ENTERING THE FIELD OF WEB3: "INFRASTRUCTURING" AND HOW TO DO IT

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Abstract

"Web3" is a practice in participatory digital infrastructures through the ability to read, write, and control (or "own") digital assets. Web3 is hailed as the alternative to the failings of big tech, offering a participatory mode of digital organization and shared ownership of digital infrastructure through algorithmic governance. This paper offers an introductory playbook to researchers entering the field of Web3 by providing an analytical lens to approach the emergent field of Web3 as "infrastructuring." It argues that Web3 can be understood as a collective, community exploration of "how to infrastructure." Drawing on qualitative examples derived from digital ethnographic methods, the study reveals that play, politics, and prefiguration are fundamental qualities underpinning Web3's vision of offering an "exit" from established institutional infrastructures. Therefore, a primary challenge Web3 faces in its governance experiments centers around the question of how to effectively build and manage infrastructure.

Keywords: Blockchain; Web3; infrastructure; ethnography; digital

INTRODUCTION

The decentralized, digital technologies that comprise Web3, such as public blockchains and digital token economies, are born out of the idea that access to encryption technology is an essential right in the age of information and computers. Encryption technology is fundamental to the ability to control one's own digital assets. Accessing and entering the field of Web3 involves navigating the boundaries of deep online and offline community participation, including "sliding into the DMs" (direct messages) of Web3 personalities, interacting with individuals using pseudonyms, and managing numerous coins, wallets, and "seed phrase" passwords.

This paper demystifies Web3 for researchers by approaching it as infrastructure, identifying where it occurs, how to enter it, and how to understand it through cultural dynamics, politics, and master narratives. Web3 is characterized by several distinct attributes, including:

- *Permissionless access*: Web3 is accessible without the need for authorization from a third-party authority, allowing for anyone to participate freely, according to a predefined ruleset.
- *Pervasiveness:* It features participatory infrastructures and personal entanglement, indicating a deeply integrated and all-encompassing nature.
- *Prickly characters*: Web3 is known for its unique and sometimes challenging personalities and pseudonymity that shape its community and culture.

- *Playful aesthetics*: The environment of Web3 is marked by playful elements, such as the widespread use of memes, adding a light-hearted and creative dimension.
- *Political origins and ambitions*: Web3 has a political aspect, rooted in its ideological origins and aspirations, reflecting a vision of societal impact and change.
- *Prefigurative bias*: It demonstrates a tendency toward prefigurative practices, suggesting an inclination to embody and experiment with the future ideals and structures it advocates for.

These themes of "permissionless," "pervasiveness," "prickly," "playful," "political," and "prefigurative" are subtly and deliberately threaded throughout this paper as "easter eggs" in theoretical explorations and qualitative examples for the reader to uncover, apply, and make meaning of. By analyzing some of Web3's key themes and politics, I argue that Web3 is about "exiting" existing institutions to build its own structures of self-governance from within the prevailing societal hierarchies and power structures. The verb "to infrastructure" denotes the activities, processes of integrated materials, tools, methods, and practices that make up and change an infrastructure. The development of "good" information infrastructures requires adaptability to changing circumstances and environments (Star and Bowker (2010, p. 159). Applying this perspective to Web3 as infrastructure highlights a core challenge that community members must grapple with in the pursuit of Web3's developmental ambitions, that is, "how to effectively build and manage infrastructure".

GAINING ACCESS

> The secret of change is to focus all of your energy not on fighting the old, but on building the new. (Millman, 1984)

It was worth leaving the house for the local "WEB3 HACK" meetup that Thursday evening, despite my post-COVID social anxiety about being in crowds and having to make small talk. In reward for our interest and attention, each attendee was "airdropped" Zcash privacy coin to our digital wallet address. To receive the equivalent of 18 cents in the privacy coin, I chose the mobile wallet brand called "Nighthawk." The transaction included a secret memo containing a "shielded love note," which was a message from the sender to the receiver that was cryptographically hidden from external surveillance or snooping.

I was late to provide my wallet address to register for the airdrop, somewhat desperately "DMing" (direct messaging) the well-known founder on Twitter in the middle of their talk to include me in their software script that would drop to all the addresses at once.

