

## **Building Blockchain Frontiers: Ethereum as an Extension of the Californian Ideology**

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The Ethereum blockchain has emerged as a new technology with particular affordances that lend themselves to entrepreneurial visions aligned with the Californian Ideology. Conceptualizing Ethereum as “the world computer” offers a compelling vision for those inspired by the Californian Ideology. This article examines two case studies—talks presented at DevCon4, the Ethereum community’s largest annual conference—to investigate some of the physical prototypes fueled by a supposedly ethereal technology. We focus on two distinct framings of Ethereum: As part of Silicon Valley elite Stewart Brand’s long-term futurist vision and crypto millionaire Jeff Berns’s utopian community in the Nevada desert. Through an ethnographic analysis of their frontier-themed visions, we argue that Ethereum proponents strategically use elements of the Californian Ideology to situate themselves in a successful history that also blends commercial success with countercultural elements.

*Keywords: imaginaries, blockchain, Californian Ideology, decentralization, Ethereum, prototype*

*This time, we’re not using toys and wooden blocks, we’re using the blockchain and we’re building a real city.*

—Jeffrey Berns, founder of Blockchains Inc.<sup>1</sup>

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<sup>1</sup> This quotation was obtained through direct observation at the ethnographic field site, attended by the primary author.

The Californian Ideology—which fuses transcendentalist, New Age ideas, techno-utopian libertarianism, and communalist sensibilities (Turner, 2006)—has shaped tech start-up culture (Marwick, 2018; Neff, 2012). Despite the Californian Ideology's positioning of individual innovators as changemakers, emphasizing bootstrapping, the ideology also upholds technology as a collective, democratizing means of improving humanity's future. However, the ideology's future orientation—its fixation on liberating everyone through technological progress—often overlooks existing social inequalities and environmental degradation (Barbrook & Cameron, 1995).

Over the past decade, the Ethereum blockchain has emerged as a new technology with particular affordances that lend themselves to entrepreneurial visions aligned with the Californian Ideology. Blockchain is a decentralized public ledger that exists across a network and operates major cryptocurrency projects such as Bitcoin and Ethereum. Every node in a given network has a copy of the ledger and can verify transactions using technical consensus mechanisms (Antonopoulos & Wood, 2018). Because of its ability to mitigate the participation of centralized authorities such as banks and governments, blockchain aficionados celebrate the technology's potential to eliminate corruption by malicious actors and traditional institutions, viewing it as a mechanism of fairness and democracy.

The Ethereum blockchain, founded by Russian-Canadian iconoclast Vitalik Buterin, has inspired a robust social movement built around eliminating fraud in financial transactions, fostering radical transparency, and automating smart contracts. Ethereum has attracted the attention of Silicon Valley elites, such as Stewart Brand, founder of the *Whole Earth Catalog* and Long Now Foundation, and Jeff Berns, a cryptocurrency millionaire who attempted to build an Ethereum-based utopian community called Blockchains in the Nevada desert. Brand has established himself as an esteemed thought leader within certain tech industry circles (Turner, 2006), while Berns, a lawyer, is a relative newcomer to the tech scene. Yet Berns' outlandish project has much in common with the underlying assumptions of the Californian Ideology as well as with Brand's longer-term visions, new communalist impulses, and techno-utopian leanings. Although Brand's and Berns' Ethereum-based initiatives purport to represent new forms of accessible communalism, based on principles of openness, meritocracy, and decentralization, we argue that they often fall back on the same libertarian ideologies underwriting previous iterations of the social Web.

To clarify, we acknowledge the many political variances, commitments, aspirations, and ethics represented in this diverse socio-technical ecosystem (Coleman, 2012; Coleman & Golub, 2008; Kelty, 2008; Postil, 2018); however, the scope of this article focuses specifically on case studies that represent Ethereum-based entrepreneurial visions that exemplify the Californian Ideology. The problems we identify with the Ethereum-based prototypes here illustrate how inequalities and extractions associated with Internet development are often replicated through the material practices of new technologies like blockchains.

This article builds on the previous work of Brody and Couture (2021), which examined the relationship between Ethereum's protocol design and its ideologies. Analyzing Ethereum's affordances and scripts through the lens of science and technology studies (STS), the authors argue that Ethereum widens the ideological spectrum and enables various political ideologies to mutually coexist in the ecosystem in contrast to earlier payment protocols, such as Bitcoin, which are more limited in their scripts.

With this in mind, we examine the prototypes proposed by leading entrepreneurial actors whose frontier imaginaries have been sparked by Ethereum. We argue that Ethereum's dominant affordances—for example, its role as "the world computer"—are what enable Ethereum proponents to strategically use elements of the Californian Ideology to successfully situate themselves in a certain socio-technical history. The world computer combines countercultural leanings with commercial elements, collectivism with individualism, and the physical with the ethereal, and yet much like the Californian Ideology, often replicates the same problems that plagued earlier Web-based communities.

In this article, we provide a brief overview of Ethereum and its connections with a larger conceptual framework known as the "world computer." Then, we provide a textual and ethnographic analysis of two Ethereum-related events: Stewart Brand's keynote and Jeff Berns' Blockchains launch. Both events took place during the 2018 DevCon4 at the Prague Convention Center in the Czech Republic. DevCon4 was hosted by the Ethereum Foundation, and Brand and Berns presented different views on how Ethereum may translate into physical communities. We argue that Brand and Berns speak to a socio-technical imaginary that is shared between Ethereum and the original Californian Ideology-inflected founders of the Web. This socio-technical imaginary is informed by a long history that combines the ideology of rugged individualism with communitarian values, thereby overlooking socioeconomic inequalities.

