Web3 Is the Opportunity We Have Had All Along: Innovation Amnesia and Economic Democracy

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Abstract

The class of technology variously referred to as Web3 or crypto has been heralded as a democratizing force for economics and governance. This chapter argues that, to the extent such hype is justified, it is only partly due to the affordances of the technology itself. Perhaps more important is the amnesia it has induced, as an innovative paradigm whose novelty inclines people to neglect once-stable norms. In both economics and governance, crypto offers opportunities for greater democracy, but following through on them is guaranteed by neither the technology nor the amnesia it invites.

Web3 is an opportunity to do what could have been done before but wasn't done, which is already being squandered with what *is* being done. Nevertheless, I will argue, it is an opportunity we need.

The kind of opportunity I refer to is not necessarily the opportunity everybody sees in Web3—which I will subsequently include in the broader terminology of *crypto*. Common accounts of what crypto is good for include keywords such as trustlessness (Nakamoto 2009; De Filippi, Mannan, and Reijers 2020), openness (Caliskan 2020),

coordination (Swartz 2017; Soleimani et al. 2019; Owocki 2022), decentralization (Schneider 2019; Walch 2019), and freedom (Golumbia 2016). But the opportunity I am most interested in would be better phrased with another floating signifier (Mehlman 1972): *democracy*—specially, the pursuit of equitable economics and decision-making. Democracy is also widely cited among crypto's possible or actual affordances (e.g., Reijers, O'Brolcháin, and Haynes 2016; Buterin, Hitzig, and Weyl 2018; Linares and Cabaña 2019; Allen, Berg, and Lane 2019; Magnuson 2020), and for some it is the end for which the other keywords are means. Crypto comes by these democratic associations honestly; its distributed ledger technology enables novel means of circulating wealth and power among a system's participants. Unlike Internet technology that operates through a central server, shared ownership and control are the default setting. Crypto meanwhile has the wherewithal to enable new degrees of consolidation in wealth and power.

[Figure 1. Adapted by the author from public domain images with the GNU Image Manipulation Program.]

The democratic opportunities of crypto are real. But those opportunities are not unique to the technology at hand. They could have been taken before, although for the most part they were not.

The most salient opportunity that crypto presents, more than any particular technical feature or affordance, arises from the amnesia of innovation: that deer-in-the-headlights effect as a new technological paradigm shines brightly enough that people freeze and forget to apply once-stable, and still applicable, social contracts to it. Much as gig platforms made regulators forget labor laws (Cherry 2015–2016) and cloud services did not face the same privacy rules governing older telecoms (Zuboff 2019), the strange new tech of crypto has made space for breaking and remaking norms about how networked assets are to be owned and governed. What once seemed (but did not have to be) fixed is now (by no particular necessity) in flux.

As Langdon Winner put it, in the final paragraph of his seminal essay "Do Artifacts Have Politics?" (1980, 135):

> In our times people are often willing to make drastic changes in the way they live to accord with technological innovation at the same time they would resist similar kinds of changes justified on political grounds.

That is: What was always possible for humans to do in politics, but never quite feasible, can happen all of a sudden if it can be made to seem the inevitable result of technology.

[Figure 2. Adapted by the author from public domain images with the GNU Image Manipulation Program.]

With Web3 we find ourselves in a throwback to Web1, which is to say the days when John Perry Barlow (1996) could proclaim a "Declaration of the Independence of Cyberspace." The years since have insisted that cyberspace was never its own space and was certainly not independent from its surroundings. Meatspace regimes of law, finance, wealth, and power have had their way with Internet technology, turning that open and decentralized technology into unprecedented concentrations of corporate power. So goes the story again with incipient crypto.

Once again, under the cover of decentralization-talk, the centralization power grab is well underway. Venture capitalists have recognized that crypto protocols represent an even greater chance for value capture than platforms did in Web1 or Web2 (Wilson 2016). Platforms operate within rules; protocols write the rules (Galloway

2006). A further advantage for the power grabbers lies in the amnesia: crypto's ability to operate ambiguously with respect to territorial law and regulation, carrying out forms of ownership, governance, and financial chicanery that could not be gotten away with using more familiar technologies. In this respect, the disruption of crypto runs the risk enabling of "disaster capitalism" (Klein 2008): the use of a rupture in the way of things to enact an anti-democratic power grab by capital holders, enabling them to accomplish what would otherwise face too much popular resistance.