> Hi! *wave emoji*. Please add me to your bash script. Wallet address: zs1tegqkd6ll92ktc2gxr874ljy7qjau5aa7pspp6rrktnaeyl82fgrdh6zxlr5pjznsdgpjmyqaef.[1]
>
> Ty! *thank you hands emoji*.
>
> Also, I would love to interview you for a research article on the Cypherpunk's and origins of decentralized technologies to test some assumptions.

To my surprise, they responded.

> Hi.
>
> Check your Shielded Love Notes!

[1] Alas, I have edited the figures so this is not my actual wallet address.

Opening up my Nighthawk wallet, the transaction memo read:

> Hi, Kelsie, nice to meet you! How did you think the meetup went yesterday? What assumption are you trying to test?

With the tiny amount of coins I had received, I could still afford to send micro transactions of cryptocurrency with a memo attached each time. Each message exchanged was shielded by "zero knowledge" cryptography on the Zcash privacy coin blockchain.

I thought to myself, "I'm interviewing a well-known cryptographer and privacy coin founder, mediated by cryptographically shielded love note transactions on the blockchain they invented!" as I responded: "There are not enough characters in the memo or Zcash in my wallet …. Also, I need your approval to interview ☺," referring to the ethics form I needed them to sign to consent to an interview to comply with university processes.

WHAT IS WEB3? A BRIEF BACKGROUND

The invention of the World Wide Web, known as "Web 2.0," offered a revolutionary shift in digital media. It enables any individual to access information through browser-based search engines and share content via web pages, blogs, and eventually social media platforms. "Web 3.0" is an evolution of the internet, with greater data portability to shift power away from corporates to individuals (Stevens, 2022). In contrast, Web3 is a general term used to refer to platforms that leverage blockchain technology to enable verifiable ownership of digital assets (including data). Web3 is hailed as offering an alternative, decentralized internet (although it still depends on existing internet infrastructure). If Web 2.0 gave people the ability to read as well as "write" digital media on the World Wide Web (e.g., blogs), then Web3 is a platform infrastructure to read, write, and "own" (insofar as anything digital can really be "owned"). For ownership, the cryptographic properties of private key management in cryptocurrency (a.k.a. fancy maths for secure communication over insecure channels), combined with the shared, distributed consensus of blockchain-based ledgers (databases), provide the foundations for cryptocurrency tokens that represent property rights and ownership of decentralized digital assets and networks. As such, this paper largely focuses on blockchain technology as an enabling infrastructure for Web3, and blockchain communities as a field site by which to enter Web3.

PROMISES, PROMISES

The promise of Web3 is a decentralized infrastructural base that anyone can build on, and everyone can collectively own. Web3 provides a next-generational, peer-to-peer network for participatory self-organizing and a new infrastructural "archetype" (Stefik, 1996). The unique components of public blockchains are the combination of distributed computing, cryptography, and self-provisioning public infrastructure (such as financial networks) to coordinate without central intermediaries. This gives rise to what has been labeled as a new field of "cryptoeconomics," which is the application of cryptography and economics for new forms of institutional infrastructure (Berg et al., 2019b; Nabben, 2023a). Grounded in the purity and infallibility of mathematics, cryptoeconomic systems combine cryptography and economics to "produce new methods of communication, cooperation, and organization" (Cowen & Tabarrok, 2022). Blockchains are touted as a technical expression of the politics of "exit, choice, and loyalty" (Hirschman, 1972). This means that individual freedom is pursued through optionality, with the choice to split the technology and the community if there is strong disagreement (known as "forking") (Berg & Berg, 2017). This infrastructure provides an alternative, free market response to the decline in organizations and nation-states.

In response to these features, public blockchains have been described as creating "new institutional possibilities" and providing a "blueprint for a new economy" (Berg et al., 2019a; Swan, 2015). In blockchain systems, the rules of collective governance are designed and encoded for software to enact through ordered, distributed consensus. When applied to governance procedures, this purportedly minimizes the need for trust in institutions by relying on computational processes, especially transparent and verifiable software code and cryptography (Szabo, 2017). In theory, code reduces the need for third-party regulators, as the system can regulate itself (Wright & De Filippi, 2015). This procedural "input–processing–output" perspective of the world is referred to as "blockchain thinking" (Swan, 2017). What can be built on these infrastructural foundations include decentralized autonomous organizations (DAOs) for coordination (as represented in Fig. 3.1 in the form of a meme), decentralized finance (DeFi), non-fungible tokens for digital representation of unique items (NFTs), and "open" metaverses for immersive digital experiences (Nabben, 2021a).