DevCon is the Ethereum community's major annual conference. It is an important gathering for Ethereum developers and entrepreneurs—who are typically connected through digital platforms—such as Discord, Twitter, and Telegram—to strengthen the community's connections in a place-based setting through shared symbols and experiences. At DevCon, social connections are forged, and future directions for Ethereum's development are negotiated, presenting a useful site for case studies to be observed and analyzed.

We conducted a multi-sited ethnography (Marcus, 1995), which served as a suitable strategy for tracing people, technologies, and narratives across the deeply intertwined digital and place-based settings of Ethereum. In contrast to traditional ethnography, where a researcher enters and exits a single site for fieldwork, multi-sited ethnography acknowledges the movement and spatiality involved in the circulation of new technologies and dispersed global networks. Prominent scholars of STS) have used this mode of inquiry to understand their objects of study (Haraway, 1991; Latour, 1990).

We then applied a textual and thematic analysis of the participant observations at these sites, guided by Coleman's (2010) ethnographic account of "The Hacker Conference." Coleman draws on her experiences at various hacker conferences, approaching the in-person conference as a space for ritual condensation and emotional celebration to examine the "complementary and intertwined relationships between face-to-face interactions and online interactivity among a group of people" (Coleman, 2010, p. 47). To round up our multi-sited ethnographic approach, we supplemented our analysis with publicly available resources, including company websites, YouTube videos, social media posts, and news reports.

Our study adds to the growing literature on blockchains by examining the symbols and cultural significance of Ethereum's major annual conference. Blockchain is a chameleon-like technology associated with a wide array of social, political, and economic goals based on its central discourse of decentralization (Coeckelbergh & Reijers, 2016; Schneider, 2019). Various communities within the space have evolved as

the latest proponents of future-oriented utopian imaginings. Scholars have traced the role of cyber-libertarianism in the cultures and technical architectures of various blockchains. For example, Golumbia (2016) argued that Bitcoin and its underlying ledger technology are premised on "extreme right-wing politics" in their design and ideological constitution (p. 4), and Swartz (2018) explored the ideological dimensions of blockchain, identifying two main ideologies: *Infrastructural mutualism* and *digital metallism*. What Swartz (2018) calls "infrastructural mutualism" refers to "the cypherpunk ideology of privacy and mutualistic self-help organized through 'writing code'" (p. 10). Digital metallism refers to an ideology that believes that money should be free from state control. Swartz explains how these two distinct economic imaginaries influenced Bitcoin's development, leading to ideological contentions within the Bitcoin community. Brunton (2019) connected the concept of digital cash to various utopian and futurist groups, including "the Extropians," a trans-humanist group that aspired to use digital cash to achieve a form of utopia and support radical longevity through cryogenics.

While we draw connections between Ethereum and the Californian Ideology, we also wish to highlight the distinctions that exist between Ethereum and its Web 1.0 and Web 2.0 predecessors. Some of Ethereum's affordances lend themselves to the entrepreneurial visions of the Californian Ideology unique to Web 1.0 and Web 2.0. There are also aspects in which the protocol and community significantly diverge from it. For example, despite its shortcomings, Ethereum seems more aware of socioeconomic disparities than its Web1 predecessors and is also aware of its environmental impact. Furthermore, while the full effects of The Merge, or the shift from proof-of-work to the less-energy intensive proof-of-stake consensus mechanism that occurred on September 15, 2022, remain unknown, Ethereum developers celebrated the shift that lessened their carbon emissions by an estimated 99.95% (Kneese & Cooper, 2022). Ethereum community members are typical of a younger generation than that of Brand or Berns, and some are part of more radical social movements connected to decentralized autonomous organizations (DAOs). While the Ethereum community invited figures such as Brand and Berns to legitimize Ethereum and draw a connection between new generations of technologists and the countercultural projects of Brand, in particular, Ethereum proponents viewed their project as a new, more utopian version of what came before.

Below, we explore how transcendental and material elements converge on the Ethereum blockchain, highlighting the tensions that operate between cyber-communism and cyber-libertarianism. By looking to historically significant figures such as Stewart Brand for legitimation, Ethereum members often repeat the same social problems that occurred on Web 1.0 and 2.0. Lofty visions depicting Ethereum as an ethereal, unearthly force fall apart in analyses of entrepreneurial projects that neglect accounting for social exclusions and perpetuate social inequalities in the real world. We demonstrate how the Californian Ideology is materialized through physical projects, in contrast with the notion of the virtual, decentralized community promised by Web 3.0 investors and practitioners.

### **Theoretical Framework**

We analyze the case studies using the concepts of "social imaginaries" (Jasanoff & Kim, 2015) from STS, "prototypes" from media scholar Turner's (2016) analysis, and "frontiers" of cyberspace as articulated by Virginia Eubanks (1999).

First, this article is primarily concerned with mapping the visions, motives, and collective futures emerging around Ethereum, making Jasanoff's (2004) conceptual tool, "sociotechnical imaginaries," a useful theoretical concept for our analysis. "Sociotechnical imaginaries" refer to visions of scientific and/or technological progress that carry implicit ideas about collective futures and can be observed, especially in the early stages of a new technology's emergence, contestation, and stabilization. More recently, Jasanoff and Kim (2015) explored how such visions of technological progress are infused with ideas about public purposes, collective futures, and the common good.

