

The Metaverse with Chinese Characteristics:
A Discussion of the Metaverse through the Lens of Confucianism and Daoism

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2021 is often referred to as the first year of the metaverse. The metaverse is a collection of core technologies that, taken together, create something of a virtual world. There appears to be widescale support for the creation of a metaverse in China by both the government and private companies. The metaverse which will be created by China will likely be intentionally different from a “Western” metaverse, at least in its levels of regulation and government control. A possible justification for this control may be viewed through the lens of Confucianism as a means for cultivating societal harmony and order. The dialectics of philosophical Daoism may further provide a conceptual framework through which to view the metaverse, both in China and abroad. Overall, the perception of the metaverse may be shaped and influenced by Chinese philosophical concepts related to space, being, time, relativity, identity and the body.

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Preface

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I graduated from college a quarter of a century ago. I completed law school twenty years ago, passed the Bar seventeen years ago and have taught law at the undergraduate level in China for nearly fifteen of those years. Re-entering academia has been a challenge. I am fortunate to have been given the opportunity to renew my academic studies. I am very grateful to my advisor, Dr. Kun Qian, for allowing me a wide berth in which to explore my interests. I entered this master's program intending to study Chinese improvisational theater and ended up studying the metaverse, but never lost my interest in philosophical Daoism, which is, to me, the crux of both.

For the purposes of this paper, Chinese terms will use pinyin romanizations and, in quotes from older texts, Wade-Giles romanization. For example, the word *Dao* may also appear as *Tao*;

de may appear as *te*. This was chosen in order to use the modern romanization while preserving quotes from traditional sources without alteration.

1.0 Chinese Support for the Metaverse

“The whole world says that my way is vast and resembles nothing. It is because it is vast that it resembles nothing. If it resembled anything, it would, long before now, have become small.”
(Laozi, LXVII)

This study is an attempt to discuss the emergent phenomenon of the metaverse in China, and to develop a potential framework through which to view the metaverse using traditional Chinese Confucian and Daoist concepts. I suggest that the perception of the metaverse in China may be shaped and influenced by Chinese philosophical concepts. The metaverse which will be created by China will likely be intentionally different from a “Western” metaverse, at least in its levels of regulation and government control. A justification for this control may be viewed through the lens of Confucianism as a means for cultivating societal harmony and order. The dialectics of Daoism may provide a conceptual framework through which to view the larger metaverse.

This thesis will be separated into four sections. The first section will establish the current emphasis on building the metaverse in China. The second section will outline the concepts and technologies that, taken together, are called the metaverse. The final two sections will discuss what it means for the metaverse to have Chinese characteristics. The essence of this section will be a discussion of how contemporary scholarly discussion and characterization of the metaverse reflects a cosmological view that has its roots in Neo-Confucianism and Daoism, which is in tension with the prospect of decentralization promised by the Western metaverse.

1.1 Chinese Support for the Metaverse

“At present, the attention of the whole world is focused on China and the ‘metaverse’ in China.” (Zhao et al., 2021:30) As Chinese Academy of Social Sciences researcher, Zuo Pengfei, noted, the metaverse offers China “great opportunities and revolutionary effects” and Chinese private and state companies should proactively take advantage of strategic positions in the metaverse industry so they can “overtake [competitors] on the bend.” (Zuo, 2021)

“For China, the metaverse may emerge as an arena where prudent, strategic policy decisions could position the country in a way that gives it leverage and dominance over other players.” (Hui, 2021) This is similar to the methods that China has used to “establish dominance in critical industries like electric vehicles and rare earths.” (Hui, 2021)

Pan Helin, Executive Dean of the Zhongnan University of Economics and Law, and a member of the Information and Communication Economics Expert Committee of the Ministry of Industry and Information Technology, stated that “the soil for the metaverse in China and abroad is not the same. The development of the metaverse in China is inseparable from the support of policies.” (Liu, 2022)

The seriousness with which the Chinese government takes policies regarding the metaverse can be seen through the variety of national reports, committees and initiatives being developed. The Ministry of Industry and Information Technology (MIIT) and the Cyberspace Administration of China (CAC) have been focused on blockchain technology as the “backbone of virtual worlds” while China has become the “first major country to issue a digital currency.” (Williams, 2021) As early as June 16, 2020, the graduates of the School of Animation and Digital Art at the Communication University of China were permitted to hold a digital “cloud graduation” in the metaverse game Minecraft. (Zhao et al., 2021:48)

Officially, the Chinese government has seen the digital economy as a part of its stated strategic goals for years. (Hui, 2021) In a speech at the seventh meeting of the Central Financial and Economic Affairs Commission on April 10, 2020, published in the November 1, 2020 issue of Qiushi (求是), the official journal of the Chinese Communist Party (CCP) Central Committee, General Secretary Xi Jinping stated that while the digital economy is important, “the real economy is the foundation.” (Xi, 2020; Hui, 2021) However, in a later speech, given in October 2021, Xi Jinping “emphasized that developing the digital economy is a strategic choice to grasp the new opportunities of the new round of technological revolution and industrial transformation.” (Renmin Ribao, 2021)

In September 2021, CCTV Financial Channel highlighted the metaverse in a program and there were an increasing number of short videos on social media platforms “Douyin” and “Kuaishou” regarding how to invest in metaverse projects. (“Shuohao de Xingchen Dahai, Ni Que Zhi Gei Le Wo ‘Yuan Yuzhou’ [You Said an Ocean of Stars but Only Gave Me the ‘Metaverse’],” 2021)

In October 2021, the China Institutes of Contemporary International Relations (CICIR), a think-tank affiliated with the Ministry of State Security, issued a paper on the metaverse describing it as the next generation of the internet and warning of the need for law and regulations to deal with “virtual labor, economic crimes and other issues in the grey area between the virtual world and reality.” (“Building a Metaverse with Chinese Characteristics,” 2022)

In November 2021, the Zhejiang government held a “metaverse industry development symposium” where it was agreed that Zhejiang should be at the forefront of the new technology, as it is the home to Alibaba Group. (“Building a Metaverse with Chinese Characteristics,” 2022) Also in November, China launched its first metaverse industry group, the Metaverse Industry

Committee, under the state-supervised China Mobile Communications Association (CMCA). At this event, former Vice-Minister of the Ministry of Science and Technology, Wu Zhongze, said that “the metaverse will definitely become a wind vane of global technology development in the next decade, and will also become a new high ground of competition in the digital economy of all countries.” (Hui, 2021)

In December 2021, Shanghai officials said in a key economic meeting that the city will guide corporations to study the “important platform that contains the intersection between the virtual world and the real world.” (Li, 2022) One week later, the Shanghai Municipal Commission for Economy and Information Technology’s five-year plan called for “encouraging the application of the metaverse in areas such as public services, business offices, social entertainment, industrial manufacturing, production safety and electronic games.” (Cheng, 2021)

In January 2022, the Zhejiang Provincial Digital Economy Development Leading Group Office called for the advancement of blockchain technology and the metaverse in their “Guiding Opinions on the Construction of Future Industry Pilot Zones in Zhejiang Province”. (Hu, 2022) This is significant as Zhejiang is home to the e-commerce giant, Alibaba. Additionally, Hangzhou City in Zhejiang set up a special metaverse committee.

One week later, it was reported that the National People’s Congress of Hefei Province and Wuhan City in Hubei Province both include the metaverse in their “Government Work Report.” (Liu, 2022) Both Hefei and Wuhan stated that in the next five years, they will expand cutting-edge fields such as the metaverse, cloud computing and the blockchain.

Both Hefei and Wuhan are important due to their considerable industrial bases. Economist Ma Guangyuan stated that Wuhan’s digital economy is “the most promising and imaginative and has the most potential.” The “2021 White Paper on the Development of Hefei’s Digital Economy

Industry” shows that in 2020, Hefei’s digital economy exceeded 400 billion RMB (\$62.87 billion USD), accounting for more than 40% of GDP. (Liu, 2022) Wuxi City in Jiangsu Province followed suit by releasing the “Tai Lake Branch Metaverse Development Plan” to build a domestic metaverse ecological demonstration zone. Beijing also said that it would promote the formation of a new and innovative metaverse consortium. (Liu, 2022)

In January 2022, a think-tank at the powerful state regulator, the Ministry of Industry and Information Technology, convened a workshop with Chinese big tech firms, including Tencent, Baidu and Alibaba. The participants agreed on the importance of the metaverse and the “need for risk countermeasures to be deployed in advance.” (“Building a Metaverse with Chinese Characteristics,” 2022)

1.2 Private Chinese Support for the Metaverse

Private Chinese tech companies have also been very optimistic about entering the metaverse. Social media giant Tencent, the largest company in China by market value and the world’s largest online gaming firm by revenue, “acknowledged that China’s version of the metaverse would need to be different from to the rest of the world’s.” (Goh, 2021) Tencent’s president, Martin Lau, has said that they have the capabilities to develop the metaverse and that “the Chinese government will be in support of the development of such technologies as long as the user experience is actually provided under the regulatory framework.” (Goh, 2021) Tencent owns 40% of Epic Games, has invested in Wave, a US virtual concert organizer, has equity in Roblox, and has an international team on their TiMi Studio Group, which develops metaverse games. (Williams, 2021)

In August 2021, ByteDance, the parent company of TikTok, purchased the VR-headset maker, Pico, for an undisclosed sum, rumored to be between 5 billion to 9 billion RMB. (“Building a Metaverse with Chinese Characteristics,” 2022) From September to November 2021, “more than 10 billion RMB (\$1.6 billion) was invested in metaverse-related ventures, far more than the 2.1 billion invested in all of 2020, according to crypto venture capital firm Sina Global. (Baptista, 2022) By the end of 2021, over 1000 Chinese companies, including Alibaba and Tencent had applied for approximately 10,000 metaverse-related trademarks, according to business tracking firm Tianyancha. (Baptista, 2022)

Chinese internet giant, Baidu, has also been registering metaverse-related trademarks (Deng, 2021) and broke ground in December 2021 with the launch of “XiRang” described as “China’s first metaverse platform, though it has been widely panned for not offering a high-level immersive experience. Baidu says that it is a work in progress.” (Baptista, 2022) XiRang has a virtual conference hall that can hold 100,000 users simultaneously, a creator city and a virtual Shaolin temple. (Kawakami, 2021)

The founder and CEO of video gaming firm, NetEase, Ding Lei, said in an interview that NetEase is “well prepared in terms of metaverse related technologies and rules” and that he believes “that NetEase will have the ability to quickly run away when the metaverse really comes out.” (Fan, 2021)

Beijing augmented reality technology company NReal recently completed a Series C funding round of over \$100 million. (Williams, 2021) For the romantic holiday “520”, Taobao has “offered consumers the opportunity to virtually dress their own Taobao Life avatars in designs from the likes of Prada, Hugo Boss, Alexander McQueen and Net-a-Porter.” (Williams, 2021) Shanghai-based Ranmai Tech has developed “super photoreal quality virtual humans” such as the

virtual celebrity influencer, Ayayi, whose first social media post had nearly 3 million views and 40,000 followers overnight on Xiaohongshu. (Williams, 2021)

At the same time that private companies are investing in the metaverse in China, infrastructural projects are also developing. “China Mobile, China Unicom and China Telecom have all partnered with several tech companies to form China’s first industry group dedicated to the metaverse.” This “Metaverse Industry Committee” has announced that they will leverage their 5G networks, cloud gaming and virtual reality technologies. (Williams, 2021)

1.3 Chinese Modernity and the Metaverse

In China, “up to 1905, and for centuries prior, young men (and it was always men) vied for good jobs and social standing by scoring well in civil service examinations based on the Confucian classics. The sea change in learning, from competence in Confucian metaphysics to mastery of the nuts and bolts of technologizing nature, is central to the question of how to define, for lack of a better term, Chinese modernity.” (Chang, 2017:vi)

Support for the metaverse in both public and private sectors in China also reflects support for Chinese modernity, as China improves the development of technologies directly and peripherally related to the metaverse. Northwestern Polytechnical University computer science professor Guo Bin, notes that the metaverse will require new talent in 5G, cloud computing, blockchain and other infrastructure projects and that “the reason everyone brings up the metaverse is mainly because we now have the foundation of such technologies.” (Zhou, 2021)