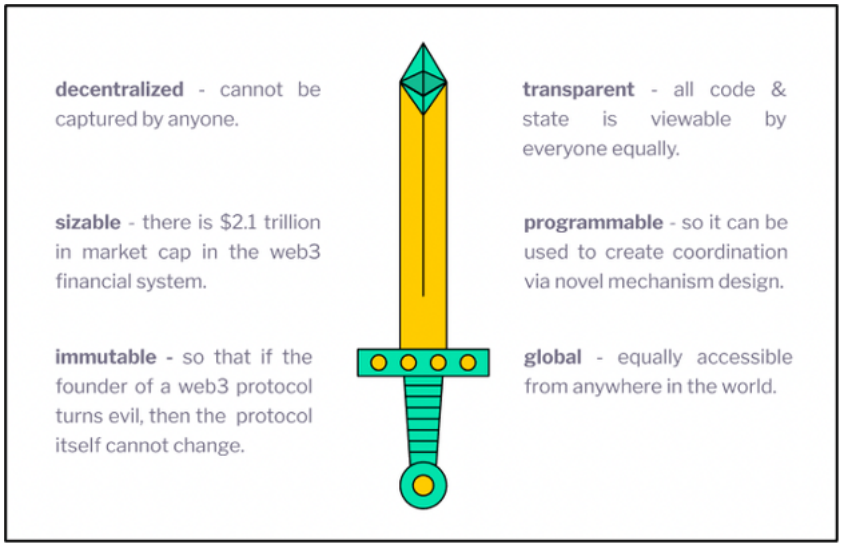

Fig. 1.1. "The Sword That Can Slay Moloch" (the God of Coordination Failure) (Owocki, 2022).

RESEARCHING WEB3

Relatively little has been written about conducting research in the field of blockchain communities as an enabling component of "Web3." Web3 is a multidisciplinary construct, combining principles and practices from cryptography, software engineering, network security, and economics. Rella (2021) describes the ethnography of blockchain communities as digital, multi-sited, and "radically networked." Rennie (2021) highlights the cooperative, participatory nature of decentralized technologies, posing the question: "what would it be like to be *part of* an autonomous robot or infrastructure that makes decisions?" Generating ethnographic connections and identifying patterns, especially in socio-technical systems, is analogous to human–machine entanglement between heterogenous, connected elements (Murray-Rust et al., 2019; Strathern, 2004). In this ethnographic engagement between constellations of people, artifacts, and algorithms, it is impossible not to get subsumed by the pervasive nature of crypto culture.

As an ethnographer, entering the field of Web3 requires entanglement. Communities are relatively open and easy to access. This aligns with the ethos of "permissionlessness," meaning "possible to participate in the use, development, and governance of that system or infrastructure without requiring permission from an authority, by adhering to publicly stated procedures" (Nabben & Zargham, 2022, n.p.). Participation consists of "lurking" in numerous online Discord application chats, community and company Slack groups, engagement in full-blown Discourse forum discussions, and voting in DAOs. Yet, everyday immersion in the field of crypto is unrelenting and consuming. In markets that never close, traders don't stop trading, and developers in time zones

around the world don't stop developing. One early and long-term contributor and "cypherpunk" Vinay Gupta (2022) states: "You've never seen burnout till you've seen blockchain burnout: 24h a day, 7 days a week … I remember working on the web: it was never *anything* like as intense as the blockchain space is." Even crypto researchers have announced a leave of absence, citing burnout (Walch, 2022).

In entering the field, Web3 is inseparably intertwined across the digital and physical. Blockchain research has been described as both a theoretical and logistical pursuit (Rella, 2021). Researching Web3 occurs in and through information infrastructures, often those of Web3 itself. Amid the COVID-19 pandemic, and for me in the city with the world's longest lockdown, the moving circus of crypto conferences slowed but the online forums and sheer volume of conversation continued to rage. The intense cadence of discussions, proposals, votes, and market twists and turns that are maintained in these online spaces all form ethnographic research data to identify, keep track of, document, analyze, reflect on, and transform. Meanwhile, the moving feast of crypto conferences charged ahead throughout the pandemic where personal relationships are built for "high signal, low noise" communications that lubricate deals, projects, governance decisions, and development. In many cases, catching COVID-19 was "proof of attendance." When I was able to return to my first crypto conferences in three years (actually three conferences in two and a half weeks), I was physically exhausted but intellectually invigorated.

