Technics and Bitcoin: a philosophical connection

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Abstract

This paper argues that Bitcoin can be conceptualized as a manifestation of Technics, building on definitions of this term offered by selected philosophers of technology from the last century. Such conceptualization aims to help frame Bitcoin's understanding and trajectory, especially in relation to other forces competing in the world over the past two centuries and still striving for their own affirmation. Starting by defining this approach to Technics as the essence of technology, we explore some of its critical traits such as autonomy and purpose and discuss its interplay with other and apparently competing forces. For each section of our exploration, we look at and for analogies and connections with Bitcoin to substantiate its overarching conceptualization as a manifestation of Technics.

1. Introduction

The increase of interest in Bitcoin and cryptocurrencies is undeniable. Whether considered a hazardous investment, a financial bubble, or the best monetary technology that ever existed, Bitcoin is now, to various degrees, taken seriously by governments, corporations, media, and the society at large. Its understanding, though, not only and not much of its technological and mathematical features, but of its long-term implications on politics, economy and culture, is by no doubt at an early stage. Philosophy has a role to play in helping enhance this understanding, as does history. Philosophy of technology, in particular, with the unsung but forward-looking ideas developed by thinkers of the twentieth century, can provide a frame of interpretation to conceptualize this "object" and place it in a historical perspective that could help us make sense of it. With this short paper, we adopt one of these frameworks to see what we can learn about Bitcoin from it. Our ambition is to encourage further and more in-depth philosophical explorations in this space, to the benefit of the overall marketplace of ideas.

2. Technics and the essence of technology

Firstly, this exploration is not about technology. It is about "the essence of technology" (Heidegger, 1977) and how it connects to the characteristics of Bitcoin. We call this essence "Technics" (without engaging in the terminological debate fuelled by different translations and semantic approaches, by which, for example, some use the French-derived term "Technique", and others adopt a broader definition of the term "Technology"). Two of the most brilliant philosophers of technology of the twentieth century, Jacques Ellul and Emanuele Severino, share an overall convergent view of this concept. Ellul defines it as "the totality of methods rationally arrived at and having absolute efficiency (for a given stage of development) in every field of human activity." Severino adds that Technics is a "system of subsystems" whose purpose is to increase its capability to achieve ends. Technics does not work towards a specific and exclusive end but towards the undefined increase of the ability to achieve ends, which is an undefined increase of the ability to satisfy needs.

Oswald Spengler also connects Technics with ability and satisfaction of needs, suggesting in his exploration of "Man and Technics" that "technics is the tactics of living." Langdon Winner summarizes the notion of Technics as "the whole body of technical activities (skills, methods, procedures, etc.) that people engage in to accomplish tasks."

Spengler and Winner, though, incorporate the concepts of living/people in their definitions of Technics, adding a potentially inessential specification. Ellul and Severino avoided this specification, and in a way, this distinguishes their line of thought.

Both Ellul and Severino read and learn from Martin Heidegger, whose thought on Technics was profound and far-reaching (more than we want to address in this paper). What is relevant here is that Heidegger categorizes the essence of technology (which, for all the intents and purposes of this paper, we consider as Technics) as a mode of being. For Heidegger, this essence is a "revealing" turning nature into a resource for efficient use. With these considerations, he creates the foundation for Ellul's and Severino's thoughts to explore this essence, not as a technological thing per se but as a more profound and broader force, uniting, for example, both technology and science (the techno-scientific apparatus). Although intrinsically tied to technology, science, and human beings, this force transcends them and only engages in increasing the ability to achieve ends.

3. Autonomy of Technics

Secondly, our exploration leads us to the notion that Technics is increasingly autonomous. It is especially so today that we appear to be on the verge (in historical terms) of the advent of artificial general intelligence and singularity. What will become evident and undeniable has already been apparent to many thinkers who have studied the *longue durée* of Technics: this force we are contending with, that is, Technics, relies less and less on humans.

Autonomy of Technics implies its emergent dissociation from human control. At the level of the individual, this dissociation is almost complete, as the instances in which an individual controls the larger force of Technics are virtually irrelevant. The spirit of this subordination and irrelevance, the obsolescence of the human being that Gunther Anders connected to a psychological unease that he called "Promethean Shame," was already intrinsic to the development of the first, rudimental tools through which humans aimed at increasing their superiority (over nature) far beyond the limits of their bodily power. By the effect of that action, Oswald Spengler noticed, humans sacrificed some of their personal freedom: "Once habituated to the collective doing and its successes, man commits himself more and more deeply to its fateful complication. The enterprise in the mind

requires a firmer and firmer hold on the life of the soul. Man has become the slave of his thought" (Spengler, 1963).

