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Confronting Web3 Technology: Opportunities, Challenges and Community Formation

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by

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Abstract

The emergence of blockchain technology created an entire industry of innovative new digital assets—or tokens—and diverse new fields of expertise founded on ideological aspirations of a new World Wide Web that reimagines digital value transfer through decentralization and disintermediation. Experimentation in the so-called "Web3" industry produces rich new fields of ethnographic study revealing the experiences of diverse individuals navigating novel technological capabilities which give way to new avenues of identity formation, community building, and ecosystem creation. These exciting new endeavors come with difficult challenges threatening the realization of ambitious visions for digital futures. Ethnographic research conducted through discourse analysis, participant observation, and formal and informal interviewing identified three key challenges stemming from Web3 builder experiences creating ecosystems through token-economic design: the prevalence of scams impedes productive development and mainstream perception, tokenomics—the design and study of token-based economies forming the much of the Web3 industry—is highly complex and under-developed as a field lacking sufficient expertise to meet demand, and regulatory uncertainty prohibitively raises costs and risk for builders. As the industry continues to grow more social science research and interest is needed to shed light on human experiences with these novel technologies.

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Introduction

In November 2021 the USD price for Bitcoin exceeded $65,000 per coin (CoinMarketCap, n.d.). The meteoric rise was rather short lived, with the price falling starkly shortly thereafter, eventually settling under $17,000USD in just a year's time. Most interest in the cryptocurrency space from social science researchers appears to extend no further than fleeting dismissal or outright criticism through a handful of widely accepted notions about energy consumption or speculative bubbles. This lack of interest leaves a tremendous gap in anthropological and social science understandings of emerging technology, novel economic systems and tools, the potential future nature of digital spaces, and the intersection of these systems with real world communities of people. Whether or not researchers and academics find the "crypto" and "blockchain" space to be palatable personally is of no consequence to the fact that as of September 2022 16% of adult Americans had purchased some form of digital asset (U.S. White House, n.d.). These assets and the greater ecosystem they have created warrant serious attention, not only as speculative devices generating attention and interest for millions of people, but also as rich fields of ethnographic data concerning the interactions of human beings in digital spaces, and their economic aspirations and projects within them.

What is it: Industry Technologies and Terminology

One quality of the crypto industry that keeps it from being subject to greater interest is that it is incredibly confusing to navigate and understand. Is it made up of internet money? Is it a new form of technology? Is it expensive JPEG images? Is it Wall

Street for the technologically savvy? The answer to all of these questions is largely, yes. To fully grasp the diversity of this space—referred to as "Web3" and understood to be an entire industry—it is helpful to define some key terms and qualities before beginning to disentangle them and tease apart their implications for the human beings that interact with them. Web3, at its core, is an emerging industry building a new form of the World Wide Web that transforms the nature of digital spaces with novel economic technologies and digital infrastructures using blockchain technology and digital token-economic systems that are inherently disintermediated from centralized authorities and institutions. Over the last five or so years, industry framings of the space shifted from being centered around digital tokens and cryptocurrencies, towards the underlying technology enabling them i.e. blockchain. Understanding why blockchain technology is so intriguing for so many people requires an understanding of how it functions. At its simplest, a blockchain is a digital ledger of transactions. These transactions are recorded chronologically, stored in batches that are then cryptographically secured (linked like a *chain*) to each other such that any efforts to tamper with the ledger would reveal the malfeasance. The key innovation that emerged from blockchain traces back to the 2009 launch of the now infamous and genesis cryptocurrency, Bitcoin.

The principal goal of the anonymous creator—or creators—of Bitcoin was to launch a so-called "electronic cash" system that does not require participants to go through a centralized intermediary or financial institution (Nakamoto, n.d.). In order to make this possible, Satoshi Nakamoto, the named creator of Bitcoin, designed the blockchain as public decentralized accounting software where volunteer participants

maintain the ledger simultaneously. This ledger tracks the movement of the digital assets, or bitcoins, between participants. Incentivizing volunteers to perform the service of continually maintaining the ledger and verifying the transactions posted to it created the need for bitcoin, a token or digital asset that would reward participants for their "labor." Participants that run the software, verify the transactions, and coordinate synchronization of the state of the ledger in the Bitcoin ecosystem are referred to as "miners." Bitcoin miners maintain a copy of the entire blockchain transaction history while also gathering all new transactions into batches to be posted to the ledger. Before this can take place, miners enlist their computer systems to participate in a race to solve a complex mathematical problem. The first miner to solve this problem successfully is granted the ability to broadcast out the new list of transactions to all other participants to be added to the blockchain and is rewarded in the blockchain's native asset, newly "mined" bitcoin.

Tokenomics: Novel Assets and Areas of Expertise

Tokens that are launched as foundational native digital assets to a specific blockchain, critical to the function of the blockchain itself, are referred to as cryptocurrencies. Services performed in the ecosystem, such as that of recording and verifying transactions on the ledger, are paid for in these assets. It is important to note here that the verification of transactions to be posted to the ledger is done by community volunteers seeking to be rewarded in the native asset of a particular ecosystem. This process looks somewhat different for each blockchain, but the goal always remains that it is theoretically carried out by community members, and not a centralized authority, such as the Automated Clearing House, who is responsible for processing and verifying

electronic credit and debit transactions when we swipe our cards for purchases. Instead of a sole intermediary handling this task, blockchain communities orient themselves and the technologies they build on top of for these processes to be carried out by distributed volunteer members of the community. Designing these token systems is a complicated undertaking referred to in the industry as *tokenomics*, a portmanteau of "token" and "economics." Tokenomics, sometimes called cryptoeconomics, was revealed in this project, as an essential tool and emerging field of study nested at the core of Web3, driving the communities within the industry. This new field is the study, design, and implementation of token-based economic systems for Web3 projects, incentivizing participants to take coordinated actions that benefit the ecosystem, projects, and communities within it.

The intentions with which tokenomic designs are created vary significantly. The Bitcoin network, for example, while complex technologically, is actually rather straightforward in its intended function: to serve as a pseudonymous—accounts in the Bitcoin ecosystem are tied not to identities but to alphanumerical addresses—digital form of cash or cryptographically-secured currency. Most social science research encountered during the literature review focuses exclusively on Bitcoin. While it is true that Bitcoin is the most popular cryptocurrency, there are *thousands* of other cryptocurrencies in circulation, many of which draw significant attention and a handful of which compete directly with Bitcoin by either copying the designs of the Bitcoin network or by iterating upon the concept and expanding its function significantly. This second approach proves incredibly noteworthy in understanding the true diversity of the industry and the shared

vision for its future potential, with implications for collaborative governance, technological experimentation, transparency, community building, development of novel digital assets, and intriguing new online ecosystems.

During the course of our research inquiring into the nature of tokenomics and Web3 builder communities, we encountered blockchain networks designed to function in remarkably diverse ways. More than just tokens aspiring to represent digital cash used as a reward for providing public technological infrastructure, systems emerged since the development of Bitcoin to serve innumerable different purposes, and experimentation with these systems continues each day. Some of the systems we encountered were designed to digitally represent and "tokenize"—represent as a digital token recorded on a blockchain ledger—carbon assets, wireless connectivity credits, complex investment vehicles, community membership, or certificates of ownership over various real-world and digital assets like art or property, to name only a few. Where anthropological approaches to the blockchain industry become ensnared in a hyper-focus on the "gold-standard" crypto, Bitcoin, they miss the depth and diversity of the industry. Some describe the development of smart contracts and the subsequent expansion of tokens and ecosystems as a "Cambrian explosion," (Jevans 2018) likening it to the largest biodiversity expansion period in the history of the world. While this is certainly a bit hyperbolic, the expansion of the Web3 ecosystem at large has been extraordinary.

The materialization of thousands of digital token ecosystems raises interesting questions about the nature of token money—forms of money that are accepted as value not due to their intrinsic qualities but to the promise of value from the issuing body.