So far, actually existing practice appears to be making good on that risk. Available data on blockchain activity is plentiful and precise, but it rarely reveals much about the effects on real human lives. Viral tokens attract hopeful retail investors, who may reap astonishing gains or see large chunks of their savings wiped away in hours. Venture capitalists meanwhile hold large stakes in important DAOs and protocols, through which they can dominate governance processes (Buterin 2018; Ferreira, Li, and Nikolowa 2019; Jensen, von Wachter, and Ross 2021). The crypto advocates' longstanding promise of financial inclusion for the world's poor appears to remain mostly deferred. Any opportunities that crypto presents on behalf of democracy, therefore, accompany opportunities for democracy's enemies.

Capital, and crypto-capital especially, is itself be a form of media (Schneider 2020b)—malleable, transmissible, vulnerable to subversion, and a vessel for culture. Like any other media, it shapes us, and perhaps even more than we recognize, we shape it. We can bend it beyond recognition, even to the point of its abolition.

I offer this chapter as an explanation for the cautious but determined hope I have for the opportunity that crypto and its cognates present—even if we shouldn't need this opportunity, because the possibility for more democratic ownership and governance has been with us all along. As Kei Kreutler puts it, those earlier chances represent a kind of

"prehistory" for crypto (Kreutler 2021). I will consider crypto's contexts, prospects, and potential tactics for ownership and governance, centered too much on my particular life-world of the United States tech economy, which is at once parochial and outsized in influence. Despite my ambivalence about turning to any technology as a lever of social change—can't we humans do this on our own?—I write in order that, through the amnesia, we might better remember the stakes and defeat exploitation in all its forms.

Ownership

In capitalist economies, wealth accumulation tends to derive from business ownership (Smith et al. 2019). Particularly since the 1970s in the United States, the returns to capital ownership have continued to grow while wage income has stagnated (Michel 2012; Alvaredo et al. 2013). There are many contributing reasons for this. Labor-union membership has declined while the financial sector grew. Public policies in much of the world have privileged accumulations of investor wealth and discouraged widespread participation in early-stage businesses. Taxes on capital gains are generally lower than on wages. Stock ownership is highly concentrated, and the bottom half of American income-earners own almost none of it (Wolff 2017). Redlining and other exclusions have prevented people racialized as non-White from accessing ownership. Private equity funds can access financing to purchase a business, but its own employees rarely can do the same. When even the likes of Uber and Airbnb seek to distribute company stock to their contract workers, the US Securities and Exchange Commission declines to permit it (Robbins, Schlaefer, and Lutrin 2018). Business structures based on shared ownership such as cooperatives have consistently faced barriers to growth, due to a lack of capital access and other signs of structural neglect (Molk 2014; Spicer 2021). Cooperatives have been particularly rare in the platform economy, where venture

capital has excelled in deploying large quantities of investment that co-ops cannot access.

This is not a natural or inevitable condition. In sectors such as credit unions, agricultural cooperatives, and rural electrification, public policy has enabled shared ownership to flourish by enabling frameworks for financing it (Schneider 2018). Economic democracy works when the system allows it to happen. Tools such as dividends from sovereign wealth funds and "baby bonds" could have spread the benefits of capital gains much more universally. Programs for expanding homeownership could have targeted, rather than excluded, marginalized populations. And policy could have ensured that workers who want to buy their factory, or neighborhoods that want to set up their own broadband networks, can access financing just like wealthy investors do (Kelso and Kelso 1986; Schneider 2020a).

Those things didn't happen. Now, crypto presents another chance to try.

Shared ownership is the basic value proposition of a blockchain—a database that distinct stakeholders agree on together. Achieving the hallowed goal of decentralization requires having many participants jointly managing their network. Users of a blockchain or a DAO typically hold its associated tokens, which can accrue value with the system as a whole. Use and equity, roughly, go hand in hand; to be a user is to be an owner. The classic distinction between labor and capital could thus be poised to dissolve into an alignment through a common token. Where regulators blocked Uber and Airbnb, crypto seems to find a way. When Gitcoin conducted a financing round in 2021 and created a DAO, it distributed tokens to users (Owocki 2021). When the Ethereum Name Service released its own token, it distributed thousands of dollars' worth to anyone who had bought a domain (Thurman 2021). In the culture of crypto early adopters, co-ownership is an expectation and a norm.

