



Cyberpunk and Cypherpunk: A Philosophical Analysis Comparing Two Views of the Metaverse

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Abstract. As ancestors of the idea of the metaverse - Cyberpunks and Cypherpunks - propose two distinct attitudes towards Cyberspace, and this difference also infuses their attitudes towards the metaverse. These two attitudes will powerfully influence the developmental direction of the metaverse and how it will be recognized and accepted by society. Given that the visual space is an artificial reality created by technology, they not only illustrate two different ideas regarding “realities other than the physical one of human society”, but also illustrate two different ideas regarding technology itself. The Cyberpunk view of the metaverse could be seen as techno-pessimistic or Luddism. Cypherpunk’s metaverse view, on the other hand, is “technological transformationism”, which carries multi-possibilities of living styles of human being, and it almost incompatible with Luddism.

Keywords: Metaverse · Cyberpunk · Cypherpunk · Philosophy of technology

1 Introduction

The metaverse rose to prominence in 2021. It has become a pan-cultural phenomenon that sparks commentary and participation from a wide range of disciplines and industries. Corresponding to this is the uncertainty regarding its conceptual definition, technological standards, and evaluation methods. In other words, it is still difficult for us to get a precise unified consensus on the concept of the metaverse. Aside from the business and financial applications, I find two methods for evaluating the metaverse with partial consensus, which can be described as two views. Respectively, they correspond to virtual reality and internet technology with blockchain as the core. These two technological directions are also related to two similarly-pronounced concepts, namely “Cyberpunk” and “Cypherpunk”. Historically, they have rarely been related to each other, and it is precisely the unified concept of the metaverse that has contributed to their rivalry.

The focus of this article is to analyze and compare views of metaverses from the perspectives of Cyberpunk and Cypherpunk. They happen to be related to two different attitudes toward the relationship between metaverse and the real world. The original ideal metaverse comes from Neil Stephen’s cyberpunk novel “Snow Crash” [1]. These two attitudes will develop into different directions of investigation on the authenticity of “virtual cyberspace”. When we examine whether the “virtual” should compromise with “reality”, we will find that versions of the metaverse supported by different philosophical views of technology will take different paths.

2 Snow Crash and the Inappropriately Implemented Metaverse

Although there are different opinions on the technological standards and development direction of the metaverse, there is a consensus on the starting point of the concept itself. It originated in the novel “Snow Crash”, and swept the world with Spielberg’s film “Ready Player One”, which duplicated the former’s setting. For convenience of organisation, we will introduce the “metaverse” as imagined in “Snow Crash” as if divided into two parts: 1. The part which overlaps with the metaverse that has been realized or is expected to be realized currently; 2. The part that is different from the metaverse in the real world at the moment.

The concept of virtual reality (VR) was first proposed in “Snow Crash”. However, the construction of the metaverse in our world requires not only VR technology but also a 3D modeling engine and a digital world physical construction system that can create a sense of “real” immersion. Although imperfect, these technologies have entered the stage of usability. Examples include the Oculus Quest 2, Unreal Engine 5, and the Omniverse virtual work platform standouts in their respective fields. Based on the accumulation of technology, some companies with strong resources such as Meta (Facebook), Tencent, etc. have launched metaverse projects, which are committed to reconstructing the virtual environment for the office, education, social interaction, and entertainment.

In addition, the metaverse in “Snow Crash” is also a Sandbox game with a high degree of freedom, in which players can own and build virtual land and upload programs. In this game, metaverse regions would look very different due to the variety of tastes and technological abilities of players. A connected concept is User Generated Content (UGC). Namely, users create content, and the central platform only provides the basic framework. The “Warcraft map editor”, and MOD production in “The Elder Scrolls” and “Mount and Blade” represent UGC. It is more thorough in “Second Life”, Minecraft and Roblox with the independent production of virtual avatars by users of “Second Life” directly inheriting the story settings and plots in “Snow Crash”. But these are not enough to construct a ideal metaverse, because users can not own their digital assets, without being manipulated by these companies.