While state cash systems, or fiat monies, are also forms of token money, these are not the focus of interest for the research here. The tokens addressed in our research exist digitally with no physical form whatsoever. They are issued by blockchain networks as rewards for network participants performing specific functions within the ecosystem. Digital tokens of these kinds make claims to monetary purposes but in large part only aspire towards this quality since there are currently little opportunities for these tokens to be utilized as a means of exchange outside of the blockchain network ecosystem that they are born of. Proponents point to digital tokens as improved forms of token money for a number of reasons. As mentioned earlier, digital tokens are secured cryptographically, meaning that they are recorded through a cryptographic process making them incredibly difficult to duplicate or falsify. Digital tokens are subject to the programmable code they are created with, such that economic and monetary characteristics like total supply and emission schedules—the rate at which tokens are put into circulation—can be controlled hypothetically much easier than that of fiat money systems. Additionally, the blockchain ledger on which token movements are recorded is public and transparent. In this way, anyone with a computer and internet access can theoretically see the entire history of the blockchain ledger and the movement of tokens throughout that history.

The emergence of blockchain technology and the subsequent explosion of interest in crypto-token experimentation was the topic of inquiry for this research project. At the Crypto Research & Design Lab (CRADL), two other researchers and I conducted ethnographic research in the crypto, blockchain, and Web3 industry carrying out interviews, participant observation, and discourse analysis as part of the organization's

mission to center human voices in the industry. Our research at first provided the team with rich ethnographic research opportunities to inquire about the existence of these tokens, the purposes they serve, and the intentions of the individuals behind their development. Over the course of our research we discovered that the Web3 industry was about far more than the creation of digital token assets, and is certainly about far more than any singular token or so-called cryptocurrency. Our participants revealed the importance of the formation of communities behind these systems and assets and the challenges they face in fostering communities in pursuit of their visions of a new digital economic future. These participants largely share a collective vision of the future they aim to create through blockchain ecosystems, centered around disintermediation and community participation.

Literature Review

Fully understanding crypto and Web3 requires that we grasp the diversity of actors involved and the respective identities and motivations they bring to the industry. First glances might lead researchers and others to, whether intentionally or not, locate the narrative of the entire ecosystem through the interests of one of two groups: either retail investors, or political projects and ambitions of builders and other industry professionals associated with the production of the industry. Examinations of Web3 are hence generally framed through either speculative behavior or libertarian ideologies. Not only is the space far more diverse than these two goals, but these goals and others might be held congruently. This section outlines approaches that are useful in situating the Web3 industry as a complex process of identity formation and community building grappling with the opportunities and challenges of decentralization and disintermediation.

Identity Formation

Indeed, understanding economic behaviors, projects, and ambitions as componential to identity formation is not a novel concept. Karen Ho, in her work among Wall Street financiers, outlined the clearest articulation of this phenomenon for industry employees and participants (2009). Ho challenges anthropology to forego the traditional approach to markets as abstract externalities, and instead seek to understand them as the embodied practices of actors who form their own identities through them, and in return shape the market itself (2009). While Wall Street is an extreme case, with uniquely situated actors, it is helpful to explore Ho's findings, especially as crypto and Web3 emulates Wall Street in numerous ways. Ho's research revealed the way in which elite

Wall Street financiers more than just seeing themselves as essential to the market actually identified with it through their actualized cultural model; “investment banks' organizational culture produces (and is produced by) their self-understanding as embodiments of the market, as the ultimate 'liquid' employee” (Ho 2009, 252). Ho’s understanding of Wall Street financiers proves incredibly useful in framing the individuals who hold power to shape the Web3 industry directly or indirectly, such as founders, venture capital firms, trading desks, and even some of the builders and engineers who exhibit similar meritocratic hubris in pursuing their visions of creating novel monies and digital markets, often at the expense of the individuals buying into them. Wall Street financiers exercise significant power through their identification with the market. It is understandable, then, that Web3 builders—particularly the ones responsible for *creating and personally designing* the very economic systems the entire industry is composed of—might identify with the products of their labor even more closely.

However, retail investor participation in crypto markets should be seen differently. Participation for many of these individuals is often chalked up to speculative gambling of sorts. There is a tension existing between the perception of these market participants for outside observers, their perceptions of themselves, and the perceptions of them for builders designing token systems allegedly with them in mind. It is important for anthropologists to take seriously the efforts of individuals consuming crypto products as more than one-dimensional behaviors, but as projects of identity formation and economic improvement.

Many groups, including some social science researchers, dismiss the consumption of crypto products and the people that consume them. Instead, the consumption of these digital assets might be seen as the efforts of diverse status groups participating in economic activities in an effort to improve their positions within socially structured spheres (Carrier and Heyman 1997, 364). Through Carrier and Heyman (1997), I argue on the one hand for the understanding of crypto and Web3-based product consumption as politically, socially, and economically imbued strategies of status, but agree wholeheartedly with their argument that these strategies must not be reduced to simple power structure struggles. While it may be the case that individuals participating in the space do so with explicit motives to undermine hegemonic structures—in fact, the entire space is built atop an ideology of disintermediation—this does not represent the reality of the diversity of social groups and individuals with often overlapping and multiple strategies and intentions for their involvement. Furthermore, this perspective is revealing for the strategies that builders take in considering and accounting for their communities when designing the infrastructures and products they build.

Community Building

When we focus on crypto and Web3 as merely the speculative behavior of individual digital gamblers we miss the rich and complex foundations that these ecosystems are built on. In truth, without dedicated communities, none of these projects would exist. Furthermore, their ambitions of decentralization require communicative and participatory involvement from the communities behind them in place of the central actors they sought to extract. While these new structures are far from perfect, they do in

many cases open up space for greatly increased community participation, dialogue, and influence. Anthropological research will benefit greatly from attention to these communities and their roles and implications for ever-changing digital spaces where more and more of our daily lives take place.

Benedict Anderson's theoretical conception of nations as "imagined communities" (1991) offers a useful model to understand the cohesion, shared initiative, and camaraderie often found among Web3 enthusiasts as individual groups forming around specific products, but also among the greater Web3 ecosystem. Anderson understands nations to be imagined political communities, "imagined as both inherently limited and sovereign" (1991, 6). Importantly, these "imagined communities" are socially constructed. While there are some limitations to this model, for instance the geographical boundedness that is nonexistent in digital spaces, the nature of Web3 communities reflects this understanding in many ways. The industry is complete with an origin story, antagonists, shared visions of the future, public meeting spaces where substantial discourse takes place, media dedicated entirely to the industry, cultural artifacts, shared folklore, even experimentation with governance structures that intend to reimagine existing ones in more equitable ways, and of course the foundational goal of creating novel economies for their communities to transact within. Parallels only grow more and more common once moving past the initial image of the industry to see instead just how many different structures people are iterating upon with blockchain as the technological economic infrastructure.

It is not difficult to see how the crypto community so readily takes to constructing an imagined community around their various shared projects (and also ultimately as a singular large community pitted against crypto critics). Experts designing the token systems underneath these projects express comparisons to the considerations of a nation-state economic system during their work. As a purist ideology, the Web3 endeavor is rooted in the identification of fiat currency systems as flawed, socially produced, and therefore, cynically, they propose to take that fact and construct their own forms of value in an attempt to undermine the state, and take ownership over the new token economies they create and the data economies they participate in. It may be that these attempts are perhaps in vain, containing critical gaps in logic and execution, such as the actual veracity of tokens to be utilized as currency in any other context outside of these ecosystems (Scott 2022, 210). Still, we understand how participants are primed to be open to this version of community formation.