The old and new are beginning to learn from each other. Present-day cooperatives, recognizing the constraints that the mainstream economy imposes on them, are turning to tokens and DAOs to open new financing opportunities (Prado 2021; Robey 2022). Some DAOs are legally incorporating as cooperatives (Radebaugh and Muchnik 2021). Even investors such as Variant Fund have adopted widespread user ownership as an investment thesis, citing the cooperative tradition as an inspiration (Walden 2019). The narrative of "exit to community" (Mannan and Schneider 2021)—transitioning to community ownership, in one form or another—has become a byword in some corners of crypto culture.

None of this presents a guarantee of equity, fairness, or justice. Achieving those will require intention. For instance, protocols can ensure that token allocations accrue to contributors of labor and use-value, rather than just to those who can afford to pay for them at the outset. Mechanisms akin to antitrust enforcement may be necessary to counteract consolidation and excessive inequality. Perhaps most importantly, financial instruments should ensure that communities of less-capitalized people can participate in this new economy with relative safety. Whereas the imagined user of many DeFi apps seems to be the speculative day-trader, the lone gambler, truly decentralized finance needs to focus on enabling groups of under-capitalized people to access capital for reasonable, practical undertakings.

If more equitable ownership arrangements arise through crypto, however, it is not because they were impossible before. For instance, non-fungible token (NFT) enthusiasts celebrate that the technology enables artists to receive royalties from the resale of their works. However, few seem to recognize that resale royalties have been in use in Europe since the 1920s and more recently in the United States (van Haaften-

Schick and Whitaker 2022). No NFTs required. Still, if crypto can make fair pay for artists easier to enforce and more widespread, all the better.

Governance

[Figure 3. Adapted by the author from public domain images with the GNU Image Manipulation Program.]

Those of us in the United States experience periodic dismay about institutions like the Electoral College and the Senate filibuster; these are reminders that the government's

basic mechanisms date to an eighteenth-century experiment of aristocratic slaveholders. Their experiment has thus far lasted longer than any other regime of modern republicanism, and yet it joins countries around the world in a general pattern of declining efficacy and public confidence (Diamond 2022; Papacharissi 2021; Silva-Leander 2021). Polarization and gridlock have become increasingly synonymous with democracy.

This is not for lack of opportunities. Recent decades have seen social movements and technologists develop numerous experiments in more textured, responsive, and participatory forms of collective decision-making. These include participatory budgeting (Cabannes 2004), liquid democracy (Hardt and Lopes 2015), sortition (Gastil 2000; Bouricius 2013; Pek 2019; Fan and Zhang 2020), citizens' assemblies (Niemeyer 2014; Chwalisz 2017; Giraudet et al. 2022), crowdsourcing (Hsiao et al. 2018; Bernal 2019), and various alternative voting systems (Posner and Weyl 2014; Emmett 2019). A growing field of platforms for online citizen engagement has emerged to facilitate these processes (Stempeck 2020). Yet in even the most advanced applications of technology-enabled governance, from Madrid to Taiwan (Hsiao et al. 2018; Smith and Martín 2021; Tseng 2022), the new mechanisms serve in solely advisory roles; participatory budgeting processes, while more likely to be binding, apply to only small fractions of public budgets.

Governments could be eagerly transforming themselves into the vibrant, creative, networked institutions that the networked world arguably needs them to be, but they are not.

Meanwhile, governance in everyday online life has been guided by a design pattern of "implicit feudalism" (Schneider 2021), according to which platforms and user-moderators alike wield power with little accountability to the communities they

govern. Forms of governance common in offline civic associations—such as elected boards, bylaws binding on leaders, and clearly defined rights—are almost nonexistent in Facebook Groups, "creator economy" platforms, and group chats, for instance. If political thinkers like Alexis de Tocqueville ([1840] 2006) and Robert Putnam (Putnam, Leonardi, and Nanetti 1994) are right that small-scale democratic experience contributes to the possibility of mass democracy, then what happens in these online spaces may be contributing to the decline of confidence in democratic government.

Online democracy certainly could have become far more widespread before—though with crypto, it may be easier. Implicit feudalism emerged partly as a result of a particular socio-technical confluence: From early bulletin-board systems to Web2's corporate social media platforms, central servers and their associated legal entities have been inescapable facts of online social life. Democratic power-sharing, therefore, would probably be infeasible without something like cooperative ownership of a platform's servers. Whoever owns the server holds important legal responsibility for what occurs on it—and most often that means a platform's profit-seeking investors. To the extent that blockchains bypass such sites of central control through user ownership and control, Web3 represents an historic opportunity to break from platform feudalism to digital democracy. In this specific sense, Web3 boosters' proclamations about the democratizing power of their innovations is true.