Werner Heisenberg made some considerations on his quantum physics work relevant to our discussion. He concluded that he had unwittingly contributed to the rise of an uncontained historical force.

Techno-scientific advancement has, in his words, "gone far beyond any control through human force." However, it is not only individual control that is relinquished. It is also, and increasingly, the broader, historical sense of agency pertaining to technical development.

Continued Heisenberg, cited by Winner: "If Einstein had not discovered relativity theory, it would have been discovered sooner or later by someone else, perhaps by Poincare or Lorentz. If Hahn had not discovered uranium fission, perhaps Fermi or Joliot would have hit upon it in a few years later [...] The pioneer has simply been placed in the right spot by history, and has done no more than perform the task he has been set."

Heisenberg's point here was about the responsibility of the scientists on the effects of their discoveries and advancements, but as Winner notes, the issue is "that there is evidently an element of virtual necessity or inevitability at work here." Ellul shares this view: "Technique sharply reduces the role of human invention. It is no longer the man of genius who discovers something. It is no longer the

vision of a Newton which is decisive. What is decisive is this anonymous accretion of conditions for the leap ahead. When all the conditions concur, only minimal human intervention is needed to produce important advances. It might almost be maintained that, at this stage of evolution of a technical problem, whoever attacked the problem would find the solution." In other words, "man participates less and less actively in technical creation, which, by the automatic combination of prior elements, becomes a kind of fate. Man is reduced to the level of a catalyst". This process is self-augmentation, if not auto-poiesis, and already emergent autonomy.

The consequences of losing control and agency are far-reaching and correlate with increased complexity and decreased understandability. Not just for the unspecialized, non-knowledgeable man. The evolution of Technics is disconcerting even for the technician, for the expert. As pointed out by Bernard Stiegler, when the back-then chair of the Federal Reserve, Alan Greenspan, was questioned about the 2008 financial crisis by the US House of Representatives, he admitted his organization's incapacity to understand some of the problems it faced. The astonishing sophistication of the modern financial markets had created issues that were ungraspable: "I have dealt with many different organizations, and if the Federal Reserve at the level of technical capability is not capable of confronting this type of problem,

I think it is telling us something about the nature of the problem which itself is incapable of being handled in the way we all would like." Unexplainability and incomprehensibility, after all, are posed to become concrete and daily issues with the adoption and growth of artificial intelligence. However, what is relevant for this paper is autonomy being a fundamental although emergent defining property of Technics. A property that finds manifestation in the second object of our exploration, that is Bitcoin. It has been argued that Bitcoin is autonomous and represents the first real-world implementation of a "decentralized autonomous organization" (Hsieh & Vergne, 2018). In other words, and through an analogy, Bitcoin could "be understood as a spontaneously emergent and autonomous firm which provides a new form of money and a new payments network. There is no management or corporate structure to this firm, as all decisions are automated and preprogrammed." (Ammous, 2018).

This paper will not address the genesis of Bitcoin but will flag that the role played by its anonymous creator, Satoshi Nakamoto, can be understood as a catalyst. He originated the process, but no more, and later disappeared: Bitcoin does not need any specific individual to run it, everyone is dispensable, and the network is de facto autopoietic. The autonomy is allowed by Bitcoin's decentralization,

censorship-resistance, and trustless consensus, and it is autonomy from specific individuals and, more broadly, from third parties.

4. Purpose of Technics

The third aspect we want to explore is purpose. Assuming the essence of technology is autonomous, what is its purpose? Furthermore, how is that connected to Bitcoin? We have seen that for Heidegger, the essence of technology is a "revealing" that turns nature into a resource for efficient use. Heidegger does not clearly and explicitly address Technics' purpose. However, Ellul and Severino take Heidegger's thoughts and venture into a conversation about purpose. One to deny it, the other to amplify it.

For Ellul, "technique [...] pursues no end, professed or unprofessed. It evolves in a purely causal way: the combination of preceding elements furnishes the new technical elements. There is no purpose or plan that is being progressively realized. There is not even a tendency toward human ends. We are dealing with a phenomenon blind to the future, in a domain of integral causality. Hence, to pose arbitrarily some goal or other, to propose a direction for technique, is to deny technique and divest it of its character and its strength." Ellul thus conceptualizes a force that is autonomous but lacks intentionality.

Severino disagrees. His thesis is that the purpose of Technics, its end, is to increase its own power, which is not a static power but is better defined as the undefined increase of the capability to achieve ends. This is why technology and science, vehicles of technics, strive for accuracy and efficiency to achieve ends faster, easier, and cheaper.