Researching decentralized technology communities uncovers both the inspiring aspirations of internet subcultures, as well as the dank corners of the Dark Web. Here, the worst of human nature can be displayed in a pseudonymous atmosphere of meritocracy based on intellectual prowess, extreme libertarianism ("anything goes as long as I don't impinge on your personal property"), and a value for hard-edged incentive alignment ("make the humans do what you want via money"). Crypto can be described as a "repugnant market," meaning one that is viewed unfavorably in the eyes of society due to the real or perceived harm to participants (Allen et al., 2021). The underbelly of crypto's "dank meme culture" occasionally bubbles up and spills over from one of the "Chans" (i.e., "4Chan" or "8Chan"), an online platform that is government censored in numerous geographies but thriving. For example, the crypto craze around saying "Good morning" or "GM" for short is thought by many participants to be a way of welcoming others to a Discord chat or the Twittersphere as a way to kick off a day's work, especially during the pandemic. With a little more digging, it seems that the morning ritual emerged from a known sex cult in America and perpetuating it in unknowing online communities was seen as funny (Prabhu, 2018; Wikipedia, n.d.). In this field, I've seen many lose their identity, quit their job to become a "sovereign individual," give up one residency to gain another in a tax haven, separate from their long-term partner and declare polyamory, and forego their human decency in the hope of "mooning" (getting rich quick). I have also met wonderfully interesting people, worked on cutting-edge projects, travelled the world, and established long-term friendships.

As time progresses, I have remained entangled in Web3. As an academic researcher, people and projects seem genuinely interested in my research outputs. In such a fast-paced setting and with little sensemaking occurring in near real time, I am invited to speak, write, participate, govern, steward, and advise (thank goodness my husband refuses to come to all the events, so I am forced to return home from the conference circuit and maintain a life on the outside). These projects too want to know "how does technology become resilient?", "What are DAOs vulnerable to?", and "what is good governance?". Why these questions are even relevant is connected to the origins of Web3.

WHERE DID WEB3 COME FROM?

In the study of infrastructures, one way to identify emerging ecosystems is by their master narratives (Star & Ruhleder, 1996). In this chapter, I reject the notion of Web3 as a Venture Capital marketing

term designed to capture emerging technologies, instead (briefly) focusing on the historical origins of public blockchains. Blockchain, and by extension Web3, can be known by its political imaginaries and expressions (Husain et al., 2020). Blockchains configure our social reality by configuring social relations and constituting new social realities (Reijers & Coeckelbergh, 2016). Decentralized technologies offer an information infrastructure with unique attributes, in that it is participatory, open source, and encrypted, which suggests the possibility for social coordination that is free from unwanted third-party interference. The combination of distributed computing, cryptography, and the idea of self-provisioned digital monies led to the invention of Bitcoin, the first functioning, "peer-to-peer digital cash" (Nakamoto, 2008). This concoction of an invention is largely credited to the Cypherpunks, a 1990s subcultural group of cryptographers, computer engineers, philosophers, and political extremists (Brunton, 2019; Maurer et al., 2013; Nabben, 2023a; Swartz, 2018). The Cypherpunks have been described as key political protagonists in the engineering of Web3 political economies (Brekke, 2020).

Cryptocurrencies and Web3 emerge as an early reaction to the potential of computing to greatly enhance the surveillance state and surveillance capitalism (Nabben, 2023; Nabben, 2021b). The advent of public key cryptography enabled access to the ability for identities to communicate securely over insecure networks (Diffie & Hellman, 1976). The Cypherpunks converged over the shared belief that public key cryptography was a powerful tool in restructuring society. According to Timothy C. May, author of the Crypto Anarchist Manifesto and one of the co-founders of the Cypherpunks Mailing List, cryptography has the ability to "fundamentally alter the nature of corporations and of government interference in economic transactions" (although we know that public blockchains as an instantiation of this vision are indeed very traceable, with professional organizations offering this service to governments and other companies) (May, 1992). Such tools for communication, commerce, and self-organization were first embraced by repugnant markets, such as the "silk road" online drug marketplace.

Web3 also perpetuates computer subcultures of old by embracing the hacker ethic of participatory organizing. Hacking is about political reordering. The cultural politics of Web3 are in many ways a continuation of hacker traditions of political reordering, embracing political ambition through "playful tinkering" (Coleman, 2011). Although serious in its underlying ambition, development is conducted playfully and for the "lulz" (laughs) (Coleman, 2014), as both an intellectual challenge and a game. Yet, in Web3, hackers are not breaking, but the overarching memetic phrase known as "BUIDLing."