According to the “2020-2021 Metaverse Development Research Report” released by the New Media Research Center at Tsinghua University, 5G is the communication foundation of the

metaverse, and cloud computing is the power foundation. (Zhou, 2021) China leads the world in 5G technology and, according to the Vice-Minister of Industry and Information Technology, Liu Liehong, the number of 5G terminal connections in China accounts for more than 80% of the world's total. (*China Leads the World in 5G Base Stations*, 2021) China is “well positioned to do the same with 6G and successor technologies, which will be essential to providing the enormous mobile bandwidth and high speeds needed for the constant, data-drenched connections the metaverse will require.” (“Building a Metaverse with Chinese Characteristics,” 2022)

In addition to 5G technologies, China has a high pre-existing level of social acceptance for social media, gaming, e-commerce and virtual currency, with market players such as Tencent, “the world's biggest publisher of games and one of the biggest forces in social media and e-commerce” which “invests in or operates many of the most popular multiplayer online games in the world.” (“Building a Metaverse with Chinese Characteristics,” 2022) As Hualong Securities researcher Yao Haoran indicated, the largest manifestation of the metaverse will come from online gaming, leading to the gradual integration of digital entertainment, education, health care and other functions.” (Liu, 2022)

According to Nick Mitchell, a developer of metaverse projects based on Chinese stories highlighting elements such as calligraphy and traditional costumes, when Chinese consumers are ready for metaverse tech, “then there will be mass adoption at a level that I don't think will happen in the West nearly as quick.” (Baptista, 2022)

Other countries are also beginning to take the metaverse seriously. Barbados was the first country to open a virtual embassy in the metaverse. (Wyss, 2021) On May 18, 2021, the South Korean Ministry of Science, Technology, Information and Communications established the “Metaverse Alliance” with more than 200 Korean companies and organizations, including

Hyundai, SK Group and LG group. Their stated goal is to build a national-level augmented reality platform and to provide public virtual services. On August 31, 2021, the South Korean Ministry of Finance released the 2022 budget, with the intention to spend \$20 million USD for the development of the metaverse platform. (Zuo, 2021) On July 13, 2021, the Japanese Ministry of Economy, Trade and Industry released the “Investigation Report on Future Possibilities and Issues of the Virtual Space Industry”, which summarized the urgent problems that the Japanese virtual space industry needs to address. (Zuo, 2021)

1.4 Cryptocurrencies and NFTs in the Chinese Metaverse

Cryptocurrencies and CBDCs (Central Bank Digital Currencies) form an integral element of the digital economies that exist in the metaverse. Many metaverse projects rely on cryptocurrencies, yet China has issued multiple bans on cryptocurrency since 2013. (Locke, 2021) A recent law, passed in March 2021, creates severe penalties for anyone raising funds using crypto, leading to a potential prison sentence of more than ten years. (Qin, 2022) However, “it is indisputable and inevitable that China’s metaverse should be built on digital currencies and electronic payments (DC/EP)” such as the digital RMB. “In China, there is no question of converting DC/EP to fiat money; DC/EP itself is fiat money.” (Zhao et al., 2021:198)

While the Chinese government has banned cryptocurrencies, they are unlikely to ban NFTs (non-fungible tokens) outright. “NFT is a non-homogenous asset, indivisible and unique. The characteristic of non-homogenous assets is that they cannot be divided and are not exactly the same.” (Zhao et al., 2021:276) According to Ma Xin, the Secretary of the Institute of Electrical and Electronics Engineers (IEEE)’s Digital Transformation working group, “China is cautious

about NFTs. China will not tolerate an NFT market full of scams just like the fake coins in the early days of blockchain development.” (Cao, 2022) To control domestic development of NFTs, China has formed the State-backed Blockchain Services Network (BSN). According to He Yifan, the CEO of Red Date Technology, which provides technical support to BSN, NFTs, “have no legal issue in China” as long as they distance themselves from cryptocurrencies. (Cao, 2022) For this reason, many Chinese companies have eschewed the term NFT and instead use the phrase “digital collectibles.” According to Stanley Chao, managing director of business advisory firm All In Consulting, “China let cryptocurrencies get out of hand to the point that they had to shut it down cold turkey. They won’t make the same mistake with NFTs.” (Cao, 2022)

JD Technology, a division of JD.com, offered NFT badges to those registered for their annual tech summit in November 2021. This was the first time that JD.com offered NFTs based on the company’s blockchain, JD Chain. (Williams, 2021) CryptoC Labs is one of the most influential NFT communities in China, having launched their first crypto art gallery, Fresh, in June 2021. Another Chinese NFT community, TreasureIsland, auctioned a CNY sneaker from global digital fashion brand, RTFKT, for \$28,000, while social media platform, Xiaohongshu, launched an NFT platform allowing customers to purchase digital artwork using WeChat or Alipay. (Williams, 2021) Chinese social media platform SuperELLE has announced a partnership with BCA Technology and Art to create the SuperELLE metaverse while London-based Stephy Fung has created digital qipaos, which can be bought from the virtual retail site, Dress X. (Williams, 2021)

Chinese support for the metaverse and NFTs is potentially quite strong. There is also a unified view in China of the nature of the metaverse. This view sees the metaverse as an amalgam of technologies rather than as merely a virtual game space.

2.0 What is the Metaverse

“In 1521, the Holy Roman Emperor Charles V received a letter from the Americas, written by Hernan Cortes, known as the founder of “New Spain.” The letter depicts a bizarre, surreal, exotic space.” Similarly, “many people compare the metaverse to the discovery of new continents in the digital age.” (Yu, 2021) The metaverse is uncharted space, undiscovered land. It is a surreal, exotic, virtual territory that brings its own rules and understandings, identities, governance, economic development and territorialization. “The metaverse narrative ‘reverses’ the relationship between human beings and the story... it allows the wills, wishes and desires of different people to interweave and collide.” (“‘Yuan Yuzou’ Yu Jishu Zhili: Tansuo Yu Zhengming 2021 Nian Du Guanjianci Zhi San [“Metaverse” and Technology Governance: Exploration and Contention 2021 Keynote Number 3],” 2022)

The portmanteau “metaverse” was first used in the 1992 science fiction novel, *Snow Crash*, by Neal Stephenson to describe a dystopian virtual reality-based successor to the modern internet. *Ready Player One*, written by Ernest Cline in 2011, novelized the normalization of the metaverse from those versed in technology, such as coders, to the world at large. The metaverse differs from the “mirror world”, a term coined by Yale University computer scientist David Gelernter in 1991, in that the mirror world is an analogue or representation of the real world in digital form, such as Google Earth. If coders create a second layer of virtual reality upon the first layer representation, such as the project Earth 2 (www.earth2.io), this would then become part of the metaverse.

According to the recent book “Metaverse” (元宇宙) published by the State-backed China Publishing Group, “the year 2021 can be called the first year of the metaverse” (Zhao et al., 2021:11) where the metaverse is defined as “a virtual space parallel to and independent of the real

world, an online virtual world that mirrors the real one, and it is increasingly real.” (Zhao et al., 2021:6) This is but one of many definitions of the metaverse.

2.1 What the Metaverse is Not

As with the Buddha’s definition of enlightenment or Laozi’s definition of the *Dao*, it may be easier to explain what the metaverse is not. The metaverse that can be explained is not the true metaverse. The metaverse is not simply a large interactive multi-player video game. It is not only a digital world where avatars go on missions, fight or cavort as in games such as World of Warcraft, Grand Theft Auto or Fortnite. It is not only a virtual space where people have online meetups and parties, such as Roblox.

While it is certainly possible to go on missions, fight, cavort, meet and have parties in the aforementioned games, that no more defines the metaverse than it would define New York City or Beijing. The metaverse neither requires virtual reality (VR) goggles nor haptic suits, nor does it assume augmented reality (AR), a digital overlay projected on the real world. The metaverse is more commonly described using vague umbrella terms, such as mixed reality (MR), extended reality (XR) or cyberspace, where the real world and the online world overlap.

Accenture, a multinational Global Fortune 500 company, has called the metaverse the Nth floor, where people are brought together in ways never before possible in the physical world. (Hackl, 2021) This implies that, in terms of bringing people together, the metaverse is everything the real world is not. An example of Accenture’s concept is the 21-floor virtual building “Bloktopia” (www.bloktopia.com) designed as an origin portal cum shopping mall for those who seek to better understand the metaverse.

2.2 The Metaverse is a Collection of Technologies

Fundamentally, the metaverse is a collection of technologies which, taken together, may form the vanguard of a relatively permanent, organic social movement, revolutionary in its global impact, ethically progressive and rhizomatic in its potentiality. Eric Redmond, the Global Director for Technology Innovation at Nike, has described the metaverse as “the all-encompassing space in which all digital experience sits; the observable digital universe made up of millions of digital galaxies.” (Hackl, 2021) These digital technologies include consumer-facing hardware, enterprise hardware, compute-specific hardware, network bandwidth and services, interoperative protocols, formats and engines, payment processing platforms, virtual platforms and metaverse content. (Ball, 2021)

It “can be considered that the metaverse is based on traditional cyberspace, and with the improvement of the maturity of various digital technologies, a virtual world that is both mapped to and independent of the real world is constructed. At the same time, the metaverse is not a simple virtual space, but includes the network, hardware terminals and users in a sustainable, wide-coverage virtual reality system. The system includes both digital replicas of the real world and virtual world’s creations.” (Zuo, 2021) This may involve “digital twins” where an entity in the physical world collects information and transmits it to a digital twin in the metaverse, which provides analysis and decision-making functions for the physical twin to receive and execute (Zhao et al., 2021:140) or a metaverse “supercontinent” with the basic elements of digital creation, digital assets, digital transactions and digital consumption. (Zhao et al., 2021:237)

According to Zhang Hanzhou, a researcher at Tsinghua University, the metaverse is a fusion of six specific technologies. First, 5G and 6G communication technology allows for high speed, low latency and high-capacity data transmission, which allows for near-instant data

synchronization. Second, computing power, along with cloud computing, allows for fast data processing. Third, interactive technology such as augmented reality and extended reality using VR headsets, haptic gloves and sensing vests, along with advances in brain-computer interface technology. Fourth, artificial intelligence technology “imparts functions such as perception, learning, reasoning and planning to various artificial objects.” (Zhang, 2021) Fifth is the internet of things technology, which allows for “real-time monitoring and remote control of equipment in an energy-saving and environmentally-friendly way.” (Zhang, 2021) This allows human activities in the digital world to act on various objects in reality. Finally, distributed ledger (blockchain) technology allows for transparent sharing of data, smart contracts to “enable the credibility, traceability and irreversibility of transactions”, verifications and confirmations completed via a consensus mechanism. “All digital identities, authentication, attribution, circulation and even exchange of digital assets can operate freely on the blockchain in principle. These six underlying technologies have consolidated the foundation of the metaverse.” (Zhang, 2021)

According to Zhao Guodong, Yi Huanhuan and Xu Yuanzhong, “five technology clusters power the ‘metaverse’. First, network technology and computing power technology, including spatial positioning algorithms, virtual scene fitting, real-time network transmission, GPU servers, edge computing, techniques for reducing cost and network congestion. Second, artificial intelligence. Third, video game technologies such as the game engine that supports codes and resources... Fourth, display technologies such as VR, AR, ER, MR, and especially XR... Fifth, blockchain technology. Facilitated by smart contracts, decentralized settlement platforms and value transfer mechanisms, it assures value ownership and circulation.” (Zhao et al., 2021:11-12) Zhao et al sees the basics of the metaverse as summarized by the acronym “BIGANT,” which

stands for blockchain, interactivity, gaming, artificial intelligence, network computing and (internet of) things. (Zhao et al., 2021:80)