Crypto may also help short-circuit the logjam that has hobbled experimentation among democratic governments. In a promotional video for Aragon, a platform for blockchain governance, co-founder Luis Cuende boasts, "Today, we are in the first time in history that we can actually try out new governance models without the need of people getting killed" (Aragon 2018). It is actually the case that many of the governance innovations listed above—the ones being used either as mere advisors or not at all by

governments—are already at work in crypto protocols, organizing decisions and moving resources. Programmable smart contracts enable mechanisms to be tried without asking whether an external legal system will enforce them. Experimentation becomes easier to imagine when it doesn't require a political revolution, just a tweak to the source code.

Crypto's democratic opportunities, however, are not guarantees. Software protocols can become as entrenched and inflexible as political constitutions (Alston 2019). The dominant design logic for blockchain governance today is "cryptoeconomics," which relies on economic incentives in ways that risk making democratic deliberation on the common good inadmissible (Schneider 2022). Too often, the actual practice of participatory governance that crypto makes possible would be better described as plutocracy (Buterin 2018) or technocracy (Postman 1993), as opposed to democracy.

For crypto to usher in a democratic renaissance, it needs to be designed that way. For example, even leading advocates of cryptoeconomic designs have begun calling for systems with "soulbound" features that center people, not tokens, as their basic unit (Buterin 2022; Weyl, Ohlhaver, and Buterin 2022). This is an important prerequisite for fostering spaces of political, rather than just economic, deliberation and decision-making—for imagining a common good, not just an optimal return on investment. Drawing on the much longer tradition of cooperative business (Schneider 2018), crypto systems might more intentionally allocate governance rights accordingly: perhaps only to the workers who build value in their systems, or to people making the most widely appreciated contributions, rather than flattening all forms of citizenship into token-holding.

In the meantime, it is a predictable irony that the fate of crypto governance may lie with old-world governments. As policy-makers scramble to regulate crypto—or

strategically not regulate it—they also decide whether to turn crypto into a subsidiary or an autonomous zone. Will widespread use of blockchains depend on their adherence to territorial governments' laws? Or will the technology enable new governance layers, as distinct from existing governments as the most libertarian partisans have hoped? In either case, the reshuffling of social contracts underway presents a chance to catch up on the democratic experimentation that has otherwise gone neglected.

Conclusion

There is a tendency among some crypto enthusiasts to imagine that, thanks to the marvelous new technology at hand, a green solarpunk paradise of abundant wealth and close-to-effortless coordination is at hand (e.g., Wenger 2016; Swartz 2017; Owocki 2022). It is an echo, amplified with a new kind of hyper-volatile money, of the "solutionism" familiar from the heyday of Web2 (Morozov 2014). The disappointments of Web2, combined with a steady stream of Web3 cataclysms (White n.d.), give cause to dismiss such utopianism. Yet it remains undeniable that Web2 produced a kind of rupture with its round of innovation and amnesia—reshaping society, economics, and politics in ways we are still grasping to understand. The result is hardly utopian. To a greater degree than early enthusiasts expected, the rupture was shaped by external forces: venture capital, racism, colonial power relations, and authoritarian politics, for instance.

If Web3 ushers in a similar rupture, it runs a similar risk of amplifying outside forces that do not necessarily contribute to human and ecological flourishing. From the carbon footprint of Bitcoin mining to the surge in crypto-enabled ransomware attacks, the negative externalities are well underway. But with every change comes opportunity. In this chapter I have sought to identify very real opportunities that crypto presents to

radically advance democratic ownership and governance—in ways that both were possible before crypto and are well-suited for crypto's particular affordances.

[Figure 4. Adapted by the author from public domain images with the GNU Image Manipulation Program.]

What is missing from the crypto-optimist culture, as with Web2 solutionism, is a sober recognition of the forces arrayed against happy outcomes. The rewards are great for a small minority to capture the wealth and power of this new paradigm, and to

prevent democratic possibilities from taking hold. Many contenders seeking to be that small minority are already actively at work in doing so. If people building, regulating, and using crypto are serious about advancing democracy, they will need to design for democracy with determination comparable to what they now apply, for instance, to system security. Tremendous energy—intellectual and computational—goes toward securing property rights on blockchains. What if similar energy were also devoted to ensuring these systems produced more democratic outcomes than their predecessors? What if designers' threat models were not just double-spending and distributed-denial-of-service attacks but also plutocracy and wealth inequality?

This is not the first time advancing democracy has been an option, an opportunity. Too often, other forces won out, and they are well on their way to doing so again.

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