An interesting aspect of these imagined communities, that contributes to and strengthens the cohesion among the group, is that they largely share a vision of the future oriented around specific political, social, and economic ambitions. Interestingly, this shared vision and the passion that the community exhibits in its execution—even in the face of failure after failure—is not unique even within the financial technology space. In "How the Future Shaped the Past: The Case of the Cashless Society" (2013), the authors outline the history and development of automation and computer technology that imagined a future cashless society, with all transactions being processed electronically. Without taking seriously people's fascination with the future, historians and researchers

may underestimate just how influential imagined futures are for the trajectory and ultimate realization of novel technology and its adoption (Bátiz-Lazo, Haigh, and Stearns 2013, 104). At times influenced by popular fiction and other creative imaginations of the future, those seeking to pursue "shared visions" of the imagined cashless societal future saw that vision as the "natural result of adopting an emerging, unproven technology" (Bátiz-Lazo, Haigh, and Stearns 2013, 105). The authors frame this approach through Flichy's "imaginaire," who defines it as "a 'collective vision' [tying] the concept closely to utopian thought, arguing that over time a utopian fantasy is transformed through experimentation and the application of specific technologies into an ideology that directs change in the real world" (Bátiz-Lazo, Haigh, and Stearns 2013, 105). Failures in experimentation pursuing the imaginaire are experienced only as small inconveniences along the way to the inevitable future destination. Importantly, the success of this vision depends on convincing others that the vision of the future is achievable; the authors locate this process within the concept of "institutional isomorphism," borrowed from DiMaggio and Powell, as the processes by which organizations in a particular field tend to grow more and more alike (Bátiz-Lazo, Haigh, and Stearns 2013, 105). As these organizations reach consensus on what this shared future vision looks like, it becomes possible to build broad coalitions around which the vision can be sought and what execution of it through a variety of approaches and systems might look like.

So much of the Web3 industry sits on top of ideologies of public access and iteration. Often, crypto-designs are copied or "forked" off of existing models. As these models are proven over time, they solidify as mutually accepted approaches to the Web3

imaginaire. Still, many components to the space are still being negotiated, and one can easily perceive the industry as existing in the early stages of identifying successful designs as they move towards isomorphism. Where the industry was first built with proof-of-work consensus mechanisms in mind, we see today that proof-of-stake and other less energy intensive approaches are starting to dominate the design of these networks and their tokens.

Decentralization

One vision proves durable and consistent. Crypto ideologies, past and mostly present, rest solidly upon the notion of decentralization. Decentralization in the form of disintermediation of novel digital token-based monetary systems is the defining quality of most popular cryptocurrencies today, and the battle-cry of the flagship crypto, Bitcoin. Many divides in the space, and conflicts ultimately pertaining to the execution of the crypto imaginaire, are based around questions of decentralization. Decentralization is so core to the Bitcoin creation story and stated objectives that the name for the adopted industry standard metric for measuring the degree of decentralization of a crypto project is the "Nakamoto coefficient," taking its namesake from the anonymous creator of Bitcoin, Satoshi Nakamoto. Such powerful claims on the quality of decentralization raise questions about the reality of its role, and how it has manifested, or not, in practice. Industry conversations about decentralization are almost always framed through the designs of the token, where the holdings are primarily located, how they are distributed, and who controls or can contribute to changes in the token design or state. These are

largely technological design critiques. Others have begun to expand that critique to additional spheres.

Challenges to claims of decentralization of the Bitcoin ecosystem, and other proof-of-work consensus protocols, typically point to Bitcoin mining, or the process of securing and adding transactions to the Bitcoin ledger which rewards these participants in new Bitcoin. What started as a relatively accessible endeavor for Bitcoin enthusiasts and community members has since exploded into a conglomerate dominated industry where only the parties with money for industrial computing hardware and large warehouses to run them have any chance at turning a profit (Calvão 2019). Others point out that beyond the technological tools required, these systems overlook their dependence upon additional infrastructures such as electrical grids and ecosystem and product on-ramps, like the Automated Clearing House network which, while theoretically disintermediated from the functionality of blockchain transaction processing, still very much plays a role in bringing individuals into ecosystems (Maurer, Nelms, and Swartz 2013, 272).

Even in undermining one of Bitcoin's primary antagonists—state intermediation in value transfer—notions of the actual degree of decentralization come into question. One of the often-cited advocacy points for Bitcoin and other cryptocurrencies is that it is, according to some, a borderless currency. The case being that individuals seeking to transfer value across borders can do so without falling victim to extreme fees from services like Western Union and other middlemen perceived to be skimming off the top as often vulnerable populations send remittances back home to their families. Though this, too, is revealed to be far less straightforward than originally offered. Tankha (2020),

examining digital financial transactions between the United States and Cuba, points out that these transactions rely, in fact, on "a set of interconnected, interdependent, and incongruous technical and social infrastructures—electronic payment gateways, internet cables and Internet Protocol (IP) addresses, cash flow circuits, social networks of trust and reciprocity, and the pernicious histories and (un)diplomatic channels of United States-Cuba relations–that simultaneously facilitate but also detain the settlement of cross-border payments and currency exchange" (138). Politico-infrastructural histories shaping fiber-optic technological access and the geo-politics of embargos remind the wishful-minded that we can perhaps never be too far from the influence and control, whether direct or indirect, of the state.

Critiques on the reality of decentralization and disintermediation of the crypto and Web3 industry also point out that claims towards these qualities focus too strictly on the technology without acknowledging glaring blind spots in the various other infrastructures and processes involved in the practicality of these networks and communities in action. Even if blockchain technology is designed in a way that appears to be "decentralized," factors such as the potential outsized influence that a particular founder or community member may have on the project or token can be overlooked in industry narratives. Cases such as that of Electra—a cryptocurrency project that eventually fell victim to a fractured community resulting from the actions of its founder undermining the new directions that the development team and community members intended to pursue—illustrate how, despite decentralizing governance processes, token holdings and the impact large movements of them can have on the stability of an ecosystem are potentially centralizing

to the extent of a single malicious actor sinking an entire project that once competed for a role as the number one cryptocurrency project (Caliskan 2022). Others call into question the very nature of "publics" and what constitutes so-called *public infrastructures*. Nelms, Maurer, Swartz, and Mainwaring (2018) outline the recentralizing tendencies of start-ups and tech companies who subject their communities and participants to governance structures that are more accurately rooted in "End User License and Terms of Service agreements" (27). Crypto attempts to bill itself as a public good but, as the authors point out, is dependent on the code it is created with. Additionally, access to particular technologies that cannot feasibly be acquired by all of a particular public create something of a *technocracy,* where illusions of decentralization are achieved only by those who can afford to not be trapped within cash economies (Nelms, Maurer, Swartz, and Mainwaring 2018). These authors prudently point out that decentralization is an extraordinarily nuanced and elusive objective, not reducible to an easily achieved quality or state of being.

The lenses described in this section helped to frame and understand the actions and endeavors for many of the participants we encountered during this research. Web3 builder communities and others employed in the development of the industry appear to reflect many of the qualities of Wall Street financier identity formation described in Ho's (2009) work. Comprehending the projects of the various actors participating in the space benefited significantly from our understanding of Web3 community cohesion, determination, and shared identities as explainable through Anderson's "imagined communities" (1991). In fact, it appears as though much of the space is appropriately

perceived as existing in and being produced by the imaginations of those participating in it. The pursuit of an *imagined* shared vision for a Web3 future further explains the determination characterizing the industry (Bátiz-Lazo, Haigh, Stearns 2013). And no examination of the field would be complete without a consideration of decentralization, for which we are grateful for the many critical and illuminating perspectives that molded our understanding of realities for this industry defining tenet (Caliskan 2022; Calvão 2019; Maurer, Nelms, and Swartz 2013; Nelms, Maurer, Swartz, and Mainwaring 2018; Tankha 2020).