Now onto Bitcoin. What is its purpose? In its creator's words, the primary purpose of Bitcoin is the creation of "an electronic payment system" that would allow "any two willing parties to transact directly with each other without the need for a trusted third party" (Nakamoto, 2008).

The implications of such a purpose are consequential: "Bitcoin is the newest technology to serve the function of money—an invention leveraging the technological possibilities of the digital age to solve a problem that has persisted for all of humanity's existence: how to move economic value across time and space" (Ammous, 2018).

Saifedean Ammous explains further: "Until Bitcoin's invention, all forms of money were unlimited in their quantity and thus imperfect in their ability to store value across time. Bitcoin's immutable monetary supply makes it the best medium to store the value produced from the limited human time, thus making it arguably the best store of value

humanity has ever invented. To put it differently, Bitcoin is the cheapest way to buy the future, because Bitcoin is the only medium guaranteed to not be debased, no matter how much its value rises."

Furthermore, we should read Bitcoin in the historical context of its creation, on the backdrop of the 2008 financial crisis that, for many, marked a tipping point in the modern monetary and economic course. Bitcoiners claim that Bitcoin's spirit - its essence - is hard money, the most sophisticated monetary technology. The creation of an electronic payment system is its stated purpose, but Bitcoin supposedly achieves and strives for far more than that. Bitcoin would be most useful as a store of wealth, solving problems with inflation, borders, segregation, and privacy by providing limited supply, decentralization, and borderlessness. Bitcoin thus solves several problems, and Bitcoin miners literally solve computational hash problems in the "proof of work" mechanism that secures the Bitcoin network.

The analogy with Severino's Technics theory is that as Technics increases its own power (its own capacity of solving problems), so does Bitcoin. As time goes by, adoption grows, and Bitcoin overcomes all the threats that challenge it (all the "FUD or "Fear Uncertainty Doubt," as the community calls it), the network is every day larger, more secure, more valuable, and, in short, more robust and

better able to solve problems. Regardless of the most helpful purpose served by Bitcoin, the network has the end of reinforcing itself, or it would not be able to function effectively and serve its purpose (whatever that may be).

Building on the "spontaneously emergent and autonomous firm" metaphor we have encountered early in this paper, Ammous explains how Bitcoin deploys such a self-reinforcing mechanism.
"Miners invest electricity and processing power in the mining infrastructure that protects the network because they are rewarded for it. Bitcoin users pay transaction fees and buy the coins from the miners because they want to utilize digital cash and benefit from the appreciation over time, and in the process, they finance the miners' investment in operating the network. The investment in PoW (Proof of Work) mining hardware makes the network more secure and can be understood as the firm's capital. The more the demand for the network grows, the more valuable the miners' rewards and transaction fees become, which necessitates more processing power to generate new coins, increasing the company's capital, making the network more secure and the coins harder to produce. It is an economic arrangement that has been productive and lucrative to everyone involved, which in

turn leads to the network continuing to grow at an astonishing pace" (Ammous, 2018).

5. The growth trajectory of Technics

For Severino, Technics is the ineluctable leading force globally. It is better understood in the interplay with the great forces of Western Tradition – which for Severino has come to dominate the world stage, so that non-Western societies largely adopt and now contribute to the narratives of these forces. These great forces of the Tradition are the major ideologies, religions, and cultural drivers of the West: Christianity, Capitalism, Democracy, Socialism, and others. We can incorporate among these, even though less canonized by the Tradition, more recent social movements such as Environmentalism, for example. For Severino, these forces are most of the time in conflict among them, and often it is a silenced conflict, but nonetheless a conflict. Their ends are conflictual and essentially mutually exclusive. Each of them conceptualizes Technics as a means to an end. They adopt Technics – in the concrete forms of technology or science and their derivates – as this provides them with better tools to pursue and achieve their ends. Capitalism uses Technics to realize a Capitalistic world, and Christianity uses Technics to realize a Christian world. And so forth. These forces compete with each other. Christianity tries

to prevail on Capitalism. Capitalism on Democracy. Socialism on Capitalism. This dynamic means each force tries to push its ends over the others' ends. These are practical, not only theoretical conflicts, and these forces utilize Technics to make their ends prevail over those of the opponents. For Severino, no force can be indifferent to the power of Technics in such a scenario or will be left behind and succumb to the other forces, which are instead increasingly using Technics. This means they are developing their ability and capabilities in the technical-scientific apparatus to reach their ends better. Each force wants to preserve and increase the power of its tools – which are technical tools.

