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From Bitcoin to Farm Bank: An idiotic inquiry into blockchain speculation

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Introduction

In 2016, ads inviting people to join Farm Bank (*Çiftlik Bank*) started flooding Turkish media. By downloading an app designed as a virtual farm world, users would be able to invest money in local, organic agriculture and receive monetary return as well as actual food products such as milk, cheese, eggs, and honey. Farm Bank appealed to myths of pastoral simplicity and "real" production. Yet the agricultural model proposed by Farm Bank was not just idyllic but promised to combine the forces of nature with those of science and high-tech innovation. The project was portrayed as "green" innovation, a daring social, technological, and economic experiment, all at once, that could either break through or fail. In that regard, users of the app could consider themselves investors, akin to their stock market counterparts, opting for innovative, "green" stocks of companies that might one day discover the key to revolutionizing our unsustainable lifestyles. Investing in Farm Bank seemed somewhat risky, but in a "good," entrepreneurial kind of manner. However, after about 1.5 years, it was revealed that Farm Bank was a Ponzi scheme that re-invested users' money in Bitcoin rather than farming. Beyond a few sites used for publicity events, the only farms that really had gone up and running were Bitcoin farms. Once the price of Bitcoin went down, the company was no longer able to pay out returns and the Ponzi scheme collapsed. Its 132,222 users had collectively invested over 1,14 billion Turkish Lira (at the time, roughly equal to 140 million

USD for a country with an average net salary of 420 USD per month).[1] And, mostly, they lost it all. Its owner, a twenty-something-year-old with some web animation skills, fled to Uruguay where he was, according to the rumors on social media, driving a luxury car and sailing a yacht with his lover.

After the unraveling of the Farm Bank scandal, its participants were widely ridiculed in Turkish media for their gullibility. At the same time, the country's Bitcoin uptake surged, which earned the country an adoption rate that was among the highest in the world.[2] It was in this period that I interviewed Bitcoin users in Turkey, who fiercely distinguished their own speculative practices from those of Farm Bankers. The irony that the Farm Bankers unwittingly had invested in Bitcoin and that this had contributed to their losses remained usually overlooked. Farm Bank's downfall together with Bitcoin's surge in Turkey provide an opportunity to study the politics of speculation as a digital-cultural practice of wagering on possible, plausible, or expectable futures of technological innovation that intersects with new forms of financial speculation. While appealing to utopian sentiment in some regards, Bitcoin and Farm Bank both contribute to the casualization of risk and gamification of finance. This trend is stirred by the arrival of (crypto) fintech trading apps, nonfungible tokens (NFTs) markets, social casino apps, and other forms of gamble-play that are often deeply intertwined with social media platforms (Ross and Nieborg 2021; Zaucha and Agur 2022; XXX). Interweaving the analysis of Turkey's Bitcoin hype with the Farm Bank scandal, I explore how speculation concerning technological innovation shapes the present and forecloses possible futures emerging from it.

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[1] See https://www.bloomberght.com/tarim/haber/2126722-ciftlik-bank-raporu-borc-3-milyar-tl-geri-odemesi-imkansiz. Last accessed, 14 February 2022.

[2] See https://www.weforum.org/agenda/2021/01/cryptocurrencies-are-democratising-the-financial-world-heres-how/. Last accessed, 14 February 2022. For significantly more positive attitude toward cryptocurrency in Turkey compared to European countries, US, and Australia, see: https://think.ing.com/uploads/reports/IIS_New_Tech_Cryptocurrencies_report_18092019.pdf. Last accessed, 14 February 2022.

By situating this research in Turkey, I aim to displace decidedly North-American myths of blockchain-based sociotechnical organization as well as their critiques. The infrastructure underlying Bitcoin consists of a blockchain sustained by cryptographic processes of computation that allow for decentralized record-keeping. The blockchain is often likened to an incorruptible ledger maintained across a network of peers each contributing to the authentication of the ledger's transactions with computational power. Referencing this architecture, North-American stories of origins of Bitcoin have described it as a "hard-coded" tool of libertarianism that can safeguard individual freedom against state interference (Golumbia 2016, Nelms et al 2018). The theme of decentralization continues in current "Web3" myths that portray blockchain architectures as a panacea for the centralized "Web2." The notion of a new phase in digital infrastructure evokes a sense of open-ended possibility and transformative potential. But it also revives the ideological force of what Mosco (2004) in the context of "Web2's" emergence called myths of the technological sublime. Erasing all "misgivings, problems, and contradictions" (Leo Marx, 1964, cited in Mosco 2004, p.23), such myths are "sustained by the collective belief" that technological innovation opens "a new world" (4). The theme of decentralization, coated with the technological sublime, likewise lures in blockchain imaginaries in Turkey. Nonetheless, the particular dreams of a disruptive future are shaped by social position, local history, and context. Hence, I inquire into the practices and experiences of people in milieus beyond that of the libertarian Subject and dominant corporate Tech scene. Their speculative practices are motivated by experiences of precarity—variably economic, geopolitical, and/or ecological in nature—that inform utopian sentiment as well as risk perceptions in specific ways (XXX). In particular, economic precarity intensified in Turkey since 2013 due to financialization combined with economic decline. At stake have been inflation and depreciation of the Turkish Lira vis-à-vis the Dollar, accompanied by sever volatility as well as record-high unemployment and household debt,

and the undying threat of economic sanctions imposed by either the United States (US) or European Union (EU). These macro-economic developments have been accompanied by the marginalization of organized labor and the rise of political authoritarianism (Akçay 2021, Yücel and Kabalay 2022). Considering this context, of central importance in my analysis are situated experiences of precarity, risk/opportunity, uncertainty, mystery, and technological sublimity.

