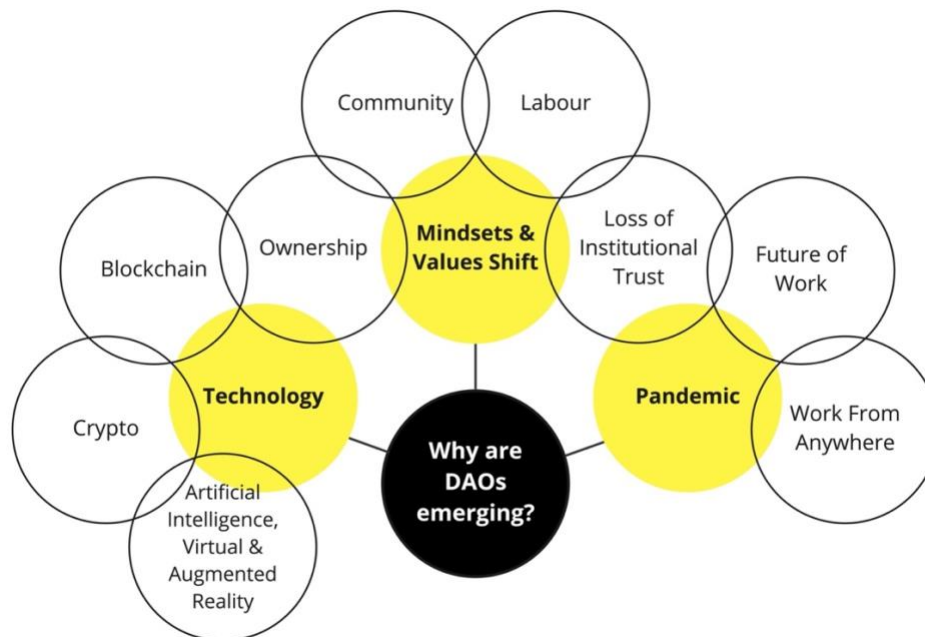ng the fastest-growing parts of the crypto ecosystem." (Woo & Roose, 2022) DAOs are essentially online communities that utilize blockchain technology for collective decision-making and managing shared resources. They allow for greater transparency, accountability, and participation compared to traditional organizations. Additionally, the decentralized nature of DAOs makes them resistant to control by any single entity, which is appealing to many.

Just like Co-ops before them, DAOs are emerging to answer a problem. Some argue that Bitcoin is effectively the first DAO. Satoshi Nakamoto, the founder of Bitcoin, created Bitcoin to regain financial control from powerful, centralized financial institutions. Give access to financial control for ordinary people – "bitcoin, a new electronic cash system that's fully peer-to-peer, with no trusted third party" (Nakamoto, 2008). However, Bitcoin does not have an organized governance system, which some see as the standard for defining a DAO today. (Cointelegraph, n.d.) DAOs emerged to solve the problem of equity and inclusion, removing the barrier to entry in hierarchical organizations by using democratic structures that, in theory, the average person can participate and contribute, allowing them to gain economic freedom (usually only reserved for the upper class).

Co-ops, on the other hand, emerged in the past as a way for people to collectively organize and meet their economic and social needs. Co-ops emerged in the late 18th and early 19th centuries as a response to economic inequality and exploitation. Workers and consumers banded together to form Co-ops, allowing them to pool their resources and share in the profits and decision-making. According to Jessica Gordon Nembhard, economic cooperation was "natural and continuous in the Black community of the United States" and their early roots include "collective benevolence, grassroots economic organizing, and cooperative agriculture." (Gordon Nembhard, 2014) Co-ops were often formed by marginalized and

excluded communities, such as women, Black, Indigenous, people of colour, and immigrants. These Co-ops, or solidarity networks, aided in gaining economic independence. Through this "solidarity model", Co-ops build for the long-term and are focused on relationships to "encourage transformation, rather than engage in purely transactional relations." (Novkovic, 2019)

DAOs and Co-ops are examples of people coming together to create more democratic and equitable forms of organization. While the technologies and contexts are different, the underlying motivations can be seen as similar.

Drivers of Change

Why are DAOs emerging?	Summary of Responses *from interview participants*
Future of Work	☐ The next generation is creative and overeducated. ☐ Centralized organizations do not know how to foster talent. ☐ Workers are disillusioned with traditional work environments *('quiet quitting', 'the great resignation')*. *"You're seeing is a generation coming up, that has a breadth of creative talent … the current centralized organizations put these people in a box, in a desk, in a nine-to-five. And [these organizations] give a performance review and tell them if they're doing it right. [This generation] is like, "that taps into 0.001% of my capability. I don't want to do that for eight hours a day. Because if I do that for eight hours a day, then my worth to myself, and to the greater market, depreciates."*
Technology	☐ New technology is here that is useful for coordination and governance. ☐ Old technologies were no longer sufficient for the complexity of challenges. *"This technology facilitates something that is true to our increasingly digital experience. We live our lives on networks... why not be able to build our organizations on networks?"*
Values Shift	☐ Ownership is becoming a cultural value. ☐ Loss of trust *(globally)*. ☐ People are asking questions of institutions *(economic, financial, political, etc.)*. ☐ Desire for agency and control *(I want to work for myself)*. *"Recognition by some that what we are doing isn't working."*
Community	☐ The pandemic made us aware of our need for community. ☐ Natural paradigm to coordinate ourselves. ☐ [We are] ready for community organizing. *"This is what we do – as humans, we organize. And so, we're going to pick up a new technology and we're going to do stuff with it, we're going to organize with it. We just can't help it."*

Figure 16. Synthesized responses to the question: "Why are DAOs emerging now?"

The emergence of DAOs can be attributed to several drivers of change. To being with, there has been a shift in values, as people are more aware of the effects of technology and place more importance on ownership and control over their data and content. This is due to previous data exploitation and the growth of centralized platforms, leading to a lack of trust in traditional institutions. In addition, the desire for ownership of labour has increased because of this mistrust and is creating a value for agency ("I want

to own my labour"). As a result, individuals seek alternatives to the traditional way of working, where they have limited control over their decisions. DAOs provide an opportunity for self-sufficiency, where people can make choices and contribute on their own terms. DAOs offer a more decentralized and democratic alternative, allowing people greater agency over their data, content, and labour.

What are the values propelling entry and participation in DAOs?	Quotes *from interview participants*
We want something better.	*"We are frustrated over what currently exists (outside of DAOs)."*
We want self-sufficiency & control.	*"I want to live a life where I decide to do things."*
We want something different.	*"I do not want to go back to that fixed paycheck or desk job."*

Figure 17. What are the values propelling entry and participation in DAOs?

In addition, the future of work has also played a role in the emergence of DAOs. The pandemic has forced people to work remotely and embrace digital-first approaches (Hamingson, 2023), which has changed how people view traditional work, processes, and culture. The younger generation is vocal about pursuing more creative and online work experience (Krueger, 2022), and DAOs provide a way for them to work together and build something meaningful without relying on centralized organizations that may not understand their values (*Gen Z Don't Want to Work for You. Here's How to Fix That*, 2022).

The emergence of blockchain technology has allowed for distributed and global connections, thereby creating a trustless system that has opened borders. This has allowed for more opportunities and collaboration between users. DAOs rely on blockchain technology, allowing for greater transparency, accountability, and participation compared to traditional organizations. On the other hand, blockchain technology also poses potential risks because of the complexity of code and level of understanding needed. This can be a barrier for adoption along with the potential for "bad actors" to take advantage of the system. In addition, blockchain supports immutability, which means that it's impossible to erase and is hard to correct a mistake or adjust the code. This results in high operation costs among other factors, like slower speed and performance (Budhi, 2022).

Closely related to how technology has enabled these distributed connections, the desire for community has exploded because of the pandemic. Through this global isolation experience, people began seeking ways to organize and create together. DAOs respond to this and provide a structure for people to come together and collaborate on shared goals and values. In addition, the decentralized nature of DAOs allows for more equitable and democratic decision-making, creating a more inclusive and community-driven approach to organization.

As I interviewed DAO experts, they all noted the various drivers that created a perfect storm for DAOs to emerge when added together. Overall themes can be summarized in the following three sentences (in quotations): The desire for ownership and control has increased through the mistrust in traditional institutions ("I do not trust that they have my best interests in mind") along with the desire for agency ("I want to own and be in control of my labour") when you add the access to available tools ("I can access new technology tools") they coalesce to create an environment where DAOs are possible.
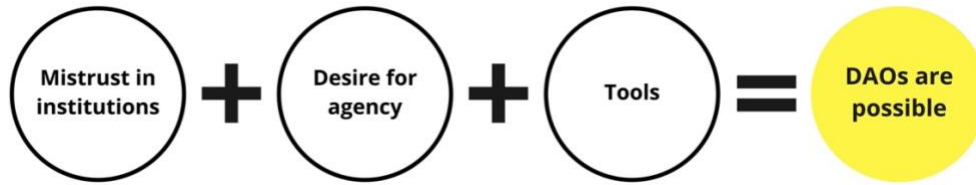
Figure 18. Coalescence of Drivers to create the perfect storm for DAOs to emerge

Definitions of a DAO

In chapters 1 and 2, I described a DAO and how it is broadly and technically defined. OdysseyDAO, an educator DAO, describes a DAO in these accessible terms:

> *A DAOs primary purpose is to rally a group of people to achieve a shared goal using crypto-native tools (e.g., smart contracts). Most DAOs are:*
> - Decentralized*: No c-suite or hierarchal leadership.*
> - Autonomous*: Smart contracts offload manual labor such as distributing capital.*
> - Organization*: A group of people with a shared mission abides by a set of rules.*

In 2014, two years before the first DAO, The DAO, was announced by Ethereum community members (Falkon, 2018), Nathan Schneider referenced Decentralized Autonomous Organizations by describing "nonviolent decentralised action in the counter-globalisation social movement". Vitalik Buterin, founder of Ethereum, notes that to define a DAO it is easier to say what a DAO is not than what a DAO is. In the end, he describes DAOs as "automation at the center, humans at the edges." (Buterin, 2014) He describes that what makes DAOs different than automation or artificial intelligence (A.I.) is that a "DAO still requires heavy involvement from humans specifically interacting according to a protocol defined by the DAO in order to operate." DAOs are internet-native organizations that are coordinated through code.

> *A DAO is a blockchain-based system that enables people to coordinate and govern themselves mediated by a set of self-executing rules deployed on a public blockchain, and whose governance is decentralised (i.e., independent from central control).* (Hassan & De Filippi, 2021)

Hassan & De Filippi noted that DAO & Decentralized Autonomous Organization are widely used as terms now. However, there are still misconceptions and "unresolved issues" in the discussion around those terms.

Characterization of a DAO *by interview participants*

Keyword	Summary
Community	A **group of people** with a shared purpose or goal, using technology to achieve that goal.
Experiment	**Sandbox** to play and try *(tools for thinking about ownership differently)*
Justice	**Opportunity for liberation** *(new borderless pathways for anyone to participate)*
Network	**Network native organization**, *generally with a blockchain infrastructure*
Energy	**They are energy or flows**, coordinated flows of resources towards a goal.
Nature	**A pattern found in nature**, like a ripple effect or web, connecting, evolving, expanding.

Figure 19. Personal definitions of a DAO

As I was interviewing experts and DAO builders, I observed that many had differing ideas about what Decentralized Autonomous Organization meant. There were as many characterizations as there were interview participants. Academic experts spoke to the technical definition, referring to them as "network native organization" with "blockchain infrastructure". One expert noted:

> *I think of DAO as a term that is, rhetorically culturally associated with crypto, but I don't think the things that people want to achieve necessarily require that kind of money or infrastructure. But we do need to recognize that the infrastructure we currently have doesn't enable shared governance or co-governance and that's why people are so excited about this DAO thing …*

However, DAO builders (those currently in the field building and participating within DAOs), spoke less about the definition and more about the feeling of a DAO. Their language was illustrative and emotive. To them, DAOs were "sandboxes" for experimentation, or they were "energy flows" or they were a "natural pattern" only found in nature (like a ripple effect or a connected web).