Internship / Organization

The research presented here was conducted through an internship with the Crypto Research & Design Lab (CRADL). CRADL is a social science research organization producing reports focusing on the experiences of people interacting with and building Web3 technologies. CRADL's stated organizational vision is to "put people at the center of crypto," as an ethnographic research organization centering human experiences in the crypto and Web3 industry. CRADL's mission is to produce evidence-based thought leadership to accelerate the industry's ability to be a driver for equity. CRADL stakeholders include founders, policymakers, investors, and product teams, as well as the World Economic Forum, through which we channeled and conducted much of our research. The organization produced a number of reports examining the Web3 industry. Some of these reports included "UX in Cryptocurrency" which outlines landmines in crypto financial application user experiences, "Cities and Crypto," a profile on Web3 interventions for city funding, "Income and Wealth Creation in Web3," and "Black Experiences in Web3," which explores why Black people in the United States are adopting crypto at higher rates relative to other groups.

CRADL was founded, in part, by Tricia Wang, a tech ethnographer with expertise in design, community organization, and consultation. Tricia led the CRADL team alongside Lauren Serota, a design research expert with experience working with emerging markets and technologies. The organization consisted of around 10 researchers with varying backgrounds ranging from economic development to design strategy. Researchers collaborated on projects, typically with lead researchers guiding the process,

supported by one or two others. The teams would engage industry participants seeking to better understand their experiences and stories with Web3 technology. The reports that came out of these research projects aimed to inform industry understandings of the space and help guide and inform regulatory perspectives with more holistic data on people's experiences with Web3.

As a research intern I was hired to learn the organization's research process and methodologies, assist with tasks related to the dissemination of existing research, provide support for the preparation of CRADL's participation in the Consensus 2022 Web3 conference in Austin, TX, develop the organization's participant personal identifiable information (PII) protocol, perform data entry, and participate in the design and execution of the "New Ecosystems in Web3" research project, data collection and analysis, synthesis, and report writing process. The research presented here reflects this project, the process we underwent, and the findings that we presented as a result of our research.

Our research team consisted of three individuals, myself included, with occasional as-needed support provided by additional researchers and lab higher-ups throughout the research and report writing process. The research project was led by Kyle Becker, a senior design researcher with over ten years of experience in digital product research, design, and strategy. Kyle led myself and Katherine Paseman, a design researcher who specializes in working with early-stage organizations, through the research and report writing process. For the majority of the project our team was located in various cities across the United States spanning three different time zones. In addition to the physical

field site research opportunities, our team organized in-person collaborative time for the research development, synthesis, and report writing processes.

Research Questions, Process, and Methods

The "New Ecosystems in Web3" research project was conducted with the intention of informing industry perspectives for the individuals and organizations operating within Web3, primarily the builders, developers, founders, and regulators creating and guiding the industry. We sought to understand the roles and experiences of individuals building in Web3, how teams went about developing and implementing tokenomic systems, and the challenges emerging from that design process. Our team's research further inquired into the current state of the Web3 industry and the potential "path dependencies"—the processual and developmental constraints emerging from hardened or hardening decision-making consequences—shaping its evolution for the individuals and projects building and participating in it. Our inquiry was guided by the following research questions:

- How are path dependencies emerging in Web3?
- What challenges do founders, builders, and developers face creating projects in the industry?
- What is the role of tokenomics in building the Web3 industry?
- How do Web3 tokenomic systems designers, builders, developers, and creators make decisions about the design of the systems they are creating?

These research questions, and the data that came out of them, reflect CRADL's mission of identifying the industry's role as a potential driver of equity and was in line with the goals of the organization to center the human voices and experiences within the Web3 industry. Our principal focus was on the design and creation of tokenomic systems. We

approached the research from this perspective because the tokenomic systems underlying the Web3 industry were revealed through our initial research efforts to be foundational to the creation of communities, products, and ecosystems quintessentially characteristic of the industry. As with any other business space, funding and capital proved to be a very important factor for Web3 teams building these projects. Additionally, understanding the experiences of diverse builders in the industry is critical to examining whether Web3 is delivering on promises of driving equity and improving on the shortcomings of Web2. We sought to understand barriers impacting the realization of Web3 futures as constrained by project funding, access for the diverse groups and individuals aspiring to participate, and the developmental process and technologies needed to make their visions of the future and of the industry possible. From May 2022 through October 2022 our research team conducted qualitative research in the Web3 industry at various in-person and digital field sites, analyzing industry publications, discourse analysis of industry narratives and forum interactions, participant observation at industry events, presentations, conferences, and of tokenomic consultant processes, and formal and informal interviews with Web3 founders, builders, consultants, participants, investors, and legal experts.

Participant Observation

Our physical field sites consisted of 11 separate crypto, blockchain, or otherwise Web3-oriented events. These events included one of the largest crypto conferences in the country, Consensus 2022, which was held in Austin, Texas. Conferences like Consensus offer the unique opportunity for shared physical space and networking for an industry

that is otherwise almost entirely digital. Through the research, it became clear that while Web3 proudly proclaims its ability to exist almost entirely as a collection of global digital communities, shared in-person space still holds significant importance, and in many cases makes the difference between privileged builders with access to deep networks and resources, and those struggling to make their vision a reality without.

We attended pitch events in the San Francisco bay area, where start-up companies would preview their new projects for prospective investors and venture capitalists. Other events included more informal coffee meet-ups and cocktail hours where we were able to make contacts with individuals working in the industry. Our team was also invited to a Web3 coworking space in Manhattan, where we met with individuals and projects working out of the building. In the week that we were conducting research there, the hosts held an event celebrating a critical landmark upgrade for Ethereum, one of the most popular and expansive active blockchain ecosystems. Some of the individuals we met there were developing Web3 gaming projects, working on self-described "infrastructural" technologies, and various other endeavors.

With the crypto industry so heavily oriented towards digital communities we were able to access diverse and rich digital field sites during our research. Our team conducted participant observation in 10 Discord and Telegram groups. These groups are the primary locations where communities form around crypto projects, with many, particularly the projects on Discord, consisting of different channels nested within the project's profile. Channels were often dedicated to fostering particular types of conversations and interactions for their communities. For example, a project might have a channel dedicated

to community conversations about the on-going democratic governance of the project, where community members can propose changes to processes and even formulate official governance votes where the community would decide on the proposal to be potentially initiated. Other channels are dedicated to topics like sharing memes, which function as unique crypto cultural artifacts, building folklore around individual projects and the broader crypto ecosystem. Projects use these platforms to share updates and news, and grow engagement from their community.

Desk Research and Discourse Analysis

Our research included dedicated time for thorough desktop research and discourse analysis. We gathered and analyzed over 80 articles, papers, trainings, podcasts, and videos on various topics relevant to the research. This included topics such as cryptoeconomics, metrics, and project whitepapers, which are both blueprints and roadmaps for Web3 projects and the go-to resources for learning about a particular project's ins and outs. Discourse analysis helped shape the direction of our research and allowed the team to go deep on a number of emerging topics and actively developing professional fields within the Web3 industry.

Formal and Informal Interviews

We conducted 57 formal and informal interviews, including speaking to 26 founders and project creators, a few of which we conducted one-on-one interviews and participant observation of consulting processes with. We spoke with 5 tokenomics consultants for one-on-one interviews and conducted participant observation of their consulting sessions with project founders and creators. After observing the consulting

process our team organized follow-up interviews with both the tokenomic design consultants and each of the projects that they spoke to, giving us the opportunity to get clarity on some of the interactions that took place during the consulting process and to hear how the teams for each project perceived the process to have gone. We also spoke with 11 venture capitalists and professional investors, seeking to understand their decision-making processes and self-identified role in the Web3 industry.