An additional key technology in the metaverse is information modeling. For the metaverse to function, “it is necessary to complete the information modeling of the earth environment we live in – not the modeling of a building or a room, but the modeling of every small piece of wallpaper, every power cord.” (Jiang & Jiang, 2021) This information modeling is done using IP (internet protocol) addresses, which are numerical labels assigned to devices connected to a computer network. The first iteration of IP (IPv4) was deployed in 1983 for production in the ARPANET. It uses a 32-bit address scheme, which is enough for more than 4 billion addresses. The most recent version of the internet protocol is IPv6, which allows for 340 undecillion (1 followed by 36 zeros) unique addresses. (Williams, 2022) When IPv6 was created, “it was claimed that this upgrade would be enough to assign an IP address to every grain of sand on Earth.” (Jiang & Jiang, 2021)

The Chinese view of the metaverse can also be summed up in the book “Metaverse,” (元宇宙) published by Chinese state-owned CITIC Publishing and co-authored by the executive director of the newly formed Chinese Metaverse Industry Committee, Yu Jianing. Yu Jianing’s view of the metaverse has received a great deal of high-level support. The book is co-authored by He Chao, the founder and Secretary-General of the Metaverse Industry Committee. It also contains commentary from former Deputy Minister of the Ministry of Science and Technology, Wu Zhongze, digital economy expert Zheng Weimin, Tsinghua University professor Zhang Ping, Beijing University of Telecommunications professor Ni Jianzhong, Executive Chairman of the Communications Federation, Zhu Jiaming, economist Liang Xinjun, Co-Founder of the Fosun Group, He Baohong, Director of the Cloud Institute at the China Academy of Information and

Communications Technology, Guan Qingyou, President of Rui Finance Research Institute, Lang Yongchun and many other scholars and experts. (Yu, 2021)

In his book, Yu sketches six major trends of the Chinese metaverse and five fusions. (Hui, 2021) The six trends are: the integration of the digital and real economy, data as the core asset, the rise and growth of the economic community, the reshaping of self-image and identity, a prospering of digital culture and global inclusivity of digital finance. (Yu, 2021) The five fusions are the fusion of the digital world and the physical world, the integration of the digital and the real economy, the fusion of the digital life and social life, the fusion of digital and physical assets, and the fusion of digital and real identities. (Yu, 2021)

More populist views tend to relate the metaverse to gaming and the digital economy.

Zuo Pengfei, a journalist with People Magazine China, sees the key elements as hardware terminals with massive resources and low latency, an immersive sensory experience, the use of virtual avatars with new digital identities, an open creator economy, a real social relationship chain and an orderly economic operation system. (Zuo, 2021) According to Tsinghua University School of Journalism professor Shen Yang, “The ideal metaverse can blend the virtual and the real... and it can also feedback the benefits generated into the virtual world back to the real world, providing a good economic system and open content system.” (Zhou, 2021)

Private gaming companies have a slightly different view of the metaverse. One such company is Roblox, a platform used by 50% of all American children under 16 in 2020, (Lyles, 2020) which has a significant joint venture with Chinese gaming giant, Tencent. (Zhao et al., 2021:57) Roblox is a “sandbox game” that can “offer users a VR in which they can build and shape the environment in which they play.” (Rospigliosi, 2022) According the Roblox CEO David Baszucki in the company’s S-1 filing with the US Securities and Exchange Commission (SEC),

the metaverse is “a term often used to describe the concept of persistent, shared, 3D virtual spaces in a virtual universe.” The Roblox metaverse, while entirely centralized, has eight fundamental elements: identity, friends, immersion, low friction, variety, anywhere, economy and civility. (Baszucki, 2020)

2.3 History of the Metaverse

According to Zhao et al. the metaverse has gone through three basic historical stages. In the first stage, they see the metaverse “in its classical form as literature, art and religions.” In the second stage, “it developed into a neo-classical form represented by science fiction and video games.” In the final stage, the metaverse has evolved “into a highly intelligent form represented by ‘decentralized’ games.” (Zhao et al., 2021:8-9) The metaverse can also be understood as web3, the most modern iteration of the internet.

The early internet, or web1, was formally established on January 1, 1983 (though preliminary research was done throughout the 1970’s) when ARPANET and the Defense Data Network communicated using the Transfer Control Protocol / Internetwork Protocol (TCP/IP), allowing different networks to talk to each other. (*A Brief History of the Internet*, n.d.) Web1 was characterized by static pages of information, such as the online Encyclopedia Britannica. Users could read these pages and link to other pages but could not create content. (Edelman, 2021)

The term web 2.0 was coined by information architecture consultant Darcy DiNucci in a 1999 article in the magazine *Print*. (Aced, 2013) Though web 2.0, users began to provide content rather than simply viewing content. This was a move from the “read-only” web1 interface to a collaborative web 2.0 environment, characterized by social locations such as Facebook, Instagram,

Snapchat, Twitter, Reddit and Slack. (Kenton, 2021) Web 2.0 is also portrayed as the era of centralization, where a huge share of the collective data is controlled by closed platforms such as Facebook, Amazon, Google, Microsoft, and Apple, “subject to the nominal control of centralized government regulators.” (Kenton, 2021)

On May 17, 2001, Oxford and MIT professor Sir Timothy John Berners-Lee (TimBL), the inventor of the World Wide Web, the director of the World Wide Web Consortium (W3C) and the co-founder of the World Wide Web Foundation, published an article in *Scientific American* discussing what he termed the “semantic web”. TimBL foresaw a next-gen internet where “the day-to-day mechanisms of trade, bureaucracy and our daily lives will be handled by machines talking to machines.” (Berners-Lee et al., 2001) At the time, this was a theoretical construct.

It was not until 2014 that the term web3 was coined by Gavin Wood, one of the three creators of the Ethereum Virtual Machine (EVM) and the current director of the Web3 Foundation. “At the most basic level, web3 refers to a decentralized online ecosystem based on the blockchain. Platforms and apps built on web3 won’t be owned by a central gatekeeper, but rather by users, who will earn their ownership stake by helping to develop and maintain those services.” (Edelman, 2021)

In a 2021 interview, Gavin Wood stated that web2 is similar to the model for feudal, pre-urbanized society, in that people “relied on, broadly speaking, the social fabric, to ensure that expectations were credible.” (Edelman, 2021) Wood suggests that the failure of the feudal web2 world is a failure of trust. which is essentially faith. “It’s the belief that something will happen, that the world will work in a certain way, without any real evidence or rational arguments as to why it will do that... Trust implies that you are placing some sort of authority in somebody else, or in some organization, and they will be able to use this authority in some arbitrary way. As soon

as it becomes *credible* trust, it's not really trust anymore. There is a mechanism, a rationale, an argument, a logical mechanism – whatever – but in my mind, it's not trust... I've never seen a technology that existed to limit one's power... every technology that I can think of has served to make the user more powerful. Blockchain doesn't do that. It's fundamentally different. It's effectively a social construct. It's a set of rules. And the only thing that these rules have going for themselves is that there is no one with arbitrary power within the system... For me, web3 is actually much more of a sociopolitical movement that is moving away from arbitrary authorities into a much more rationally based liberal model. And this is the only way I can see of safeguarding the liberal world.” (Edelman, 2021, italics in original)

The “biggest difference between it [the metaverse] and the current form of the internet is that it cancels the ‘interface’ between people and the internet – we need to use PCs, mobile phones, tablets or other devices to enter the internet now.” These “black mirrors” are the devices “that separates us in the flesh from the pervasive world of information – the metaverse will make these mediums/interfaces invisible – not cancelled but integrated into wearable virtual reality devices.” (Jiang & Jiang, 2021)

In addition to the collected technologies that form the metaverse, there are also new issues that are raised by the metaverse. For example, the Chinese are concerned about the following changes that may be brought about by the metaverse: “When we talk about the arrival of the metaverse era, it should not be in future tense, but in present continuous tense. Therefore, a series of new issues need to be considered. First, how to determine the value orientation, system and order of the metaverse? Second, how to determine the internal economic rules of the metaverse? Third, how to avoid the inherent monopoly of the metaverse? Fourth, how to avoid possible hegemony in the metaverse and conflicts among the metaverses? Fifth, how to maintain the

positive interaction between the real world and the metaverse? Sixth, how to coordinate the participation of capital, government, and the public to create the metaverse? (Zhao et al., 2021:18-20)

2.4 Metaverse Locations

There are dozens of extant metaverse locations, although only one of them, tech giant Baidu's "XiRang," which has yet to be launched, is considered "Chinese". Decentraland (www.decentraland.org) was the first metaverse city. It contains 90,000 parcels of virtual land, each of which can be privately owned and built upon, including a virtual Chinatown known as "Dragon City". Visitors to Decentraland can meet, walk around, shop and attend various concerts, shows and exhibitions. In 2021, one large contiguous parcel of land sold for \$2.4 million. (Howcroft, 2021) Cryptovoxels (www.cryptovoxels.com) is the second metaverse city, which mints parcels at the rate comparable to that of potential IRL (in real life) construction. There are currently 6,554 parcels in their metaverse world, ranging over a number of virtual islands. The Sandbox (www.sandbox.game) is a gamified metacountry with 166,464 parcels, which sold \$86.5 million of land within one week in 2021. (Hissong, 2021) Axie Infinity (www.axieinfinity.com) is a play-to-earn metaworld where users can earn in-game currency and offer IRL fiat scholarships to low-income, working-class individuals, particularly in the Philippines. (Elliott, 2021). Star Atlas (www.staratlas.com) is a gamified metagalaxy containing a number of metaworlds. Somnium Space (www.somniumspace.com) is a cross-chain metaworld using advanced VR technology. Polkacity (www.polkacity.io) is an interactive yield-generation city where assets such as virtual bicycles, taxis, gas stations and food vendors produce a weekly return on investment (ROI) based

on the number of active participants in the city. Wilder World (www.wilderworld.com) calls itself 5D, as it uses the fifth iteration of the Unreal Engine, which powers many of world's most advanced video games. Illuvium (www.illuvium.io) is a metaworld where users battle each other for Ethereum. CEEK (www.ceek.io) which is a metacity that works closely with artists, sports and content creators. The second largest clothing brand in the world, H&M, recently opened their flagship store in CEEK City where clothes can be bought with cryptocurrencies and delivered IRL. (Nahar, 2022)

2.5 Metaverse Infrastructure Projects

Other important infrastructural metaverse projects include Kleros, also known as the Justice Protocol (www.kleros.io), which provides decentralized civil arbitration. Aragon (www.aragon.org) allows users to create DAOs with governance plug-ins. Proof of Humanity (www.proofofhumanity.id), uses reverse Turing tests to provide a universal basic income to all verified humans, Bright (www.brightid.org) uses proof of uniqueness to establish digital identity. The Theta Network (www.thetatoken.org) creates a decentralized streaming video platform to disrupt YouTube, while Audius (www.audius.co), creates a decentralized streaming music platform to disrupt Spotify. Helium (www.helium.com) creates free globally linked WiFi hotspots granting internet to all as a basic human right. Ravencoin (www.ravencoin.org) allows fractional ownership through tokenization of assets, allowing anyone to create investment vehicles. Enzyme (www.enzyme.finance) allows any individual to create and operate a hedge fund or shared investment portfolio. Nexus Mutual (www.nexusmutual.io) provides decentralized insurance using smart contracts. Rally (www.rally.io) allows anyone to create their own tokenized economy

to disrupt Patreon. Synthetix Network Token (www.synthetix.io) allows anyone anywhere in the world to trade synthetic stocks without access to government-controlled stock markets. The Mask Network (www.mask.io) allows every one of the aforementioned projects to be conducted anonymously. These projects, and thousands more, form the backbone of the metaverse.

The metaverse as perceived by Chinese authors and experts appears to be viewed as a collection of interrelated technologies. This view is largely shared by Western experts. An historical view of the metaverse, from the western perspective, relates to the development of these technologies, and the levels of participation and ownership achieved by users. In China, there may be another historical argument, which concerns how these developing technologies contribute or detract from societal harmony and order. It is through this lens of Confucian values that the metaverse may be considered in relation to Chinese notions of control, censorship, regulation and government cooption, and also of both acceptance or subversion from the perspective of the Chinese citizens.