The metaverse in “Snow Crash” is a highly decentralized network. There is no system administrator or backdoor system for manipulation, which means no super-system authority. It is a paradise for hackers and programmers. This makes it more like the Internet than a local system. Roblox and Sandbox which claim to be metaverse are not strictly decentralized enough (and Meta’s Horizon Workroom is simply centralized). They may be metaverse-like in some respects, but the underlying technological logic has not yet reached the ideal standard. There are two reasons: 1. They have not been able to completely get rid of the traditional smart contract (computer program-based business or other human-machine/human interaction with value); 2. Some their network infrastructure (such as storage) is still centralized.

According to Nick Szabo (a cypherpunk) [2], traditional smart contracts (a centralized smart contract, such as a common buying and selling program on the vending machine) generally require a backdoor system. Such smart contracts require a “third party” to act as an intermediary to provide arbitration or deliberation for interactions between users in a system. Decentralized smart contracts need to be built on a public blockchain. Blockchain technology enables the confirmation of business communication

interactions. It also enables part of the delivery work to be distributed to automated programs based on hashing, signatures and specific consensus mechanism of distributed protocols. Ethereum is currently the most successful blockchain in the industry that deploys smart contracts. Developers build their smart contracts and decentralized applications on Ethereum through the Ethereum Virtual Machine.

But this is not enough. Although some metaverse projects like Sandbox are based on Ethereum in terms of value circulation and virtual property confirmation, ultimate control of the game operation is still in the hands of the developers. The real metaverse would never go offline and would have no access restrictions. At the same time, its software updates would not depend on any institution or individual and must be the result of the users' group resolution. It is difficult for commercial projects to include these characteristics.

Such a metaverse is a large decentralized virtual world, and building it requires upgrading of the internet infrastructure. For example, it requires the reconstruction of the underlying protocols of the Internet to establish a set of P2P storage protocols that can be used to distribute and store large-scale dynamic data. Projects such as the Interplanetary File System (IPFS) and Arweave are working in this direction. Only when the decentralized infrastructure is completed will the metaverse – like the internet – never go offline.

From Meta to Tencent, from Roblox to Sandbox, the current metaverse projects on the market do not fully conform to the idea of the “Metaverse”. They may have elements of it in some respects, but not enough for realizing the kind of metaverse imagined in Snow Crash. The two perspectives discussed in this article are related to this. Cyberpunk-style metaverse reviews, which focus on deviations of the metaverse from the reality of human society, often focus on the overlap of the current metaverse (VR technology) and that seen in Snow Crash; while Cypherpunk's expectations for the metaverse (an ultimate decentralized one) are based on the difference between it and the Snow Crash metaverse (they worry that its realizations are not decentralized enough).

3 Cyberpunk's Warning

From 2021 to the present, the metaverse has been reviewed endlessly. Most of these comments are related to keywords like “dystopia”, “capital control”, etc. These cyberpunk reviews warn of blind technological optimism and technological determinism, and also examine the negative effects of capital and power control in the process of social evolution brought about by technology. These dystopian stories take place in cyberspace. Among the classic movies, “Akira” (1998) directed by Katsuhiro Otomo, and “Ghost in the Shell” (1995) by Mamoru Oshii are typical cyberpunk arts.

The point about “immersive spaces built with virtual reality are not worth looking forward to” is one of the most frequent criticisms. The founder of the mobile game Pokémon GO, John Hanke [3], wrote “The metaverse is a dystopian nightmare, Let's build a better reality”. Commenting on the VR metaverse, he also said: What if technology could make us better? Could it nudge us to get off the couch and out for an evening stroll or a Saturday in the park? Could it draw us into public space and into contact with neighbors we might never have met? Could it give us a reason to call a friend, make plans with our

families, or even discover brand-new friends? Collectively, could it help us discover the magic, history, and beauty hiding in plain sight?" Hanke's subtext is that the metaverse has taken us away from real life and reduced real human interpersonal-contact. We can see a similar warning in the film "Surrogates".