Data Analysis

After each interview and data collection event, our team debriefed together, discussing and comparing observations, and reflecting on stand-out moments. This process took primarily two forms. If the team was in the field physically during the data collection event, the debrief was recorded as a collaborative conversation with the transcription software, Otter, and later analyzed. If the data collection event was conducted digitally, team members synchronously organized their observations and data points on a digital collaborative software, taking turns sharing and clustering data on the digital sticky note board. Throughout our research process the team continuously collected and organized data on the shared sticky note board, Miro, until clusters of data began to reveal themes emerging from the research. As data collected around various themes, we were able to generate insights that eventually formed the structure and narrative we used to articulate the findings from our research. As we began the report writing process, our team coordinated synchronous in-person time to solidify the report content and goals. The entire report writing process extended over nearly two months from November through the end of December and early January. During this time various

versions of the document underwent rounds of review from our internal team and organization higher-ups, and from our external stakeholders, network collaborators, and industry experts.

Findings

Our research revealed insights about the nature of the industry and challenges in realizing community visions for the future of Web3. The Web3 ethos still aspires towards a future version of the World Wide Web where digital interactions are facilitated by "decentralized" technologies and economies. We saw this theme commonly among the experts that designed these systems. Though, a tokenomics consultant working with a popular firm articulated a more nuanced approach to the topic during one of our interviews: "It's important for projects to consider *why* [emphasis added] they want to be decentralized and what their optimal level of decentralization is, and how important it is to reach a certain point of completion of the project before taking on the risk of opening it up to a wider group." Perhaps most importantly, it became clear that Web3 was about much more than cryptocurrencies as speculative investment assets. Rather, the individuals most passionate about building towards the Web3 imaginaire viewed novel token-economic systems and the communities that form around them as the essential instruments in the Web3 toolkit for a new future.

Through tokenomics, Web3 builders seek to develop economic systems around their projects permitting their community members to interact and transact with each other. The ability for a plurality of ecosystems and communities to propagate within the broader Web3 industry speaks to the efforts in achieving decentralized and pluralistic visions inherent to Web3 imaginaires. These efforts are not without challenges. During our research these challenges spoke to a variety of factors, actors, and institutions that

call into question claims of decentralization and equitable access. While other challenges of course exist, our research largely revealed challenges that were relevant to cryptoeconomics and ecosystem and community formation. This research took the team all over the country, and exposed us to Web3 participants and projects from across the world. We observed aspirations of "plurality" in nearly all of our fieldwork and during discourse analysis. These goals of plurality and diversity serve multiple functions, and operate in more nuanced ways than one might expect.

Plurality of Projects and Products

Participant observation fieldwork at a Web3 convention in Austin, Texas illustrated an almost dizzying array of presentations and sessions spanning decentralized finance strategies and tools, to interactive conversations about governance and the social and technological structure of particular projects. The social impact of blockchain session described a project aiming to improve access to traditional finance, remittance capabilities, and financial education of formerly incarcerated communities as well as a project helping Brazilian indigenous communities access monetization strategies of the carbon assets on their traditional lands. Yet, truly equity-minded projects like the ones we observed during this session were difficult to find; industry narratives frequently use the language of "financial inclusion," though few appeared to provide concrete examples of how they actionably pursue those claims. Another session featured a network proudly touting their 600+ project ecosystem and describing future goals for their technology to be the "largest on-ramp in Web3 history," citing their 500k member and growing

community. Others still attracted audiences eager to hear about projects working on gamification—using game theory and design along with tokens to incentivize activities such as learning objectives or industry participation—mining and other blockchain functionality projects, social tokens and the reimagination of data management in digital spaces, and UI and Web design projects, like that of Brandon Eich, the creator of Javascript and founder of Brave Browser—a web browser with data harvesting protections and crypto integration.

In New York, we encountered Web3 gaming projects wanting to make tokens and digital assets like exchangeable "skins"—personalized game character components—foundational to new gaming experiences, and former traditional finance folks who identified the need for treasury management among Web3 projects, starting their own company to fill this need. At a crypto coffee hour in the San Francisco bay area we met a founder who, after immigrating to the United States, built a project for seeking and providing micro-tasking labor with work paid for in crypto. Podcasts we analyzed introduced projects building digital identity use cases and experimentation with derivative markets in the DeFi sector. Prominent voices in the industry were observed criticizing individual project dominance, calling for "strong competitors" to keep the space diverse and healthy. We observed plurality emerging naturally as new fields within the industry became clear to participants, such as treasury management mentioned earlier and transaction ordering technologies of blockchain infrastructure, like MEV bots—

computer programs coded and deployed to order transactions in the most efficient and value-return maximizing fashion.

Plurality of Tokenomic Designs

Tokenomic systems design has come a long way from aiming only to serve as "digital cash." Comprehending the roles and interactions of these assets in multi-token ecosystems becomes exponentially more complex. Even a single token ecosystem, such as that of Filecoin a decentralized blockchain network for file storage services, imbues their token with multiple functions. The $FIL token is used to permit holders to pay for goods and services within the ecosystem, "stake" their token—an industry term for temporarily forfeiting the ability to exchange a token to generate yield or passive income—retrieve stored data, and reward validators for securing the network. Many token models will emulate characteristics and functions that appear to be gaining traction in the broader crypto market. Others continue to experiment with novel functions and designs.

We encountered a carbon credit project in the early stages of their design process. During an informal interview they shared an early version of their project whitepaper and described their tokenomic system design up to that point, which was revealed to comprise three separate tokens representing varying stages of the carbon cycle. Movement of the tokens through the ecosystem was to involve complicated mandatory holding periods and sometimes independent and sometimes overlapping spheres of exchange depending on the actors holding which tokens. While at first perplexing and frustrating to wrap our

heads around, mapping out these systems visually proved a useful exercise in understanding why the systems function in such complex ways and why so many different models are developed. Tokenomic design experimentation in Web3 is still exploring the boundaries of what is possible.

Plurality of Communities and Ecosystems

One particular narrative around plurality relates to the negotiations over the Web3 future imaginaire. Cross-chain interoperability—or the technological capabilities of blockchain networks to communicate with each other and facilitate the transfer of assets between them—appeared to come up with nearly every field site visit we conducted. There were numerous sessions dedicated to this topic at the convention in Austin. Speakers expressed their frustrations with "siloism" and competition, arguing for the needed development of interoperable capabilities to reduce "tribalism" they characterized the industry by. One speaker called for greater measures in the security of interoperability technologies proclaiming, "We all know [the future is] going to be cross-chain." Interoperability featured prominently in discourse analysis as well. Here we heard a podcast guest explaining the constraints on a single blockchain project filling the needs of global reach: "There is a misunderstanding that there is ever going to be a single chain that is going to manage all of the world's capacity or demand for blockspace. There is no such thing—[blockchains have] a finite amount of [available space to record new transactions]."

Web3 "plurality" for industry builders and participants is not a singular goal, but rather, it is functional, even predicted to be technologically *necessary* for scaling the industry; it is experimental, with complicated and intricate technologies stretching the boundaries of what is possible; it is entrepreneurially savvy in that a greater variety of projects being built leads to greater involvement from the public, and thus more individuals participating, adding value, and strengthening Web3's goal of embedding itself in the future of digital environments; it is also an honorable goal for the genuinely equitably-minded; and it is sometimes a social signal for the performative actors destigmatizing their projects by riding the coattails of more altruistic endeavors.

Diverse Builders: Blockchain Tokenomics as a Tool for Seeking Equity and Community

The builders that we spoke to during our research made clear to us the importance of Web3 tools that enabled new forms of communities, and for those communities to emerge simultaneously and synchronously, creating a *plurality of ecosystems*. In fact, tokenomic consultants insisted in some cases that without a community, creating a token system—a design strategy on which most of the industry is built—might be in vain. A consultant who started one of the first decentralized organizations for designing token-economic systems for projects told us: "I always recommend starting with a community first, because then you have something proven and something tested, before you actually do the token." Importantly, to build these systems sustainably, they shouldn't just facilitate interest among the community, but they should reflect the values of their

communities as well (Crypto Research & Design Lab 2022, 15). Contrary to popular media representations of the Web3 and crypto space, there are indeed more than just opportunist Silicon Valley affluent tech entrepreneurs experimenting and building in the industry.