In Turkish popular discourse, a number of questions have surfaced to establish moral judgment about engagement in Bitcoin and Farm Bank alike: who is daringly visionary and who is merely gullible or blinded by illusory promise? Who is investing and who is just gambling? From a more analytical angle, this article raises the following questions to investigate the politics of speculation as a digital-cultural practice: how do speculative technologies and discourses help materialize and shape the present, while foreclosing futures that emerge from it? Against such foreclosure, what would a speculative engagement with seemingly "implausible" or "impossible" futures comprise that deserves *not* to be dismissed as simply gullible or blinded? Prompted by these questions, this article discusses the asymmetries and inequalities of media ecologies affording speculative practices as well as contested articulations of the boundaries between the possible/impossible, realism/utopianism, common sense/idiocy.

The methods used in this study comprise respondent interviews which are designed to disclose experience and perception (Lindlof and Taylor 2018). Concerning cryptocurrency, I conducted interviews with 18 individuals, two follow-up interviews, and a focus group with five participants. Interviews lasted between one and two hours and were semi-structured. Respondents were contacted through snowball method, whereby I aimed for diversity in terms of level of involvement and expertise (some had been professionally engaged with cryptocurrency or blockchain innovation as an opinion leader on social media, dedicated

blogs, and/or national media outlets or as marketer or entrepreneur). All respondents lived in Turkey's biggest cities: Istanbul, Ankara, and Bursa. All were university students, graduates, or drop-outs. Despite my efforts, I was only able to find two female interviewees who agreed to being interviewed. To understand local context, I built an archive of newspaper articles on cryptocurrency from 2013-2019. In addition, I interviewed four former Farm Bank investors and collected extensive media representations and promotional material related to Farm Bank. Interviews were mostly conducted in Turkish, and translations are my own. Next to interviews and media representations, this research makes use of digital methods to study the "Web2" media ecology through which most users experienced and accessed blockchain-based, "Web3" applications such as cryptocurrency. In order to map Turkish "crypto Twitter," namely accounts and conversations dedicated to crypto in Turkish, I started out with an "informant list" of Twitter accounts that were identified by my interviewees as influential, which I complemented by searching for relevant accounts with Twitter's own search function, using the keywords "bitcoin," "btc," and "btcusd" (and their hashtags), with the search language being Turkish and the geolocation Turkey. The top 50 accounts (with follower quantities ranging between 146.913 and 1158) were selected and, for each of these "opinion leaders" the most recent 3200 posts were scraped for the period June-August 2019.

This article unfolds in the following way. First, I will introduce my conceptual framework by outlining three modes of speculation. The next section discusses imaginations about cryptocurrency and blockchain-centric innovation peculiar (though not always unique) to the Turkish context. I continue by discussing media ecology and financialization of sociotechnical potential, and the foreclosure this implies. In the final section and conclusion, I reflect on the production of time and futurity through speculation and introduce the notion of the "idiotic technological sublime" as a form of speculating otherwise.

Section 2: Three modes of speculation

Central to my conceptual framework is the assumption that innovation has to do with underdetermined and, in principle, open-ended sociotechnical potential. Philosophers of technology building on Gilbert Simondon (2017) consider such potential in an ontological fashion. For instance, as Lotti (2019) frames it, blockchains and crypto tokens are "novel technologies in the initial stages of a process of *individuation*" (p.288). This Simondonian concept replaces the notion of an ontology of being consisting of constituted individual entities (objects and subjects) with an ontogenesis of becoming. Ontogenesis involves "*the system of virtualities*, of potentials, forces that carve out their path" to form a temporary and metastable "system of actuality" (Simondon 2017, p.61, see also Hui 2016, p.193). Ontogenesis hence indicates an ontology in which technology is not an isolated object with a fixed, essentialist character but, instead, an unstable actualization and articulation of material potential that can be otherwise. According to this framework, a technology's underdetermined potential evolves and actualizes by integrating into situated milieus with which it becomes associated. Dwelling on the interaction between technical objects and milieus, Hui (2019) argues that "technology is not anthropologically universal; it is enabled and constrained by particular cosmologies, which go beyond mere functionality or utility" (p.227). Instead of "one single technology," Hui argues, there are "multiple cosmotechnics" (p.227). The notion of cosmotechnics highlights the heterogeneity of (potential) trajectories of individuation through relations to different milieus. As Srnicek and Williams (2015) explain this, rather than being fixed in its origins, "the design, meaning and impact of a technology are constantly shifting, altering as users transform it and as its environment changes" (p.152). Applying this line of thinking to blockchain-centric innovation, Lotti (2019) contends that "In the context of a novel technical invention such as that of the Bitcoin protocol, the milieu is yet to be fully discovered" (298).

This article, however, weighs the promissory facet of open-ended sociotechnical potential and multiplicity, emphasized in Lotti's quote, against the forces of foreclosure that constrain futures arising from the present. I argue that three intersecting modes of speculation concerning blockchain-centric innovation shape the present and future, even though foreclosure of alternative futures is never absolute. Operating discursively, media-ecologically, as well as financially, I label these three modes respectively speculating *about*, *through*, and *on*.