> *"What is emerging now is the opportunity to do coordination with a technology that enables human coordination that's much more akin to nature."*

DAO builders caution against thinking about DAOs as traditional corporations, as this takes away from the experimental and innovative spirit of DAOs. One DAO builder (with experience in Co-ops) noted:

> *Where I see everything start to break is when we start to think about DAOs as an organization with a bank account. We start thinking and acting in ways as if it's an organization with defined walls and boundaries, and we lose the magic and take the worst part about Co-ops, and everything else.*

DAOs are still in the experimental phase, and the focus should be on exploring new and flourishing ways of organizing rather than fitting DAOs into traditional structures. Another DAO builder (with experience in Co-ops, as well) spoke about DAO experimentation:

> *DAOs are one experiment to create and rediscover more flourishing ways of being for humanity and our one precious planet. And so, I think this is part of that adventure, that exploration that we're on in this world.*

Understanding the varying interpretations and definitions of DAOs is essential because it highlights the different perspectives and goals of those involved in creating and participating in DAOs. It also underscores how this landscape is evolving, and the room for experimentation and innovation within the space. By recognizing the emotive and experimental aspects of DAOs, we can better understand their potential for disrupting the traditional corporate mindsets of how we organize and create new forms of governance and decision-making. It also shows that there could be areas of confusion for new entrants into DAO participation if the description and definition vary based on whom you talk to.

Influencing Factors

With the coalescence of the shifts noted and how we see DAOs characterized and defined, several additional factors influence where DAOs are heading. These factors were synthesized from secondary research, interviews, and a trend scan (see Appendix C) and are still changing but are helpful to think about as we look at the evolving DAO environment:

Regulation: As DAOs continue to gain popularity, regulators are starting to pay attention to them. In addition, scandals within the crypto landscape add pressure on governments to learn more and act. The regulatory landscape for DAOs is still unclear, and how they will be regulated in the future will influence their development.

Technology: The continued development of blockchain technology will influence the capabilities of DAOs, along with other adjacent technologies like automation, artificial intelligence (A.I.), virtual reality (V.R.), and augmented reality (A.R.). As technology innovates, DAOs can support more complex decision-making and resource management.

Community: Even with DAOs firmly rooted in technology, their success relies on human participation and the engagement of their community members. As DAOs grow, it will become increasingly important for them to foster a strong community culture and ensure that members feel invested and valued.

Labour & Ownership: The integration of DAOs into culture could renew attention on the future of work. How we continue to value and culturally adopt these mindsets around labour and ownership will influence how DAOs are accepted and their acceleration into popular culture. *"The cultural onboarding of DAOs has revitalized the conversations around the future of work and how organizations can rebalance power structures between capital and labor, creating something sustainable and nurturing long-term employment."* (Flemming & Djuric, 2022)

Funding: To scale and achieve goals, DAOs require capital. The sources of financing and investment could influence their mission and ability to scale. Some DAOs may rely on crowdfunding or token sales, while others could seek investment through traditional fundraising processes.

Focus: The specific focus a DAOs takes will influence its development. Some DAOs may prioritize decentralized finance projects while others may focus on social impact or community-driven projects.

Collaboration: DAOs could collaborate and learn from other DAOs, and furthermore DAOs could learn from historical movements, like Co-ops. If this willingness to cross-pollinate becomes the norm, DAOs can build future resilience by learning from each other's successes and failures. As DAOs become more established, we may see unique collaborations and partnerships between traditional organizations.

Innovation: The future of DAOs will be shaped through innovation taking a pivotal role. As DAO builders and community members experiment with new ideas and approaches, we will likely see new and innovative use cases (or focuses) emerge for DAOs. Darcy Allen and Jason Potts consider how web3 innovation is possible because of toolkits. In their paper, they write that "toolkits are an organizational design solution to an innovation problem with sticky and local information" (Allen & Potts, 2022). They explain how these toolkits (e.g., DAO frameworks, DeFi standards) enable efficient organizing of sticky information to facilitate innovation.

> *DAOs offer something different, I don't think they're perfect. And I don't think they're going to be some big answer. They offer another way forward and a place to try, test, read, & reflect.*
> – DAO Builder

Most interviewees acknowledge that DAOs are a new way forward and an opportunity for experimentation and learning. DAOs offer a different path, and while they are not perfect and may not provide all the answers to address economic equity, opportunity, and ownership, they are an iteration to experiment and learn from to create viable economic communities.

Chapter 05 / <mark>Focus: How technology impacts society</mark>

> *We found that everything man makes and does, every process, every style, every artefact, every poem, song, painting, gimmick, gadget, theory, technology — every product of human effort — manifested the same four dimensions. (McLuhan & McLuhan, 1988)*

Marshall McLuhan's Tetrad of Media Effects is an analytical framework that breaks down the impact of media into four distinct laws: enhancement, obsolescence, retrieval, and reversal. McLuhan tested and studied this tetrad for twelve years near the end of his career with the help of his son, Eric McLuhan. They looked for a fifth law without success (to their surprise). Only after his death was his thinking published in the *Laws of Media* (1988). The four key areas and their effects help us understand a medium's historical and current context, as well as its unique characteristics and attributes. It is a practical tool for understanding how these things impact society and the social processes that drive their adoption. By looking at the effects of a medium in each of the four categories simultaneously and the harmony between the four, the tetrad provides a more comprehensive picture of a medium's impact, past, present, and future.

The Tetrad asks us to consider these four questions for analysis:

1. What does the technology **enhance**? *What does it amplify or intensify?*
2. What does the technology make **obsolesce**? *What does it replace or reduce?*
3. What does the technology **retrieve**? *What does it recover that was previously lost?*
4. How does the technology **reverse**? *How do these effects flip when the technology is pushed to its limits?*

As McLuhan and colleagues studied and applied the tetrad, they noted that it could be used for any product of human effort, not only media or technology. Moreover, the tetrad could also apply to the model, framework, or procedure that created the product in the first place.

> *…we learned that they applied to more than what is conventionally called 'media'; they were applicable to all the products of human endeavour, and also to the endeavour itself! One colleague at the university tried them on remedies for cancer, and found they worked. With another, my father tried business procedures; with another, Newton's laws of motion. They worked! (McLuhan & McLuhan, 1988)*
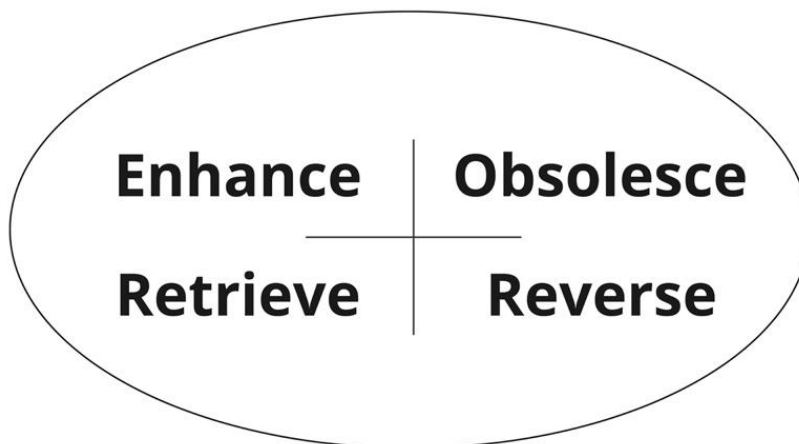

Figure 20. Graphic representation of McLuhan's Tetrad

The laws of the tetrad exist simultaneously in harmony, not successively or chronologically. Their interplay allows for the exploration of the "grammar and syntax" of the language of the medium. The four tetrads are explained as follows:

Enhance
Amplifies. Increases. Intensifies. Magnifies. Speeds up. Boosts. Every technology either improves a human ability or skill or enhances an existing platform.

> *First, extension: as an 'extension of man [sic.]' every technology extends or amplifies some organ or faculty of the user. (McLuhan & McLuhan, 1988)*

Retrieve
Recover. Reclaim. Bring back. Redeem. Revival. Retro. What's old is new again, like the adage "nothing is new under the sun." Every medium retrieves a part of an older medium. Knowledge of the past is critical to inform the future.

> *At first we thought retrieval entailed only the recasting of whatever formed the content of the new form. That is does (the content of any medium is an older medium) and considerably more. (McLuhan & McLuhan, 1988)*

Obsolesce
Go extinct. Retire. Remove. Delete. Outdate. Discontinue. Obsolete doesn't mean completely wiped out, it means that the medium's authority has been removed. What does the medium make unnecessary?

> *Then, the attendant 'closure': because there is an equilibrium in sensibility, when one area of experience is heightened or intensified, another is diminished or numbed. (McLuhan & McLuhan, 1988)*

Reverse
Opposite. Contrast. Going back. Backpedal. When pushed to extremes, every medium transforms into a new form that reverses its original characteristics.

> *… every form, pushed to the limit of its potential, reverses its characteristics. (McLuhan & McLuhan, 1988)*

These four quadrants, and no more, are the basis for McLuhan's Tetrad and create a visual, conversational, and playful exercise. The quadrants may be asked in any order as the quadrants are simultaneous (for this research, the order stated above is the order in which the quadrants were discussed) and there are no wrong answers. "The tetrads are verbal structures and poetic science in one*." (McLuhan & McLuhan, 1988)* Once all the participants had answered their tetrad, I could overlay all the quadrants to see the similarities, the differences, and the patterns emerging.

> *In presenting the laws of media in tetrad form, our objective is to draw attention to situations that are still in process, situations that are structuring new perceptions and shaping new environments, even while they are restructuring old ones, the structures of media dynamics are inseparable from performance Our effort has been to draw attention to the laws of composition as well as to the factors of regulation and interplay. (McLuhan & McLuhan, 1988)*

The tetrad is interpretive and pulls on the environment, where the technology or medium resides at this moment in time. The tetrad can be a natural form of foresight practice as it provides a framework for

imagining the lifecycle of a medium's influence on society. Through the tetrad, what might happen in the future (examined through the reverse quadrant) is explored against what can occur in the past (examined through the retrieve quadrant) and then compared to what is happening in the present (examined in both enhance and obsolesce quadrants).

I've used the tetrad to examine both Co-ops and DAOs, their roles in viable economic communities and the impacts these two models have on society. By analyzing the two tetrads separately and then merging them into a consecutive timeline based on the date of emergence (Co-ops and then DAOs), artefacts are created. Finally, patterns and common themes across these artefacts are observed and a discussion of the relationship between Co-op and DAOs, along with their influence on society, is continued.

McLuhan's Tetrad / <mark>Co-ops</mark>

In this analysis, I have examined how each interview participant answered each quadrant of McLuhan's Tetrad for Co-ops. The language and metaphor used in the responses are significant because they shape how we connect with, understand, and interpret how Co-ops impact society. Therefore, direct quotes from participants are added to give depth and anchor language as additional insight. Co-ops represent a historical model of community-based organizing. Later, by comparing it with the DAOs tetrad (the future model of organizing), the evolution and progression of these models (as technology) can be identified. This analysis will provide insights into how Co-ops have influenced society in the past and how they can impact the future.

<mark>Co-op</mark>

Enhance	Retrieve	Obsolesce	Reverse
☐ **Community** ☐ Dignity ☐ History of learnings *(sensemaking)* ☐ Ownership ☐ Personal responsibility	☐ *"My contribution matters"* ☐ *"We can learn from those that came and practiced before us"* ☐ *"Ownership is possible"* ☐ *"Business could be done differently"*	☐ Capitalism is the only option ☐ Capitalist mindsets *(scarcity, money-first, investor ownership is the only way to scale)*	**Two scenarios:** ☐ Money-first *(Standard hierarchal organization, bureaucratic, capitalist)* ☐ People-first *(Doubles down on the reason the coop started in the first place)*

Figure 21. McLuhan's Tetrad for Co-ops (see Appendix E)

Enhance

Looking at the enhance quadrant, a Co-op promotes a sense of community as members work together towards a shared goal. *"In the best scenario, Co-ops bring people to be able to meet, compromise, and listen better."* Co-ops also foster dignity by empowering individuals to make decisions and contribute to the organization's success. *"Being able to put something that's bigger than you at the center and caring for that."* Additionally, the history of learnings within a Co-op provides a sense of continuity and shared knowledge, allowing members to learn from past experiences and make informed decisions with confidence. Finally, ownership in a Co-op gives members a stake in the business's success, encouraging them to take personal responsibility for their contributions and the organization's overall well-being. "[A Co-op is…] *a business made up of a group of people whose needs are being met by that business in which they own."* Overall, Co-ops enhance individual mindsets and needs (of collaboration, empowerment, and responsibility) while pulling on the tradition of practice and lessons happening within the community.