Second, "prototypes" are important ideological devices within techno-culture because they combine speculative futures, and visions of what technology might do, with mundane engineering. They are the first step in realizing one's technological dreams. Prototypes do not have to work well but make a "possible future visible" (Turner, 2016, p. 256). The prototype also creates new social arrangements, whether they are functional or not (Suchman, Trigg, & Blomberg, 2002). As we describe below, both Brand and Berns use prototypes as part of their world-building enterprises, hoping to attract investors and followers. Both Brand and Berns combine digital and material infrastructures in the Western United States. Brand constructed the 10,000-Year Clock in the mountains of West Texas, and Berns is attempting to build an Ethereum community in the Nevada desert. Brand and Berns' projects are prototypes, more speculative than real, and provide a glimpse of possible technological futures built according to the dreams of their inventors.

Third, metaphors laden with frontier and manifest destiny plagued early techno-utopian writings and are still very much a part of today's cyber-utopianism. In an early critical article, technology and social justice scholar Virginia Eubanks (1999) wrote about the connection between the frontier imaginaries of the 19th-century American West and the 1990s' frontier of cyberspace. Manifest destiny as a concept was intended to give White Americans sovereignty over all non-White nations in the West. The hero of the frontier imaginary is the pioneer. The pioneer ethos upheld the values of flexibility and conquest along with democracy and individualism. Later, the pioneer ideal was infused into new technologies, and the Industrial Revolution as the "frontier" itself closed. As Eubanks (1999) puts it,

The faith invested in the landed frontier was eclipsed by faith in technological progress, and as a fundamental part of the national destiny, it carried with it a history of what progress was supposed to mean: conquest, flexibility, individualism, and a materialist and profit-oriented democracy. (para. 12)

As Eubanks (1999) goes on to describe, this pioneer/manifest destiny/frontier line of metaphors would eventually be taken up by early Internet proponents.

By upholding rugged individualism and White dominance, even through their language, metaphors have the capacity to entrench and justify existing inequalities. For early cyber-utopians, cyberspace was a new frontier, conjuring images of the idealized American West.

The folklore of the American frontier and the archetype of the "Old West" have latched themselves not only onto American identities and cultural genres such as old Western films but have also seeped into

the construction of “the future” (Forlano, 2021, p. 2) in contemporary technological spheres. In the same way that frontier imaginaries masked the dispossession and genocide of Native Americans, Internet-based frontier imaginaries overlook the material infrastructures, environmental impact, and globalized and precarious labor conditions that produce digital technologies. This trope of tension between the communalist spirit and rugged individualism returns repeatedly in both fiction and writings about networked technologies and in leading figures’ entrepreneurial visions. In the next section, we connect these ideas with the Californian ideology and Ethereum.

### **The Californian Ideology**

The Californian Ideology itself takes up the intimate relationship between myth-making and material technologies at the heart of our analysis. It was written around the time when techno-optimists like Rheingold (1993) portrayed early Internet use as “*homesteading on the electronic frontier*,” and John Perry Barlow (1996) penned his manifesto about cyberspace as a libertarian frontier free from the limits of government control and embodiment. While various scholars celebrated the emerging Internet as a space for new and robust forms of democracy and freedom, Barbrook and Cameron (1995) pushed back against these more idealistic notions. They noted that the Californian Ideology frames technologies, such as bulletin board systems, as the foundation of a new gift economy that will replace capitalism and provide a free exchange of information. As some proponents emphasized the entrepreneurial freedoms afforded by cyberspace, the Californian Ideology subscribes to a simultaneously libertarian/individualistic and communalist/democratic worldview.

Barbrook and Cameron (1995) also pointed to the spiritual qualities of the Californian Ideology. For instance, they referred to *Wired* magazine as the Bible of the technologist class and to belief in the free market as a religious ideology. The Californian Ideology is fundamentally tied to New Age spirituality and beliefs around a convergence of religion and technology.

However, the Californian Ideology, for all of its transcendent aspirations, is also defined by histories of violence and dispossession in the American West. As Barbrook and Cameron (1995) state, “this utopian fantasy of the West Coast depends upon its blindness towards—and dependence on—the social and racial polarization of the society from which it was born” (p. 14). The myths of the American West privilege trappers, cowboys, and settlers on the frontier but tend to ignore the suffering and oppression of women and indigenous groups fundamentally related to this mythology.

Similarly, scholars point to how this reliance on inequality, papered over with meritocracy, is taken up in more recent iterations of the Californian Ideology, including the relationships between venture capital and social media platforms (Marwick, 2018), ideals of entrepreneurialism in hackathons (Irani, 2015), and the workings of future-oriented, risk-taking “venture labor” (Neff, 2012). How do venture capital, status, and entrepreneurial imaginaries impact the ways that technologies are designed, disseminated, and used? Technologies are not by themselves democratic, and there are barriers to entry for women and non-White people in many corners of the tech industry, including the blockchain (Dunbar-Hester, 2020; Frizzo-Barker, 2021; Noble, 2018). In a rather glaring omission, Barbrook and Cameron’s (1995) theorizing of a potentially more inclusive and democratic cyberspace does not mention women or gender at all. While they mention

the supposedly democratic sexual practices of the hippies, there is no acknowledgment of gendered power differentials within the New Communalist movement or digital techno-culture.