Speculating about involves imaginations and projections of sociotechnical potential and the futures it could gestate. Coining the phrase "blockchain dreams," Swartz (2017) unpacks how blockchain infrastructure has created attraction and held promise as "an inventory of desire" and "an engine of alterity: an opportunity to imagine a different world and imagine the mechanics of how that different world might be run" (83). Indicating the sensed openness of sociotechnical potential, this infrastructure and its applications such as cryptocurrency have attracted the interest of various groups, including libertarians, anarchists, venture capitalists, entrepreneurs, hackers, and artists (Dallyn and Frenzel, 2021, Faustino 2022, Lotti 2019, Swartz 2018). *Speculating about* outlines discourses about blockchain-centric innovation and the futures it may provoke, while also probing affect at the limits of what is sayable and thinkable.

What I call *speculating through* pertains to material and practical experimentation with sociotechnical potential, inducing ontogenetic processes of individuation. The actual course of ontogenesis can be the result of more intentional experimental practice but always involves unintended (and in that sense accidental or contingent) consequences too. For instance, Dallyn and Frenzel (2021) chronicle a social experiment advancing progressive politics via cryptography, called FairCoin. This coin was created to facilitate a "transition to postcapitalist futures through an alternative, collectivist and sustainable blockchain design"

(p.868). Yet sociotechnical potential is not boundless, and associated milieus are not just radically heterogeneous in an absolute sense. The ontogenetic process of individuation evolves in particular ways, even though this could be otherwise. Hence a critical analysis needs to weigh the underdetermination of potential against forces of foreclosure. Easterling (2014) calls infrastructural disposition a "relationship between potentials," informing "a tendency, activity, faculty, or property in either beings or objects—a propensity within a context" (71).

In the present analysis, *speculating through* is especially impacted by the material practices and relations in the "Web2" media ecology that mediate the encounter with cryptocurrency and the so-called "Web3" for many users. Foreclosure of sociotechnical potential stems from the predominance media and milieus oriented onto *speculating on*, which refers to financial investment. *Speculating on* manifests in the dual, and interlinked, modes of wagering on cryptocurrency's price development as well as the potential of its underlying technology to usher in pathbreaking futures. It is striking that although the person(s) carrying the pseudonym Satoshi Nakamoto designed Bitcoin as a currency that thanks to its technological architecture would have the potential to transform society (Baldwin 2018), it now primarily functions as a means of speculation (Faria 2021). While practically speaking cryptocurrency exchanges facilitate trading, ontologically speaking these "Web2" platforms work toward actualizing crypto's sociotechnical potential in a particular way. As associated milieu and media ecology (Caliskan 2020, Rella 2020), these trading platforms co-shape crypto's disposition. Meanwhile, volatility, which makes crypto interesting as a speculative asset, prevents it from functioning as a currency, as originally intended, by undermining the "stability necessary to store wealth or, indeed, act as a unit of account" (Baldwin 2018, p.6). More so, crypto imaginations of decentralization are problematized by vast infrastructural and media-ecological inequalities and asymmetries

consisting in speed, computational power, energy, and information as well as by the operations of "whales" (extraordinary large asset holders),[3] mining pools,[4] speculative cartels, and legacy capitalist institutions (Dodd 2018, Herian 2018, 50).

At the intersection of *speculating about*, *through*, and *on*, the question arises of whose blockchain dreams can be influential on the process of actual sociotechnical ontogenesis. Focusing on cryptocurrency in Puerto Rico, Crandall (2019) argues that it is unlikely that marginalized populations there "will have a meaningful say in cryptocurrency or blockchain" (293). Rather, "cryptocurrency, blockchain, and the desires of its proponents" may make "the existing chains of empire stronger" (p.293, see also Jutel 2021). As I will argue in this article, the experimentation with sociotechnical potential remains curtailed and alternative possibilities remain foreclosed when certain stories and imaginations are marginalized as "impossible," "irrational," or "idiotic."

Section 3: The Multiplicity of Bitcoin

Iterations of the decentralization myth that I encountered during interviews were articulated into dreams of a disruptive future, shaped by local history and context. These imaginations were diversified further by my respondents' particular social positions within Turkish society. The active reframing and reimagination of "decentralization" comprise a slivering practice of *speculating about*, indicating alternative milieus and ontogenetic processes of sociotechnical emergence, *in potential*.

Many of my respondents critiqued the US-centric, Dollar-dominated global economy and argued that Bitcoin promised a global financial infrastructure that was more inclusive in

[3] WSJ recently revealed that Bitcoin's "one percent" controls lion share of the cryptocurrency's wealth. See https://www.wsj.com/articles/bitcoins-one-percent-controls-lions-share-of-the-cryptocurrencys-wealth-11639996204. Last accessed: 13 March 2022.
[4] According to Swartz (2017), 5 such pools operate 80% of the mining.

one way or another. For instance, Can [5] argued that if trade between two nations can be conducted in cryptocurrency, "The dominance of the Dollar will be shaken."[6] Though respondents did not use the term, their takes on decentralization bordered on anti-imperialist reasoning and sentiment. Issues they identified as expressions of systematic power were the centrality of the Dollar in global trade and the ability of the US government to ban countries from SWIFT or to impose crippling sanctions, which in recent years had been a threat to Turkey too.[7] One research participant who was a well-known opinion leader concerning cryptocurrency and blockchain innovation in some circles argued that "The Western banking system is a tool for governments to dictate by means of sanctions."[8]