Retrieve

Co-ops retrieve a sense of purpose and belonging by reminding us that our contributions matter. It allows us to learn from those who came before us and practiced cooperative principles.

> *"A vessel through which various kinds of pre-existing traditional practices of co-ownership and co-governance have taken institutional form … With various streams feeding the Cooperative reservoir (solidarity movement, Indigenous practices, guild tradition, etc.)."*

Ownership becomes possible, and we are encouraged to participate more actively in our communities. *"People that normally couldn't own something can now own something (think Co-op housing)."* By embracing the Co-op model, the practice of business could be done differently, emphasizing cooperation and mutual support, rather than competition and individualism. "*A group of individuals can own things that were traditionally owned by one person."* Co-ops are a reminder that *"we could have done things differently all along, and perhaps, we still can."* Co-ops retrieve the possibility of a new dream for ownership and agency, reminding us of a new way to practice community-building.

Obsolesce

Co-ops challenge the notion that capitalism is the only solution to business and economic issues. *"I don't think it makes anything obsolete, It's an additional choice for people. It's additive."* By prioritizing the needs of their members over profit, Co-ops demonstrate that there are alternative models for running successful and sustainable businesses. *"Removes scarcity mindset, keeping in mind we are still all under capitalism ... but ideally, it brings hope and possibilities ..."* Co-ops also make obsolete the capitalist mindsets that prioritize scarcity, profit maximization, and investor ownership as the only way to scale a business.

> *"Make obsolete this assumption that every large scale or innovative activity should be owned by investors."* As a result, *"could enable much more of the economy to be owned and governed by the people that are participating in a particular enterprise."*

Instead, Co-ops emphasize democratic decision-making, shared ownership, and equitable distribution of resources. These values challenge capitalist notions and offer a more sustainable and ethical way of doing business that benefits both the members and the wider community. Co-ops make obsolete capitalism as the singular economic model, and instead expand our thinking that there could be another way.

Reverse

When pushed to extremes, a Co-op can reverse into two vastly different scenarios. The first scenario is when a Co-op reverts to prioritizing money over everything else. The result is a Co-op becoming like a standard hierarchical organization that is bureaucratic and capitalist. The Co-op starts to forget about its core values and focuses solely on generating profits, which can negatively impact its members. On the other hand, a second scenario can occur. The second scenario is when the Co-op becomes resolute on its mission. Co-ops are founded on a significant need or reaction to injustice. They have historically proven that when they come against adversity or are pushed to extremes, they do not flip away from themselves but instead push in harder on what values they were founded on in the first place. Co-ops *"double down on "why we exist & who we serve. When pushed to extremes, they are stubborn, creative, problem solve, and put people first."* The Co-op prioritizes people over everything else and focuses on creating a supportive environment for its members to weather the storm. Co-ops historically reverse into a more profound sense of why they were founded and whom they serve, However, they also could revert into a competitive hierarchical structure and stagnant bureaucratic model, because of human nature and the inherent system of capitalism that we are subject to.

If looking at a *"Co-op to meet all needs, or be a utopia, that is when it will disappoint. It is a model, a framework for governance and organizing, but it cannot be a saviour."* The interviews suggest that while Co-ops offer a viable framework for governance and organization, they should not be viewed as a complete solution to address all the issues related to capitalism and equity. Expecting Co-ops to be a utopian solution to all problems is unrealistic and may lead to disappointment. Therefore, it's essential to view Co-ops critically and realistically and understand that they are just one model for promoting a more equitable and sustainable economic future.

McLuhan's Tetrad / DAOs

In this continued analysis, I have examined and aggregated the DAO responses from each interview participant for McLuhan's Tetrad. Again, the language and metaphor used in the responses are significant because they shape how we connect with, understand, and interpret how DAOs impact society. Therefore, direct quotes from participants are added throughout (without attribution) to give depth and anchor language as additional insight. DAOs represent a future model of organizing and opportunity. Later, by comparing it with the Co-ops tetrad (the historical model), the evolution and progression of these models (as technology) can be identified. By exploring these comparisons, we can gain insights into the potential impact of DAOs on society and how they will shape our future together.

DAO

Enhance	Retrieve	Obsolesce	Reverse
☐ Global community governance ☐ Opportunity to make a tangible difference ☐ Financial resilience and ownership ☐ Sovereignty over labour, focus	☐ Traditional *(instinctive, natural)* frameworks for organizing ☐ Digital ownership ☐ Reciprocity *(benefit for human & planet)* ☐ "Pioneering" energy	☐ The individual and their individual power ☐ Corporate mindsets & capitalist ambition are the only option ☐ Current nation-state relationship *(especially for problem solving)*	☐ Cutthroat society ☐ Drowning in politics ☐ Capitalist nightmare

Figure 22. McLuhan's Tetrad for DAOs (see Appendix E)

Enhance
DAOs have the potential to enhance various aspects in the world of governance and finance. One of the most significant enhancements that a DAO provides is global community governance. DAOs allow people worldwide to participate in the decision-making process, creating a more inclusive and transparent system. Additionally, DAOs offer the potential to make a tangible difference in the world. "A *blended return is more possible (positive environmental, social and economic impact).*" By leveraging the power of the collective, DAOs can pool resources and expertise to tackle large-scale projects that would be difficult or impossible for individuals to accomplish alone.

> *"Addressing multiple issues at once could be more possible in a DAO, because if you build out the right kinds of infrastructure to be able to scale citizens, like engagement and communication, then those kinds of opportunities are possible."*

Moreover, DAOs offer financial resilience and ownership to participants, as they operate on a trustless blockchain system that allows for transparency and security. This move to expand ownership is exciting for communities that have relied on large corporations in the past to broker opportunities, like artists,

musicians, writers, and more. DAOs offer the chance to *"take back ownership over a whole art form or industry".* Finally, DAOs provide sovereignty over labour and focus, allowing participants to pursue projects and initiatives that align with their values and interests. *"Enhance the ability for some people to kind of set their own boundaries around their actions and the ways that they organize and pursue their goals".* Overall, DAOs enhance individual mindsets and needs (of ownership and agency) all while boosting the possibility and potential of the community.

Retrieve

DAOs retrieve several elements from the past. First, they draw on traditional frameworks for organizing that were more instinctive and natural, as opposed to modern institutions' often bureaucratic and hierarchical structures. *"[As we build our DAO] we are always trying to question the patterns we're bringing from the past."* Second, DAOs retrieve the concept of digital ownership, enabling members to have a tangible stake in the organization's success and governance. *"Allows a new set of people to experience something like co-governance. People who have not had opportunities for co-governance in other contexts."* Third, DAOs retrieve the principle of reciprocity, where both humans and the planet benefit from the organization's activities. DAOs could *"embed a real sense of commitment to nature and our planet".* Finally, the "pioneering" energy of past movements to build new and innovative ways of organizing is also retrieved in the development and implementation of DAOs. *"Kind of colonial frontier excitement (even if it's a fiction) of encountering a new world."* Overall, DAOs retrieve the energy and opportunity needed to pioneer a new future all while pulling on the tradition and reciprocity within the history of community-building.

Obsolesce

DAOs have the potential to make many things obsolete in the current system. *"If [DAOs] could make corporations obsolete, I would love that."* Firstly, they make individual power and control obsolete, as DAOs operate through a collective decision-making process. *"DAOs are not meant to be about individual leaders or individual personalities being able to grossly influence vision or mission."* Secondly, they make corporate mindsets and capitalist ambitions obsolete, as they prioritize the benefit of the community rather than maximizing shareholder profit. *"[DAOs] shift corporate structure (that hold hierarchy, wellness, and capital in concentrated ways)."* Instead, DAOs emphasize democratic decision-making, shared ownership, and collective problem-solving. DAOs make obsolete individual (capitalist) ambition as the only way to succeed within an economic system, and instead expand our thinking that there could be another way.

Reverse

When a DAO is pushed to extremes, it has the potential to reverse into a *"capitalist nightmare".* It could become a cutthroat society where competition and greed become the main driving force, leading to the exploitation of its members and the destruction of the community. If community scales too quickly, DAOs have the potential to drown in politics, where decision-making becomes gridlocked, and progress is stalled by infighting and ideological differences. *"A DAO demands so much of quasi-democratic subjects. They are unable to be real human beings in non-digital lives – they must be online all of the time (on Discord, voting, etc.)."* Finally, the focus could shift from the common good to individual profit, where ownership becomes concentrated in the hands of a few powerful entities. *"Extreme speculation [could occur] which distorts our economic lives and then pushes resources to things that don't matter. We begin to play these circular games."* When pushed to extremes, DAOs may revert into a cutthroat society where the *"first one out, theoretically wins"*, because of human nature and the inherent system of capitalism that we are subject to.

The interviews suggest that despite the excitement around DAOs, they are still not accessible to everyone and are primarily designed for a select group with the necessary privileges to participate. There

are many factors to this exclusion, however, I outlined a few that were personal to my experience: learning curve, volume, and time. One expert asked, *"Are we designing for ourselves? Or are we designing for others in mind?"* It's important to consider whether DAOs are designed with a broader audience in mind or just for those already familiar with the technology and have the necessary resources to participate.

McLuhan's Tetrad / Relationship between Co-ops & DAOs

In exploring the quadrants from Marshall McLuhan's Tetrad, we gain a deeper understanding of how a technology, medium, or platform impacts society. When we apply this framework to Co-ops and DAOs, we start to see a progression and notice how these organizational models have evolved and adapted. By examining the patterns between the tetrads, we gain further insights into how Co-ops and DAOs build off each other. Furthermore, comparing the two tetrad artefacts allows us to uncover past, present, and future insights and better understand the evolution of these models and how they mutually relate.
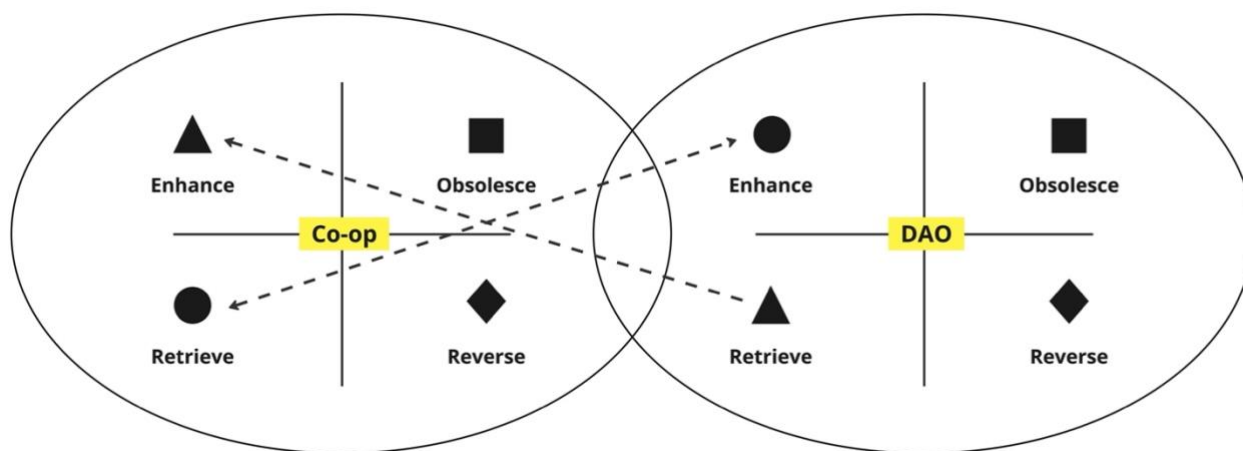

Figure 23. McLuhan's Tetrad for both Co-op and DAOs shows the relationships between quadrants

After the tetrads were explored individually, the two artefacts were merged to analyze the relationships. The following connections were observed:

- DAOs are <u>retrieving</u> *some* of what Co-ops <u>enhance</u>.
- Co-ops are <u>retrieving</u> *some* of what DAOs <u>enhance</u>.
- Co-ops & DAOs have similar <u>obsolete</u> hopes.
- For both Co-ops and DAOs, the <u>reversed</u> quadrant is the current problem they are trying to answer.