The Californian ideology has also seeped into the imaginaries of blockchain's earliest forerunners, who also combined the countercultural and the utopian with commercial elements. Tracing the history of digital cash, Brunton (2019) demonstrated how a cross-pollination of ideas occurred between the early privacy advocate movement, "the Cypherpunks," and a trans-humanist movement known as "The Extropians." Trans-humanist commitments to finding technical means of carrying money into the future (without it losing its storage value) in reality served as the driving force for many of the early experiments in cryptocurrencies and blockchains:

Extropians fused Austrian economic theories with new technologies and Bay Area techno-optimism to produce a model of transformation through speculative monies—from idea coupons to anonymous digital cash—that could be cryptographically authenticated, with their value backed by the very future they promised to bring about. (Brunton, 2019, p. 118)

Here, decentralized tools are presented as powerful tools for reshaping the collective future, echoing many of the same arguments as previous versions of the Internet.

However, in contrast to earlier Web-based communities, Ethereum actively seeks to disrupt the problems associated with previous versions of the social Web. For example, Ethereum seems more aware of socioeconomic disparities than its Web 1.0 predecessors. Contrary to traditional Silicon Valley technologists, who principally work toward advancing corporate interests that seek to undermine human rights like privacy, Ethereum proponents subscribe to a different kind of liberalism that rejects corporate capitalism and consumer culture (Postil, 2018).

In fact, Ethereum was created in response to "the horrors" of centralized services that occurred when Vitalik Buterin's (Ethereum's co-founder) beloved World of Warcraft character was weakened by developers (Dailey, 2021). Drawing inspiration from Bitcoin, Buterin envisioned leveraging Bitcoin's underlying ledger technology (blockchain) to support other value transactions beyond monetary ones using a feature known as "smart contracts"—a list of programmed commands that provide the means for certifying and securing transactions without certification authorities.

Aside from being a financially centered protocol, Ethereum also enables the creation of decentralized applications (dApps) and DAOs. Using various automated tools and governance mechanisms supported by blockchains, DAOs enable online communities to govern themselves and are implemented for raising and governing funds.

A popular imaginary in Ethereum is the world computer, which speaks to a vision of Ethereum as a digital and invisible infrastructure that behaves like a single computer system (Buterin, 2017). The world computer imaginary encompasses the vision of Web 3.0, a blockchain-run model of the Web that promises to restore the original vision of the decentralized Internet. Many Ethereum enthusiasts are convinced that

the protocol will help hand back control to Internet users—for instance, by using blockchain’s privacy features to protect their data and by ensuring that no centralized entities can take down networks.

In the next sections, we analyze two Ethereum-based prototypes of the Californian Ideology to demonstrate how Ethereum’s world computer enables its proponents to situate themselves in a successful history that also blends commercial success with countercultural elements.

### **Stewart Brand’s “Long Now” Vision**

At DevCon, groups of mostly White men wearing T-shirts from either their tech company or the conference itself packed the room for Stewart Brand’s keynote address. Brand, the founder of the 1960s’ *The Whole Earth Catalog*, is a subject in Barbrook and Cameron’s (1995) depiction of the Californian Ideology, and with good reason. As Turner (2006) argued, Brand combined the psychedelic, communalist impulses of the hippies with a libertarian belief in the power of technology to transform the future for the better. Brand’s many ventures and deep social networks, from the Global Business Network (GBN) and The Whole Earth ‘Lectronic Link (The WELL) to Hackers Conference and the Long Now Foundation, map onto many of the most visible trends in techno-culture. There are some similarities between the hippie strains of Brand’s ventures and the fun, bohemian, drug-infused culture of DevCon, with its use of unicorn and rainbow motifs. While Ethereum practitioners may not yet constitute a social movement in the same way Brand and his new communalists did, there is still a general ethos of values related to freedom, creative expression, fun, unconventionality, and even the desire for collective unity to some extent (Cuen, 2020).

It is significant that Brand is a keynote speaker at DevCon, particularly because, as he states in his talk, he is not familiar with how blockchain technology works and is not connected to the Ethereum community. Instead, DevCon organizers look to him as a legitimizing force, connecting Ethereum to Brand’s many successful projects; he represents an important part of their genealogy. Brand refuses to answer technical questions from the audience, but attendees repeatedly ask him questions as if he is a sage, and they need his guidance, especially as the moderator stresses how Brand has seen everything and been around for a long time. Audience members say they are honored to be in the same room as Brand. For DevCon audiences, it is strategically useful to connect their growing community to Brand’s legacy. By inviting him as a featured guest, Ethereum community members draw a clear line between Brand’s new communalist influences on the tech industry and Ethereum’s ambitions. Stewart Brand is now in his 80s, but within techno-optimist circles, he is still believed to have his finger on the pulse of the latest technology trends with an eye toward the future.

At DevCon, Brand’s projects and catchphrases are tied to the Ethereum world computer imaginary. For Ethereum proponents and Brand, technology creates the capacity for both individual agency and collective action on a global scale. On the DevCon stage, the person introducing Stewart Brand to the audience ahead of Brand’s keynote lecture says that blockchains are about “shared infrastructure,” individual freedom to act, and social advancement: “Fundamentally, [blockchains] are about coordination.”<sup>2</sup> He goes

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<sup>2</sup> The quotations referenced in the accompanying case studies were obtained through direct participation at the field sites (DevCon 4 and Blockchains Inc.) by the primary author.



on to say, "We make the world computer, and therefore the world computer makes us. How much agency do we have in using it?" He ends by stating that Brand popularized the personal computer and coined the phrase "information wants to be free." Brand aims to balance libertarian leanings with collectivism in his stance on Ethereum. Ethereum community members view themselves as part of the same socio-technical lineage as Brand, relating individual agency to the democratizing potential of the world computer.