A cosmopolitan version of anti-statist politics emerged from a female Bitcoin user, Sezan, who had been an early adopter.[9] Talking from memories of the first half of the 2010s, she evoked a cosmopolitan subculture that she connected with by traveling the world, especially Latin America and Asia. She paid for these extended trips with earnings from her early Bitcoin investment. The goal of her travels was to participate in experiments with alternative economies and social modes of organization. Bitcoin, until its more recent cooptation by capitalists, was "something anarchical, decentralized," according to her.[10]

Yet other respondents brought up the role of cryptocurrencies in the context of the region's multiple ethnic and geopolitical conflicts, referring to militias in Syria, Kurdish enclaves seeking autonomy in northern Syria, Iranians seeking to do international trade, as well as refugees from conflict-ridden regions on the move to Turkey or Europe.[11] In these contexts, cryptocurrencies afforded a means to elude social and political power alternatively

[5] All names of respondents are pseudonyms.
[6] Personal interviews, 20 May 2019.
[7] Personal interviews, 20 May 2019; 24 May 2019.
[8] Personal interview 12 June 2019.
[9] Personal interview, 21 December 2019.
[10] Personal interview, 21 December 2019.
[11] Personal interview, 26 May 2019; 12 June 2019; 19 June 2019; 22 December 2019.

through secrecy, uncontrollability, mobility, and security. Nihat was an opinion leader in crypto of Kurdish origin, who was displaced from his hometown in the ethnically Kurdish region of Turkey as a result of the operations of the Turkish military in 2015/2016 during the resumption of the decade-long armed conflict with the Kurdistan Workers' Party (PKK). He argued that in Bitcoin matters "There is no jury, minority, or a privileged group that elects you."[12] Nihat explained how his experience with what he considered Turkish fascism and discrimination on the job market due to his ethnic background had driven him to the crypto business:

> I did not have a job … Our [Kurdish] cities had been burnt down and nobody else in my family was working, either… I decided to do what I do best, namely developing my skills, and I turned to Bitcoin. I spent months with research and analysis. But I knew this: if I would become an expert of crypto through blockchain, I would not have to work with anyone in this country again. I knew I would not have to worry about my career and future under fascism.[13]

For Nihat, the blockchain's supposed decentralization meant social inclusion.

The diverse range of Bitcoin imaginations and blockchain dreams that I encountered during my fieldwork speaks to the sensed openness of sociotechnical potential. Indicating the underdetermined and elusive nature of this potential, Sezan said: "Everybody expected to do many [different] things with Bitcoin."[14] While she spoke in the past tense, Hakan expressed a similar sentiment projected onto the future: "It does not have to be called Bitcoin, Ethereum or something else, but I believe that this system will overtake the world one way or another, simply speaking."[15] While not generating a systematic utopian narrative of a concrete world

[12] Personal interview, 19 June 2019.
[13] Personal interview, 19 June 2019.
[14] Personal interview, 21 December 2019.
[15] Personal interview, 3 June 2019.

to come, blockchain-centric innovation elicited utopian desire. Such desire, to speak with Jameson (2005), forms an "obscure yet omnipresent utopian impulse" (p.3). It implies speculatively seeing or sensing beyond what is taken for granted: other sociotechnical orders exist in potential; and a potential for alternative ontogenetic processes of sociotechnical individuation *exists* (see also, Faustino 2022).

Section 4: Financialization of sociotechnical potential

Whereas Turkish blockchain dreams indicate the potential for alternative ontogenetic processes, such potential was not actualized. Material practices of experimentation with sociotechnical potential, or *speculating through,* remained curtailed as *speculating about* open-ended sociotechnical potential coincided with financial speculation, or *speculating on*. Rather than enabling decentralization, the "Web2" media ecology supporting financial speculation (re)produced asymmetries and inequalities, which, as this section argues, are reflected in situated experiences of mystery, uncertainty, risk, and precarity.

With the shift toward *speculating on*, technological innovation was rearticulated as a matter of financial risk and opportunity. That is to say, the openness and uncertainty of sociotechnical potential, and the future overall, was drawn into the present and rendered available for financial speculation. My respondents speculated that the value of cryptocurrency as a technological application would prove to be immense in the future and, hence, they considered it a good investment in the present. Cryptocurrencies could be considered as a kind of derivatives that have as their underlying asset this distant future in which currently uncertain and speculative use value presumably will be settled (Lotti 2019, p.304). That this supposed future utility could not be pinpointed exactly in the present did not cause much hesitation: the technology would usher in a pathbreaking future that we cannot imagine just yet. However, potential for pathbreaking transformation impacts

cryptocurrencies' valuation on the condition that, and to the extent that, it can stir the current general expectation and reflect on market behavior. What ultimately counts may not be one's individual forecasts and expectations regarding sociotechnical potential and future developments but others' expectations, or rather everyone's expectation regarding everyone else's expectation. Driven by expectations of expectations, *speculating on* dwells in general market belief and hype (Lee 2022; XXX).