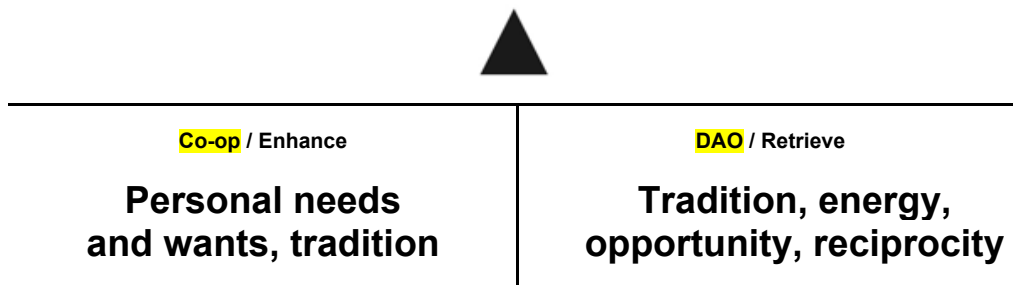| Co-op / Enhance	DAO / Retrieve
Personal needs and wants, tradition	**Tradition, energy, opportunity, reciprocity**

Figure 24. Summary of the relationship between Enhance (Co-op) and Retrieve (DAO)

DAOs aim to retrieve many of the elements that Co-ops have traditionally enhanced. For example, like Co-ops, DAOs are building strong communities around shared values and interests. They also allow individuals to have a sense of ownership and personal responsibility for the organization's success, like Co-ops. Additionally, DAOs are retrieving traditional frameworks for organizing that have been lost and Co-ops are rich in traditional practice and historical knowledge. Finally, DAOs are promoting reciprocity, seeking to benefit both humans and the planet, which is like the theory of the "triple bottom line" (expanding business success to include the organization's contributions to people, planet, and prosperity) that many Co-ops use to measure their success and impact their decision-making.

This relationship indicates the past informing the present, as DAOs retrieve from the established model.
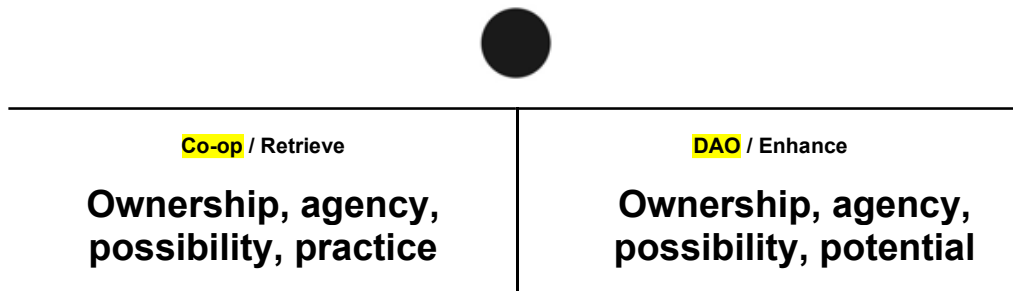

Co-op / Retrieve	**DAO** / Enhance
Ownership, agency, possibility, practice	**Ownership, agency, possibility, potential**

Figure 25. Summary of the relationship between Retrieve (Co-op) and Enhance (DAO)

Co-ops are retrieving some of what was previously lost from what DAOs enhance in several ways. First, Co-ops retrieve the possibility of a new dream for ownership and agency, reminding us of a new way to practice community-building. While DAOs enhance individual mindsets and needs (of ownership and agency) all while boosting the possibility and potential of the community. In this relationship, we see how the established model (Co-op) can learn from the energy of the emergent model (DAO). There is a synergy and iteration between these quadrants, as the Co-op hopes to retrieve the energy and possibility that the energetic, self-propelled DAOs possess. Finally, while the DAO is taking the values of ownership and agency, which the Co-op has modelled for centuries, DAOs aim to infuse new life into them.
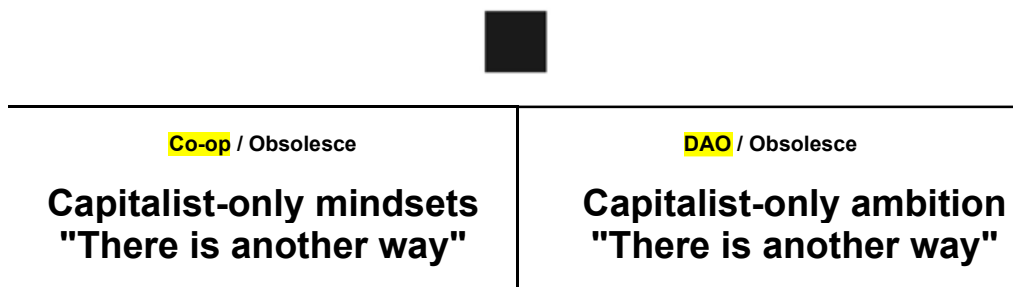

Co-op / Obsolesce	**DAO** / Obsolesce
Capitalist-only mindsets "There is another way"	**Capitalist-only ambition "There is another way"**

Figure 26. Summary of the relationship between Obsolesce (Co-op) and Obsolesce (DAO)

Co-ops and DAOs share similar hopes for obsolescence in challenging the dominant capitalist mindset. Both models aim to provide an alternative to the belief that capitalism is the only answer, and that shareholder ownership is the only way to scale. Both models aim to overcome individualistic and corporate mindsets, rejecting the notion that the individual has all the power or that capitalist ambition is the only option. Knowing that they both have similar aspirations, Co-ops and DAOs have the opportunity to join forces to re-work the narrative that "what we have always known" (capitalism, corporations, hierarchical structures, shareholder profits, and investors) is the only want to create a viable future.

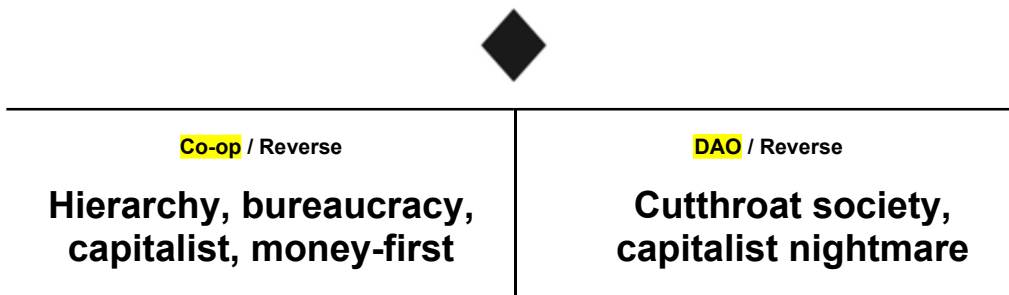| Co-op / Reverse	DAO / Reverse
Hierarchy, bureaucracy, capitalist, money-first	**Cutthroat society, capitalist nightmare**

Figure 27. Summary of the relationship between Reverse (Co-op) and Reverse (DAO)

When comparing reverse quadrants, the outcome of being pushed to extremes for both Co-ops and DAOs is like the inception of why a Co-op and DAO would be established. Co-ops and DAOs are attempting to address the problems of current systems, which are often hierarchical, bureaucratic, and driven by capitalist values. Scenario one for Co-ops represents the standard hierarchical organization and capitalist mindset of putting money first. Similarly, for DAOs, the reverse scenario is a cutthroat society, drowning in politics. Both scenarios are various degrees of the current economic, political, and social landscape. However, when we examine the second scenario for Co-ops an opportunity for DAOs to learn what is possible and be inspired in an alternate response to extremes. Co-ops have a history of doubling down on their people-first vision and why they were started in the first place, resulting in long-term, viable economic communities that withstand financial disasters like recessions and pandemics. Learning from this example may be essential to ensure that a DAO remains true to its founding principles and values to prevent such negative scenarios from occurring.

The comparisons between Co-ops and DAOs using McLuhan's Tetrad quadrants have revealed patterns into human organizing as technology and the relationship between the established and emergent models. While Co-ops and DAOs have different ways of enhancing and retrieving certain aspects of organizing, both share the same hopes of removing the singular capitalist mindset and frameworks. Moreover, both Co-ops and DAOs are attempting to answer the current problem of hierarchical and capitalist systems, with Co-ops modelling how to preserve the vision when pushed to extremes. As one expert noted:

> *"All of these new structures are just different ways of humans organizing themselves. [With web3] humans are organizing themselves somewhere new and the technology around it is different. But ultimately, what always ends up shining through is the human nature of the group that started it. The technology, either amplifies or reduces certain things and people will tend to amplify what benefits them. What are people trying to amplify based on the system they're building for themselves?"*

Ultimately, the human nature of the group will shine through, and the technology (or models) used will help amplify or reduce their mission. The key is to understand what is being amplified or reduced based on looking at the models they are building for themselves. These two models have many similarities in how they impact society and similar future aspirations. The comparisons between the Co-ops and DAOs Tetrad provide valuable insights into how humans organize themselves and how these models (technology) can be leveraged. In the next chapter, we will use the insights from the Tetrads and overlay them with Co-op and DAO strengths and weaknesses. New insights will emerge from this comparison which will uncover areas of opportunity to create more viable economic communities*.

Chapter 06 / <mark>Reveal: Insights for viable economic communities</mark>

My boundary for this project was bound to the insights gleaned from the interviews I conducted. I acknowledge that there are many additional strengths, weaknesses, and opportunities but for the scope of this research, I have focused on the responses from the interview participants and validated them through secondary research.

Initially, I began by reaching out to Co-op and DAO experts and members whose work I had been reading or whom I had found online through research, and I was surprised to find that most people I connected with were eager to talk. From the start, many responses were supportive already thanking me for doing this research. Yet even this positive response was an insight into the energy, curiosity, and mystery surrounding this space.

> *"Glad you're doing this."* – DAO expert

> *"It's wonderful that you're doing this kind of work."* – DAO & Co-op expert

As I met with each interview participant, I noticed something about my initial sampling hypothesis: interview experts and interview members. Separating experts and members was difficult, as I realized that to be in this immersive and emerging space, you naturally became an expert on the subject. Therefore, most of my interviews consisted of lived experience and expertise based on experience. Another insight of my sample was that almost all the DAO builders or experts started their experience and practice within the cooperative movement. Many had previously built or been members of a Co-op and it was a natural progression to follow their curiosity into learning and participating within DAOs.

I intentionally structured the interviews with half questions and half exercise (or mini workshop). The first half was a semi-structured interview with questions I sent each interviewee in advance. The second half was a one-on-one exercise where I walked them through McLuhan's Tetrad for either a DAO, Co-op or both – depending on their focus. Feedback from the "interview workshop" was positive as interviewees enjoyed the framing of the questions and the model that followed. In addition, the questions seemed to warm up the interview participant to dive into what could be considered a more complex tetrad exercise. One participant noted that the experience was "fun and therapeutic."

> *"The early questions were good to warm me up to be able to answer the tetrad because when I looked at it before I had no idea what it was. But going through [this interview], it's rare to have a moment to be able to think deeply about these things. It's hard to do that as most people don't understand. [Most people are thinking] what's he talking about now?"* – DAO expert

As we look to the future for economic communities, DAOs and Co-ops have emerged as compelling options to create viable results. Both models offer unique strengths and weaknesses for consideration which can often be complementary. DAOs offer a decentralized autonomous approach to organizing that leverages technology to empower individuals and promote transparency. Similarly, Co-ops provide a democratic, collective system that prioritizes member ownership and control but does not only rely on technology for organizing power. As we explore the potential of these models, it is essential to consider the opportunities present for creating more sustainable, equitable, and resilient economic communities. This includes exploring the potential for DAOs and Co-ops to work together and leverage their strengths to achieve shared goals. In this chapter, the strengths and weaknesses of DAOs and Co-ops will be examined, concluding with the uncovering of futures-focussed opportunities using McLuhan's Tetrad to build viable economic communities.