Before launching into his view of Ethereum, Brand discusses his own trajectory, from the use of psychedelics during the 1960s to his involvement with Hacker Con in the 1980s. For Brand, his main objective has always been to "hack civilization" on a grand scale. Most of his keynote address is not about Ethereum at all; however, the ideology and mythology underlying his personal trajectory, through his speech, make Ethereum an extension of his project.

Other scholars have picked up on the ideological connections between Brand's projects and Ethereum. As Schrepel (2021) argues, Ethereum proponents are directly building on Brand's broader project of decentralization:

Brand wants every individual to access emancipating tools. Blockchain communities want to emancipate themselves from current transactional methods; this explains why they draw inspiration from Brand. In that sense, his influence is very much visible, even if it is only indirect (i.e., does not directly concern blockchain architectural choices). He contributed to the decentralized philosophy of Web 2.0; while blockchain communities want to implement this into Web 3.0. (p. 5)

Given these symbolic connections, in his speech, Brand frames Ethereum as a tool that, like other tools associated with the Whole Earth era, can be used for empowerment. Ethereum is a kind of "network forum," much like The WELL, which Brand co-founded in 1985 with Larry Brilliant because it hinges on community building (Turner, 2006). The WELL was an early electronic community that combined a sense of community, including in-person potluck dinners and various channels for different interests, from wellness to parenting, with commercial interests (Rheingold, 1993). The Ethereum community is formed through electronic services like Discord and Telegram and then reinforced at major in-person conferences such as DevCon and ETHDenver.

Despite its more utopian and inclusive imaginings, much like the open-source movement and other network forums, Ethereum communities have been critiqued for their hostility to women, trans-people, and Black and indigenous people. On Twitter, one DAO member noted that she was ejected from an Ethereum-based community for pointing out racist and other inappropriate content on the organization's Discord (Popsi, 2022). According to Molly White, a technologist who runs a popular website called *Web3 is Going Great*, the main website for Ethereum has a statement that if Twitter ran on Ethereum, no one would be canceled (White, 2022). Again, this plays into the notion that technology itself protects against abuse and inequality.

Brand's talk, however, points to the ongoing problem of content moderation in online spaces, in the context of Ethereum and in general. On the DevCon stage, a woman moderator, Althea Allen, names Wikipedia

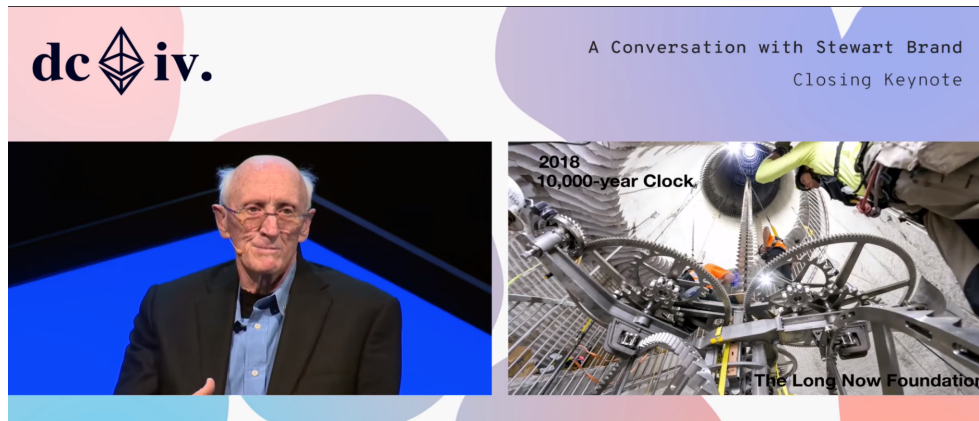
as a shining beacon of the best things that can happen on the Internet, or an example of human collaboration. As one of the few women in the room, Allen points to the issues with social media platforms, which are the dark side of what Internet technologies can bring. In response to her comment, Brand references trolls in *The WELL*, stating that flame wars and mob action existed even in the early virtual community. While cases of trolling within *The WELL* sometimes happened among people who knew each other in real life (Hafner, 2001), Brand states that anonymity online is the root cause of trolling and other social ills. Anonymity is better in theory than in practice. One perk of blockchain is that it can verify identity, which makes it valuable in Brand's estimation. Blockchain not only protects privacy but also allows people to be "who they really are." Yet scholars have challenged such claims. For example, Brooke (2020) conducted a social network analysis across tech communities that offer anonymity, such as Reddit, Twitter, and 4chan. She documents how the inferred gender of contributors can be predicted by how they are spoken to. She identifies gender as a key mediator of legitimate technical knowledge, even in so-called meritocratic environments.

While Brand ties his own trajectory, and through it, Ethereum, to social justice movements, the imagined world computer and collective liberation are at odds with material barriers to inclusion. Brand links his appreciation of tools, including the personal computer, to a major symbol of the women's liberation movement, namely, *Our Bodies, Ourselves*, published by the Boston Women's Health Book Collective starting in 1970. Brand argues that it is one of the most important books to come from the 1960s' social movements because it offered an alternative to medical expertise that treated women's bodies as diseased. As he puts it, the book was "a manual of having a woman's body: There's craft to it. It takes tuning, and it takes maintenance and enjoying it at a cellular level." As Fred Turner (2006) observed, women were basically absent from *The Whole Earth Catalog*, other than a couple of references to *Our Bodies, Ourselves*, featuring images of women breastfeeding or lying naked on their backs: Women were either part of the sexual revolution and new technologies like the birth control pills or were valued for their reproductive labor. While Brand's style of do-it-yourself techno-culture and decentralized Ethereum communities are based on Californian Ideology tropes of openness and bootstrapping, in reality, women and other marginalized groups are not automatically included.