In the move from *speculating about* to *speculating on*, the experience of the uncertainty at stake often shifted from a dreamful sense of the open-ended sociotechnical potential to a sense of insufficient or unreliable information. The respondent Bülent recalled his sentiment when first engaging with Bitcoin and attempting to become a Bitcoin miner, while dealing with a dearth of informational resources:

> There are very few resources [about crypto] in Turkish on the web. There are [only] resources available in foreign languages. Our English is not good enough. So we use [Google] Translate, but the results are often irrelevant, so we do not understand anything.[16]

Interestingly, this lack of comprehension convinced Bülent of Bitcoin's promise. He continued: "Yet we understood this: there is an opportunity here. But where to start, how to start? There was no one with expertise around us. There was no one to explain us how Bitcoin works."[17] Bülent's reasoning echoed the correlation between risk and opportunity, advocated by the Chicago School financial theory and specifically the leading economist Frank Knight. According to this vision, which is of great influence in contemporary finance, profit derives from risk-taking and decisive action in the face of radical uncertainty (Poovey 2018). Yet, despite the parallels in logic, the limit of knowledge experienced by Bülent is

[16] Personal interview, 15 June 2019.
[17] Personal interview, 15 June 2019.

critically different from the experience of uncertainty and the construction of risk in finance. Bülent described risk-taking and the uncertainty he encountered as follows:

> When I first entered [this business], I knew nothing. In my view, risk equals money. The higher the risk, the larger the margin of profit will be. That is how things work in trade: if I cannot comprehend something you explain to me, that means there is an opportunity there.[18]

In the financial sector, however, risk calculation and prediction, whether qualitative or computational, emerge from information abundance. The financial sector actively and strategically explores limits of knowledge by opting for either stronger or fainter predictive signals, while testing and combining resources and methodologies. Such "playing" with uncertainty[19] supports the discovery of new sites of risk/opportunity that will not be traded away by competitors (Leins 2018). Bülent's sense of mystery, however, was a singular and situated experience of uncertainty stemming from the lack of information available to him as someone scrolling Google and local social media for resources in Turkish.

Other respondents were ambivalent about whether market behavior and price development were predicable/calculable or unpredictive/incalculable. Kaya had started a Telegram group focused on peer-to-peer teaching and sharing of market predictions based on technical analysis. Yet he had to acknowledge that such analysis was a matter of interpretation and group members usually came up with wildly varying visions, challenging the belief in technical analysis' capacity to predict crypto markets and rendering the activity of investing similar to gambling.[20] Overall, the "Web2" media ecology that facilitated speculative practices lacked decisive information and authority, while it reproduced informational asymmetries and inequalities.

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[18] Personal interview, 15 June 2019.
[19] For the case of computational prediction, see Amoore, 2020.
[20] Personal interview, 18 December 2020.

[insert figure 1 here]

Map of the provenance of information shared via URLs on Turkish crypto Twitter.

[insert figure 2 here]

Graph of mention networks on Turkish crypto Twitter.

Figures 1 and 2 provide further insight into informational uncertainties and asymmetries sustained by the "Web2" media ecology. Focused on the example of Twitter, figure 1 shows the provenance of information circulating on Turkish "crypto Twitter" in 2019. It maps the location of media production indicated on websites for the 400 unique website URLs that were extracted from the tweets in my Twitter dataset tracking opinion leaders' accounts (see introduction). The ratio of foreign-domestic media production is 296-104, with the United States contributing 147 websites and counting as the most dominant producer by far, followed by the United Kingdom with 29 websites. The ratio suggests that opinion leaders often took up the role of introducing and translating foreign resources for a population of crypto investors of whom many lack access to news and information in English, similar to Bülent's situation described above.

Figure 2 presents a network graph, composed with Gephi visualization software (ForceAltas2 algorithm). It analyzes "@" mention networks among opinion leaders. The data shows that opinion leaders who mentioned other accounts (outdegree) on Twitter did so for a great variety of different accounts, while not receiving many mentions from, nor making them to, each other or shared followers (the highest number of received mentions—indegree—being 18). Characterized by single edges leading from various mentioning accounts to a host of mentioned accounts, this figure depicts a highly modular network

featuring the scatteredness of relatively isolated followings each cultivated by an opinion leader, while integration of the conversation is lacking (Himelboim et al 2017). Indeed, recognition, authority, and trust were dispersed and could quickly fall in doubt. As the discourse analysis of the text of the tweets identified with the "@" function indicates, discussions between the mentioned opinion leaders and their followers reflect the nuances of morality between the act of giving honorable albeit not disinterested advice, on the one hand, and the act of willful manipulation in one's own interest at the expense of one's followers, on the other.

Together, figures 1 and 2 suggest dependence on opinion leaders on Twitter for information along with dubitable authority, exacerbated by the fact that accounts are typically pseudonymous, carrying handle names such as "kriptoemre" ("kripto" being the Turkish spelling of crypto and Emre being a common Turkish male name) as well as "PonziAddict" and "bit_gossip." My respondents' accounts of their experiences with Turkish crypto Twitter corroborated this interpretation. They relied on Twitter for insight but faced uncertainty about whom to follow, believe, and trust. They had to negotiate fast-trafficking social-media rumors and manipulation by opinion leaders acting on their own (undisclosed) interests and pump-and-dump schemes, operating via backchannels on Telegram and Discord, that coordinate to provoke a hype and benefit from the hike in price.