PAINS / WEAKNESSES

Co-op	DAO
Learning curve *(steep)*	**Questions** *(Legal, etc.)*
Wrestling with capitalist mindsets	**Wrestling with capitalist mindsets**
Access to capital and scaling	**Pressure to grow and scale**
Burnout	**Burnout**
Staled function	**Governance** *(complex)*
Hard time entering emerging digital spaces	**Risk**
Resistant to change *(emerging ideas, new tech)*	**No collective knowledge**
	Creating culture *(in a technical, digital-first environment)*

Figure 28. Co-op and DAO pains or weaknesses, aggregated from interviews (see Appendix F)

Co-ops, while having many strengths, also face weaknesses that can pose significant challenges to their success. One major hurdle is the steep learning curve that Co-op members face when adopting and implementing a cooperative business model. Additionally, Co-ops struggle with accessing capital and scaling their operations, which can limit their ability to compete with larger, more established companies. Burnout is also a concern, as members are often deeply invested in the mission and success of their Co-op resulting in taking on too much work or responsibility. Another weakness is the potential for staled function, where Co-ops become too entrenched in their ways of doing things and resist change, including researching emerging ideas and adopting new technologies. Finally, Co-ops may need help entering emerging digital spaces, as they may need more resources, capital, or expertise to compete with tech-focused companies.

> On accessing capital and scaling: *"Co-ops are really good at protecting themselves from having value extracted from them, but aren't as good at capturing value."*

> On the learning curve: *"People project so much stuff onto Co-ops just because they are not corporations. For example, [Co-ops] are better because they are not corporations. Right? Yes, until you start one."*

> On wrestling with capitalist mindsets: *"[Having principles] doesn't necessarily force everyone to do better."*

> On being resistant to change: *"With a Cooperative, you're playing by a certain set of rules."*

DAOs offer many benefits as a new model, however, they also face several weaknesses that can pose significant challenges to their adoption. One major hurdle is navigating legal questions, as DAOs are still a relatively new concept that lacks clear regulatory frameworks in many jurisdictions. Additionally, DAOs may struggle with altering entrenched capitalist mindsets that prioritize growth and profit over collective values. Since many DAO members are familiar with the technology start-up landscape, they are only familiar with this way of thinking. Constantly feeling the pressure to grow and scale can lead to burnout for members, as well as governance issues that arise when decision-making becomes too centralized. Risk is also a concern, as there is often no collective knowledge or expertise to fall back on in times of crisis. Finally, DAOs may struggle with creating a cohesive culture and addressing issues of diversity, equity, and inclusion as the privilege to join this space to be left to the technical few.

On risk: *"A lot of DAOs present this idea of like, "We trust everyone. If you have a wallet, we trust you". And what they are saying is, "If you come in, you trust us"."*

On burnout: *"Disadvantages include having to coordinate a part-time workforce in a decentralized manner."* (OdysseyDAO, 2022)

On the pressure to grow and scale: *"We recently took our 6,000+ member community and limited it to 60 people … Despite having 6,000+ members, nobody was really talking".* (Yang, 2022)
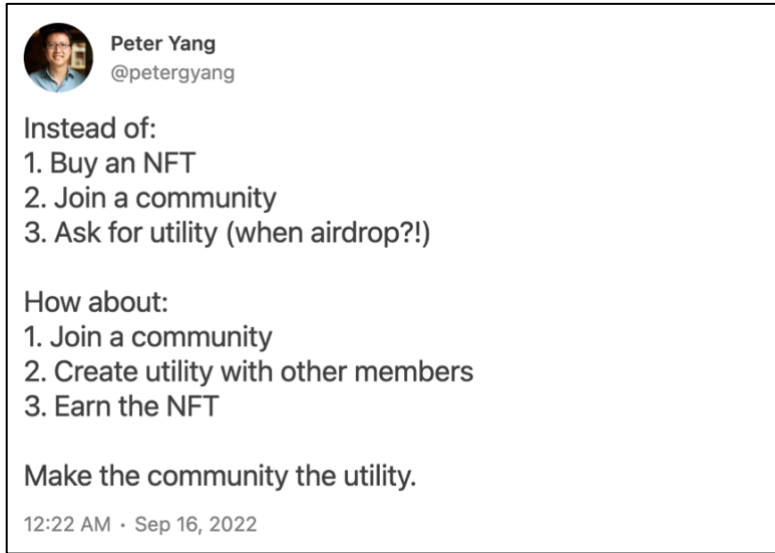

Figure 29. Tweet about building community by Peter Yang, @petergyang

==ADVANTAGES== / ==STRENGTHS==

Co-op	DAO
History of success and clarity of mission	**Experimentation** *(testing and experimenting)*
Power of community	**Learn quickly from mistakes**
Agency	**Flexible and variety**
Tangible *(physical spaces, offline)*	**Ownership** *(focus on)*
Systems, resources, principles	**Digital First**
Values	**Systems and tools**
	Access to capital and scaling
	Inclusivity
	Community-minded
	Borderless
	New energy

Figure 30. Co-op and DAO advantages or strengths (see Appendix G)

Co-ops have a rich history and clear values that prioritize community, democracy, and sustainability. One of the critical strengths of Co-ops is the power of community, which enables members to pool their resources and expertise to achieve shared goals. This sense of agency is a powerful motivator for members, who feel a sense of ownership and contribution within the cooperative structure. Co-ops also have a strong presence in real-life communities, which can help to build trust and establish a sense of shared purpose among members. Another advantage of Co-ops is the value of continuous education and the access to systems and resources they provide, including training, technical assistance, and funding opportunities. Finally, Co-ops are grounded in a set of core values that prioritize social and environmental sustainability, which can help to build a more holistic society.

> On agency: "Co-ops are successful when their members feel a sense of ownership and responsibility for the organization. This feeling of ownership leads to a stronger community and more engaged members. The DAO can create a system where members can participate in decision-making processes and have a voice in the organization's direction." (Westenberg, 2022)

DAOs have emerged as a new, innovative model offering several key strengths and advantages. One of the primary strengths of DAOs is their flexibility and variety, allowing for the experimentation and testing of new ideas quickly and efficiently. DAOs also prioritize ownership, which can help to build trust and foster a sense of shared purpose among members. Another advantage of DAOs is their digital-first approach, which allows for a global, distributed network not reliant on national borders. This borderless approach also allows for greater collaboration and contribution among members, regardless of their physical location. Additionally, DAOs provide access to cutting-edge systems and tools, as well as capital and scaling opportunities, which can help to fuel growth and innovation. Finally, DAOs are powered by new energy driving innovation and experimentation in the economic sphere.

> On being flexible and variety: "DAOs have a certain flexibility that you can shape it in a slightly different way."

> On ownership: DAOs tend to be better at enabling collective ownership at scale, even if their cultural understanding of the rights, responsibilities, and accountability associated with ownership is comparatively underdeveloped. And while Cooperatives tend to be less successful in securing funding, they are also more likely, through their sober rejection of capitalist realism, to correctly address the root causes of inequity. (Robey, 2022a)

> On inclusivity: "Advantages include letting more people contribute, participate in decisions, and own the upside." (OdysseyDAO, 2022)

OPPORTUNITIES

"You can analyze the past, but you need to design the future." – Dr. Edward De Bono

DAOs and Co-ops offer unique strengths and advantages that can be leveraged to build more sustainable, equitable, and resilient economic communities. Where one model sees a problem, often the other has a solution. While both models have distinct approaches, they share many common values and goals, including a commitment to transparency, democracy, and community ownership. By learning from each other's strengths and weaknesses, DAOs and co-ops can collaborate to create innovative new models to leverage the best of both worlds.
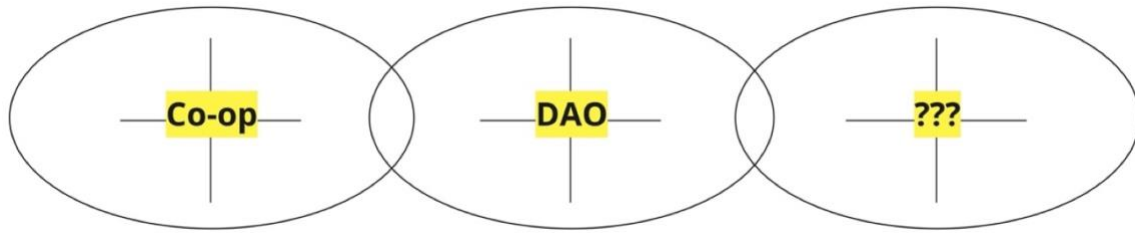
Through interview synthesis and comparing the strengths of one with the weaknesses of the other, a few questions emerged as opportunities for further exploration (see Appendix H). In chapter 5, the use of McLuhan's Tetrad was meant as an analysis, to understand the relationships between DAOs and Co-ops but also to understand their impact on society. In this chapter, McLuhan's Tetrad was used as an exploratory futures-focussed research approach, looking at the quadrants to provoke and uncover opportunity areas of innovation and further study. This exploration using the Tetrad was inspired by Edward De Bono's creative approach to brainstorming called "Lateral Thinking". In this method, provoked brainstorming is facilitated using exercises that challenge, exaggerate, distort, reverse, and provoke wishful thinking (Schultz, 1993). Lateral Thinking, what many might describe as creativity, is meant to "push our brains out of established patterns of perceiving, thinking, problem-solving, and imagining" (Schultz, 1993). Through the exercise using McLuhan's Tetrad, keeping in mind secondary research, trends and influencing factors along with strengths, weaknesses and previous McLuhan Tetrads, the exercise illuminated the quadrants and a future scenario was created.
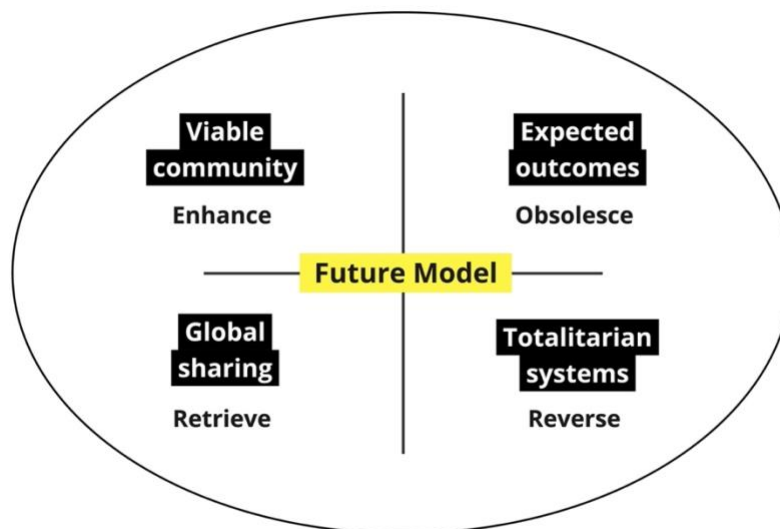

Figure 32. Potential future model

Potential Scenario

Within the Enhance quadrant, a viable community is fundamental to amplify from the past models. The strengths of both Co-op and DAOs are in how they build, organize, and sustain community and intensify further in a future model. For the Retrieve quadrant, the future model retrieves past knowledge-sharing and collective sensemaking from former models. This is possible to retrieve from Co-op models and their history of success, defined principles and process, along with clarity of mission. As DAOs mature, their successes and failures will also be valuable learnings for the growth of a new model and access to this

will be important for growth. As technology moves us past our own borders, it will be important for this level of knowledge-sharing to scale and be accessible globally. Within the Obsolesce quadrant, we find that expected outcomes or the status quo become obsolete because risk-taking, non-traditional vocations, and thinking differently about lifestyle are celebrated. The next generation entering the workforce and positions of influence bring this spirit. In addition, the energy and hype that DAOs brought into the mainstream is a catalyst for believing that "there is another way" to do work, life, and more. Finally, in the Reverse quadrant, the model flips to an extreme when pushed to its limits. Where in previous models, the extreme when to a capitalist nightmare, in this extreme the model flips further into a totalitarian system. In this extreme, society begins to forget how to make collective decisions and all creativity is repressed.

Looking at this potential scenario, the exercise opened new directions for inquiry which were phrased as questions relating to each quadrant of the Tetrad with the hope to invite the reader into the solution. These questions are meant to be a starting point in how DAOs and Co-ops can learn from each other and what might be possible moving forward.