Web3 has emerged from encryption, massive expansion in digital possibilities for coordination, and anarchy, not for tearing down but for creating value networks that restructure society in ways where people have more control. For hackers, "code is speech," meaning a sphere for free speech and protest (Coleman, 2009). The saying "code is law" in Bitcoin communities refers to the immutable, software code that acts as legal enforcement of the rules of the system (somehow perverted from its application in academic circles (Lessig, 2000)). In Web3, code is *creation*. Its playful origins that were once surmised in the meme phrase "HODL" (meaning, hold your tokens despite market bear and bull runs) are now described as large-scale infrastructure engineering projects, encapsulated in the surprisingly sticky meme "BUIDL" (meaning, build). Creation speaks of iterative "experiments" in new institutional infrastructures and societal possibilities for self-organization. Yet, the subliminal but fundamental question behind Web3 is, what is being built?

THE PREFIGURATIVE POLITICS OF WEB3

The cultural politics of digital media is a seminal lens for the analysis of software communities (Coleman, 2010), as "no tool is neutral" (Star, 1999). Decentralized, public blockchains have been described as both a "theory of the larger social order" and a challenge to it (Swartz, 2018). The

political philosophy of these infrastructures includes self-provisioning of public goods via technological tools, free markets, and governance minimization (Ennis, 2021; Swartz, 2018). The Ethereum public blockchain project positions itself as the infrastructural backbone for distributed, global, coordination that will emerge from within the existing system.

> "[…] money is a fundamentally social thing in a much deeper way than, say, two-party encrypted communication," Buterin [co-founder of the Ethereum blockchain] states. "You have to start thinking about governance, social contracts … common shared expectations in this community, how do changes get made, how do we decide how changes get made, how do we discuss things …. These are all very political things." (As quoted by Morris, 2019)

While admiring the Cypherpunks' anarchist ideologies and creations, Ethereum's politics have been gently redirected to emphasize a culture of software development, immersed in cultural diversity and belonging, and epitomized in memes and motifs of rainbows and unicorns, as demonstrated in Figure 1.2, which shows co-founder of the Ethereum blockchain, Vitalik Buterin, wearing pyjama pants and hugging a person in a "Spork" suit at a cryptocurrency software developer conference. By taking a more subtle but still political path to societal change, "Ethereum is not in the business of countering the state" directly (Ennis, 2021). This has allowed for the gradual advancement in the development of decentralized infrastructure for financial markets, governance, government, identity, and coordination between digital and physical assets into the mainstream. Relatively little reprimand from regulators to stop this burgeoning industry has occurred along the way, despite some SEC notices being served and US Treasury Sanctions against virtual currency mixer "Tornado Cash."

Figure 1.2: "This is the man that has all your money!". Image courtesy of Amasihy Photography (ETHDenver, 2022).

These themes underpinning the political propensities of public blockchains are encapsulated in the concept of prefigurative politics.

Prefiguration is a politics of creation in response and opposition to existing institutions to embody personal and anti-hierarchical values through participatory action to enact a vision of a desired society in place of what is (Boggs, 1977; Swain, 2019). Blockchain communities embrace a politics of prefiguration by embodying the politics and power structures that they want to enable in society (noting that they are heterogeneous and fraught with political infighting and alliances). In parallel with existing forms of government, blockchain introduces a novel form of self-governance with its own power dynamics (Miscione & Kavanagh, 2015). This disintermediation of centralized actors emerges from within existing structures in society, including that of communications, money, digital media, and recreation. What is not completely clear is what society is being prefigured toward.

If blockchain is about infrastructural experiments in reordering society, then Web3 is the configuration of these new social worlds. Of course, the risk with any strategy of prefiguration is that rather than offering an escape from government, technological infrastructures just offer another, competing governance system with its own politics (Reijers & Coeckelbergh, 2016). The reimagining of Web3 is ambitious, broad-scale, self-made societal improvement, where local actions, such as a shielded love note, lead to global change. Thus, the question begging Web3 is not just "what is good governance?" but "what is good infrastructure?" In trying to design coordination infrastructures for societal scale, the subliminal, unaddressed, question staring Web3 in the face is, "how to infrastructure?" in line with the cultural values of Web3's developmental ambitions, which has been referred to as "self-infrastructuring" (Nabben, 2023b).