Information-related asymmetries coincided with inequalities in what can be called performative power in financial markets. As Kaya and others explained, in the Turkish language, 'speculation' [*spekülasyon*] blends into 'manipulation' [*manipülasyon*]: that is, all speculation has a performative, and therefore manipulative, dimension. Kaya argued: "Speculation kind of refers to producing lies about [made-up] facts that do not exist yet. Speculation is a claim, whereas manipulation refers to turning that [claim] into reality."[21]

[21] Personal interview, 18 December 2019.

According to this statement, speculation is a "lie" in that what it states does not reflect reality, but its claims are intended to become factual, and hence this is the performative but also manipulative working of speculation. The power to act performatively is however distributed unequally and my respondents mostly had to accept their own disempowerment in this regard: they were on the receiving end of manipulative speculation by pump-and-dump schemes and opinion leaders on social media. Though they considered rumor and manipulative power as part and parcel of crypto markets rather than their illegitimate perversion (see also Swartz 2021), they concluded that they simply did not have access to that kind of power.

Despite such asymmetries and inequalities, my respondents knowingly chose to participate in the game of crypto, as its underdogs. This was so because the experience of risk is relative and weighted against other risks and overall precarity, which is contextual and situated (McCormack and Salmenniemi 2016, XXX). For instance, respondents assessed Bitcoin's volatility and uncertainty by comparing them to the Turkish Lira's, which in recent years has been subject to significant depreciation and inflation. Hence there was the sentiment: with the Lira one only loses, but with Bitcoin one has a chance to win. There was a consensus among respondents that Bitcoin's hype in Turkey bore a close relation to economic and geopolitical precarity. As Levent argued, "I don't think Bitcoin would be this popular if the economy were not this bad in Turkey."[22] Others gave the example that for more well-to-do populations such as Germans, Bitcoin would be entertainment, but in Turkey it formed a serious effort at making money as local incomes were insufficient.[23] The extraordinarily risky and skewed form of speculative capitalism that crypto markets advance exploits the precarity of populations in struggling economies (see also Bear 2020).

[22] Personal interview, 26 May 2019.
[23] Focus group, 18 December 2019.

Section 5: Impossible Futures and Idiotic Utopianism

My further critique of the dynamics and consequences of *speculating on* revolves around the production of time and futurity. For whom did the future exist and for whom did it disappear into an extended present? In what ways was sociotechnical potential but also, more broadly, the future, either open and changeable or foreclosed and unchanging?

In the process of financialization, speculation on Bitcoin's price development produced particular temporalities. During periods of active trading, many of my respondents experienced what could be described as an extended, continuous present. They were consumed by continuously checking real-time price updates on exchanges, opinions and trends on social media as well as news resources for emerging events. Trading for them was deeply affective, involving stress, fear, regret, tension, hope, excitement, and bliss. As Can notes, "You are constantly online, keeping an eye on the screen. How much has it [the price of Bitcoin] risen…You are constantly following the updates, like that. 'What is the price now, what is it now?"[24] Quitting or entering a holding position could leave one with a sense of emptiness. As Can commented, "All of a sudden you realize how big a hole exists in your life, since you have been so caught up in following the updates."[25] What in some cases had driven respondents away from active trading was suffering losses of a scale that seemed irrecuperable for now. By entering a holding position, they imagined redemption via the projection of a distant future. In this regard, two repondents independently spoke of crypto investments as inheritance for their (imagined) future children.[26] Inscribing Bitcoin's distant future on an imaginary family timeline, Bülent declared:

[24] Personal interview, 20 May 2019.
[25] Personal interview, 20 May 2019.
[26] Personal interviews, 3 June 2019; 15 June 2019.

> This is something my children will inherit. I would not touch [this Bitcoin investment] no matter what, even if I have to go hungry…because I am confident that the price of a single Bitcoin will reach 1 million USD one day. I am not sure exactly when, but this will happen.[27]

The combination of an affectively felt, continuous present of market volatility and real-time updates, on the one hand, and a faraway, hardly imaginable future of pathbreaking transformation and financial recuperation, on the other, is remarkable. Between these two times, the near future, stemming from the present but also diverting from it—being new or different in some capacity—seemed unthinkable. For instance, even though all respondents were critical of the conditions of precarity that brought people to cryptocurrency speculation in the first place, interventions in the present to bring about change to these conditions remained unimaginable (see also Guyer 2007). While seemingly having all eyes on innovation and the future, *speculating on* captured attention and action in the continuous present and thereby foreclosed the emergence of alternative futures from it.

Blockchain innovation industries claim that they hold the key to the future by unlocking radically transformative and pathbreaking potential, but it is rather the case that the future is being "colonized" by their discourse (Bangh 2019): akin to the role of knowledge and technology in the colonization of land historically, the ideological projections of innovation industries construct the open future as a futurescape, "rendering it available for possession, even as a sight to behold, or an imaginary to occupy" (Bangh 2019, p.11). To speak with Srnicek and Williams (2015, p.3), the future is canceled when such projections limit the collective imagination. This is especially so when the appeal to novelty and revolutionary change in blockchain-centric innovation coincides with what Fisher (2009, p.16) calls "capitalist realism," namely "a pervasive *atmosphere*" that acts "as a kind of

[27] Personal interview, 15 June 2019.

invisible barrier constraining thought and action." In the case of crypto and blockchain-centric innovation, for instance, conditions of structural inequality in finance capitalism and capitalism overall are taken for granted and considered impossible to change. In this regard, capitalist-realist innovation discourses exemplify Clair Sagan's (2019) notion of uchronia, the temporal equivalent of utopia, referring to a "non-time" [*ou-chronia*]. Following Sagan's critique, uchronic visions contain promises of a different future to come, while they in fact aid the reproduction of present realities in problematic ways, such as the asymmetries and inequalities discussed above that remain taken for granted.