Hanke was just emphasizing the importance of the real world to human life, while another strand of cyberpunk metaverse commentary is more serious and philosophical. It review argues that the metaverse will pull humanity back into "Plato's cave" - into an inextricable fantasy. Philosopher Nozick constructed a thought experiment similar to the "Matrix" in his "Anarchy, State and Utopia" [4]: In it, people can knowingly choose to be in a container with electronic interfaces in their brains. By stimulating his brain, the best neuropsychologists provide him with whatever experience he desires. Nozick puts forward three reasons for rejecting the experience machine: 1. I want to do some (real) things, not just get the experience of doing these things; 2. For a person living in a container, there is no meaning in life, "it's the same as suicide"; 3. The experience machine cannot give the users anything more profound than the artificial virtual environment.

Nozick exhibits a social reality-centric approach, which we may call "physical reality-centrism". For him, the anchor point of value must be based on real society, and virtual reality is either "unreal" or just "second-class reality". The former heralds a kind of perception-centrism (such as Berkeley's "To exist is to be perceived"), while the latter still acknowledges the reality of the virtual environment, but does not value it. Neither of them expresses distrust of the maturity of the technology, but only of the technology itself.

However, perception-centrism is not suitable for providing a theoretical description of VR. David Chalmers [5] assumes that VR is an experience constructed by human perception. To him, human perceptions produced by VR are neither hallucination (generated purely by the human brain without external information input) nor illusion (with external – but misleading - information input). Crucially, in the VR environment, people only have a perception after receiving the information input, so it cannot be regarded as a hallucination.

Neither is VR perception an illusion. Chalmers uses an analogy to illustrate this: person (A) enters a restaurant and does not notice a large mirror in front of him. A perceives person B approaching from the opposite direction, but in fact, B approaches from behind him. There are two conditions for this illusion. 1. A does not know that a device that does not reflect the "real" situation is inputting information to him; 2. A still cannot use this device proficiently. Just think about a rearview mirror. We know its existence and purpose, and we can use it skillfully. This situation is not an illusion. A person who has just entered the VR world is likely to have some illusions, which are the same as when we first watch a 3D movie. But if you become an "expert," you don't have this illusion and instead experience real interactions with others in this environment. All in all, it is hard to say that VR is an environment centered on constructing hallucinations and illusions.

Both Chalmers' "Digital Realism" [5] and Zhai Zhenming's "Perceptual Frame Equivalence Principle" [6] are trying to examine whether physical reality and virtual

reality are equally real to human experience. In other words, they both see a virtual environment as a real scenario that provides causal interaction for humans. This response to Nozick is a reason for discounting his first objection. But his second objection must still be examined: can this virtual reality provide us with a meaningful life? Zhenming believes: “The difference of meaning is first related to the initial intention. This intention determines what kind of real changes the selected part (a constituent) of the object world should have (from the subject of intentional movement), and these changes does not reveal as the experience of human being, but rather the changes of reality. The concept of success versus the concept of failure is originally about individual intentions, the concept of ownership is about the collective institutionalized intention of all individual participants, and the concept of moral responsibility is about the interaction between all individuals and the collective institutionalized intention “ [6]. That is, as long as the actor can cause real objects to change in the VR world, this intentionality is real. Furthermore meaningful value concepts such as rights, success, and morality can be reduced to intentional relationships. Therefore, the VR world has the power to construct meaning.

In the end, only Nozick’s third objection remains. Chalmers argues that this objection expresses a distrust of the artificial environment. But in this case, it shouldn’t be just VR technology that is mistrusted: tech artifacts of the physical real world should not be trusted either. Chalmers appears to be suggesting a “Luddite” attitude towards VR technology (i.e. opposition to technological progress). The original Luddite workers who smashed machines were not opposed to all technology, but only the part of it that they could not adapt to. VR opponents don’t have to reject all technological artificial environments, they just need to believe that the reality that VR constructs “doesn’t feel right.” They can indeed identify many metaverse problems, such as “what if there is a bug in the system?”; “VR will cause dizziness, will it be harmful to the human body?”; “what if these technologies are used to control society?”, and many more. However, it is theoretically consistent for them to be completely techno-pessimistic – because real-world technology also has negative effects on human society.