The next logical step is that each force has to avoid that their will to reach a particular end leads to weakening, for any reason, the power of Technics (the tool which should help it realize that very end). Traditional forces do not need to oppose, weaken or slow down Technics to utilize it against each other. However, avoiding that the end would hinder and weaken the mean implies adopting the mean as the primary purpose, de facto subordinating it to the initial end.

As a result, Severino concluded, Technics' adoption by the traditional forces as just a tool to realize their end is an illusion. What really happens is that the power of Technics becomes their fundamental and

primary end. Of course, this is a gradual process and one that is always denied by the forces themselves.

The analogy with Bitcoin is evident. We are continuously witnessing the attempts of other forces to “master” Bitcoin and make it serve their own purposes. What happens, though, is that the attempt to subordinate Bitcoin leads to increased adoption of Bitcoin and, thus, of its ends. A process that can be explained with game theory: “If you take any two individuals, businesses, competing nations, large corporations, any entities for whom the goal is to acquire more capital and enrich themselves, they are all witting or unwitting participants in the Bitcoin Dilemma. Players can either choose to accumulate Bitcoin at any moment or defer to a higher price” (McShane, 2021).

In other words: “There is very high stakes game theory at play here, whereby if bitcoin adoption increases, the countries that secure some bitcoin today will be better off competitively than their peers. Therefore, even if other countries do not believe in the investment thesis or adoption of bitcoin, they will be forced to acquire some as a form of insurance. In other words, a small cost can be paid today as a hedge compared to a potentially much larger cost years in the future” (Kuiper and Neureuter, 2021).

Players might think they are using Bitcoin for their purposes, but they take a stake in it by adopting it. They think of Bitcoin as a means to an end (diverse ends are at play), but what happens is that they are incentivized to avoid decisions that weaken Bitcoin, and it can be argued that, doing so, they actually subordinate their end to Bitcoin's. The more optimistic bitcoiners argue this self-reinforcing process will go all the way through and lead to a Bitcoinization of the world - a Bitcoin Standard. This would be similar to the dynamic by which all traditional forces are unintentionally pushing towards the advent of the age of Technics.

6. Conclusion

This paper has addressed the topic of Technics, intended as the essence of technology as conceptualized by several thinkers, mainly Martin Heidegger, Emanuele Severino, and Jacques Ellul. Building from this starting point, we have explored the notions of the autonomy of Technics, its purpose, and its growth trajectory - associating each of these aspects to Bitcoin's own journey and identifying analogies. Thus, we put forward the idea that Bitcoin is a potential manifestation of Technics as intended by these philosophers. In proposing this idea, we advanced a double-fold objective: socializing this association to encourage further philosophical explorations around it; and providing

a framework for thinking about Bitcoin and its interplay with other forces engaged in the socio-economic world, in the context of the advent of Technics. With no claim of being exhaustive nor exact, a key ambition of this proposed interpretation is to make a small contribution through philosophical ideas to the discussion on Bitcoin, in an effort to advance its individual and collective comprehension so that we can grow awareness of the society that is being shaped up by technological and scientific advancements.

References

Ammous, S. (2018). *The Bitcoin Standard*, Wiley.
Ellul, J. (1964). *The Technological Society*, Vintage Books.
Greenspan, A. (2008), *Hearing before the Committee on Oversight and Government Reform of the House of Representatives*. https://www.govinfo.gov/content/pkg/CHRG-110hhrg55764/html/CHRG-110hhrg55764.htm.
Heidegger, M. (1977). *The Question concerning Technology and Other Essays*, Garland Publishing. Original text in German published in 1953.
Hsieh YY & Vergne JP. (2018). *Bitcoin and the rise of decentralized autonomous organizations*, Journal of Organization Design.
Kuiper, C. and Neureuter, J. (2022). *Research Round-Up: 2021 Trends and Their Potential Future Impact*, Fidelity, https://www.fidelitydigitalassets.com/articles/2021-trends-impact.
McShane, A, (2021). *The Bitcoin Dilemma*, Bitcoin Magazine. https://bitcoinmagazine.com/culture/the-bitcoin-dilemma

Nakamoto, S. (2008). B*itcoin: A Peer-to-Peer Electronic Cash System*, https://bitcoin.org/bitcoin.pdfSeverino, E., (1988). *Il destino della tecnica*, Rizzoli.
Spengler, O. (1963). *Man and Technics*, Knopf.
Stiegler, B. (1998). *Technics and Time*, Stanford University Press.
Winner, L. (1978). *Autonomous Technology,* MIT Press.

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