WEB3 AS INFRASTRUCTURE

One way to examine Web3 that integrates its prefigurative ambitions and the technical details of its everyday functioning is by viewing it as infrastructure. Information infrastructures are the array of social and technical elements, characterized by people and processes of human organization that support the creation, use, transmission, storage, and destruction of information (Akrich, 1992; Star & Ruhleder, 1996). The attributes of infrastructure include "embedded, transparent, learned as part of membership, linked, embodied, built, modular" (Star, 1999). They are "shared, evolving, open, standardized, heterogenous" to provide an installed base on which to build (Hanseth & Lyytinen, 2016, p. 109). Bowker et al. (2009) argue that when dealing with information infrastructures, we need to look at the whole array of organizational forms, practices, and institutions that accompany, make possible, and inflect the development of new technology, their related practices, and their distributions. Institutional infrastructures are the sets of political, legal, and cultural institutions that form the backdrop for economic activity and governance, which enable or constrain operations to organize and configure societal relations (Hinings et al., 2017). In this context, Web3 is both technical infrastructure and institutional infrastructure. The challenge, in this novel context of decentralized social infrastructure, is learning *how* to infrastructure. This necessitates not only creative ambition, but a deep understanding of infrastructural lifecycles, in terms of design, development, operation, and maintenance.

HOW TO INFRASTRUCTURE

Web3 is innovating in reaction to the much-anticipated failures of Web 2.0 and the "myth of digital democracy" (Hindman, 2009). The purpose of infrastructure is to support a particular activity (Zurkowski, 1984). This is an inherently political undertaking. "The politics of technology are about ways of building order in our world" states infrastructure scholar Langdon Winner (1985). Proponents of Web3 want to create and build better information infrastructures. They just don't know how yet. "To infrastructure" denotes the ongoing activities, processes, tools, methods, and practices that make up and change an infrastructure (Star & Bowker, 2010). Good information infrastructures are those that are adaptive to changing circumstances and environments, yet,

designing for flexibility in relation to a clear purpose is not an easy task (Star & Bowker, 2010). Innovation that is predicated on past examples can lead to a lack of imagination (Star & Bowker, 2010) or, worse, degradation of "the layer of institutions that keeps individuals from eating each other" (Turner, 2019).

Public blockchains enable social, political, and economic modes of self-organization through the ability for members of a network to enter and exit infrastructures, according to their values and preferences, and the rules of the infrastructure in which they shape and participate. This flexibility cannot always be planned in advance as changes in social, technical, and economic settings are often unpredictable. Already, public blockchains are composed of the "infrastructural legos" of cryptography, computing hardware, software, and ledger, and are being composed still of decentralized applications (DApps), DeFi, NFTs, and DAOs. How these can and should be combined, and to which emergent models of data governance they will ascribe (whether based on cooperative data governance models, more legalistic data trust structures, or by emphasizing personal data sovereignty) will greatly influence the social outcomes of Web3 infrastructure.

Furthermore, the work of creating and building infrastructure is secondary to the work of ongoing maintenance. In building coordination infrastructure, it's all a coordination game. Public infrastructures traditionally emerge out of significant bureaucracy. In other networks, such as the Web, standard bodies and social arrangements make the development and ongoing maintenance of large-scale technological infrastructure possible. Although standards are essential in the development of large-scale infrastructures, they are a messy entanglement of social processes, across numerous layers of a technology stack, require practice, and evolve over time (Star & Bowker, 2010). This highlights a potential contradiction to be planned and solved if Web3 is to fulfill its vision (although as Buterin (2022) himself points out, there are many contradictions). Decentralized infrastructure cannot be governed by centralized bureaucracies in the long term, yet infrastructures require long-term maintenance strategies.

Ultimately, infrastructure requires people, and it is the social consequences of infrastructures that matter (Edwards et al., 2009). The challenge of broad-scale infrastructures is the "gateway moments" when technical, political, legal, and social innovations link previously separate systems to form far more powerful, far-reaching networks. Here, infrastructures must "adapt to, reshape, or even internalize elements of their environment in the process of growth and entrenchment" (Edwards et al., 2009). As Web3 scales in development, general interest, adoption, and the rise of challengers to it (such as nation-state-based "Central Bank Digital Currencies"), it must have a clear purpose to unite and guide its infrastructuring if it is to deliver on the hopes of its roots and its promises as a genuine alternative to Web 2.0 failings. Perhaps Web3 needs a new meme, from "BUIDL" to "COORDINAET" (meaning, coordinate – also, this is why my Web3 job title is not "Dank Meme Lord").