Enhance: Viable community

How might we build these viable economic communities that value people first?
DAOs and Co-ops can build viable economic communities that value people first by prioritizing value flows beyond just capital, such as shared ownership and decision-making. These organizations can create more equitable and sustainable financial models by putting people first. Checks and balances are needed to ensure the system stays accountable to this mission. Looking at the history of Co-ops is a critical case study to learn from, how when pushed to extremes, the Co-op makes creative decisions to ensure that the members are supported first. Through experimentation and innovation, DAOs and Co-ops can continue to pave the way for new economic models that prioritize the well-being of all members.

One interview participant talked about questions to ask of DAOs to get a sense of viability that speaks more to the community and human ambitions of the community:
- *Are they tackling a systems problem?*
- *What is their ambition?*
- *Is the governance true to the principle and spirit of decentralization?*
- *How is the community? Are the vibes good?*

How might we scale community sustainably and ethically?
Co-ops have historically found it challenging to scale, because of their limited access to capital and the view that scaling can result in the loss of culture and community values. DAOs offer a unique opportunity to scale by empowering communities to take ownership of their trajectory and drive growth. However, there are no clear ethical and sustainable scaling frameworks, which often reverts to capitalist, start-up, or competitive actions. Traditional models (corporations) prioritize speed of growth and investor ownership. In contrast, DAOs could lead the way with their desire to tackle problems at scale in a community-led and transparent manner. By prioritizing community engagement and participation, DAOs can ensure that growth is driven by the needs and desires of the community rather than external factors. As a result, DAOs can play a crucial role in changing the assumption that external investors should own every large-scale or innovative activity.

Retrieve: Global sharing

How might we access community-shared knowledge or collective sensemaking?
By looking at the examples of DAOs and Co-ops, we can identify ways to build access to community-shared knowledge and pinpoint areas where knowledge sharing is needed. DAOs can learn from the Co-op's legacy. How knowledge streams feed Co-ops to understand the history and collective wisdom better. Additionally, the sixth principle of a Co-op, "cooperation among cooperatives", is an example of how the cooperative movement continues to strengthen by learning and leveraging the community. Within the DAO landscape, DAOs should be talking to each other and the cooperative movement, which can help to promote clarity and build a stronger sense of community. Using Co-ops as an example, DAOs can build more resilient communities and foster greater collaboration and knowledge-sharing.

How might we leverage this "global" opportunity?
As borderless entities, DAOs have the opportunity to transcend traditional geopolitical boundaries and operate on a global scale. This is particularly relevant in transitioning from a North American to a worldwide economic system, as DAOs can serve as a cross-border collaboration and resource-sharing platform. Additionally, the decentralized nature of DAOs and web3 technology enables them to move around more easily and adapt to changing regulatory environments and market conditions. This agility and flexibility can give DAOs a competitive edge in a rapidly evolving global economy. Questions begin to emerge about the legal structures needed to sustain borderless economics, as governments start to understand and slowly add regulation to web3. Co-ops have a rich history of border dependent cooperative enterprise and legal structure that could benefit the DAO landscape.

Obsolesce: Expected Outcomes

How might we understand and build with a new generation that are risk takers?
To understand and build with a new generation wanting to take risks, we can begin to communicate how Co-op and DAOs are established and emergent frameworks for risk-taking. This generation has a lifestyle buffer and safety net (or is willing to create one), allowing them to take on more risk. They are motivated and autonomous, ready to wear many hats, and driven by creativity, purpose, and independence. DAOs and Co-ops are environments that foster risk-taking, innovation, and creativity, while also providing a sense of community and support for those who are pursuing their passions. By welcoming the new generation through clear messaging and accessible entry points to DAOs and Co-ops, we can begin to learn, grow, and take risks together.

Reverse: Totalitarian systems
Since this quadrant of the tetrad is an extreme scenario, the opportunity questions look at ways to protect and practice which aim to help these models thrive and not reverse into their extreme.

How might we create regulations and frameworks that protect but do not stifle innovation?
To create regulations and frameworks that protect but do not stifle change, it is essential to work collaboratively with territorial bodies and other stakeholders to develop a regulatory environment that is more conducive to experimentation. This may involve exploring new models of governance that prioritize community trust and accountability, allowing for greater transparency and participation. In addition, it is essential to prioritize the creation of a clear map of the future and articulate a theory of change to help understand what is possible and how it can be accomplished. Finally, allowing all voices to be heard and creating a space for experimentation can help create a more equitable and inclusive economy that fosters innovation and growth.

How might we create more opportunities to practice democracy?

Co-ops have a legacy of collective wisdom, democratic governance, and a dedication to training and education. Successful Co-ops train their members in governance models and soft skills, like interpersonal communication and conflict resolution. These soft skills are necessary for healthy democratic structures. DAOs offer a unique opportunity to create more moments for practicing democracy, which is crucial in a world where people are increasingly out of practice due to the lack of democratic systems in our daily lives. DAOs can help address this issue by providing accessible platforms for people with various backgrounds to participate in democratic governance. Furthermore, the experimentation and testing that DAOs value can help build trust and familiarity with democratic processes. Successful DAOs can serve as templates for replication, learning from the training and education that Co-ops value, allowing for the creation of more democratic systems that are accessible, trustworthy, and effective.

DAOs and Co-ops offer unique opportunities for building sustainable, equitable, and resilient economic communities. DAOs can transcend traditional geopolitical boundaries and develop platforms for cross-border collaboration and resource-sharing. Through online platforms, people can begin to participate in democratic governance and engage in shared ownership and decision-making. By tapping into the collective wisdom and history of communities found within Co-ops, DAOs can create a more open and inclusive environment that drives innovation and builds more robust, resilient communities. Additionally, by prioritizing community engagement and participation, DAOs can ensure that growth is driven by the needs and desires of the community rather than external factors, ultimately creating a more equitable and community-driven economic system. To achieve this, it is essential to work collaboratively with stakeholders to develop a regulatory environment that is more conducive to shared ownership and experimentation, fostering innovation and growth, and to use the examples of Co-ops as a framework for understanding and building with a new generation that wants to take risks.

Chapter 07 / <mark>Conclusion</mark>

The first two iterations of the internet (web1 and web2) were built on siloed services with power and control in the hands of a few large tech companies. As we move into the next iteration, web3 directly responds to the problems that emerged from web2 (data ownership, big tech monopolies, and more) and addresses those problems using blockchain technology and decentralization. Decentralized Autonomous Organizations (DAOs) have emerged as a new model for community building, opportunity, and governance within web3. However, this emergent model is like the established cooperative (Co-ops) model built on human decision-making and solidarity.

I started this journey feeling overwhelmed by the opportunity and information. The learning curve felt steep and technical. Additionally, I perceived web3 as an exclusive members-only club. But as I've been learning, talking to people building in the space – their energy, care, and excitement have been contagious. I am still trying to find my fit in this evolving world, where I can contribute and offer my participation. At this point, DAOs have felt like an "add-on" to my already full schedule, and they haven't slipped into my current lifestyle or habits easily. But I can already anticipate, as evident in the history of my life, once I find my community – my contribution will feel natural. I also have noticed that participation follows an alignment with the mission. As a result, until I discover a community of like-minded people, my involvement will continue to be on pause.

This research aimed to explore two models of community building, Co-ops and DAOs, to learn from their commonalities and differences. As both models are often viewed skeptically, DAOs and Cooperatives can collaborate and learn from each other's strengths to increase their impact and social proof. Co-ops have existed for centuries, built on democratic decision-making, and shared ownership by workers and users. In contrast, DAOs have emerged from the web3 landscape as a new mode of community and democratic organization. Overall, this research focused on increasing understanding and accessibility for the next iteration of community building, drawing on emerging opportunities, and learning from established models that are similar in nature.

I explored the potential for learning and exchange of ideas between Co-ops and DAOs in the emerging spaces of community and cooperation online. By delving into the growth and influences behind the emergence of DAOs, this research utilized Marshall McLuhan's Tetrad of Media Effects to analyze the impact of these models on society now and in the future. In addition, the strengths and weaknesses of these models were examined, along with opportunities for their individual and joint relationships. Ultimately, the research provided the first step into insights for building viable economic communities using Co-ops and DAOs answering the question: *What can DAOs and Co-ops learn from one another?*

This research project is for foresight practitioners, business explorers, and non-technicals. First, it aims to provide foresight practitioners in the industry application and insight into using McLuhan's Tetrad for the purpose of foresight inquiry and exploration. Second, the research provides sensemaking for individuals who are interested in alternative economies, particularly entrepreneurs who are exploring that there could be another way to build a business. Lastly, the research hopes to reduce barriers along with providing further understanding of where the internet is headed by equipping more people with the accessible language and understanding to enter these new online collective spaces (see Appendix I for additional resources). While launching a DAO requires less effort than starting a Co-op, there is still much to learn from how successful Co-ops organize, govern, and respond to adversity. The research emphasizes the benefit of collaboration between an established and emergent model to achieve shared goals of creating equitable and viable economic communities.

Next Steps

This project is a small step in uncovering patterns and connections between DAOs and Co-ops to innovate for a cooperative future. Further research could involve talking to more members and individuals building in the space to gain deeper insights into the evolution of Co-ops to DAOs. Collective experiments based on the *"How Might We"* questions (in chapter 8) could be conducted to understand further what opportunities are present. Further experimentation could include intentionally using Co-op structures in DAO environments, and existing viable Co-ops (or a portion of a cooperative business) could be transformed using the DAO frameworks. Additionally, it may be of interest to conduct further research into the progression of Co-ops evolving into DAOs and to explore the prior knowledge, lessons, and successes of the cooperative model that Co-op experts bring when they transition into building a DAO. Finally, continued research could focus on developing DAO benchmarks, like B Corp standards, to help individuals understand the level of cooperative governance, community, and accountability present in DAOs. Even as I write this, there is economic uncertainty and further fluctuation in cryptocurrency, which impacts the adoption of DAOs – however Kevin Owocki, a leader in the web3 space, recently talked about how web3 should start focussing on onboarding, that this journey into web3 could "spark hope & optimism through education, decentralization, pluralism, fair access, positive-sum games, self-discovery, empowerment, & sovereignty." (Owocki, 2023) In the end, if our goal is a cooperative equitable future the importance of collaboration between the emergent model (DAO) and the established model (Co-op) to achieve these goals should continue to be explored.

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APPENDIX A: Web3 Journal Template

Date:

What did I do this week? What did you learn?

What inspired you this week?

What did you contribute this week?

Today, I'm feeling:

Based on the face chosen, please explain:

DAO OBSERVATIONS

DAO name:

Mission

Community

Opportunity

APPENDIX B: <mark>Glossary of Terms</mark>

Web3 Glossary of Terms:

Unless otherwise cited, the following terms are defined by OdysseyDAO (educator DAO). A web3 learning community helping one million people join the web3 economy. Education pathways on web3, NFTs, DeFi and more at: www.odysseydao.com

Web1: (1990-early 2000s) was read-only. People consumed static web pages that they navigated to from directories like Yahoo. Web1 was built on open protocols like HTML.

Web2: (early 2000s-today) is read and write. People create and consume content on the social platforms that we're all familiar with. In web2, tech giants extract value from users by sitting in the middle. Web2 is built on client-server architecture where users are the client, and companies control the servers.

Web3: (2020+) is read, write, and own. People create, consume, and own the upside of their work through tokens. Web3 is built on peer-to-peer networks of computers that talk to each other without intermediaries.

Decentralization: "Instead of large swathes of the internet controlled and owned by centralized entities, ownership gets distributed amongst its builders and users." (*What Is Web3 and Why Is It Important?*, 2023)

Distributed Networks: A computer system in which programming, software, and data are spread out across more than one computer.

Token: A token is a record of ownership of an asset. Tokens can be fungible or non-fungible:
- **Fungible tokens** are interchangeable (e.g., the US dollar, bitcoin).
- **Non-fungible tokens** (NFTs) are unique (e.g., a piece of art).

Bitcoin: Created by Satoshi Nakamoto and released in January 2009. A cryptocurrency built on a blockchain and therefore is decentralized, immutable, and open. Built as a "peer-to-peer electronic cash system." Bitcoin is arguably the most secure and decentralized of all cryptocurrencies. Today, many people use bitcoin as a store of value.