Until this point, I have shown how speculative discourses and practices help materialize the present and foreclose alternative futures that could emerge from it. Now I would like to consider, against such foreclosure, what a speculative engagement with the "impossible" would comprise; one that deserves not to be dismissed as gullible or blinded by the technological sublime. This is a matter of recuperating utopias/uchronias as speculative (in the sense of imagined or sensed), longed-for, and desired "other" places/times, even if we do not think to know their concrete contours, but only dream of alternative possibilities—or just the possibility of an alternative—that negatively contrast with existing reality (Jameson 2005). As Srnicek and Williams (2015), contra Sagan's critique of utopia/uchronia, argue,

> Utopias give us something to aim for – something beyond the stale repetition of the same offered by the eternal present of capitalism. In cracking open the present and providing an image of a better future, the space between the present and the future becomes the space for hope and the desire for *more*. (p.140)

For Srnicek and Williams (2015), utopias nurture an affective force unmissable for achieving societal change: utopian thinking forms a necessary "spur to action, a catalyst for change" (p.140).

In the opening of this article, I already introduced Farm Bank. Farm Bank presented an idyllic and, indeed, utopian model world that one could long for. It promised to revitalize local, organic farming as well as to reinvent, at least in gesture, the traditional agricultural cooperative as a digital platform or app, whereby consumers invested in the sustainable production of their own food. Rather than astronomical profits for elite venture capitalists, the project would boost sustainable farming and generate both monetary return and use value (namely, real produce) for the expanding mass of mom-and-pop consumer-investors. In one of the ads, young plants are sprouting from the earth, while the voice-over narrator declares: "We have a dream […] Keep your past alive, keep your hope alive, keep humanity alive. Be a producer or side with the producers. Be a hope for the future." Farm Bank's dream appears to be the fulfilment of longstanding national aspirations for modernization as much as a return to an idyllic pastoral past rooted in agricultural production. Historical footage shows Turkey's mythologized founder Mustafa Kemal Atatürk assuring Turkey's great potential and promising development. This is followed by futuristic scenes of laboratories and high-tech agriculture. Computer graphics and animation are deployed to suggest that Farm Bank operates at the forefront of science and innovation. As suggested in this and other ads, Farm Bank's groundbreaking innovation would result in a revival of Turkey's agricultural sector to the benefit of the overall Turkish population, who resides in cities yet will be able to consume pastoral simplicity via locally produced food, in addition to receiving a share of Farm Bank's profits. This message resonated with a country that had first seen its agricultural production decimated under IMF and World Bank pressure for economic transformation and later experienced constant depreciation of its currency in global financial markets. Futurism and nostalgia are reconciled as the agricultural past supposedly opens up to a new future of abundance. If Farm Bank had worked as promised (and it had not secretly wagered users'

money on Bitcoin), all parties involved would dwell in the riches offered so generously by nature and enhanced by means of science and technology.

Farm Bank's users invested their savings, even if its proposal sounded a bit "too good to be true," that is, if Farm Bank's propositions defied "common sense" and violated "reasonable" understandings of the probable or even possible. Media coverage from before the downfall gives a sense of Farm Bank's standing as some kind of collective trend that spread with each user recommending the project, and its app that gamified farming, on social media and in everyday lives. Former Farm Bankers whom I interviewed after the unraveling of the scandal mostly emphasized being motivated by the joys of gamble-play, while they played down having been attracted to the utopian promises of Farm Bank. Perhaps they did so because losing money on a game that one only plays "for fun" and as a gamble can be considered "rational" behavior, whereas admitting to "unrealistic," utopian desire carries the risk of appearing irrational and delusional. Farm Bank users had been relentlessly depicted as gullible idiots in Turkish media and my Bitcoin respondents often reiterated such a portrayal. They also frequently depicted Farm Bank investors as greedy and lazy for wanting to make money without doing any work, and this weakness of character presumably had rendered them vulnerable to the Ponzi scheme. Even though Bitcoin investors had rather similar motives and in general had lost much more money at the time of my interviews, all participants in my focus group agreed that they and other Bitcoin investors had acted far smarter than Farm Bank investors, to whom one of the participants referred as people who "don't manage to think rationally." In another interview, Bitcoin user Levent offered a more compassionate perspective when acknowledging the utopian lure of Farm Bank and pointing out that we ought not to confuse "stupidity with desperation" in our judgement.[28]

[28] Personal interview, 26 May 2019.