Our research organization encountered a number of groups of historically excluded communities leveraging the Web3 toolkit to pursue equity and autonomy for their communities. For these groups, Web3 is an opportunity to reimagine digital spaces in ways that reflect their own values and aspirations without the exclusionary aspects that many of them found present in Web2. Chamisa Edmo, an Indigenous technologist, educator, and entrepreneur who works as a project manager for New Mexico Community Capital explained during an interview: "There's such a long history of [indigenous folks] being subjected to bigger powers, and tech is one of those powers now. Figuring out a way to create an organization that has power that mirrors our community structure is incredibly important. We do have to disrupt and create something completely different that's on our own terms" (Crypto Research & Design Lab 2022, 16). Subverting the control that traditional tech spaces have over these communities is an important goal for many of the individuals building in Web3. Blockchain—tokenomics as a tool extending out of that technology—was identified as an attractive avenue to pursue those subversive goals, and serves a double purpose of potentially strengthening these communities and giving them shared ownership over the vision and projects they intend to build: Tavonia Evans, the founder of GUAP Coin, a public cryptocurrency developed for the Global

African Diaspora community told us, "...[As] Black people, we've been building a tremendous amount of social capital on platforms like Facebook and…our hands are tied—we can't really do anything with it. We're like a slave to the platform. Once we introduce the idea of blockchain…we're creating as a community…we can put our social capital there and it could get back to us in many different ways" (Crypto Research & Design Lab 2022, 17). Equipped with the ability to create novel economic incentive systems that more closely align with the specific needs and goals of a particular community allows these projects to foster passionate followings and rich digital environments.

The depth of these digital environments and ecosystems varies greatly, along with the intended purposes and goals of the individual actors and communities within them. Many experimented with democratic governance mechanisms involving blockchain voting processes. During participant observation in the Discord channel of a popular Web3 project organized as a social network, a lively debate began around the barriers—or apparent lack thereof—to participation. In order to access the network's channels and events, community members must prove that they hold a minimum amount of the project's tokens. Some members argued that the minimum required token holdings for entry were too low, allowing unengaged members to saturate the community. Others responded that they would have never been able to afford to join if the required amount of tokens to be held were raised. A governance proposal—a community-crafted proposition that participants vote on to solicit project developers to alter the coded rules

for the project—to increase the required holdings was published in the channel outlining both sides of the argument and the plan of action. On the day of the vote, those in favor decidedly won out, and two months later the community updated its coded protocol to require the increased amount of tokens for participation and removed those below the requisite amount from the community's channels and network.

These actions, such as access capabilities and voting permissions, are programmed into the digital tokens as part of the crypto economic design underlying an ecosystem. Other communities experimented with reimagining digital organizational structures without traditional hierarchies. These new structures, called decentralized autonomous organizations or DAOs, achieve mixed levels of success. The applications of tokenomics to facilitate community formation emerged as a far more diverse and nuanced area than what was originally thought. More than this, though, tokenomics was revealed to be an essential tool for Web3 builders, opening up new possibilities for these projects including attracting participants to them, driving activity within the ecosystem, offering new models for project funding, and creating new forms of digital assets.

Challenges Web3 Developers Face Realizing Their Vision of Ecosystem Plurality

We also found that the goals of the industry in fostering a plurality of ecosystems struggle to be fully realized due a number of challenges facing the implementation of tokenomic systems. The Web3 industry's ideological roots in community-maintained infrastructures led it to become a fertile ground for community experimentation and proliferation. With the understanding of tokenomics as a near essential, albeit less visible,

component to Web3 ecosystems, our research sought to further understand the challenges impacting these designs and the implications on productive experimentation with community building and tokenomic systems design. These challenges are borne by the builders seeking to develop in the space and the communities they create.

We were able to hone in on three primary challenges that communities and builders face implementing tokenomics.

Challenge 1: The industry has a lot of scammers

First, while the argument we make is that there is more to Web3 and crypto than speculation and risk, it is true that the industry faces a serious threat with the prevalence of scammers (Crypto Research & Design Lab 2022, 45). These actors and their designs impact mainstream perceptions of the industry, slowing adoption and making it difficult for honest teams to avoid destructive models that might harm their communities. A tokenomics product expert that we interviewed noted on the topic, "There's just a lot of charlatans in the space…[even] law firms have asked us to do stuff that's probably not legal…it would be easy for an inexperienced founder to get really bad advice" (Crypto Research & Design Lab 2022, 46). Participant observation when attending events in San Francisco also put us in contact with a project that appeared to be building a strong global community around their platform. Upon reviewing the project's whitepaper and tokenomics documentation, we revealed that their acquisition strategy was actually a multi-level marketing scheme.

Challenge 2: Tokenomics is complex

The second challenge we identified is that tokenomics is highly complex and not well-developed as a field (Crypto Research & Design Lab 2022, 47). This makes it difficult for teams to locate the expertise needed to design a truly sustainable ecosystem. Those few that do possess the expertise command high premiums and are many times only accessible to networked and well-resourced projects. In fact, while conducting research into tokenomics and inquiring about experts working in the field, conversations led projects to ask us if we would help them in designing their token systems. In an interview with a tokenomic consultant and founder of a decentralized autonomous organization that specializes in mapping tokenomic systems, we learned that the consultancy came into being after he realized there appeared to be no one doing the work and more and more he received requests from other community members to help them either understand existing systems, or to map out their own ideas for one.

Challenge 3: Regulatory uncertainty raises costs in the industry

And finally, our research participants described the lack of regulatory clarity leading to higher costs and ambiguities around whether designs are determined to be legal or not as a substantial concern seemingly on the mind of nearly all of the builders that we spoke to (Crypto Research & Design Lab 2022, 51). The cost to ensure that a team could seek even marginal assurance in their designs such that they didn't attract unwanted attention from the SEC or other regulatory enforcement agencies led one project to leverage their organization's legal counsel as a selling point. We observed them during consultation sessions ensuring the projects they were recruiting to build on their

platform that they would be able to guide them in designing their tokenomic system without crossing any legal boundaries and without the burdensome cost of employing their own counsel.

Reflections

My time working as a researcher for the Crypto Research & Design Lab ironically, and revealingly, paralleled experiences with the Web3 industry at large. In fact, my first week at the organization was postponed due to the collapse of a predicted rising star cryptocurrency and the shockwaves this catastrophe sent rippling through the industry—including through the organization's funding. Research opportunities arose sporadically and in many cases needed to be acted on quickly. After all, Web3 is both global and unremitting.

Conducting research in industry came with nuances and challenges. Reflecting on our findings and insights generated through the research, I remind readers the report we produced is positioned such that it might be useful and actionable to the builders, founders, and regulators operating in the industry. With all of our stakeholders working within Web3 or towards Web3 futures, many of the academic critiques of the space were not productive as a stance to take in the report document. Instead, our report intended to encourage builders towards thoughtful consideration of tokenomic design and laid forth a primer on the topic with cautionary warnings about the challenges facing that field. It was essential to our stakeholders that we honestly reported back on the data that we collected, but that we also ensured our stance was not to disparage, but to encourage. In line with this objective, certain theoretical lenses seemed too critical to explore in that deliverable.

Meritocratic Blinders

For instance, our research illustrated a great diversity of actors participating in a variety of ways. Some of these individuals reflected the sentiments of Ho's Wall Street financiers (2009), forming their identities around the hard work and meritocratic nature of succeeding in fast-moving, complex, and intellectually challenging spaces. These qualities appeared in the way that some Web3 participants spoke optimistically, and naively, about who could find success in the industry: "I want to make a controversial but true opinion. Web3 is about abstracting identity from merit. One can be anonymous and rise up the hierarchy on merit alone. No one cares about women/men, black/white or straight/gay. It's the great equalizer," (@Crypto_McKenna, October 13, 2022). However, it did not seem useful to draw this connection with these individuals as an audience that we intended to gain credibility from. Though overly optimistic views of the technology's capabilities were exceedingly common, so much so that even participants within the industry would on occasion refer to the phenomenon as "techno-optimism" (Nelms, Maurer, Swartz, and Mainwaring 2018). What is missed by these white-washed perspectives is that opportunity, in any space, is rarely created equal or exempt from existing dominant social structures.