3.0 Confucianism and the Chinese Metaverse

There appears to be strong support by the Chinese government and by private Chinese companies for the development of a metaverse with Chinese characteristics. In order to appreciate some of the possible differences between a Western metaverse, characterized by profit and capitalism, decentralization and autonomy, a “wild west” of sorts, and a metaverse with Chinese characteristics, it may be relevant to recognize that the government implementation of a Chinese metaverse appears to reflect what could be perceived as Confucian principles of order and societal harmony.

It should be noted that the Chinese government does not use Confucian terminology to legitimize their control. Many of these terms were severely criticized in the May Fourth Movement, where Confucianism was seen as an obstacle to modernity. The modern official ideology of China is Marxism-Maoism founded on the People’s Democracy. It might be more accurate to view the modern Chinese Confucianism as a form of paternalism. However, the basis of control still appears to rest on Confucian principles of righteousness over profitability and the ideas of Mencius towards both the innate goodness of people, the inability of citizens to tend to their own true needs, and the government’s responsibility to protect and guide the people.

Possible acceptance of a controlled metaverse by Chinese citizens may also be related to Confucian principles of obedience and responsibility. However, this does not suggest that all citizens encourage and welcome paternalistic, Confucian control. The metaverse ushers in subversive voices as well, that call for individual agency, autonomy, decentralization and transparency as a counter to regulation and enforcement of centralized rules. In this sense, the metaverse may in fact be something of a Trojan horse, allowing the subversion in the door in the

guise of controlled modernity. It is overall therefore useful to appreciate some key historical elements and concepts of Confucianism as they may relate to the metaverse.

3.1 A Confucian Civilizational View of the Metaverse

The book entitled “Metaverse”, published by State-backed China Publishing Group (*Zhongyi Chuban She*) in 2021, suggests that “the formation and development of the metaverse requires it to interact with the real world, realizing complementation and balance between both worlds in layers of the concept, technology and culture on which an ecology of the new civilization will be formed.” (Zhao et al., 2021:19) In terms of civilization, the principles of Confucianism have served as Chinese ethics and, in place of formal organized religions, have provided the spiritual basis for Chinese society. (Feng, 1948: 4)

As Confucianism is a guiding philosophy for Chinese civilization, this suggests that Confucianism may be relevant in a discussion of the metaverse as approved and implemented by the Chinese government. “According to Confucianism, harmony is crucial for human existence. A moral code, which stressed a rational order and a social order based on strict ethical rules, meshed with the structure of Chinese society.” (Li, 2002) Early principles of Confucianism involved a number of key practices designed to enhance this social harmony and order. “The high regard for social harmony is the concrete expression of the particular Confucian training and indoctrination that aimed primarily at the dissolution of the ego-centered self in favor of an understanding of oneself as a social figure, a servant to society and world, a part of a larger whole.” (Kohn, 2020:174)

Confucius (551-479 BCE) was the eponymous founder of the Confucian School of philosophy. His philosophy was developed during the Warring States period (476-221 BCE) in China, a time of widespread violence and instability. Daoism is another Chinese philosophy that “emerged out of a very fertile time of philosophizing in early China called the Hundred Schools period, from the sixth century to the middle of the third century BCE.” (Chang, 1956: vii)

Confucian concepts of civilization must also be viewed through the lens of Mencius (371-289 BCE), a Confucian scholar and philosopher who was a disciple of Confucius’ grandson, Zi Si. Mencius sought to answer a question raised by Confucius, which was why people should behave benevolently or choose righteousness over profit.” (Feng, 1948: 68) In answering this question, Mencius proposed the concept of the goodness of human nature, which exists within the human “mind” or “heart” (心, *xin*).

Mencius proposed that all humans are born with a heart sensitive to the suffering of others. (Mencius, VI.16) People are gifted four “germs”: compassion, shame, modesty and a knowledge of right and wrong. (Mencius, II.A.6) According to Mencius, “All people in their original nature possess these ‘four beginnings,’ which, if fully developed, become the four ‘constant virtues,’ so greatly emphasized in Confucianism,” which are benevolence (仁, *ren*), rightness (义, *yi*), loyalty (忠, *zhong*), filial piety (孝, *xiao*) and the rites (礼, *li*). (Feng, 1948: 70) The ideas of Mencius strongly influenced the Neo-Confucian view of the universe, which, along with philosophical Daoism, may be relevant to a discussion of the metaverse.

Although “Confucianism and Taoism are the two main streams of Chinese thought,” (Feng, 1948: 30) Sima Tan (died 110 BCE), the father of the great historiographer Sima Qian (145-86 BCE), categorized early Chinese philosophical thought into six major schools. The Yin Yang School (阴阳家, also known as the School of Naturalists), the Confucian School (儒家, also known

as the School of Literati), the Mohist School (墨家), The School of Names (名家), the Legalist School (法家) and the Taoist School (道家, also known as the School of the Way and its Power) (Feng, 1948: 30-31)

3.2 Rectification of Names (*zhengming*, 正名)

Confucius held that to have a well-ordered society, “if something has to be put first, it is, perhaps, the rectification of names... Thus, when the gentleman names something, the name is sure to be useable in speech, and when he says something, this is sure to be practicable. The thing about the gentleman is that he is anything but casual where speech is concerned.” (Analects, XIII.3) In other words, “every name contains certain implications which constitute the essence of that class of things to which this name applies... Every name in the social relationships implies certain responsibilities and duties.” (Feng, 1948: 41)

The rectification of names may be reflected in how the Chinese government intends to control cryptocurrencies, which form the economic backbone of the Western metaverse. In America, the government has been unclear on whether cryptographic assets can be classed as currencies, commodities or securities. This lack of clarity has serious legal and tax consequences and has even led to lawsuits, such as the US government’s court case against cryptocurrency XRP for \$1.3 billion, alleging that funds were illegally raised (*SEC.Gov / SEC Charges Ripple and Two Executives with Conducting \$1.3 Billion Unregistered Securities Offering*, 2020), despite serious contentions from XRP that the SEC provided contradictory information. (Frankel, 2021)

In China, on the other hand, in a case heard on July 17, 2019, a Hangzhou court ruled that Bitcoin “and crypto at large – ought to be considered ‘virtual internet property’ and deserves to be treated like other assets.” This rested on the Court’s determination that “Bitcoin has value, scarcity and disposability, and therefore ought to enjoy the protection of Chinese property laws.” The Court distinguished that Bitcoin is not fiat. (Kong, 2019) China has been far clearer than America on the nature and classification of cryptographic assets. A Chinese metaverse will likely use “the manifold forms of Chinese digital payment already in use, like the central government’s digital yuan.” (Baptista, 2022)

Modern social relationships involving cryptocurrencies may have legal repercussions. In 2021, the Shandong High Court cited a case where a plaintiff in 2017 invested 70,000 RMB to buy virtual currencies recommended by three defendants. The Shandong High Court held that “the behavior of investing or trading cryptocurrency is not protected by law.” (Shen, 2021) The Jinan District Court pointed to a Central Bank statement that “the virtual currency trading hype disrupts the normal economic and financial order, breeds illegal cross-border asset transfer, money laundering and other illegal and criminal activities, and seriously infringes the property safety of the people.” ([Licheng Faguan Shuofa Zhi Ba] Goumai Xuni Huobi de Xingwei Zai Wo Guo Bu Shou Falu Baohu, Youci Zaocheng de Houguo Zixing Chengdan [Licheng Judgment Statement No. 8] The Act of Purchasing Virtual Currency Is Not Protected by Law in My Country, and the Consequences Arising Therefrom Shall Be Borne by Oneself, 2021)

In 2022, the People’s Supreme Court criminalized crypto fundraising when four conditions are met: “public fundraising, unspecified fundraising targets, promising returns on capital and interest, and if activities violate laws and regulations.” (Qin, 2022) Illegal funding that raises over 50 million RMB, is from 5,000 people or causes direct losses of 25 million RMB can lead to a

prison sentence of more than ten years. According to Matteo Giovannini, a senior finance manager at the Industrial and Commercial Bank of China, the Supreme People’s Court ruling “constitutes a massive blow for crypto investors who are based in China.” (Shen, 2021)

3.3 Righteousness (义, *yi*)

The clear stance of the Chinese government on the illegality of cryptocurrency, and towards regulation of the metaverse in general, may also be justified by the Confucian value of righteousness, where “*yi* (righteousness) and *li* (profit) are diametrically opposed terms.” (Feng, 1948: 41) As Confucius says, “The gentleman understands what is moral. The small man understands who is profitable.” (Analects, IV.16)

Righteousness is a sense of “oughtness” which suggests that “for every person there is something which they ought to do. Nevertheless, what the person does is ‘for nothing,’ because the value of doing what one ought to do lies in the doing itself, and not in the external result.” (Feng, 1948: 44) The Confucian concept of righteousness or “oughtness” of a situation could be perceived as a justification by the Chinese government for the high levels of censorship and control in establishing metaverse projects, in order to prevent them from being avenues for profit instead of country-building and could also be seen as rationalizations as to why Chinese citizens might accept high levels of control and censorship in the metaverse, as it is in the interest of the country and not individual profit.

There are clear indications that China sees the opportunity it has to build the infrastructure of the metaverse and to construct a metaverse with Chinese characteristics, including monitoring, censorship and a lack of anonymity. (“Building a Metaverse with Chinese Characteristics,” 2022)

According to Du Zhengping, the head of the state-based China Mobile Communications Association, “Traditional Chinese internet businesses developed first and were then regulated. Industries like the metaverse will be regulated as they are built.” This could include the 4 C’s of clean, compliant, censored and crypto-less. (Baptista, 2022).

A researcher at the Institute of Quantitative and Technological Economics at the Chinese Academy of Social Sciences, Zuo Pengfei, said in a November 2021 speech that “we are still ten to twenty years away from the realization of the metaverse” and the creation of the metaverse is a “double-edged sword.” While it can improve society’s production efficiency, it can also lead to too much time spent online. He also cautioned that the metaverse “has an inherent monopoly gene” and that “we need to avoid the metaverse being monopolized by a few powers.” (Li, 2021)

The anonymous nature of the metaverse may necessitate a heightened need for compliance in modern China. As one consultant who advises Chinese-invested technology companies on the metaverse said, “If you were to describe what a communist state doesn’t want, it’s the establishment of a virtual plane of existence that sits outside of, and without any, national boundaries.” (“Building a Metaverse with Chinese Characteristics,” 2022) According to Eloi Gerard, a VR entrepreneur who worked in China for ten years, “The idea of the metaverse is that one moves between virtual worlds... this goes immediately against the idea of one party, one voice, one vision.” (Baptista, 2022) These sentiments of compliance and control were echoed in a January 2022 meeting of Beijing’s municipal political advisory body which proposed a “registration system for metaverse communities aimed at preventing them from influencing wider public opinion and causing economic or financial shocks.” (Baptista, 2022)

For example, an influential app, *Xuexi Qiangguo*, “which is required reading for many Communist Party cadres” published an article in November 2022 which said “the metaverse should

be used to improve the quality of mandatory ideological education classes for school children.” (Baptista, 2022) This may undercut the excitement that many, especially gamers, feel about the metaverse.

3.4 Benevolence (仁, *ren*)

Another core concept in Confucianism is benevolence (仁, *ren*), which “consists in consideration of others.” (Feng, 1948: 42) Confucius described benevolence as “loving one’s fellow man,” as opposed to wisdom, which was “knowing one’s fellow man.” (Analects, XII.22) Similar to the idea of righteousness instead of profit, the Chinese government may contend that the 4 C’s of clean, compliant, censored and crypto-less are benevolent actions taken in order to preserve social order and collective harmony.