“Luddism” is different from outright techno-pessimism. The latter cannot theoretically reach a compromise with the metaverse, while the former can. Metaverse developers just need to develop some applications that don’t make people uncomfortable. For example, as John Hanke said since human beings need a real-world communication environment, the metaverse might as well abandon VR and use Augmented Reality (AR), mixed reality (XR) and IoT technologies. However, will a metaverse that compromises with physical reality succeed? Holders of another view of the metaverse – the Cypherpunks – don’t think so. In their view, cyberspace constructed by another important technology of the metaverse – internet technology – cannot compromise with the real world. Once humans try to do so, they are likely to get neither the benefits of the real world nor the benefits of the cyber world.

4 The Metaverse in the Eyes of Cypherpunk

The original “cypherpunks” were a group of privacy-protecting activists who emerged in the 1990s and advocated the idea of establishing the use of unregulated encryption technology in the United States [7]. Without such technologies there would be

no contemporary-style internet or metaverse infrastructure. Blockchain, cryptocurrency technology, and the technological implementation of distributed systems have been influenced a lot by Cypherpunk and internet libertarian movements. In a narrow sense, Cypherpunks are cryptographers, engineers, and tech geeks who communicate with each other via email groups. The earliest Cypherpunk group was established in 1992 by Eric Hughes, Timothy C. May, and John Gilmore, and the name Cypherpunk was created by Jude Milton, inspired by the concept of “cyberpunk”.

There are three notable concepts within early Cypherpunk: 1. The emphasis on privacy protection; 2. “Cypherpunk writes code”; and 3. The proposal of cryptocurrency. Eric Hughes states in the “Cypherpunk Manifesto” that privacy is different from secrecy. Privacy refers to information that the owner does not want the world to know (such as personal information), while secrecy refers to information that the owner does not want anyone else to know (such as a bank password). Privacy protection means that people can choose to expose only the necessary information (such as transaction information) in online interactions [8]. In the 1990s, there were no institutions in the United States that actively protected people’s privacy, so Cypherpunks advocated the use of encryption technology, private mail, digital signatures, and encrypted currency to protect confidentiality by writing their own code and building open-source software. Hughes’ understanding of privacy and how to protect it bodes well for the difference between the internet (the cyber world where the metaverse resides) and the real world. To be precise, what Cypherpunk maintains is precisely those characteristics of the internet that are different from the real world.

In addition, we need to think about what conclusions can be drawn when understanding regulatory issues in the context of this difference. “Cypherpunk writes code” shows an autonomous regulation scheme that is unique to the internet. At the same time, we also need to explore the technological philosophical presupposition behind it – the incorporation of value and technology, and cryptocurrency represented by Bitcoin is the concentrated expression of this view on technology.

Lawrence Lessig [9] stated that cyberspace is different from physical space, leading to the alienation of cyber legal regulation. These differences can be summarized in three points. 1. The inhabitants of the internet are born with the right to design code, which is similar to the ability to formulate the laws of nature in the real world. 2. The special “non-locality” in the online world does not directly correspond to the real world. 3. The concept of public and private in the online world is different from that in real society.

Firstly, let’s look at an example from Lessig: the story of how “Dank’s dog died after eating poisonous flower petals floating over from Martha’s yard” [9]. Dank asks Martha to stop growing the plant, but the paradox is that if Martha stops growing the plant, she loses money, and it is her legal right to grow it in her yard. Dank says irrationally, “Why not make the petals poisonous only when in the possession of someone who has ‘purchased’ them? If they are stolen, or if they blow away, then let the petals lose their poison. But when kept by the owner of the plant, the petals keep their poison. Isn’t that a solution to the problem that both of us face?”.