WEB3 AND THE EVERYDAY

Depending on the cryptocurrency market cycle, Web3 is the most hype-beasted field of what are essentially the mundane but fundamental aspects of human coordination. Societal coordination is what humans have spent generations trying to figure out. Web3 is the same goals but with new tools, situating coordination as distributed among participants across physical and digital domains, rather than hierarchical and administered via traditional institutions.

I am convinced that many people don't understand why they are here. A cause to believe in, a community, a "GM" to wake up for in the morning and, of course, an exit (either from existing social hierarchies or financially to quit the "rat race"). Yet, when there is little understanding of the history of where Web3 has come from, developers often unknowingly adopt cypherpunk sentimentalities

and hacker aesthetics to forward the subversive tide of Web3. Others are masters of their craft, the subtle art of coordination games of "political goals, via technological means" (Nabben, 2023a), and prefigurative "acting through building" (Coleman, 2011). The privacy coin airdrop and love note interaction elaborated in this chapter are about hiding cryptographic communications in a modern-day smartphone to incentivize migration to an alternative infrastructure. This alternative infrastructure, "Web3," is one undergirded by cryptography, powered by blockchain technology, and political in its affordances of creation toward "exit" from traditional infrastructures of communication, banking, and governance.

These quite serious matters of governance, politics, autonomy, and society are oftentimes a far cry from what I observe in the day-to-day Discord channels and memes of the crypto Twittersphere. Almost in contrast with the vast structural and political visions of Web3 projects is the way its materiality as a technological infrastructure is embedded in everyday encounters that shape our world. The everyday experiences of Web3 occur subtly, through regular columns in the local newspaper on "Web3 and me" or "GameFi" decentralized applications where furry animals "breed" with one another and players are rewarded in tokens (Axie Infinity, n.d.; Ihde, 2009). Keen attention must be paid to the underlying processes, politics, material infrastructures, and social protocols that enable and direct Web3.

This is not necessarily because Web3 is so special in the history of technological development, new media, and cultural adaptation but because wherever individuals and groups deploy and communicate with digital media, "there will be circulations, reimaginings, magnifications, deletions, translations, revisionings, and remakings of a range of cultural representations, experiences, and identities" (Coleman, 2010), and the precise ways that these dynamics unfold can never be fully anticipated in advance. Thinking about how to organize infrastructures that we can and want to live with might help.

CONCLUSIONS

Web3 offers an "exit" from existing institutions by building infrastructures for self-governance from within prevailing societal hierarchies and power structures. This paper has provided a practical outline of the core tenants of Web3 for those seeking to "enter the field" as researchers, as well as a theoretical framework for further research into Web3 as infrastructure. The historical origins, cultural aesthetics, and prefigurative politics of Web3 demonstrate how Web3 is a process of community discovery in learning how to infrastructure in digital realms. The challenge for proponents of Web3 is to create good information infrastructure – meaning infrastructure that provides a genuine alternative to the governance and ownership downfalls of Web2.0 to allow people to adapt and change to their environment, in line with their values and goals, and in relation to existing institutions (including the law).

Engaging with Web3 reflects profound shifts in modes of social interaction, economic, and cultural life. By encountering Web3's pursuit of collectively building better institutional infrastructure, I have presented a mirror of Web3 and a mirror to Web3 of "how to infrastructure." This infrastructural lens helps frame "success" as neither getting in early on a Ponzi scheme or orchestrating a social movement but as conscious design and maintenance for the everyday human experience.

Despite offering an analytical lens, there is no reason to presuppose that researchers *should* engage with Web3. Indeed, academic bureaucracies epitomize the antithesis of Web3, built on sluggish hierarchies, with little incentive toward practical action, in favor of climbing "publish or perish" rankings (not my team but so I'm told occurs elsewhere). According to the logic of prefiguration that organizes Web3, open, permissionless, peer-to-peer systems playfully seek to

reorder, mend, and re-create seemingly broken structures from within, to enable choice. Thus, this entire exercise in institutional reimagining and building is not really about entering the field, but true to the nature of cryptoeconomic systems, it is about *exiting* it. This is in many ways the goal of this publication.

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