One key aspect of benevolence is not speaking with a facile tongue and cunning, flowery language. (Analects, I.3; I.15; III.8; V.5; VI.25; XII.3; XIII.3; XV.8; XV.27; XV.41; XVII.18) While scams are rampant in the “Western” metaverse, this may be a justification as to why the Chinese government would censor language and control advertising and marketing for metaverse projects. Participants in the metaverse may not initially desire this level of government control, censorship or involvement but the Chinese government has made clear that they are concerned with protecting the people against possible scams. This accords with benevolence, which is intended to bring clear, direct, fair and honest relationships, which Confucius terms “straightness”. (Analects, V.11; VI.19; VIII.16; XIII.8; XIII.27; XIV.34; XV.7) After all, Confucius asks, if one is full of desires, how can one truly be straight? (Analects, V.11) This balance is explained through

the Doctrine of the Mean, which is the avoidance of extremes and the concept of moderation in all behaviors. (Analects, VI.29; VII.11; XII.16)

This “forced” moderation can be seen through the restrictions that the Chinese government has placed on the amount of time young people can spend online. Currently, Chinese youth are barred from online gaming on school days and limited to one hour a day on weekends and holiday evenings. Under the previous rules, players under the age of 18 were limited to ninety minutes of online gaming per day and three hours on weekends. (Buckley, 2021)

In April 2021, the Chinese Ministry of Education ordered online gaming companies to ensure that minors could not play online games after 10:00 PM each school night. This led to a sharp decline in the share price of many Chinese video game companies such as Tencent Holdings, after a Beijing media outlet, Economic Information Daily, called their game products “spiritual opium”. (Li, 2021)

Gaming is often seen as one of the main forms of metaverse adoption. Yet, despite the large profit motive, the potential for onboarding millions of young people to web3 and the advancements that could be made by having a large youth presence using the metaverse, games must be approved by the Chinese government and “while battle games are allowed, strong violent content... is banned, as is anything that can be construed as obscene.” (Baptista, 2022)

Dan Wang, an analyst of the Chinese tech sector, wrote that he expects the Chinese metaverse to “be an extremely lame creation heavily policed by the Propaganda Department”. (“Building a Metaverse with Chinese Characteristics,” 2022) Yet, it may be that this is an attempt by the Chinese government to strike a balance between the vagaries and temptations of the world and the internal struggle for honest integrity (Analects, I.7; I.13; II.13; IV.22; XIII.20; XV.6) and righteousness (Analects, II.17; VII.16; VII.28; XIII.3), which Confucius sees as objectively

identifiable. (Analects, IV.3) As Confucius says, “In the Book of Poetry there are three hundred poems. But the essence of them can be covered in one sentence: ‘Have no depraved thoughts.’” (Feng, 1948: 41) This can also be translated as “Swerving not from the right path.” (Analects, II.2)

In this respect, the Chinese government may see their task as far more than administrative. As Confucius points out, benevolence is not the same as administrative competence or ability. (Analects, IV.13; V.8; XV.33) Benevolence involves knowing how to avoid unnecessary political conflict, choosing one’s battles carefully (Analects, V.2; V.17; VIII.13; XIV.3; XVI.2) and a moral obligation to the common people. (Analects, V.16; XVI.1; XVII.6; XX.1) While Mencius also speaks of the importance of benevolence, he portrays it as a key determinant of effective leadership. (Mencius, IV.A.10; VI.A.11; IV.A.3; IV.A.20; IV.B.5) The Chinese government position of controlling the metaverse is consistent with many of Mencius’ positions on certain particulars of ruling, such as taxation (Mencius, I.B.5; III.A.3), salaries, land ownership and rank (Mencius, V.B.2)

Mencius believed that the key to great leadership is “tending the people,” watching over them, winning their hearts and moving them towards goodness without the people realizing. (Mencius, I.A.7; I.B.7; IV.B.3.; IV.A.9; I.B.4; VII.A.13) He felt that the loyalty of the populace will depend more on the behaviors of the state, such as explaining the laws to the people, not overtaxing, providing education and supporting public works. (Mencius, II.B.4; II.A.5; IV.A.14; III.A.4; IV.B.2)

In the view of Mencius, the people must be tended, as they cannot take care of themselves. People can tend a tree or travel to heal a broken finger but when it comes to their heart, people nurture the wrong parts of themselves. (Mencius, VI.A.13; VI.A.12; VI.A.15) Mencius argued that people should have a constant means of support lest they “go astray and fall into excesses.”

(Mencius, I.A.3; III.B.4; I.A.7) To punish the people for then falling into excesses places before them an unjust trap. Therefore, it falls on the ruler to share with the people; be it land, money, food, women, goodness and possibly even death. (Mencius, I.A.2; I.B.1; I.B.4; I.B.5; I.B.12; I.B.13; II.A.8) A small park that can't be shared by the people is uselessly large. (Mencius, I.B.2) Thus, it falls on the rulers and leaders to aim for benevolence over wealth and to win the hearts of the populace. (Mencius, III.A.3; IV.A.9)

From this viewpoint, the Chinese government has an obligation towards the citizens to tend them, lest they fall into excess and be punished for the government's lack of foresight and protection. Just as a mountain has the potential to be covered with trees given proper soil, water and sunlight, so do people have the potential to be good, provided they are given the right nourishment. (Mencius, VI.A.8)

3.5 The Five Relationships and Confucian Obedience

A separate but related question is whether Chinese participants in the metaverse will accept the clean, compliant, censored and crypto-less metaverse dictated by the government. This may also relate to the Confucian relationships and the sense of responsibility and obedience they engender.

Confucianism is ordered around five traditional social relationships: those between sovereign and subject, father and son, elder and younger siblings, marital partners, and friends. (Analects, XII.11) Three of these are family relationships. The two that are not can still be seen through the lens of family, where sovereign and subject are akin to father and son, and friends can be seen as elder and younger siblings. Much of Confucianism was a “rational justification or

theoretical expression of this social system.” (Feng, 1948: 21) According to Confucianism, these social relationships form the foundation of a secure society.

Confucius expresses the belief that an obedient son will mature into a law-abiding adult unlikely to start a rebellion. (Analects, I.2) Mencius agrees that the most important duty is that towards one’s parents. (Mencius, IV.A.19; IV.A.27) As the state and its subjects can be viewed as a parent and child relationship, this may imply a sense of obedience and duty from citizens toward the state.

4.0 A Daoist Conceptual Framework for the Metaverse

The Chinese philosophy of Daoism would likely disagree with the Confucian reasoning regarding control. “According to the Confucianists, when a sage becomes the ruler, he should do many things for the people, whereas according to the Taoists, the duty of the sage ruler is not to do things, but rather to undo or not to do at all.” (Feng, 1948: 101) In fact, the Daoists would be likely to argue that “the more laws are promulgated, the more thieves and bandits there will be.” (Laozi, LVII) While Confucianism may be useful in understanding the ethics of social order and harmony for a specifically Chinese metaverse, Daoism may prove valuable in providing a conceptual framework for the metaverse in general.

“In a way, the metaverse is not fully knowable to humans today, and at best we can only know some of the core attributes.” (“Zou Xiang Xukong: Crypto He Metaverse Xiangyu de Yuzhou [Walking towards the Void: The Universe Where Crypto and Metaverse Meet],” 2021) “When human beings pay attention to and participate in the formation and development of the ‘metaverse,’ their traditional concepts of life, time and space, energy, community, economics and values will be changed and even subverted, to such an extent that we have to re-examine our philosophy or even ethics.” (Zhao et al., 2021:20)

It is possible that Daoism could provide a coherent system through which to express and discuss some of the abstract elements and attributes of the metaverse while preserving the plasticity required for considering a developing technology. “In the metaverse, one may find it necessary to rethink the philosophical propositions of being and nothingness, body and spirit, goodness and evil, self and the universe, and to continuously explore the boundaries between finite and infinite, order and freedom, autonomy and the rule of law, economy and governance, and ethics and

civilization.” (Zhao et al., 2021: 62) In fact, the Chinese term for “metaverse”, *yuan yuzhou* (元宇宙) means the primary or fundamental universe.

When imagining and attempting to understand the metaverse, Chinese people are likely to draw from Chinese philosophical traditions, where the space is seen more holistically and metaphysically, where “the combination of virtual and real, and the interconnection of all reality means a new form of spatial awareness and governance.” (“‘Yuan Yuzou’ Yu Jishu Zhili: Tansuo Yu Zhengming 2021 Nian Du Guanjianci Zhi San [“Metaverse” and Technology Governance: Exploration and Contention 2021 Keynote Number 3],” 2022)

The metaverse may be conceived through a Daoist lens similarly to the way in which A.I.T. Chang applied the *Dao* as “an explanatory framework for comprehending our perceptual experiences of built forms” in his 1956 Princeton classic “The Tao of Architecture” also known as “The Existence of Intangible Content in Architectonic Form.” (Chang, 1956: xi)

While A.I.T. Chang applied certain Daoist concepts to the space which gives rise to architectonic forms, these concepts may also be applied to the delineated virtual space which gives rise to metaversal forms. Seen from a Daoist lens, both of these involve space and objects within space. This section will begin with a discussion of Daoism generally and then will address certain elements of the Daoist philosophy as they may relate to the metaverse.

4.1 The *Dao*

“The *Tao* is that by which anything and everything came to be.” (Feng, 1948: 95) It is the “nameless” and “the nameless was the beginning of heaven and earth.” (Laozi, I) Since it cannot be directly spoken of, named or described, the *Dao* is portrayed in disorienting terms as both

receding and turning back on itself, nameless and evading description. (Laozi, XXV; XL; XLI; I; XXXII; XLI; Zhuangzi, 1964: 39) “*Dao* is organic in the sense that it is part of the world and not a transcendent other as in Western religions; it is also order because it can be felt in the rhythms of the world, in the manifestation of organized patterns... essentially immanent, it can never become the object of knowing.” (Kohn, 2020:16)

The primary text of Daoism is the *Daodejing* (道德经), which “is a short work consisting of slightly more than 5,000 Chinese characters... Aside from the Bible, it is the most translated text in the world.” (Chang, 1956: vii) It was written by a semi-legendary figure known as Laozi, which can be translated as “the old master”, who lived sometime between the 6th to 4th centuries BCE. Sinologist Arthur Waley translates the *Daodejing* as “The Way and its Power” based on the recognition that “*de* (virtue) “is not simply a trait of a moral person; *de* is a virtuous power resident in nature.” (Chang, 1956: viii) A second key text in Daoism is the eponymously titled “*Zhuangzi*”, which was probably compiled by Guo Xiang (252-312 CE) who famously redacted the text and provided commentary. (Feng, 1948: 104) Zhuangzi the individual (369-286 BCE) has many of the same ideas as Laozi regarding *dao* and *de*.

The *Dao* is described as a series of seemingly contradictory forces, such as winning by taking the lower position, vast and resembling nothing, responding without speaking, attracting without summoning, a wide mesh net through which nothing slips. (Laozi, LXI; LXXVI; LXVII; LXXIII) Bent when straight, hollow when full, small but great, bright when it seems dull, diminished by being added to, and unable to be drained by use (Laozi, XXII; XXXIV; XLI; XLII; XLV; Zhuangzi, 1964: 40) To lay this path aside, one must set it up. To take from it, one must first give. It never acts yet nothing is left undone. (Laozi, XXXVI; XXXVII; XXXVIII) “The *Tao* is

eternal, nameless, the Uncarved Block... Once the block is carved, there are names.” (Laozi, XXXII)

The Dao defines a changing cosmos that contains antithetical yet complimentary forces within everything permanent and transient, physical and mental, imaginary and real. By blurring the boundaries between actual and virtual space, the metaverse also evades description, uses disorienting terms and is discussed by explaining what it is not, rather than what it is. Therefore, Daoist terminology or conceptualizations might be helpful in understanding the metaverse as a whole.

4.2 Space, the Universe and Daoist Cosmology

According to Zhao Guodong, Yi Huanhuan and Xu Yuanzhong, “if we are to understand the essence of the metaverse, it is quite necessary for us to understand the profound thoughts of philosophers like Lu Jiuyuan and Wang Yangming.” (Zhao et al., 2021: 24) This suggests that Daoism and its development through Neo-Confucianism are important philosophical concepts in understanding a metaverse with Chinese characteristics.

Neo-Confucianism developed nearly a thousand years after Laozi and Zhuangzi postulated their theories of the *Dao*. It combined Daoist naturalism, Confucian ethics and concepts from the Book of Changes (*yijing*, 易经), an esoteric Confucian classic text containing 64 hexagrams which could be used for divination. Lu Jiuyuan and Wang Yangming were Neo-Confucianists from the Song Dynasty School of the Mind (*xinxue*, 心学), which is also referred to as the Lu-Wang School.