Ethereum: Created by Vitalik Buterin in 2013 to let anyone "write smart contracts and decentralized applications (dApps)." As of February 2022, Ethereum is the 2nd most popular cryptocurrency. Like Bitcoin, it's built on the blockchain and is decentralized, immutable, and open. Ethereum is programmable so that you can build and deploy decentralized applications on its network.

Blockchain: A blockchain is a linked list of transactions stored on a network of computers. Blockchains are: Decentralized (Transactions are on a network of computers (nodes)), Immutable (Transactions cannot be changed once committed), and Open (Transactions can be viewed by anyone).

Smart contracts: Code that runs on a blockchain.

Cryptocurrency (crypto): Digital money that's stored on a blockchain.

Crypto Wallet: A crypto wallet is software or hardware that lets you store crypto and make cryptocurrency transactions.

Decentralized Finance (DeFi): Refers to financial services that run on smart contracts instead of relying on intermediaries such as banks or exchanges.

dApp (Decentralized App): Apps (applications) combine a backend smart contract and frontend UI (user interface). Because of the composability of web3, anyone can build on an existing smart contract to make something new. These apps power web3: buying and selling NFTs (OpenSea), swapping tokens (Uniswap), or earning income from playing games (Axie Infinity).

Composability: The ability of blockchain applications, like decentralized exchanges (DEXs), decentralized applications (dApps), and decentralized autonomous organizations (DAOs) to communicate and work with each other.

DAO: A DAO is a blockchain-based system that enables people to coordinate and govern themselves mediated by a set of self-executing rules deployed on a public blockchain, and whose governance is decentralized (i.e., independent from central control).

Web3 Slang Glossary:

gm: Good morning
gn: Good night
ser: Sir
fren: Friend
wagmi: We're all going to make it
ngmi: Not going to make it
FUD: Putting fear, uncertainty, and doubt in a project
Aped: Buy in to a project without alot of research
Wen moon: When will the value of the project go super high
Wen Lambo?: When will you crypto to reach the moon so you can buy a Lamborghini
DYOR: Do your own research
Probably nothing: Implies that a project is probably something big
Maxi: Someone who believes their cryptocurrency is the best
Shilling: Pitching your project in an annoying way
Rekt: Lost all of your money
Rugged (rug pull): A project that stole all of a person's money
LFG: Let's fucking go
HFSP: Have fun staying poor
HODL: "Hold on for dear life." (hold your crypto - don't sell)
Whale: Entities who own a large amount of crypto that can change market in a single trade
Flippening: Moment in which the market cap of Ethereum overtakes the value of Bitcoin

Cooperative Glossary of Terms:

The following terms are defined by the Platform Cooperative Consortium, a hub that helps you start, grow, or convert to platform co-ops. Read more at: www.platform.coop

Cooperative (Co-op): A Cooperative is an autonomous association of persons united voluntarily to meet their everyday economic, social, and cultural needs and aspirations through a jointly-owned and democratically-controlled enterprise.

Platform Co-op: Platform Cooperatives are businesses that sell goods or services primarily through a website, mobile app, or protocol. They rely on democratic decision-making and shared platform ownership by workers and users.

Ownership (collective or shared ownership): Broad-based ownership of the platform, in which workers control the technological features, production processes, algorithms, data, and job structures of the online platform.

Governance (democratic governance): All stakeholders who own the platform collectively govern the platform.

APPENDIX C: <mark>Trends</mark>

The following are the trends observed through interviews and the secondary research conducted for this research. These trends are impacting the future of how we gather, how we work, and how we create opportunity individually and as a collective:

Digital Burnout
What was once an enviable "job", digital and independent creators are now online at record rates, tied to the elusive algorithm, without support or compensation to match. This is leading to high levels of stress, anxiety, and burnout. Online independent creators are experiencing burnout as the expectation of more consistent content is needed to sustain a career online. Virality is the goal, which is only obtained by feeding the algorithm daily with more and more content. These independent creators, usually "companies of one", are producing high-quality content *(from videos to music to podcasts to articles)* all on their own. Digital and independent creators aren't only responsible for the product they produce and the community they build. To do this, they must be active on social media, interacting with fans, and other roles beyond writing, presenting, and editing. "This kind of labour is often invisible but very taxing and a major contributor to occupational stress." The supports that come with secure and stable employment, like health insurance, paid days off, and mental health days, aren't available to independent creators. As a result, they are over-working for little pay-off *(often what they create is not even a living wage).*

Present from Anywhere
Telepresence means creating a feeling of presence through various technologies, even though the person is not physically present. As mass adoption of these technologies' increases, remote work and "work from anywhere" is widely accepted. The development and adoption of telepresence communication technologies *(e.g., in remote work, distance education)* help people seize opportunities that would have necessitated travelling or even relocating to another area. Communication technologies have made it possible to work and interact without being physically present. Remote work is becoming more and more common and completing full degrees via online courses has become possible.

Platform with Economic Power
Entrepreneurs have shifted from traditional marketing methods to selling directly to their communities through online platforms, as more people spend time online. This has resulted in a focus on growing follower counts and using platforms that facilitate this, to communicate directly with their audience and leverage their purchasing power. As a result, entrepreneurs have used the strategy of growing their follower count and using platforms that facilitate this *(from social networks to subscription platforms)* to communicate directly to their audience and leverage the purchasing power of their community. New platforms continue to emerge to harness this strategy and these platforms themselves have become increasingly powerful as they lock in users, both brands and individuals alike.

Cult of Personality
Culture is becoming more and more influenced by prominent personalities and influencer CEOs. Fandom is not just for rockstars; niche leaders gain influencer status and are at the forefront of influencing culture, trends, and movements. Humans are susceptible to hero worship, and that has often been focused on rock, movie, and sports stars. Today, the cult of personality thrives as people place their faith in "great men" *(and sometimes women)* with power–influencing in political, economic, or business arenas. With the rise of social media and the ease at which CEOs, billionaires, and prominent personalities can communicate with their "followers," these fandoms can listen closely to their "leader", who can easily manipulate and influence their "followers" to act. And act quickly for their benefit.

The Great Values Shift *(often titled: "The Great Resignation")*
The COVID-19 pandemic pushed many people to re-evaluate their work and personal lives. When it came to their work lives, employees began to believe that "they could do better" and made career decisions that reflected that new value. Even before the COVID-19 pandemic hit, people were starting to wrestle with work frustrations internally. Frustrations included: wages that did not meet the rising cost of living, longer hours expected by companies, little work/life balance, unpaid sick leave, lack of workers' protections, underappreciation, and more. When the pandemic hit, many workers were forced to re-evaluate their lives and what mattered. Many frontline workers left the workforce, as they were forced to work in person when they felt unsafe or unsupported. As many companies moved quickly to remote work, some workers changed careers to acquire a remote work lifestyle. Many workers contemplated quitting or changing jobs to align their work and personal values better.

Financialization
The trend of financialization is changing how we view and value our labour. As more aspects of our lives become financialized, including daily activities and habits, we increasingly see the commodification of our time and effort. This can lead to a devaluation of labour, as it becomes viewed primarily to generate profit rather than a means of personal fulfillment or contribution to society.

A.I. & Automation
The rise and mainstream adoption of artificial intelligence (A.I.) and automation is revolutionizing how we work and collaborate. ChatGPT and A.I. art (like Dall•E 2) are becoming mainstream and many tech companies are launching AI-based apps and plugins to complement their existing platforms (like Notion AI). The education sector is also impacted by A.I., with institutions exploring ways to integrate it into their programs. As we think about the future of collective governance, there is a growing interest in how artificial intelligence can help automate bureaucratic activities and streamline decision-making processes.

Trust in Crypto
The lack of trust in the crypto world due to market fluctuations and scams such as "rug pulls" has made it challenging for people to join and contribute in web3. The difficulty in gaining entry and understanding the system further aggravates the trust problem. However, this loss of momentum in crypto can be an opportunity to focus on building DAOs and infrastructure slowly, creating a more thoughtful and sustainable approach. In the long run, this approach can weed out the "money-hungry tech bros" and promote a more trustworthy and inclusive system. Recent scandals such as the FTX collapse and Bored Ape Yacht Club NFT fraud further highlight the need to build trust in web3 and share positive examples of what is possible within the DAO communities.

Gen Z Boundaries
Gen Z is known for their boundaries – in life and work. They value pay transparency in hiring and prioritize being self-employed or working in creative non-traditional fields, like monetized YouTubers or influencers. They also prioritize setting boundaries, not overworking, and avoiding working for companies that do not pay them fairly. Additionally, eco-anxiety is high among Gen Z, affecting where they are willing to work and what type of work they want to do. These trends impact the future of work as companies must adapt to attract and retain this next generation of workforce.

Regulation in Tech
Governments worldwide are beginning to intervene in the technology industry, with several high-profile cases highlighting the need for regulation. For example, the $100 million settlement between Coinbase and New York regulators illustrates the importance of background checks in preventing fraudulent activity. In addition, the approval of a bill regulating the use of Bitcoin in Brazil provides a framework for crypto regulation. At the same time, the Digital Markets Act in Europe will force Big Tech platforms to open up

their walled gardens. Meanwhile, concerns over social media and ticketing bots have led to calls for greater accountability from lawmakers, with some teens even lobbying for stricter regulations.

Skilled Workers Laid Off
The mass layoffs of skilled workers from companies such as Meta, Amazon, Salesforce, Twitter, and others due to the pandemic and economic downturn could significantly impact entrepreneurship and innovation. Many of these skilled workers may choose to start their own businesses, which could lead to the development of new and innovative ideas. However, losing experienced workers could result in a talent gap and slower innovation in specific industries.

Doubts in Democracy
Reuters stated that an intergovernmental body warns that "democracy slipping away at record rate". The increasing doubts and mistrust in democracy, highlighted by events such as January 6th and the Trump election, significantly impact trust in traditional institutions. This loss of confidence in these democratic institutions and processes could lead to declining civic engagement. If left unaddressed, this trend may further erode democracy and trust in institutions.

APPENDIX D: <mark>Visual Coding Template</mark>

Name Goes Here

Description about the interviewee
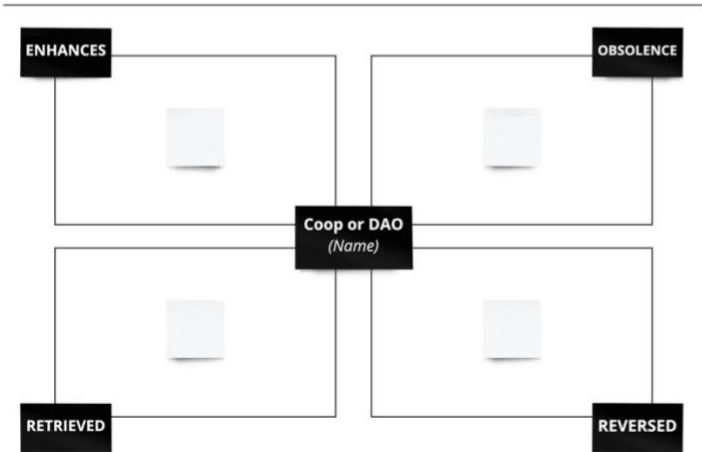
Keywords about them

LEGEND

NAME | KEY WORDS / THEME

QUOTES

LINKS MENTIONED

JOURNEY MAP

QUOTES

THEMES

Q: In your opinion, why are DAOs emerging now?