The law naturally has a way to solve the problem between Martha and Dank in the real world, but it seems difficult to meet Martha’s demands – which would mean eliminating the “negative externality”. A world without negative externalities is full of

readily available, economic “Pareto improvements”, and cyberspace or the metaverse is thought to have the potential to become such a world. The owner of cyberspace is also the designer, and Dank can use coding to achieve Martha’s request. He can even resurrect his virtual pet dog! Therefore, one observation we make here is that the ideal internet and Metaverse should have a different internal structure to the real world. The internet and the metaverse can provide people with an alternative way of life. But we must also be aware that codes can communicate regulations from physical reality, and humans can make cyberspace a space that resembles physical reality.

The second point is that the non-locality of cyberspace cannot correspond to real space. In the movie “The Matrix”, there is a scene that illustrates this point: the protagonist opens any door to go to another location. This is an image metaphor for cyberspace. It seems that online residents can break the restrictions imposed by physical space on their network avatars. The transformation of life scenarios no longer requires commuting time, and people from different regions can meet in cyberspace easily at will. This asymmetry between the virtual and the real has led to many new phenomena. For example, human beings are moving into the era in which “close neighbors are inferior to netizens”. And the more serious consequences come from the aspect of legal governance, Lessig gave this example of it [9]: In a country called “Boral”, someone set up a gambling website, and law enforcement forced him to shut down the server in his country, but could not prevent the website from continuing to run and people continuing to visit it, because its servers could be set up in other countries. This is related to the non-local characteristics of the internet. When flipping between different life scenarios, netizens only need to change the information port without having to travel mountains and rivers to access the desired positions. To restrict a website, judicial authorities can order internet service providers to block the IP address of this website through legislation or administration. In this way, the non-locality of the network is artificially limited. For real laws to work in cyberspace, what they often need to do is not judicial work, but engineering and technological work in the name of justice—change the framework of cyberspace, and make it suitable for interaction with the physical world, and this means a centralized internet.

Thirdly, the regulation of cyberspace brings up some troubling situations. First and foremost are intellectual property and privacy issues. In Lessig’s view, the purpose of traditional intellectual property law is different from the purpose of private law. Private property is exclusive: if someone else lives in your house, you can’t live it yourself. Intellectual property rights are different. When others look at one of your paintings, it does not prevent you from also viewing the painting, and the dissemination of knowledge is beneficial to the production of knowledge. Therefore, the purpose of intellectual property law is to achieve a certain **balance** between the private rights of property owners, and the dissemination and re-creation of knowledge rather than to protect the permanent exclusivity of property rights. So Lessig said: “Intellectual property rights are a monopoly that the state gives to producers of intellectual property in exchange for their production of it. After a limited time, the product of their work becomes the public’s to use as it wants.” [9].

This balance was easy to achieve before the creation of the internet because of the high cost of copying intellectual property. Nevertheless, in the internet era, the cost of

copying information is extremely low, and the copying of information is a natural process of activity on the internet. This makes the protection of traditional intellectual property rights impossible to adapt to the Internet. The invalidation of the law has laid the way for people's creations on the Internet from elitism to populism. A culture called remix has arisen (which also prevails in the metaverse). There used to be a creative method called Anime Music Videos (AMWs), by which young people compile excerpts from anime and recomposed music to make videos. In 2015, Wind-up Records instructed an AMWs website to take down all films involving their intellectual property. The case was not legally complicated, but the question was how to completely remove any works related to remix culture. According to Lessig, the only way to fully achieve this is to have a "trust system" that monitors each hard drive for illegal data. The typical method is to store a program in the user's computer, and when it finds that the user has illegal information, it will call the police. But this upsets the balance between copyright holders' rights and free transmission of knowledge, and violates the privacy of users, putting them under the complete control of the Code Law.

The fundamental explanation for this is that the real-world "public-private" division doesn't seem to exist any more on the Internet. The judiciary either controls all networked computers through code (thinking that the Internet is a public domain) or completely ignores it (regarding that the Internet is a private domain). In a centralized Internet, businesses have other ways to protect intellectual property without resorting to overpowering "trust systems." They manage their resources through traditional smart contracts. For example, some movies can be watched for a fee on Youtube. Only when users pay and obtain an electronic certificate can they click to watch these videos. However, with the emergence of the P2P networks, these film and television resources can be obtained for free.