In his DevCon keynote address, Brand deftly ties the impact of his *Whole Earth Catalog*, which included reprints of *Our Bodies, Ourselves* and inspired people to leave their hometowns and try new things, to the blockchain, which also "confers agency." Through technologies like blockchains, people have the freedom to choose what they want to do and try new things. Brand then states that the opposite of agency is "victimhood" and that "a good project is to unmake victims," emphasizing his libertarian leanings. Individuals are ultimately responsible for their own fates, and with the right tools, anything is possible. Thus, while Ethereum is based on shared belief systems and tools, it is also about individual liberty and autonomy.

Brand discusses how technology, including Ethereum, can alleviate poverty. If women have fewer children and more autonomy, he says, that will help fix the digital divide. He posits that if people see the value of blockchain, it might one day be as prevalent as mobile phones. Technology, as it improves and becomes optimized, will create equality. Brand claims that there is better cell reception in Africa than in the United States: "There is so much resourcefulness, so much ingenuity. It takes a lot of skill to be poor. They will take any tool that helps them get up in the world." As tools like blockchain are introduced into communities, Brand argues that these communities will make these tools their own and find their own uses

for them to lessen inequality. An audience member claims that blockchains are making production more efficient. With the digital economy, people can be creative without relying on physical materials, such as iron or other resources. They can create digital assets, such as Non Fungible Tokens (NFTs). Brand responds by saying that we overstate the limits of resources. He does not believe in the existential danger of artificial intelligence, climate change, or blockchain and thinks these threats are overblown. In other words, Brand has faith in the transcendent aspects of technology to overcome material scarcity.



**Figure 1. Stewart Brand on the DevCon stage next to an image of the 10,000-Year Clock being constructed (Ethereum Foundation, 2018, 25:20).**

While Brand's earlier ventures involved turning away from mainstream society and institutions, he fundamentally believes that institutions are necessary, even if they require improvement. Brand is also deeply networked in more traditional ways: His GBN connected entrepreneurs and "movers and shakers" with each other, with Brand serving as a major node. Brand's experiments, like Ethereum's value, are contingent on the approval and funding of venture capitalists and billionaires. Brand adheres to the idea that his failed experiments in the 1960s, including his communes, were a form of education. Failure as a badge of honor is a signature part of Silicon Valley's "high risk, high reward" techno-culture (Neff, 2012). "Ethereum is an institution," according to Brand. "I think this is why Ethereum is better than the Bitcoin crowd in figuring out what institutions are worth honoring and worth keeping non-destructive." While Bitcoin proponents are often against any form of government regulation or oversight, Brand admires the slightly friendlier seeming Ethereum culture, which he views as part of the same techno-culture as his own projects. He believes that institutions, including nonprofits and corporations, are what humans need—we just need better institutions that are open to innovation.

At DevCon, through this nostalgic overview of his many ventures combining individual autonomy with technology and communally shared tools, Brand contends that Ethereum aligns with his overall vision of how technology can be harnessed for both individual liberation and collective survival. For example, Brand's Long Now Foundation builds prototypes that are meant to combine digital tools with material infrastructure, including the 10,000-Year Clock, a monumental smart device originally planned for a site in Nevada and moved to a mountain in West Texas, which currently exists only in the form of several prototypes (Kneese, 2023; see Figure 1). Like Berns's attempt to build a prototype Ethereum community in

the Nevada desert, Long Now also builds prototypes in remote frontier-like locations to forge new kinds of communities. Brand says, "The customer of the Long Now Foundation and I think the customer of Ethereum is civilization." In other words, he views Long Now and Ethereum as partners with the same goal, which is to unite all of humanity through a common project. Forever the founder, he puts this in business terms. Human civilization itself is the "customer."

Following the Californian Ideology, Brand's visions are utopian and forward-looking but also fundamentally commercial. Brand and his network are more concerned with leveraging the latest technology trends to enhance their reputations as innovators than ensuring that the values guiding the initiative are community oriented.

### Jeff Berns's Desert Vision

In late October 2018, the old city of Prague was covered in billboards promoting a company called "Blockchains Inc." In almost every corner of the city, a poster featuring a little girl with her arms folded could be spotted, accompanied by the caption: "We're done waiting for the future" (see Figure 2). No further context about the advertisement was provided, aside from a website link to "Blockchains Inc.," which, when we visited it, featured a clock counting down to an unknown "launch."

The billboard campaign in Prague targeted DevCon attendees. It soon became obvious that the advertisements featuring the girl were part of Berns' greater marketing campaign, designed to stir excitement for an upcoming event that was scheduled to run adjacent to the main conference, DevCon 4.



**Figure 2. Blockchains Inc. billboard. Source: Photograph taken by the primary author.**

At DevCon, representatives wearing "Blockchains Inc." T-shirts handed out their business cards, promoting the secret event. When asked about the nature of the event, they refused to disclose any specific details, aside from logistics and the location of the venue.

On the day of the event, chartered buses came to pick up DevCon attendees, transporting them to a mysterious venue. Throughout the bus ride, the same futuristic little girl from the billboards—now featured in a short video for Blockchains Inc.—talked about the joys of “playing in a sandbox as kids,” stressing how “all you needed to bring was your imagination.” The girl jovially exclaimed, “We’re grown up now and we’re creating a different kind of sandbox. Now we’re building things with ones and zeros,” referring to blockchain’s playground-like features, as the camera turned to happy children playing at a sandy beach.