MINDSETS

BEHAVIOURS

STRENGTHS / GAINS

RISK / PAINS

OPPORTUNITIES

ENHANCES

OBSOLENCE

Coop or DAO
(Name)

RETRIEVED

REVERSED

APPENDIX E: McLuhan's Tetrad for Co-ops & DAOs

Colour coding is representative of each interview participant

Coop

ENHANCES

- Sense of belonging / community
- community / cooperation
- personhood
- personal
- dignity / Dignity
- ownership / sense of ownership
- equality
- Responsibility (personal) / Personal responsibility / Pride
- Long tradition
- a history of learnings (amassing)
- varied cross cultural tradition
- variety (varied forms)

OBSOLETE

- that capitalism is the only answer
- I don't think it makes anything obsolete
- It's an additional choice for people
- It's additive
- the LLC
- no alternative?
- hierarchies of ownership
- only one choice?
- scarcity mindset?
- the profit motive

RETRIEVED

- my contribution matters
- Voice
- concept and practice of membership
- we can learn from those that came and practiced before us
- older practices
- Indigenous tradition
- Build tradition
- Honour the diversity of legacy
- retrieving possibilities
- retrieving dreams and reminding us of what is possible
- ownership is possible
- equally shared ownership / dignity of ownership
- anti capitalism
- business could be done differently

REVERSED

Reverts to two scenarios

- Standard hierarchal organization, bureaucratic, capitalist...
- Money first
- Double down on the reason the coop started in the first place
- Overall put people first
- Becoming a capitalist entity
- Creative thinking
- 2008 crisis
- Stability
- "why we exist & who we serve"
- PUT PEOPLE FIRST
- Back to the fundamentals
- Be a Utopia
- bureaucracy
- lack of motivation and direction
- overly driven by, and subject to the whims of, personalities

Coops are founded on a major need or reaction to injustice, and they have historically proven that when they come against adversity, or pushed to extremes, they do not flip away from themselves but instead double down harder on what the values they were founded on in the first place

DAO

ENHANCES

- global community governance
- community / community
- cooperation
- Framework for decentralized self-governance
- Decentralized communication
- our ability to coordinate across boundaries
- decision-making
- participation
- sovereignty over labour and focus
- Future Work (flexibility)
- sovereignty, transparency
- enhance ability to:
- Portability
- financial resilience and ownership
- ownership
- financial access
- access redound to financial access
- achieve resilience through decentralized technologies
- incentives
- privilege
- Make a tangible difference (potential)
- working on something bigger than you
- Addressing multiple issues at once

OBSOLETE

- the individual and their individual power
- Authority
- The individual
- sole ownership
- corporate mindsets & capitalist ambition being the only option
- the LLC
- If it could make corporations obsolete, I would love that.
- rigid hierarchies
- organizational entities
- old mindsets of what was tolerated
- current nation state relationship
- Current nation state relationship
- Again it's all additive though
- It's a new option
- No choice?

RETRIEVED

- traditional protective natural frameworks for organizing
- Nature
- How nature organizes
- organic soil-like structures of human collaboration
- Indigenous ways of knowing
- grassroots community organizing
- informal working patterns
- collective community care models
- Coop tradition
- digital ownership
- stakeholder ownership
- Sense of agency
- ownership of digital space
- Value capture
- "pioneering" energy
- the sense of possibility that lies ahead
- Colonial frontier
- Energy
- Self-propelled
- reciprocity (Benefit for human & planet)
- reciprocity
- opportunity to contribute
- engage two sided / equity group and scrubbing
- Trust

REVERSED

- Drowning in politics
- Politics
- Cutthroat society
- Cult of personality
- Individual hero
- Capitalist nightmare
- Exploitation
- Everyone for themselves
- hyper-focus on profit
- SCARCITY (mindset)
- Takeovers
- Scale too quickly

So much of the "REVERSE" is actually happening right now.

Reversed feels like where we are starting from today

PRESENT DAY

"I think we all will forever love here stories but I have a hope that they shift from being the rulers of entity empire to being people in our communities that treat each other really well"

Because yes, DAOs are happening, but they are also all experiments in "hype" but also answering what is happening in the world now

APPENDIX F: <mark>Co-op & DAO Pains or Weaknesses</mark>

Expanded responses by interview participants aggregated into top level themes

Co-op	DAO
Learning curve (steep) ☐ Complicated ☐ Learning curve ☐ Need guidance	**Legal questions** ☐ Incorporation ☐ Consent (airdrop tokens) ☐ Liability (for founders & members)
Wrestle with capitalist mindsets ☐ Corporations swallow up the little guys ☐ Co-op becoming a capitalist entity ☐ values of the democratic features get lost ☐ Shift that start-up mindset that scale is the goal ☐ Co-ops are self-marginalized	**Wrestle with capitalist mindsets** ☐ Still connected to capital markets outside web3 ☐ Extreme speculation ☐ FOMO ☐ Colonizer mindset
Capital access & scaling ☐ difficulty with scalability ☐ Capital access *(fundamental problem)* ☐ profound limitations *(capital access)* ☐ Marketing ☐ Funding ☐ *How do you build something that is capital intensive (requires a lot of resources to build) without funding infrastructure?*	**Always pressure to grow and scale** ☐ Competition ☐ Growth mindset
Burnout ☐ Energy and excitement fading	**Burnout** ☐ Attention consumed by needs of the DAO democracy ☐ DAO demands so much of quasi-democratic subjects
Staled function ☐ Cannot function – no compromise is possible ☐ a bunch of incommensurate worlds in conflict with each other *(under the pretext of trying to achieve democracy)* ☐ Be a Utopia *(Is that achievable?)* ☐ Look at Co-op to meet all needs, be perfect, etc ☐ Can't force a group to move where they don't want to go ☐ Different communication styles *(difficult to manage generationally)* ☐ They are a group of humans coming together *(with personalities, problems, and points of view)* ☐ self-reinforcing systems ☐ self-replicating	**Governance** ☐ Bucking authority *(who's in charge?)* ☐ Design of governance difficult ☐ DAOs are getting regulated by territorial bodies – which is making them stifled ☐ Can't force a group to move where they don't want to go
Hard time entering emerging digital spaces ☐ "DAOs aren't new" ☐ Skeptical of the web3 hype, the mantra, the memes, the tokenization ☐ Very skeptical of DAOs *(healthy skepticism)* ☐ Limited capacity to enter into emerging digital spaces ☐ Fear of not being technical (older generation)	**Risk** ☐ No safety net ☐ More pain from mistakes ☐ It's brave and a lot of *(unassumed)* risk ☐ Uncertainty
Resistant to change *(emerging ideas, new tech, etc.)* ☐ Can become insular ☐ "democratic self-governance isn't new" ☐ kind of against financialization of organizing ☐ very skeptical of DAOs *(healthy skepticism)* ☐ Old school thinking *(because of history)* ☐ "DAOs aren't new" ☐ Skeptical of the web3 hype, the mantra, the memes, the tokenization ☐ Change (different than status quo – capitalist, colonial) ☐ Co-ops are rigid ☐ Hard time evolving to the times *(a Co-op from 1910 may still have an antiquated foundation)*	**No collective knowledge** ☐ DAOs don't have any best practices or collective knowledge ☐ DAOs haven't been tested ☐ no one to talk about this with ☐ No shared meaning ☐ Overwhelm of information & opportunities ☐ Uphill battle to educate, win hearts and minds ☐ Barriers to entry
	Culture ☐ "White cis man" space ☐ Community and culture

APPENDIX G: <mark>Co-op & DAO Strengths or Advantages</mark>

Expanded responses by interview participants aggregated into top level themes

Co-op	DAO
History & Clarity ☐ Very clear of their territory ☐ tested principles around ownership, labour, deliberation ☐ hundreds of years of defining principles and practice ☐ honest about their limitations longer story ☐ longer tradition ☐ depth of experience ☐ history	**Experimentation** (Testing and experimenting) **Learn quickly from mistakes** ☐ More pain from mistakes ☐ Pain hurts more and learn from it quickly ☐ No safety net
Power of community ☐ Do not stay alone for long ☐ community-minded from the start "you are one of us!" ☐ Community ☐ Diversity ☐ Little guy *(Daniel)* able to do something a big company *(Goliath)* can't do	**Flexible and variety** ☐ Move around DAOs/web3 (easily?) ☐ more emergent, less hierarchical, less rigid, more fluid way ☐ (Easier) to find others like them ☐ DAOs variety ☐ DAOs are flexible ☐ Little guy *(Daniel)* able to do something a big company *(Goliath)* can't do ☐ Transparency
Agency ☐ Can't delegate your vote ☐ Agency over yourself	**Ownership** (focus on) ☐ Community ownership shared ownership ☐ decentralizing power sources ☐ Ownership of talent, energy ☐ Creating value for people that need it
In Real Life ☐ Co-ops real world presence	**Digital First**
Systems & resources ☐ Resources: historical, legal, integration with civic fabric ☐ Depth of practice ☐ Co-ops have a tested legal structure ☐ Self reinforcing systems	**Systems and tools** ☐ DAO Toolkits ☐ Look at the whole system
Values ☐ Conviction ☐ Creating value for people that need it	**Capital access & scale** ☐ Good at capital access ☐ Tackle problems at scale
	Inclusivity ☐ Other voices are being heard (platform'd more) ☐ Especially in terms of nature, holistic views ☐ willingness to play
	Community-minded ☐ Small community ☐ Regulated by crowd credibility (trust)
	Borderless ☐ Borderless *(working across geographies)* ☐ Can exist outside the "normal" boundaries
	New energy ☐ Good conversations are happening ☐ Enthusiastic builders ☐ fresh perspective, question everything ☐ New pathways ☐ New models ☐ Lots of opportunity (DAOs on music, arts, climate, reproduction rights...)

APPENDIX H: <mark>Co-op & DAO Opportunities</mark>

Expanded responses by interview participants aggregated into opportunity questions relating to the scenario quadrant

<mark>OPPORTUNITIES</mark>

Quadrant	Question	Documentation
Retrieve	**How might we leverage this "global" opportunity?**	☐ Borderless ☐ **North American (NA) to global context** ☐ Move around DAOs/web3 (easily?)
Reverse	**How might we create more opportunities to practice democracy?**	☐ People are out of practice (practicing democracy) ...because so many of these systems we use are not designed for democratic practice ☐ Accessibility for older generation that is practiced in democratic governance ☐ DAOs set up enable experimentation across that ecosystem ☐ DAOs value testing / experimenting ☐ Human's need to be comfortable with trust building ☐ TRUST-BUILDING ☐ Replicate / template *(use successful DAOs as template)*
Retrieve	**How might we access community shared knowledge or sense-making?**	☐ Clarity *(DAOs)* ☐ History and collective wisdom ☐ Everyone should be talking to each other ☐ Co-op legacy, Streams feeding Co-ops ☐ knowledge
Enhance	**How might we scale community ethically?**	☐ Small community ☐ Ownership over trajectory ☐ Scaling: Speed of growth ☐ DAOs are uniquely able to tackle things at scale that we wouldn't be able to do ☐ Motivation to change this assumption that every large scale or innovative activity should be owned by investors ☐ Tackle problems at scale ☐ Engagement (DAOs)
Reverse	**How might we create regulations and frameworks that protect but do not stifle change?**	☐ DAOs are getting regulated by territorial bodies – which is making them stifled (we need to figure out a way, probably at the level of those governments, to create a framework that is more conducive to shared ownership) ☐ Regulated by crowd credibility (trust) ☐ Map of future ☐ *"How can DAOs map out the future that they hoped for, and be able to articulate ... a theory of change?"*
Obsolesce	**How might we understand and build with a new generation that wants to take risks?**	☐ Framework for risk ☐ Generation that has lifestyle buffer/safety net (or willing to create buffer) ☐ Generation that wants to create ☐ "People are there because they want to be there" ☐ Self-propelled ☐ wearing many hats
Enhance	**How might we build these viable economic communities that value people first?**	☐ Value flows *(other than capital $)* ☐ People first

APPENDIX I: ==Resources==

The following resources are compiled for learning more about DAOs, Co-ops, and how to start your own.

coopspack.xyz / A starter pack is for those new to Cooperatives and how they relate to DAOs.

future.com/dao-canon / a16z's DAO Canon, a list of resources for those seeking to understand, build, and otherwise get involved with these "decentralized autonomous organizations".

platform.coop / A hub that helps you start, grow, or convert to platform co-ops.

society.mirror.xyz / A learning DAO exploring the impact of crypto on culture and society.

odysseydao.com / Accessible pathways for learning about web3.

mybff.com / A new community for the crypto curious. An open-access community with a mission to help women and non-binary people get educated, connected, and empowered in web3.

ica.coop / The International Cooperative Alliance which unites, represents, and serves Cooperatives worldwide.

metagov.org / The Metagovernance Project is an interdisciplinary research collective. They build standards for digital self-governance and have an active community and regular seminars.