Another solution is Cohen's Law [9], which separates the network account from the real individual, and the network worm engaged in monitoring only knows that "14A" is watching, but does not know who is behind it. It also acknowledges that the web is a purely public sphere, and disconnected from reality. Even if Cohen's Law is used, to achieve intellectual property protection in a centralized network, it is necessary to obtain control over the user's local system and automatically delete or encrypt illegal files, which is not in line with Cypherpunk's demands.

Over the past 20 years, the internet seems to be gradually compromising with or follow the frame of the physical world. The right-to-code construction is gradually assigned to a few monopoly enterprises; the "localization" of the network is becoming more and more important, and users are gradually fixed in specific platform accounts and network areas. However, the "public-private boundary" in the network has never been effectively demarcated and regulated as in the real world (and rebuilding this demarcation seems to be a demand of the metaverse). These phenomena provide targets for the movement of Cypherpunks and their allies. From John Perry Barlow's (1996) "Declaration of Internet Independence" to Richard Stallman's "Free Software Movement", there is no shortage of claims that the rules of the Internet world are different and should not be the same as in the real world. In 2008, the Bitcoin system based on blockchain and cryptography, released by Satoshi Nakamoto, integrated almost all the ideas of internet independentists, which can be summarized as follows:

1. The concept of Cryptocurrency originated from Cypherpunk;
2. The Bitcoin system adopts the operation mode of free software [10], which was first uploaded to the open-source website SourceForge.net by Satoshi Nakamoto (later moved to Github), which is in line with the spirit of “Chpherpunk writing code”;
3. Bitcoin is a p2p network that complies with Cohen’s Law to a certain extent. The transaction data on its chain is public, but it does not correspond to actual personal identities, and it cannot be deleted. This is in line with the privacy-protection spirit of Cypherpunk;
4. The asymmetric encryption system in Bitcoin provides an innovative solution for “public-private division”. The bookkeeper (or miner) in the public network can confirm the transaction, but cannot obtain control of the account. This right belongs only to the user who owns the private key;
5. The control right (accounting right) of the software is not concentrated in the hands of individual nodes, but is distributed in the hands of all those who obtain the right to produce blocks based on the protocol – based on the consensus mechanism as proof of work. This is in line with the concept of decentralization of the Internet;
6. The software is a global network, like the internet and there is no access restriction. This is a characteristic of the famous “West Coast Code”, which shows the non-locality of the internet;
7. The “double-spending” attack can be prevented through blockchain technology, thereby offsetting the challenge of “replicative features” to crypto currency, and at the same time, it does not use any real objects or imitated real centralized code identifiers as transaction tokens.

The relationship between Cypherpunk and the metaverse presents itself in two ways. First, the spirit of Cypherpunk and its allies is one of the consensus among the builders of the metaverse. Secondly, various architectures created by Cypherpunks based on WEB3.0 technologies such as blockchain will become the infrastructure of the metaverse and will be gradually improved. Fred Ehrsam [11], the co-founder of cryptocurrency exchange Coinbase, wrote in 2017 that blockchain can confirm rights over virtual assets (such as avatars) in the metaverse. This is exactly the function of non-fungible tokens (NFTs). An NFT is a virtual token (essentially a smart contract) based on technological models (such as ERC 721, and ERC 1155) on a public chain such as Ethereum, which is non-replaceable data on the blockchain, can be used as a unique identifier, can be traded, and cannot be tampered with or deleted.

NFTs avoid the real world’s reliance on physical objects and consensus to jointly confirm rights, and depends only on blockchain smart contracts and consensus. In addition to NFTs, blockchain-based currency provides an exclusive value token for the metaverse, and the development of decentralized finance, and cross-chain inter-operability also provides a foundation for the flow of value in different metaverse spaces. In addition to relying on blockchain, the current metaverse project also relies heavily on P2P protocol and the fact that internet residents can set up their own platform. At the same time it properly utilizes “replicability”, a central feature of the internet. All of the above points to the difference between the metaverse and the real world. And this difference is created by Cypherpunk’s successors in their contrivance of new technologies.