It is no coincidence that Blockchains Inc. picked a futuristic girl as its brand icon (see Figure 2). The imagery of the little girl conveys a particular message about the youth versus the status quo; the symbolism of the child represents “wonder” and “ingenuity” and the notion of “children as the future,” and our hope of restoring justice by challenging the status quo. The little girl in this context depicts “revolution” even though women and girls have traditionally never been elevated or accepted as members of the blockchain revolution in practice. For instance, recent research has examined the gendered, racialized, and sexualized discursive practices embedded within libertarian blockchain-related contexts, revealing that while these spaces claim to be gender- and color-blind meritocracies, they are, in fact, incredibly thorny terrain for women and people of color to navigate (Adams, Frizzo-Barker, Ackah, & Chow-White, 2019; Allon, 2018; Frizzo-Barker, 2020).

An abstruse yet festive atmosphere suffused the space at the venue. All four corners of the room were adorned with lavish dining. Then, suddenly, on the main stage, the same little girl from the advertisement appeared in holographic form. Facing the audience, she said, “Hey everybody. Are you ready to change the world?” She went on, “I can’t hear you. Are you ready to change the world? How about you, Jeff and David?” referring to Jeff Berns and his brother David Berns, who accompanied him onstage. The hologram proceeded to engage in a scripted dialogue with the Berns brothers on stage (see Figure 3). After establishing a rapport with the audience, Jeff Berns announced that he had purchased 67,000 acres of land in Storey County, Northern Nevada, for \$170 million U.S. dollars and that he was going to use it to build “the world’s first smart city based on blockchain technology.”



**Figure 3. Jeff Berns speaking to the holographic figure of the little girl. Source: Photograph taken by the primary author.**

Introducing himself as a Californian consumer protection attorney, Berns acknowledged that his professional background had very little in common with blockchain development but that he was nonetheless a vigorous proponent of this technology: "I'm not a developer," he said. "I have no idea how to code. I'm older than most of you in the audience, and I come from a profession that many of you think causes more problems than solutions." Similar to Brand, Berns wanted the audience to know that, even though he was "old school," he was a big believer in blockchain's ability to change the balance of power "back to us instead of corporations, instead of Wall Street." By antagonizing Wall Street and centralized power, Berns attempted to position himself outside of these institutional powers despite his status as a wealthy White male attorney.

Berns described building a tangible blockchain city that would enable like-minded people to converge in a "sandbox environment." This smart city, according to Berns, would run on the Ethereum blockchain and be powered by wind and solar energy. He asserted that with the Ethereum blockchain, systems would be kept "honest, fair and democratic," thanks to its trustless nature and transparency. Residents of this futuristic city would have an address on the Ethereum network that they could use to store their personal information, vote, or record property ownership, all without the interference of "predatory intermediaries." To tackle some of the security concerns involved around losing one's private keys (and thus access to one's funds), Berns told the audience that he had even purchased vaults in the mountains of Sweden and Switzerland to help store private keys, evoking the material aspects of his grand vision.

Berns emphasized that Blockchains Limited Liability Company was "not really even a company" but a "movement" that would empower individuals using the public blockchain. As he put it, "All I've done is wrapped a company inside it in order to monetize and perpetuate this movement that I hope we'll all share in." Communalist discourses like these veil the more preponderant cyber-libertarian aspirations that lie at the heart of Berns' vision. For example, it is no coincidence that Berns purchased land in Storey County, Nevada, a designated "opportunity zone." Investment in these locales is imagined as uplifting lower-income communities, but in reality, these policies mostly benefit large real-estate projects that end up displacing poor populations with an influx of wealthy White populations (Wessel, 2021). For instance, Berns even went as far as pushing for Innovation Zones legislation, which, if passed, would enable tech companies like Blockchains Inc. to engender their own county governments (Rothberg, 2021). Furthermore, Berns envisions using blockchain's self-governing capabilities to establish autonomous physical communities, reminiscent of the New Communalist movement (Turner, 2006).

Not only is the Nevada desert landscape a direct reference to the rugged frontier imaginary but the notion of opportunity zones also instantiates the Californian Ideology in a very real sense. His reliance on the rugged frontier rhetoric and imagery, including actual desert landscapes and mountaintops, and idealized communalism is almost a self-conscious parody of the Californian Ideology and serves as an interesting counterpoint to the notion of the virtual environment/community promised by Web 3.0.

### **Tensions and Contradictions: Communalist and Cyber-Libertarian Dreams**

By analyzing the two field sites we detailed above, we see the inherent tensions that arise between communalist and cyber-libertarian sensibilities in these two prototypes of the Californian Ideology. On the one hand, both Brand and Berns are committed to building empires in remote areas, evoking ideas of

developing the “frontier” in ways that are driven by libertarian ideologies. Interestingly enough, the first live release of Ethereum was called “Frontier,” echoing the Manifest Destiny orientation of cyber-enthusiasts aligned with the Californian Ideology. On the other hand, altruistic and inclusivity discourses are also being invoked, with visions to build physical communal spaces, intended to bring like-minded individuals together to engage in the public sphere, creating an alternative for disillusioned individuals who have lost hope in current public and social infrastructures. These aspirations and prototypes are partly enabled by the world computer imaginary.