Our research revealed that, in actuality, building projects in the Web3 space is far from exempt of the biases and privileges afforded to individuals with deep networks and existing resources. This appeared especially prominent for builders who were trying to secure funding and capital for their projects. One builder noted on the fundraising

process, “Especially at seed stage, the same four or five investors always invest as a pot. And each one will put in like 50 or $100,000…If you get this investor, you're done, because all of their friends will also invest.” Problematically, securing that key investor is more likely due to the network and contacts that an individual has, and less to do with the “hard work” that a particular builder put into their project. Perspectives like these remind us that despite strong Web3 aspirations towards equity, the conception of “social capital,” where position and status (Bourdieu, 1986) interface with self-preserving meritocratic positionalities (Ho, 2009) reveal dominating re-centralizations and influences upon the industry.

To investment bankers in Ho’s (2009) research, markets are seen to be external to the actors participating within them. Though this is a distraction from the reality that their localized cultural values and “hypercapitalist sense of time” act upon the market more than any outside forces. Parallels to the Web3 industry become immediately clear, where blockchain and certain projects built atop these technologies are almost always framed as independent of the individuals who create them and those who participate in them. Individuals in the space frequently rally around proclamations like “in code we trust,” indicating the perceived extrication of human influence or bias in blockchain technologies. In truth, most of the collapses of recent crypto history are traceable not necessarily to unpredictable global events but to the actions of industry professionals and corporate negligence which ended up costing them their communities and in some cases found them facing serious legal action (Cohen and Godoy 2022; Shen 2022; Lee, Shen, and Bartenstein 2022). Yet, occurrences like these happen seemingly all the time, and

those responsible are just as surprised by the consequences of their decisions as the ones that came before them.

Aside from the fallacy of identifying with purely meritocratic achievements and the leeway that this identification affords some of the professionals working in the space, even participants that spoke to the need for improvement in diversity and equity initiatives at times slipped back into perceiving themselves as superior to and exempt from considerations of the damage that they might cause with reckless innovation. One builder, after speaking about the challenges they themselves experienced as a minority builder seeking funding in the industry went on to say, "[with] 'move fast and break things,' we will leave people behind. And we just have to make sure that we're leaving the right ones." Similar, then, to Wall Street financier identification with the market, the embracement of a "culture of expediency" (Ho 2009, 292), and the ability of these individuals to perceive themselves as channeling the market—or industry—towards a greater good, Web3 despite all of its talk of being different falls in some ways victim to the very legacy system, and its centralities and intermediaries, that they sought to escape.

Experimental Hubris and Ideologies of Techno-Utopianism

Still, these meritocratic identities cling to the ideologies that the space was founded on, even if blurring the lines or overlooking the contradictions being carried out in practice altogether. The grand vision of the Web3 imaginaire, replete with techno-optimism and the determination to see that vision through was no clearer than in conversations with the consultants and individuals working on developing the tokenomic incentive systems foundational to so many crypto and Web3 communities: "If done right,

we can restructure the way the world works, and we can do that from the ground up. And that is something worth fighting for...The only people that have been able to create incentive systems are governments...but we can iterate on them now, we can see what works. That has never happened before. Ever." These aspirations are certainly noble, and I agree that economic experimentation has never been as accessible—certainly at scale—as it is today with blockchain and token economies. What this participant did not speak to was the dangers for the communities that are required for this experimentation to occur if carried out haphazardly, of which examples abound. And while it may be that this particular individual would tread lightly in their experimental endeavors, many do not, leaving vulnerable communities damaged in their wake (U.S. Securities and Exchange Commission 2023). So while some of these projects and individuals slide back into a few of the industry qualities they meant to leave behind, the apparent practical-cum-ideological dissonance does not prevent them from continuing to see their ambitions as aligned with original ideological and morally aspirational Web3 endeavors. It appears as though these sacrifices on ideological imperatives are either left unmentioned in pursuit of the goals for their project, or are framed as temporary in order to ensure the eventual success and full realization of decentralization. Or perhaps the libertarian bent is so embedded as to permit industry actors to conflate sacrificial experimentation with economic freedom. Possibly the founding Web3 ideological foundation never actually made any claims as to being free of extreme risk. Is it that maximized decentralization is mutually exclusive of community safety nets?

Finding Balance and Maturity: "Progressive Decentralization"

In truth, balancing safe avenues to experimentation with ideological goals of decentralization and disintermediation is more than likely better achieved as a process of controlled release of influence. When projects decentralize too much too early they risk exposing their virtuous community members to the whims of malicious market actors who can change the direction of an entire ecosystem in pursuit of profit or spite. We see this in Caliskan's analysis of Electra (2022), where a founder misaligned with the direction the community wanted to take the project dumped all of his token holdings into the market, tanking the price, and unraveling the ecosystem. These sorts of events and others that reveal the dangers of pseudo-decentralization have some in the industry questioning an all-at-once approach. Progressive decentralization, or the process of setting benchmarks over time for the eventual decentralization of a project were not commonplace during our research, but did appear to be gaining traction as a design consideration. A tokenomics consultant explains:

> "It depends on the goals of the particular projects. Not all companies have the same targets for decentralization, some are fine with a long period of centralized control. This is especially relevant in the context of games where they're, at least for a long period of time, needs to be, [as well as] the importance of having some central entity executing on a particular vision. Versus when you have become more decentralized, there's greater potential for fragmented visions and goals and incentives to execute that could slow down or derail the progress of the project."

In my opinion, progressive decentralization indicates, hopefully, an industry moving towards maturity, and possibly even empathy. If not for the communities fallen

victim to extraordinary volatility, then for their fellow builders who lost their entire projects and visions in market death spirals.

Final Reflections on a Multi-Faceted Industry

Ultimately, I am a bit wary to over-emphasize the positives of Web3 toolkits for community formation. While it may be true that Web3 community building is certainly more thoughtful and often reciprocal about the individuals participating in their products and businesses than previous models, at the end of the day, they are just that: products and businesses. Some may work towards designs that achieve greater equity than others, but I wonder about the implications of conflating healthy community formation with capitalist economic system experimentation. Who and what is overlooked when we begin to see communities as merely something to build economies with? What are the impacts on communities that begin to identify with the products they are participating in, and with greater levels of participation than ever before, without fully realizing that they are many times simply components meticulously modeled out to drive the economic system of a digital business? A tokenomic consultant at a prominent consultancy that we spoke with explains matter-of-factly: “There's some forward planning to be done in terms of who you want your community to consist of, ‘cause that affects your planning for the incentives that you set up and the expectations that you can have around growth. And also, when you're modeling your economy, it's important enough to break down these different types of users as far as they are going to be expected to act differently within your ecosystem.”

In the restaurant industry, and many others to be sure, there is a phenomenon of framing your business and its employees as "family." While this may be to promote cohesion and camaraderie, the toxic effects of hiding power dynamics behind pseudo-familial manipulation and the impacts of taking advantage of employees under the guise of a "family culture" are well-known (Luna 2021). Some in the Web3 space are already hesitant about this approach. Speaking about decentralized autonomous organizations (DAOs), which reimagine organizational structures without hierarchies through the collaborative use of blockchain technology, one participant said, "In DAOs, everyone thinks '[if] everybody contribute[s] for free, eventually it will pay off.' I can't have anybody work and not pay them. But I also don't have funding." While framings of communities working together towards a shared goal are indeed admirable, this participant recognized the exploitative nature of that approach, and the conundrum of being stuck without the means to pay for those individuals to drive the project forward without funding in an industry where funding is largely dependent on networks and connections.