For Cypherpunks, cyberspace and the Metaverse may not be an ideal paradise. It is more like the rabbit hole in “Alice in Wonderland”. It is full of risks, mistakes, and uncertainties, but it is also compelling, which makes people persistent in their exploration and invention. The adventurous nature of human beings constitutes the premise of this debate.

5 The Metaverse and the Philosophy of Technology

Whether or not to compromise with the physical world is only at the surface of a deeper debate about the nature of the metaverse. There are more profound philosophical explanations to be explored. Let’s look at cyberpunk first. Nozick’s views represent complete technological pessimism, which means technology is incapable of self-development: it has its internal developmental logic and is not dependent on human will. From this perspective, people would eventually become vassals of technology, just as people in the experience machine lose the sense of meaning in their existence.

Luddism seems to be compatible with the existence of a technology-neutral theory. It means that technology does not necessarily contain certain values. In the context of the virtual reality problem, the proposition becomes that the metaverse can follow the reality of the physical world. But technological pessimism and Luddism are not completely coincident, because physical reality no longer supplies the adaptive needs of all people.

Let’s look at the philosophical perspective of Cypherpunk. Firstly, Cypherpunks are not techno-neutralists (or techno-optimists), because techno-neutralists believe that the ends and means of technology are only connected by chance. But Cypherpunks and their allies see the internet as a unique space of meaning and endow encryption with a purpose—to protect privacy. So they are not just using the internet and encryption as a tool. Secondly, Cypherpunks are not techno-pessimists either. The practical idea that “cypherpunks write code” is contradictory to the theory of technological autonomy. Then how should the Cypherpunks’ view of technology be understood? The theories of “Transformation by Technology” may help explain (stems from the work of Wu Guosheng[12]). The so-called “transformation” here refers to activating the potentiality of reality, and transforming the philosopher Heidegger’s “being” into “the thing of what it is”. As “being”, the way of life has the potential for innate difference and diversity. Technology is the process that makes this difference a reality. The internet created by Cypherpunk is a kind of “different existence” that is distinct from “real life” and experienced by a representative group of people who realize their lives through their specific technological means.

Technological transformationists will analyze various technologies specifically because different technologies reflect the demands of different groups of people. As a result, the development of a metaverse based on multiple technologies may be divided. But what is more worthy of our attention is whether “anti-technological” technology will appear in the metaverse, if the technology here means the initial way for carrying multiple possibilities of living styles of human being. Before the advent of mechanized clocks, farmers’ time were different due to different lifestyles: technology was determined by life. And the emergence of universal time in industrial society led to a uniformity of people’s ways of life. The experience of human beings may be determined by industrial

technology, but it has perhaps lost a certain type of “meaning”. From this perspective, Cypherpunk’s “entering the rabbit hole” may be counted as an effort to counter a certain uniformity through a different reality produced by different technological framework. The question of whether metaverse follows the domination by reality may be cast differently: whether humanity is compromising with the “anti-technology” philosophy of modern industrial society. Cyberpunks and Cypherpunks seem have distinct attitudes on this point.

6 Conclusion

We can now return to the core metaphor of Stephenson’s “Snow Crash”. The “Snow Crash” in the novel is essentially an information virus that can infect any information carrier, such as genes, languages (mind), or computer code. The infected system will enter a primitive state of disorientation. Language (and information technology) itself is a “technology” created for the “anti-Babel project”, but it is not aimed at destroying the unity of mankind as in the Bible story, but to prevent mankind from returning to a primitive chaotic state and to provide a “vaccine” against the virus. Perhaps it is a coincidence that the “technology” discussed in this article should be the “transformer” that promotes diverse ways of life for human beings, rather than a provider of a uniform and empty “new order”. With this understanding, we also have another interesting perspective to understand why internet geeks who advocate a metaverse model of “multiple” intercommunication do not like monopoly internet giants presenting their metaverse concepts to the market, even though such concepts may be acceptable to Luddites.

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