The masculine “exit fantasy” remains particularly strong in both Brand’s and Berns’ narratives. Both entrepreneurs appeal to the idea of sidestepping the problematic existing infrastructures of current big cities and developing their own—sort of a physical instantiation of the hopes built into the blockchain itself. Berns’ vision of the blockchain-run city in particular is demonstrative of a more common narrative encountered within certain blockchain communities. It relates to the notion that one can simply leave an existing community and start anew without accounting for the complexity of human relationships and the potential for permanent social and economic divisions. It is an attractive fantasy for those who are dissatisfied with the status quo but ultimately ignores the fact that these technologies are embedded within existing human infrastructures of power (Sharma, 2020).

Naturally, these ideas in blockchain have been particularly attractive both for crypto-anarchists and mainstream technopreneurs who see the network state as a way to escape the restrictions of traditional nation-states while also returning to community-oriented living. Take, for example, the “network state,” a concept proposed by Balaji Srinivasan, an angel investor and the former chief technology officer of a crypto company called Coinbase. Srinivasan describes the network state as a sovereign collective that procures statehood by crowdfunding territory but continues to operate in the cloud (Ferriss, 2022). Srinivasan envisions a future in which world citizens simultaneously belong to multiple network states and can move freely among them. He also stresses the importance of social norms and religious attachment to values for the success of a network state, explicitly referring to religious themes and ideas, with blockchain remaining at the center of this exit fantasy.

There are aspects of the world computer imaginary in pre-Ethereum contexts; Stewart Brand’s vision for technology is aligned with this concept. The proclivity to treat blockchain as a religious movement that has the ability to shift power and promote social transformation directly links it to the Californian Ideology. In some cases, there are more explicitly religious components. For example, Kevin Kelly, the founding executive editor of *Wired*, who is closely tied to Stewart Brand and identifies as a born-again Christian, announced in a December 2002 issue of *Wired* that “God is the Machine” and “the universe is not merely like a computer, it is a computer” (Mosco, 2004, p. 14).

Famously, Brand asked why, in 1966, there was no image of the whole earth taken from space when humans had been in space for 10 years. This gave birth to the first *Whole Earth Catalog* in 1968, which featured a photograph of the Earth, as seen from space, on the cover. Here, Brand envisioned technology as providing a new perspective on humanity and creating a sense of “oneness.” Brand’s notions of the Whole Earth and Ethereum’s world computer are linked. The world computer speaks to the vision of Ethereum as a digital and invisible infrastructure that behaves like a single computer system (Buterin,

2017). Even the name "Ethereum" carries with it a transcendental connotation itself, where the technology is imagined as a type of computer network that resides in no particular location while simultaneously denoting an "all-encompassing" and ubiquitous quality to it. Indeed, the Ethereum community is ethereal in that it mostly exists on Discord servers and is maintained through cloud-based exchanges.

On the other hand, several projects seek to integrate Ethereum with real-world infrastructures through prototypes or in-person communities, sometimes proposing the blockchain's use in ReFi, or what is known as "regenerative finance," a play on decentralized finance that uses tokens to encourage more sustainable land practices in the Amazon Rainforest and to help marginalized and indigenous communities by tokenizing trees and other parts of the natural world. The success of such projects, such as WorldCoin, a Sam Altman of Y-Combinator-backed wealth redistribution start-up that uses an Ethereum-based "orb" prototype to collect high-resolution images of the faces, bodies, and eyes of marginalized people in the Global South, is dubious at best (Cheesman, 2022). WorldCoin is imagined as empowering poor people in places such as Sudan, who may not have access to traditional banking infrastructures and fiat currency, presenting itself as a democratizing opportunity while providing a back door for new kinds of surveillance and exploitation.

However, despite these obvious problems, with the numerous and ongoing experimentation in decentralized governance and the recent Merge, we anticipate interesting developments in Ethereum. Alongside Schneider (2022), who cites Ethereum's potential to open "the door for new kinds of participation and accountability, a democracy native to the Internet" (para. 4), we look forward to observing the opportunities it might bring for cultivating alternative financial, economic, and political forms.

### **Conclusion**

In this article, we have analyzed the imaginaries of two influential technopreneurs, legendary Stewart Brand and the Californian attorney Jeffrey Berns, to demonstrate how a conception of Ethereum as the world computer offers a compelling vision for those aligned with the Californian Ideology. We argue that through their utopian, futurist orientation, these specific iterations of the Ethereum movement overlook current social inequalities in ways that echo many of the same arguments as previous versions of the Internet. This dynamic is a common theme echoed throughout Web 3.0 circles, especially in Ethereum communities.

While this article has focused its observations mainly on these two particular case studies, we anticipate that this work will serve as a stepping stone for future research and scholars centered on interrogating the visions that undergird a certain class of altruistic blockchain projects, commonly referred to as "public goods" and/or climate impact projects known as ReFi within the Ethereum ecosystem. Ethereum's connection to ReFi clearly fits into the frontier narrative, as Ethereum is meant to be a building block in a very real way, where it is not limited to decentralized digital communication but embedded in trees, cities, the rainforest, and other physical infrastructures.

Examining a collection of projects that have used design-led approaches to question blockchains and related systems, Murray-Rust and colleagues (2021) argued that design prototypes and public



engagement methods can help move blockchain imaginaries beyond either dystopian or techno-utopian frames. Referring to design and human-computer interaction methods, the authors point to the necessity of grounding blockchain imaginaries in real-world use cases. We are hopeful that future research can focus on how Ethereum—regardless of its infusion with ideologies, Californian or otherwise—shapes real-world relationships and modes of governance for participants in its ecosystem.

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