Neo-Confucianism has a long lineage, including important philosophers such as Zhou Dunyi (1017-1073 CE) and Shao Yong, (1011-1077 CE) who set the 64 hexagrams into a binary

sequence, known as the Fu Xi Ordering, which was later used by Gottfried Wilhelm Leibniz in his thinking on binary arithmetic, in turn influencing the modern language of computers. (“Shao Yong,” 2022)

Eventually, the Neo-Confucians split into two branches. The first branch, known as the Cheng-Zhu School of Principle (*lixue*, 理学) was started by Song dynasty philosopher, Cheng Yi and advanced by his student, Zhu Xi, who was one China’s most famous philosophers. Zhu’s commentary and edits of the Four Books of Confucianism (The Great Learning, The Doctrine of the Mean, The Analects of Confucius and the Mencius) formed the core curriculum for the official examinations in China from the twelfth century up until 1905. (“Zhu Xi,” 2022)

The second branch was the Lu-Wang School of the Mind, which was started by Cheng Yi’s brother, Cheng Hao (1032-1085 CE). Neo-Confucianism has certain key tenets which may be relevant to a conceptual understanding of the metaverse. The first is related to the notion of the universe and space, which begins with the relationship between being and nonbeing. The second concept is that of the distinction between *li* (理) and *qi* (气).

4.2.1 Being and Nonbeing

“The Chinese understanding of space can be traced back to Laozi’s idea that ‘carving out a void to create a room, only where there is emptiness does the room acquire utility.’ The ‘utility of a room’ is a function of its space, or ‘nothingness’. (Li, 2002) “Thirty spokes share one hub.” It is the emptiness at the center of the wheel that gives use to the spokes. Adapting empty space to clay creates a vessel. “Thus, what we gain is something, yet it is by virtue of nothing that this can be put to use.” (Laozi, XI)

“According to Laozi, the concept of nothingness is equivalent to the *Dao*.” (Li, 2002) Nothingness is also known as nonbeing. “All things in the world come from being (*you*, 有), and being comes from nonbeing (*wu*, 无).” (Chan, 1963: 160; Feng, 1948: 96) “The myriad creatures in the world are born from something, and something from nothing.” (Laozi, XL) Zhuangzi also refers to non-being as essential. “Suddenly there is being and there is non-being, but between this being and non-being, I don’t really know which is being and which is non-being.” (Zhuangzi, 38)

Amos Ih Tiao, the author of *The Tao of Architecture*, takes nonbeing as the key concept he adapts from Daoist ideas. “Aside from the term itself, he uses a cluster of other words that all reinforce his understanding of nonbeing: void, negative, unfinished existence, nothingness, emptiness, formless form, beyond our knowing, intangible.” (Chang, 1956: x) Nonbeing, or “that which is intangible, is beyond the power of man, existing as a permanent reservoir from which the potential of life may be drawn as the need arises.” (Chang, 1956: 3)

It may be that the metaverse is a combination of being and nonbeing. The virtual space in the metaverse could be seen in terms of nonbeing as it is both material and immaterial; immaterial yet producing material wealth. The numbers and digits that are used to define the space of the metaverse may be being, as is the electricity, computing power and storage required to actualize the metaverse, but the space that exists prior to the being is nonbeing, and it is that from which the being arises.

4.2.2 Neo-Confucian View of the Universe

In the Lu-Wang School of the Mind, the conception of the universe was developed by Lu Jiuyuan (1139-1193 CE) from earlier concepts presented by the philosophers Huizi and Shi Jiao.

Huizi (370-310 BCE) was a Chinese philosopher and member of the School of Names during the Warring States period (476-221 BCE) who called the universe the “Great One,” which he described as having nothing beyond itself. (Feng, 1948: 2) Shi Jiao (390-330 BCE) was a syncretic philosopher who stated that the “universe is the combination of space and time, where space refers to all six directions including the east, the south, the west, the north, the upper and the lower directions, and time includes the past, the present and the future.” (四方上下曰宇, 往古来今曰宙) (Zhao et al., 2021: 24)

Extending these concepts, Lu Jiuyuan said, “The universe is my mind, and my mind is the universe.” (宇宙便是吾心, 吾心即是宇宙) (Zhao et al., 2021: 24) As argued by Zhao Guodong, Yi Huanhuan and Xu Yuanzhong, “the world of the metaverse is based on the illusion of humans. It is an external manifestation of the human spirit and the three-dimensional representation of ‘my mind is the universe and the universe is my mind.’” (Zhao et al., 2021: 63)

Ming dynasty philosopher Wang Yangming (1472-1529 CE) advanced Lu’s philosophy one step further by arguing that, “No principles or things exist outside the mind.” (无心外之理, 无心外之物) (Zhao et al., 2021: 24) Wang argued that knowledge of the supreme principle (*li*, 理) must be unified with action in relation to concepts of morality. This idea, expressed as “regarding the inner knowledge and the exterior action as one” (知行合一) is a main tenet of the School of the Mind. (Chan, 1963: 656)

Wang Yangming’s expansion of Lu Jiuyuan’s views suggests that the physical world does not supply the rules and patterns of the universe. Those rules and patterns exist only in the heart/mind, which, according to Mencius, is the origin of the original goodness of humans. Outside the heart/mind there is no *li*, no logic, reason, truth or, metaphorically, grain of the wood. Outside the heart/mind there is no *wu*, no physical objects or matter.

Therefore, according to the Lu-Wang School, “space is a mental notion devoid of objective existence” (Li, 2002) as it lies entirely within the heart/mind. Even if there were objectivity, it is meaningless unless one can access it and, the moment it is accessed, it becomes unique to the individual’s heart/mind and is no longer objective. All that exists, exists within one’s heart/mind as an expression of innate goodness, which can be conceived of as the grain of the wood. “The representative work for inner exploration by humans is *A Happy Excursion* by Zhuangzi” (Zhao et al., 2021:65) which further suggests that Daoist principles may be relevant to conceptualize the cosmological exploration of the metaverse.

“It can be said that it is precisely because of blockchain technology that the ‘metaverse’ can leap from the ordinary concept of ‘virtual world’ into a grander one of ‘universe.’” (Zhao et al., 2021:26) In terms of understanding the metaverse, Lu Jiuyuan might say the metaverse is my mind and my mind is the metaverse. The metaverse is, or can be, an expression of the innate sense of goodness in humans, the grain of the wood. While the universe appears to have an objective reality and existence outside the structure of the mind, the metaverse is more obviously subjective and conceptual as it is built by humans. Also, “the virtual world produces far richer knowledge than that produced in the physical world (such as a simulation cabin for trainer pilots). Therefore, the physical world and the virtual world cannot be examined separately, but rather, in terms of human needs, they are still a unified one.” (Zhao et al., 2021:41)

The metaverse may be part of the “Great One” which has nothing beyond itself, part of the universe of space and time, and is limited only by human imagination and ingenuity. “Laozi says that all things are produced out of nothing. Thus, for the Chinese, the intangible content of things, though not materially manifested, is regarded as something real; accordingly, emptiness can be

real space.” (Li, 2002) Thus, the metaverse may be seen as real space, being that comes from nonbeing, and a part of the eternal universe that exists within our heart/mind duality.

4.2.3 Neo-Confucian View of *Li* and *Qi*

Another key concept from Neo-Confucianism that relates to the metaverse is that of the distinction between *li* (理) and *qi* (气). *Li* is the principle that underlies all being. According to Zhu Xi, “whenever the members of a certain kind of thing exist, the *li* of that kind is inherent in them and constitutes their nature. It is this *li* that makes them what they are... All *li* are present even before the formation of the physical universe.” (Feng, 1948: 296-7)

According to Neo-Confucian philosopher, Zhang Zai (1020-1077 CE), *qi* is the primary undifferentiated material out of which all individual things are formed.” When *qi* condenses, it forms concrete things. (Feng, 1948: 278-9) *Qi* is “the basic material of all that exists.” (Kohn, 2020:27) According to the Cheng-Zhu School of Principle (*lixue*, 理学), “when an individual thing comes into existence, a certain *li* is inherent in it, which makes it what it is and constitutes its nature.” Thus, “what we call human nature is simply the *li* of humanity that is inherent in the individual.” (Feng, 1948: 300) “A flower is a flower because it is the condensation of *qi* taking place in accordance with the *li* of the flower; and a leaf is a leaf, because it is the condensation of the *qi* taking place in accordance with the *li* of the leaf.” According to Shao Yong, this is the law that governs the transformation of individual things. (Feng, 1948: 295)

The Cheng-Zhu School of Principle felt that the mind is the concrete embodiment (*qi*) of the *li*. Reality therefore consisted of two worlds. The Lu-Wang School of the Mind, on the other hand, felt that reality consists of only one world, which is the mind, not the concrete embodiment

of *li*; but nature itself (Feng, 1948: 307) and that “every one of us possesses the original mind, which is one with the universe.” (Feng, 1948: 315)

This nondifferentiation between the universe and mind corresponds to the creative and generative power of the metaverse. Insofar as the metaverse expands on the physical world through digital means, it is a changing cosmos that subverts the traditional hierarchy between body and mind, material and spiritual, self and nature. It calls for a more correlative way of thinking to encompass the emerging relationships in the metaverse. Daoist cosmology might provide a sensible framework to approach the dynamics of the metaverse.

Just as virtual objects have *li*, the metaverse must be run according to its *li*. The metaverse appears to be part of the cosmological universe according to Chinese philosophy and all things in the metaverse would then have a pre-existing principle or *li*. Furthermore, Mencius’ doctrine asserts absolutely that nature is good (Feng, 1948: 301) and thus the *li* of the objects in the metaverse, and the metaverse itself can be seen as inherently virtuous and good if run in accord with the *Dao*. If the metaverse is organized and governed according to its *li*, it will be stable and prosperous. If not, it will become disorganized and fall into disorder.

4.2.4 Geomancy

The metaverse is an artificial, human-made space, constructed on numbers and their application through electricity and computers, all of which can be seen as concrete forms of *qi*. At the same time, the metaverse is still space and “a major factor that influenced the Chinese perception of space was geomancy.” (Li, 2002)

Fengshui (风水), literally “wind-water”, involves “the placement of a physical object in space. *Feng* actually represents intangible and spiritual aspects of environment, whereas *Shui*

represents tangible and physical aspects.” (Li, 2002) According to geomantic principles, “the rhythm of time guided by spatial positions combined to create the Chinese conception of the universe.” (Li, 2002) This also involves the use of space to create order. “Space, which is to be planned to reflect social hierarchy, is essential in keeping social harmony.” (Li, 2002)

Just as landscape painting involves a unique sense of space where “the idea of painting, for the Chinese, has never been the truthful representation of reality,” (Li, 2002) so does the metaverse offer opportunities for spatial creations that accord with Chinese philosophical principles, particularly in light of the attempt to create order and harmony in an otherwise chaotic and anarchic space. In geomancy, it is believed that “different shapes of space conduct different energy flows” and that a “balanced, steady symmetrical space... square in shape and axial in orientation, which also has an inherent suggestion of wholeness and unity” can hold positive *qi*. (Li, 2002)

The consideration of geomancy as a potential element of the metaverse is somewhat conflictual. Geomancy works with natural space and the metaverse is artificial. However, geomantic principles also work with space, the nonbeing that gives rise to being, which may possibly be a view of the uncarved metaverse. Thus, it may be possible to consider geomantic principles where photo-realistic avatars and stunningly detailed graphics are not the only goals. In Chinese landscape painting, “details and individual elements are never as important as the relationship among them.” While the metaverse is limited by our current levels of technology, “it is a part of the Chinese world-view to see the unlimited in the limited.” (Li, 2002) There may something harmonious and impactful in the placement of mountains, water, trees and stone, whether they are virtual or organic.

4.3 Daoism and Relativity

According to Zhuangzi, the universe is the embodiment of the relativity of Daoism. “The task of knowledge in the ordinary sense is to make distinctions; to know a thing is to know the difference between it and other things. Therefore, to discard knowledge means to forget these distinctions. Once all distinctions are forgotten, there remains only the undifferentiable one, which is the great whole.” (Feng, 1948: 115) The metaverse begins with such a distinction – whether it is natural or artificial, whether it is a portion of the universe created or recently discovered.