In these pillorying dismissals of alternatives to Bitcoin, Sagan's (2016) insight rings true that "[t]hrough an exclusive and exclusionary claim to realism," uchronic projections deny that "'other' temporalities may be possible" (p.149). But what is possible, impossible, or plausible? The blockchain dreams of my respondents (see Section 3) were also not particularly "realistic." In order to sustain the myth of blockchain-led decentralization my respondents had to ignore realities of recentralization and reproduced asymmetries and inequalities. Moreover, contravening the usual depiction of Bitcoin and Farm Bank, my interviewee Emre, who had been a Farm Banker rather than cryptocurrency investor, turned the binary of rational/irrational around and questioned Bitcoin's immaterial and entirely speculative nature. He pointed out that Bitcoin lacked any aspect of concrete production and hence the project seemed "absurd" to him:

> I did not play that one [Bitcoin]. It looked very silly to me, I did not get it. You buy some Bitcoin and your investment grows ten-fold… Farm Bank was really rational and really nice. You purchased some cattle or things like that.[29]

Whereas Emre's visions would be considered foolish by my Bitcoin respondents, I want to suggest that his answers involve a kind of "idiocy" in the sense that Stengers gives to this label. Choosing a label that echoes Bitcoin investors' and media discourses may strike as unsympathetic to the plight of people who have lost their savings. However, in Stengers' usage, idiocy does not imply low judgment of intellectual merit. Rather, it reappropriates the pejorative term to describe a position of open inquiry and fundamental questioning of what is considered commonsense among members of a society or specific social group, such as experts or technological elites. Stengers' (2005) "idiot" is someone who refuses to accept hegemonic senses of the normal, plausible, and realistic, and does so without pretending to

[29] Personal interview, 17 June 2019.

know better or more. As Stengers (2005) writes, “Don’t ask him why; the idiot will neither reply nor discuss the issue. The idiot is a presence or, as Whitehead would have put it, produces an interstice” (p.994). The encounter with the “idiot” then “demands that we slow down, that we don’t consider ourselves authorized to believe we possess the meaning of what we know” (p.994). Whereas it is not my intention to depict Emre as a fully-fledged Stengersian “idiot,” his speech at certain moments did produce the interstice Stengers refers to. More so, his speech hinted at a rendition of the technological sublime that was as much idiotic as utopian in its refusal of commonsense. To Emre, the idea of consumers investing in “green” innovation for sustainable agriculture to receive both produce and monetary returns appeared plausible. If Farm Bank had stayed true to its supposed mission, it could have worked out, Emre speculated. He insisted that things could be different, even if this conviction was merely informed by a desire that he clang onto rather than a concrete vision. Emre’s hope and desire persisted without the pretention of knowing all solutions.

Conclusion

Focused on the hype around cryptocurrency and blockchain-centric innovation in Turkey, this article has sought to displace decidedly North-American stories of Bitcoin’s origins and “Web3” futures. Mapping the articulations between *speculating about*, *through*, and *on* innovation, I have analyzed the open-endedness of sociotechnical potential as well as its foreclosure by analyzing imaginations and desire, the “Web2 “media ecology, and logics of financialization. Foreclosure takes place in the shift from *speculation about* to *speculating on*, as financial speculation translated open-ended sociotechnical potential into notions of risk and opportunity. This shift curtails experimental material praxis, *speculating through*. Instead, media-ecological and informational asymmetries, along with economic, social, and geopolitical inequalities, shaped speculators’ experiences of mystery, sublimity, uncertainty,

and precarity. Meanwhile, Turkish speculators envisioned a vague, distant future of radical transformation, but the practice of financial speculation captured their attention in the expansive, continuous present. There was little sense of an immediate future that emerges from the present but that is also new and different in some regards. Whereas innovation's open-endedness can spur desire and imagination, capitalist realism marginalizes certain dreams by casting them away as "impossible" or "irrational."

Against such foreclosure, an idiotic and utopian rendition of the technological sublime could form a milieu enabling sociotechnical experimentation and alternative trajectories of individuation of sociotechnical potential. The idiotic technological sublime could open up our sensibility toward what Srnicek and Williams (2015) call "a significant untapped reservoir of potentials lying dormant within a technology" (p.152). As these authors ask: "What sorts of postcapitalist communities could be built upon the material we already have? Our wager is that the true transformative potentials of much of our technological and scientific research remain unexplored" (p.152). To defend the technological sublime is a risky position. After all, the affective force of utopian thinking and the technological sublime has been exploited time and again, be it in the case of decentralization discourses or the "greenwashing" of capitalist innovation. Indeed, from an ecologically-minded perspective, Sagan (2019) critiques Jameson's and Fisher's evocation of utopianism (and, by extension, mine) by arguing that seeking sustainable alternatives to the uchronian narratives of capitalism is a matter of realism rather than utopianism: it is the only plausible way forward if the aim is "to live and die well" for current and future generations (Haraway 2016, quoted in Sagan 2019, p.151).

Such objections notwithstanding, it is no doubt crucial to spark imaginative capacity and belief in a different articulation of technology, agricultural production, and investment—one that truly commits innovation to sustainability and cancels exploitative, extractive, and

wasteful habits (especially given the impact of blockchain technology, Rosenthal 2022, Zimmer 2017). Beyond a critical analysis, the combined discussion of Bitcoin and Farm Bank also allows me to ponder how to redeem speculation. I propose an ethico-politics of idiotic and utopian speculation *about* and *through* innovation that explores "unlikely" possibilities. Against hegemonic understandings of the possible/impossible as well as financialized calculations of risk and opportunity, such a politics embraces experimentation and devises "modes of living that creatively engage *uncertainty*" and that build "on the tentative mutualities that arise in the face of uncertainties" (Uncertain Commons 2013, p.13). Now let's start a farm bank!

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