Peering into the messiness that is the Web3 industry can be something of a rollercoaster ride. From the outside and at first glance, the industry can appear to be a digital nightmare casino, characterized by stories of million dollar JPEGs, rampant scams, and funny money Ponzi schemes. Digging in deeper reveals that it is much more than these qualities. Web3 is an ecosystem of diverse actors aspiring towards a vision of the future with seemingly honorable motives, rooted in self-sovereignty,

disintermediation, and the creation of fertile spaces for novel digital communities that prioritize ownership and have a say in the future of the ecosystems they are creating and participating in. Yet deeper still, it is important that critical eyes remain diligent to the impacts of break-neck speed innovation and at times near toxic techno-positivity in a space that is equipped with no safety nets, big personalities, and actors with motives of every stripe.

Conclusion

Informed suspicions tell us that Web3 is not going away. Intense market downturns in the industry are referred to as "crypto-winters" to insiders, and those that have been around long enough know well that winters inevitably end. A year-to-date glance at the Bitcoin market chart—of which has proven to be a strong indicator of the overall state of the industry—will show that other crypto-winters have come and gone delivering new peaks each climb. If we are to minimize the damage that another market crash will cause, it is important that research into market participants as much as into the market itself and the relations between the two provides clearer perspectives and understandings of the experiences of individuals and communities. Even if future visions of sovereign digital currency proliferation fizzle out, digital currencies in general will be a part of human futures. Nations-states and Unions across the globe express intense interest and outright motivations to develop blockchain-based currencies. Governments all over the world have indicated that they are open to permitting these new assets to continue, even if regulated in some manner. At this point, it is a matter of documenting perspectives and experiences with the industry that may provide insights and guidance into its ethical development, lest we fail to learn from past mistakes of waiting for new technologies to solidify with biases and inequities baked into them in difficult to dislodge ways.

My hope with this research and writing is that the Web3 industry might be seen by anthropologists and other social scientists for the diversity and expansiveness it actually contains. I suspect that Web3 and tokenomic systems will continue to proliferate

and broaden their reach in our lives. Examinations of the blockchain facilitated metaverse, for example, while a topic frequently soliciting eye rolls even from Web3 industry devotees, will come with rich opportunities of novel ethnographic study and intriguing new field sites yet to be fully explored.

During the course of this research my team members and I noticed ourselves dialogically asterisking our presence in the industry to outsiders—including to classmates and professors—by explaining that we were, in fact, not "crypto bros," but that we were instead interested in the space for scientific reasons. We eventually came to call this phenomenon the "Web3 Disclaimer," as a nod to the explanatory work we were instinctually doing of separating ourselves from the stereotypes so prevalent in conversations with family and friends who wanted to know what we were researching. In actuality, the Web3 space is exciting, diverse, novel, innovative, inventive, intriguing, surprisingly welcoming in some ways, and frustratingly unwelcoming in others; but more than anything else it is rich in manifold human experiences, motivations, aspirations, and creative endeavors. One would expect it to be anthropological bread-and-butter; the space could certainly use more voices translating the humanity it contains.

Works Cited

Anderson, Benedict. 1991. *Imagined Communities: Reflections on the Origin and Spread of Nationalism*. London: Verso.

Bátiz-Lazo, Bernardo, Thomas Haigh, and David L. Stearns. 2013. "How the Future Shaped the Past: The Case of the Cashless Society." *Enterprise and Society* 15(1): 103-31.

Bourdieu, Pierre. 1986. "The Forms of Capital." In *Handbook of theory and research for the sociology of education,* edited by J.G. Richardson, 241-58. New York: Greenwood Press.

Caliskan, Koray. 2022. "The rise and fall of Electra: emergence and transformation of a global cryptocurrency community." *Review of Social Economy*. Taylor & Francis.

Calvão, Filipe. 2019. "Crypto-Miners: Digital Labor and the Power of Blockchain Technology." *Economic Anthropology* 6(1): 123-34.

Carrier, James G., and Josiah McC. Heyman. 1997. "Consumption and Political Economy." *The Journal of the Royal Anthropological Institute* 3(2): 355-73.

Cohen, Luc, and Jody Godoy. 2022. "FTX's Bankman-Fried, charged with 'epic' fraud, released on $250 million bond." *Reuters,* December 23, 2022. https://www.reuters.com/legal/ftx-founder-bankman-fried-make-us-court-appearance-after-extradition-2022-12-22/

CoinMarketCap. n.d. "Bitcoin." *CoinMarketCap.* https://coinmarketcap.com/currencies/bitcoin/

Crypto Research & Design Lab. 2022. “New Ecosystems in Web3.” https://project-cradl.notion.site/New-Ecosystems-in-Web3-a457c49ce1d341009660326fbc504ae6

Crypto Research & Design Lab. n.d. *Crypto Research & Design Lab*. https://project-cradl.notion.site/Crypto-Research-and-Design-Lab-50a7127f34ed4c88ad95c7cedf7fbe36

Jevans, Dave. 2018. “Crypto Innovation is a Cambrian Explosion.” *CypherTrace*, March 13, 2018. https://ciphertrace.com/applied-crypto-innovation-a-cambrian-explosion/

Ho, Karen. 2009. *Liquidated: An Ethnography of Wall Street*. Durham: Duke University Press.

Lee, Justina, Muyao Shen, and Ben Bartenstein. 2022. “How Three Arrows Capital Blew Up and Set Off a Crypto Contagion.” *Bloomberg*, July 12, 2022. https://www.bloomberg.com/news/features/2022-07-13/how-crypto-hedge-fund-three-arrows-capital-fell-apart-3ac#xj4y7vzkg

Luna, Joshua A. 2021. “The Toxic Effects of Branding Your Workplace a ‘Family.’” *Harvard Business Review*, October 27, 2021. https://hbr.org/2021/10/the-toxic-effects-of-branding-your-workplace-a-family

Maurer, Bill, Taylor C. Nelms, and Lana Swartz 2013. “‘When Perhaps the Real Problem Is Money Itself!’: The Practical Materiality of Bitcoin.” *Social Semiotics* 23(2): 261-77.

Nakamoto, Satoshi. n.d. “Bitcoin: A Peer-to-Peer Electronic Cash System.” *Bitcoin Whitepaper*. https://bitcoin.org/bitcoin.pdf

Nelms, Taylor C., Bill Maurer, Lana Swartz, and Scott Mainwaring. 2018. “Social Payments: Innovation, Trust, Bitcoin, and the Sharing Economy.” *Theory, Culture, and Society* 35(3): 13-33.

Scott, Brett. 2022. *Cloudmoney: Cash, Cards, Crypto, and the War for Our Wallets.* New York: HarperCollins.

Shen, Muyao. 2022. “How $60 Billion in Terra Coins Went Up in Algorithmic Smoke.” *Bloomberg*, May 20, 2022. https://www.bloomberg.com/graphics/2022-crypto-luna-terra-stablecoin-explainer/#xj4y7vzkg

Tankha, Mrinalini. 2020. “ Detained settlements: The infrastructures and temporalities of digital financial transactions between the United States and Cuba.” *Economic Anthropology* 8: 133-147.

U.S. Securities and Exchange Commission. 2023. “Investor Alerts: Exercise Caution with Crypto Asset Securities.” *U.S. Securities and Exchange Commission,* March 23, 2023. https://www.sec.gov/oiea/investor-alerts-and-bulletins/exercise-caution-crypto-asset-securities-investor-alert

U.S. White House. 2022. “FACT SHEET: Whit House Releases First-Ever Comphrehensive Framework for Responsible Development of Digital Assets.” *U.S. White House,* September 16, 2022. https://www.whitehouse.gov/briefing-room/statements-releases/2022/09/16/fact-sheet-white-house-releases-first-ever-comprehensive-framework-for-responsible-development-of-digital-assets/