Relativity in Chinese dialectics is significant in its non-competitiveness, where all things should follow their own way, as “we are happy when this *de* or natural ability of ours is fully and freely exercised, that is, when our nature is fully and freely developed.” (Feng, 1948: 105) This can be seen in Zhuangzi’s story of the cicada and the little dove. The small birds were laughing at the great, mythical bird, Peng, whose wings were as big as clouds, mocking him for choosing to fly thousands of miles when the smaller birds were happy merely to hop from tree to tree. Yet, Peng was only following his nature, doing what he enjoyed, as the small birds were following theirs. This demonstrates how “there is no absolute uniformity in the natures of things, nor is there any need for such uniformity.” (Feng, 1948: 105)

This notion of freedom might appear to run counter to the Chinese government’s stated efforts to control the metaverse. However, from another view, this relativity may serve as a philosophical justification as to why both highly controlled and highly autonomous versions of the metaverse have natural places, and why there need not be competition for which is “better” or “right”, as the best version of each metaverse is one that follows its own *li*. “Zhuangzi maintains that concepts of right and wrong are built up by each man on the basis of his own finite point of view.” (Feng, 1948: 111)

Zhuangzi points out that “the morning mushroom knows nothing of twilight and dawn; the summer cicada knows nothing of Spring and Autumn,” (Zhuangzi, 1964: 24) noting that “you can’t discuss the ocean with a well frog – he’s limited by the space he lives in. You can’t discuss ice with a summer insect – he’s bound to a single season. You can’t discuss the way with a cramped scholar – he’s shackled by his own doctrines.” (Zhuangzi, 1964: 97) Thus, in Daoism, it is not right, per se, to build the metaverse with decentralization and autonomy rather than with censorship and strict compliance. “Right is not right; so is not so. If right were really right, it would differ so clearly from not right that there would be no need for argument.” (Zhuangzi, 1964: 44)

The experience of the metaverse may be different for different creators, users or governments. The Western view appears to push the metaverse towards a composable, interactional experience across platforms with very specific use cases. This reduces the metaverse to a series of purposive elements. It suggests that the metaverse must be populated with games, details, commodities, locations, landmarks, events, activities, buildings and other tangible evidence of development. From a Daoist point of a view, this may not be in accord with the *de* of the space in the metaverse. There may not be a need for each metaverse world to be named, built, composable, populated, commodified, purposed, territorialized, capitalized, repurposed, deterritorialized, reterritorialized, framed and determined.

Traditionally, Western governments have looked towards expansion and development, extending power and influence, either through conquest or diplomacy. Cities have formed relationships with other cities, individuals have traveled, explored, discovered and claimed what they found. However, from a Daoist point of view, it is entirely reasonable that “though adjoining states are within sight of one another, and the sound of dogs barking and cocks crowing in one

state can be heard in another, yet the people of one state will grow old and die without having had any dealings with those of another.” (Laozi, LXXX)

“The Taoists idealized the simplicity of primitive society and condemned civilization.” (Feng, 1948: 20) This may be inconsistent with modern views. “The Taoist theory is certainly wrong which says that the utopia of mankind is the primitivity of a bygone age. With the idea of progress, we moderns think that the ideal state of human existence is something to be created in the future, not something that was lost in the past” (Feng, 1948: 27) However, it may be that the metaverse is neo-primitive in that it involves vast tracts of unused, untouched virtual land.

Relativity in Daoism also extends to construction and destruction. “No thing is either complete or impaired, but all are made into one again.” (Zhuangzi, 1964: 36) Thus, “when a table is made out of wood, from the viewpoint of the table, this is an act of construction. But from the viewpoint of the wood or the tree, it is one of destruction.” (Feng, 1948: 112) As Zhuangzi says, “Forget the years; forget distinctions. Leap into the boundless and make it your home!” (Zhuangzi, 1964: 44)

4.4 Time and the Movement of the *Dao*

On a conceptual level, the metaverse may raise questions about the nature of time. In the metaverse, time and the speed of light are parameters that can be arbitrarily modified.” In a discussion with computer scientist Lex Fridman, Mark Zuckerberg said, “A lot of people think that the metaverse is about a place, but one definition of this is it’s about a time when basically immersive digital worlds become the primary way that we live our lives and spend our time.” (Canales, 2022) As the metaverse may establish new temporal possibilities, it may be relevant to

consider Daoist dialectics regarding time, as they stand in counterpoint to traditional Western notions of time from Heidegger, Sartre, Merleau-Ponty, Bergeron and others.

In the metaverse, time may be virtual, divergent and non-linear. Time may exist with different dimensions, speeds and repetitions, where different beings, such as digital humans and artificial intelligences coexist in a temporal framework in which humans do not occupy the central space. Avatars may have a permanent digital existence and may not grow old, which finds similarities with the dream of Daoist immortality. There are no organic requirements that a “day” in the metaverse must last for 24 hours, that the sun must rise and set. On “Igloo” (a metaverse island in Cryptovoxels) it is always winter. Other metaverse locations have their own coded versions of time.

“There have been very few studies of the Daoist conception of time in either the West or the East.” (Jhou, 2020) In Daoism, as explained by Zhuangzi, “time is not grounded in the presence of being but in the negative creativity of the *Dao*... If we are to truly experience *Dao* as ultimate reality, we must learn to do so meontologically – from the perspective of nothingness... Resting in nothingness, *Dao* remains beyond the grasp of cosmological and human measured time whilst giving rise to that which is temporally rooted.” (Chai, 2014)

Three forms of Daoist time may be relevant to a discussion of the metaverse: *Dao* time, cosmological time and human measured time. “*Dao* time is the nontime of *Dao* and ontological nothingness whereas cosmological time pertains to the state of primal chaos also known as the One, and human measured time is the causal or durational time of everyday human experience.” (Chai, 2014)

4.4.1 *Dao* Time

The first form of time in Daoism is *Dao* time. As “a period of undifferentiated wholeness known as primal chaos (*hundun*, 混沌), it bore witness to the formation of the One, an ontological collectivity of prephenomenological forms, whose virtue mirrored that of the *Dao*.” (Chai, 2014) “*Dao* manifests itself first as mere possibilities.” (Jhou, 2020) In this time, there were no ontic categories of nonbeing and being, as “ontic beings are conditioned by the complementariness of their own nonbeing, measuring the duration of their existence against it.” (Chai, 2014)

In relation to the metaverse, this period of undifferentiated wholeness could be viewed as the metaverse qua universe according to the Lu-Wang Neo-Confucian School of the Mind, embodied by the argument of Lu Jiuyuan that “the universe is my mind, and my mind is the universe.” (宇宙便是吾心, 吾心即是宇宙) and by Wang Yangming that, “no principles or things exist outside the mind.” (无心外之理, 无心外之物). This time may exist in the eternal *li* of the mind, rather than the biological brain.

According to Laozi, “There is a thing confusedly formed, born before heaven and earth. Silent and void, it stands alone and does not change, goes round and does not weary. It is capable of being the mother of the world. I know not its name, so I style it ‘the way.’” (Laozi, XXV) As Zhuangzi notes, “it is its own source, its own root. Before Heaven and earth existed, it was there, firm from ancient times... It was born before Heaven and earth, and yet you cannot say it has been there for long; it is earlier than the earliest time, and yet you cannot call it old.” (Zhuangzi, 2013:77)

This *Dao* time is what underlies the universe and the metaverse, as they are one in the same, existing within the *li* or *qi* of the mind. This time is “neither transcendental nor idealistic but

meontologically existential and thus can neither flow toward a future nor come to comprise a series of points whose collectivity results in the present-now.” (Chai, 2014)

4.4.2 Cosmological Time

The second form of time in Daoism is the cosmological time of the One. “Cosmological time is rendered inferior and incomplete when compared to that of the *Dao* in that it is still measurable, regardless of how large that turns out to be, whereas the nontime of *Dao* is wholly immeasurable.” (Chai, 2014) In cosmological time, with the act of naming the One, “ontic being and nonbeing arose, filling the universe with their myriad variations.” (Chai, 2014) “*Dao* manifests itself into pairs of the opposites, such as being and nonbeing, *yin* (阴) (the negative) and *yang* (阳) (the positive), and so on; finally, from the dialectical interaction of these opposites are the myriad things formed.” (Jhou, 2020)

As Laozi puts it, “The way begets one; one begets two; two begets three; three begets the myriad creatures.” (Laozi, XLII) The *Huainanzi*, a text containing scholarly debates held at the court of Liu An sometime before 139 BCE, explains that *Dao* began with an empty void which then gave birth to the universe and that the universe gave birth to *qi* (气). (“Huainanzi,” 2021) Thus, cosmological time is a measuring of the possibilities of the *Dao*, and “the course of transformation experienced by the myriad things is not due to the action of time but their inborn nature reflecting the virtue of *Dao*.” (Chai, 2014)

In regard to the metaverse, cosmological time may refer to the temporal beginning, the creation of the internet, formally established in 1983, the oneness that began with static pages of text-based information and which led to the development of the interactive web2 internet. It may

include the advent of the blockchain-based web3 internet, which will function more like a sematic web as envisioned by TimBL. From a metaversal perspective, these are the successive stages of the universe and the formation of the myriad virtual things, the underlying virtual worlds, lands, avatars, objects and NFTs, which are the being that comes from nonbeing.

From the standpoint of Chinese philosophy, time is often seen on this grand, cosmological scale. Slavoj Zizek, in his introduction to Mao Zedong's *On Practice and Contradiction*, points out that even Mao's philosophy was informed by this "cosmic perspective". Mao perceived that the "end of life on Earth 'would hardly mean anything to the universe as a whole.'" and that this 'cosmic perspective' also grounded Mao's dismissive attitude towards the human costs of economic and political endeavors. (Zizek, 2007)

4.4.3 Human Measured Time

The third form of Daoist time is human measured time. As Zhuangzi says, "The Way is without beginning or end, but things have their life and death... The years cannot be held off; time cannot be stopped. Decay, growth, fullness, and emptiness end and then begin again. It is thus that we must describe the plan of the Great Meaning and discuss the principles of the ten thousand things... The life of things is a gallop, a headlong dash – with every movement they alter, with every moment they shift." (Zhuangzi, 2013:103)

While the metaverse may be constructed and coded to reflect cosmological notions of time, such as metaworlds where the seasons never change, or metagalaxies such as Star Atlas (www.staratlas.com) where time can be measured civilizationaly, personal human existence in the metaverse is limited by measured time. Outside the metaverse, in the real world, "our state of being is necessarily constrained by moments of time and boundaries of space. These temporal-

spatial constraints limit what human beings can empirically perceive at any one time or place.” (Chang, 1956: xi)

However, in the metaverse, our interaction “is a singular manifestation amongst an infinite number of possible manifestations of *Dao* and that it has managed to fulfill itself in the form of my being is nothing if not marvelous.” (Chai, 2014) Thus, in the metaverse, human measured time applies to the myriad things as they are manipulated and used by the humans who participate in the metaverse and “has no inherent bearing on the onto-phenomenological nature of reality or the world.” (Chai, 2014)

“The Daoist assumption that the three successive stages of *ekstasis* (past, present, and future) are but imaginary happenstances of one whose unity with the nonworldly no-mindedness of *Dao* has been disrupted... stands in stark contrast to the more traditional Western belief that the past is a retreating of the present while the present progressively fills the future.” (Chai, 2014) Time in the metaverse may be consistent with Chai’s view that cosmological time is the only authentic time, for so long as the metaverse exists, avatars and virtual objects can maintain their *qi* and existence, despite the potential life and death of the user. The beginning and ending of the myriad things is the natural fulfillment of cosmological time. While the Daoist sage may see time without distinctions in the timelessness of the *Dao*, “the common person, however, only sees things on the level of their ontic existence.” (Chai, 2014)

4.4.4 The Movement of Time

Time, as seen through the lens of Daoism, is relative and non-linear. As Huizi (370-310 BCE) stated in paradoxical fashion, “I go to the state of Yueh today and arrived there yesterday.” (Zhuangzi, 1964: 34) “This states that ‘today’ and ‘yesterday’ are relative terms. The yesterday of

today was the today of yesterday, and the today of today will be the yesterday of tomorrow. Herein lies the relativity of the present and the past.” (Feng, 1948: 85)

Cosmological time has a pattern of movement in Daoist thought, which is derived from the concept that “when a thing reaches one extreme, it reverts from it”, which itself “constitutes a law of nature.” (Feng, 1948: 97) The concept of movement through reversal, that “when the development of anything brings it to one extreme, a reversal to the other extreme takes place,” is a main thesis of both Laozi and of the Book of Changes (*yijing*), as interpreted by the Confucians. (Feng, 1948: 18)

The *Daodejing* states that “turning back is how the way moves,” (Laozi, XL) and that “reversion is the action of the Tao.” (Chan, 1963: 160) “Being great, it is further described as receding. Receding, it is described as far away. Being far away, it is described as turning back.” (Laozi, XXV) Wing Tsit-Chan comments that “the doctrine of returning to the original is prominent in Lao Tzu. It has contributed in no small degree to the common Chinese cyclical concept, which teaches that both history and reality operate in cycles.” (Chan, 1963: 153)

While time operates in cycles, these may not be repeating cycles. “Liu Shu-hsien asserted that the *Yijing*, famous for its dialectical thinking, did not teach a cyclical philosophy of history in terms of recurrent repetition. Rather, ‘each cycle offers a new content, which cannot be seen as a mere repetition or going by circles.’” (Qian, 2016, quoting Liu Shu-hsien in *Notions of Time in Chinese Historical Thinking*, 91-92)

Movement through reversal may relate to the metaverse, as the metaverse may be viewed in China as a chance to remake history, not to be left behind in the wake of the next technological revolution, which in the West it is being taken as another tool of acquisition. This puts the

“Western” metaverse in a dangerous position, for “to be overbearing when one has wealth and position is to bring calamity upon oneself.” (Laozi, IX)

On an individual level, movement through reversal is seen in the “the Doctrine of the Mean,” which is the avoidance of extremes and the concept of moderation in all behaviors. (Analects, VI.29; VII.11; XII.16). Chinese moderation may be seen in the cautious development of metaverse technology, for “to know how to be content is to avoid humiliation; to know where to stop is to avoid injury.” (Laozi, XLV) “The sage avoids excess, extravagance and arrogance. (Laozi, XXIX) Without considering the extreme, the West innovates without considering the *li* of the metaverse and “woe to him who willfully innovates while ignorant of the constant.” (Laozi, XVI)

The movement of time reversing upon itself can even be seen in the history of China as a country. In terms of the history of China, time is “twisted into the shape of a spiral” where “the breadth of the spiral signifies the spatial dimension of Chinese history... implying a continuous history of China as an organic whole, inclusive and unified.” (Qian, 2016)

Thus, the Chinese notion of time “is a reconstructive approach to time, one that exhibits itself as analogous to Deleuze’s reading of Nietzsche’s ‘eternal return’... Chinese time is the repetition with (qualitative) difference, which continually generates the ever-expanding spirals, instead of circles.” (Qian, 2016) The non-circular change, “according to Deleuze, is none other than the transformed ‘eternal return,’ which does not simply bring back the same; rather the ‘returning constitutes the only Same of that which becomes.’ (Qian, 2016)

“As Gilles Deleuze observes, time is the ultimate subjectivity... This kind of historical consciousness, divergent from the Cartesian vision of omnipotent human subjectivity, has prevailed throughout Chinese history. However, in the Chinese view... time is intertwined with

human activity.” (Qian, 2016) It is this human activity that mirrors Wang Yangming’s concept of the unification of knowledge and action. (知行合一)

In addition, the universe and time itself, from the Chinese perspective, are bound with the concept of morality. “It is time together with moral mission that continually reproduces itself, articulates itself, and perpetuates itself.” (Qian, 2016) “It is time that subsumes the institutional empires and constantly manifests itself in a process of continuous folding, unfolding, and refolding.” (Qian, 2016)

4.5 Daoism and Identity

According to the Lu-Wang School of Mind, morality is also related to the unification of knowledge with action. (Chan, 1963: 656) Identity in Daoism is similarly related to morality and the concept of *de*, as it is the virtuous force of nature that makes things what they are and gives form to the abstract, virtual *li* that exists prior to all things. Our identities as individuals are shaped by *li* and given form by *qi*. As “all things in the universe are constituted of one and the same *qi*, therefore men and all other things are but part of one great body.” (Feng, 1948: 278-9) Identity is an element of the Daoist universe, and an element of the metaverse that may benefit from the application of a Daoist conceptual framework.

“The metaverse is the highest form of digital existence for mankind.” (Zhao et al., 2021:31) In the metaverse, one’s existence and identity are related to one’s avatar. Metaverse locations such as Decentraland, Cryptovoxels, Somnium Space, The Sandbox, Treeverse, XiRang and online game platforms such as Roblox or Fortnite allow users “to have a ‘doppelganger’ in the digital world, a virtual digital twin born in the digital world who might have more colorful, vivid and

diverse characteristics than the one in the real world.” (Zhao et al., 2021:31) “Avatars in the metaverse are nothing more than the incarnations of humans, where multifaceted human personalities are likely to appear as different avatars in different metaverses.” (Zhao et al., 2021:223)

These digital avatars can be created or purchased. There are free public-use avatars and large marketplaces (the largest being www.opensea.io) for paid or even bespoke avatar models that may cost many thousands of dollars. Avatars can move within the metaverse space, controlled using computer keys, peripheral devices such as a mouse, or via haptic gloves. They can interact with other avatars and objects. Avatars can range from a photorealistic three-dimensional image of the user, able to move, speak and interact in real time, to fantastical creatures, mythical beings, aliens, robots, cyborgs, animate objects and everything in between.

In most metaverse spaces, avatars are entirely anonymous. Without KYC (know your customer) provisions, there is no way to connect the user to a telephone number, passport or identification number and thus no means of determining an individual’s true identity. All that is required is that the user has a crypto wallet, which can be created by anyone with access to a computer. It is likely that a Chinese metaverse will require user registration to create avatars.

Avatars may have clothes, shoes, hats, wings, horns, tails or any other trait that can be imagined. Avatars may be of nearly any shape or size, consistency and permanence, and of course may be of any ethnicity, race or gender. Players may buy “skins” for their avatars, which gives the avatar a new look without changing their underlying, non-appearance-based identity. “Players buy ‘skins’ for two general reasons: first, to satisfy their inner spirituality; secondly, they like different game experience and the satisfaction of being visible in social networks.” (Zhao et al., 2021:176)

The avatar cannot die or grow old. This accords with the Daoist quest for immortality. In addition, avatars naturally possess many of the “powers” that Daoist immortals are written as having. “They are shape-changers who can appear in any form they please. They can multiply themselves into many different people, bilocate to be present in more than one place at once, become visible and invisible at will, travel thousands of miles in an instant, see through walls and into distant locations... They have complete mastery over their appearance, health, and vitality and are able to live for as long as they like.” (Kohn, 2020:195)

This may lead to a reevaluation of issues of identity in the metaverse. What does it mean to have an ethnic, racial or gendered identity when all physical markers are gone? What does it mean to be patriotic, or to have any feelings about birth location, when one does not know where anyone was physically born? What does it mean to “be yourself” when you look like a dragon, a talking hamburger or a half-machine bounty hunter whose head is a green mist? Zhuangzi once wondered if he existed in the dream of a butterfly. (Zhuangzi, 1964: 45) Would it change one’s identity to actually be a butterfly in the metaverse of Zhuangzi’s dream? The immersive experience of the metaverse blurs the boundaries between imagination and reality, virtual and actual. Identity becomes increasingly fluid.

4.5.1 Identity and the Daoist Body

Identity may be related to the body, where the virtual, digital body is the avatar and the physical, temporal body is the human form. Through the metaverse, one may attain a level of spiritual freedom even if physically confined to a small space. This freedom or spontaneity is not purely imaginative but becomes a real affect as wearable technology and interfaces may allow one to break the confines of physical space.

As Merleau Ponty pointed out: “The body is the general way in which we have a world.” (Xiao, 2021) The body forms part of the identity. “Plato said that the body is the prison of the soul.” (Feng, 1948: 4) This represents the view that a Daoist sage must abandon society and become separated from “what may be called the entangling net of the matter-corrupted world.” (Feng, 1948: 6) As Laozi said, “The reason I have great trouble is that I have a body. When I no longer have a body, what trouble have I?” (Laozi, XIII) This was interpreted by seventh-century philosopher of Twofold Mystery, Li Rong, to refer to sensory involvement and the development of desire. (Kohn, 2020:51)

“Modern Western cultures tend to see the body as essentially mechanical, a machine consisting of parts that function more or less well and can be repaired or changed as necessary... The Daoist take on the body could not be more different. There is nothing firm, stable or separate about it but, like everything else, it consists of *qi* and is thus essentially the same as the cosmos. The body is the visible expression of the universal flow of energy, a dynamic field of multiple forces and tendencies, a continuous process or materialization, animation, disintegration, and reconstitution.” (Kohn, 2020:50)

In the metaverse, one may have no body at all but may have a direct neural connection to a computer. The metaverse, and the possibility of brain-computer interface, gives us a more Daoist sense of the body. “Changes in the way things interact makes the body a replaceable object.” (“‘Yuan Yuzou’ Yu Jishu Zhili: Tansuo Yu Zhengming 2021 Nian Du Guanjianci Zhi San [“Metaverse” and Technology Governance: Exploration and Contention 2021 Keynote Number 3],” 2022)

Computers are tools and Merleau-Ponty “argues that when people use (even primitive) tools and equipment, they already integrate them into their bodily experience and change the way

they construct ‘their world’.” (Xiao, 2021) The potential for a human-computer interaction in the metaverse involves the “mutual transformation between the inner spiritual world and the external material world.” (Xiao, 2021)

If external equipment through a brain-computer interface is seen as an extension of the human body, then a virtual limb extending into virtual space may be an extension of the real human body, in a sense, converting virtual space into real space. “The body extension realized through the brain-computer interface actually includes technology in the human body, so that the technically extended body becomes a new body and a part of the body (as if the extended cognition is a part of human cognition, the extended mind is a part of the human mind) and the human body’s ability has undergone revolutionary changes.” (Xiao, 2021)

In Daoism, “the physical body is a basically cosmic entity, the personal body and thus the self is a human construction.” (Kohn, 2020:171) In terms of identity and the body, a Daoist perspective suggests that, in the metaverse, one’s identity can take on a higher form and one can be removed from the need to have a body. As Zhuangzi says, “The Perfect Man has no self.” (Zhuangzi, 1964:26) According to the Neo-Confucian Lu-Wang School of the Mind, it makes little difference if there is a body, as the mind itself is the *li* and no separate concretization of the *qi* is required.

4.5.2 Identity of the Metaverse Space

Participants in the metaverse may have a fluidity of identity that far surpasses that of the web2 internet where an individual can change only their username and profile picture. The use of avatars can allow a participant to more fully create a persona and identity that can interact in a

three-dimensional space, moving the body from the physical world into the virtual world, thereby producing the possibility of real affect.

It may be that the space of the metaverse itself can take on an identity as well, a sense of self-expression. The universe in Daoist and Neo-Confucian thought is not conscious, as such, but is contained with the mind/heart duality, as “no principles or things exist outside the mind.” (Zhao et al., 2021: 24) In addition, the universe is influenced by the context in which it is engaged. “Reality without anything in it is *yu* (宇). So, according to the Chinese, space is clearly defined not only by itself but also by its referential relationship to the contexts. (Li, 2002)

“No individual person or thing is complete. Everything is related to everything else. The “everything else” is intangible because not all of everything else can be here and now... Unity here requires accrual: “Like a new life, the meaning of a new building suggestively manifested by others will grow in time from nothingness to something of its own... You cannot have sense of place with new buildings alone (or old buildings assigned new expectations). You have to accrue with your environment over time. It is only then that you touch Unity (read: sense of place).” (Chang, 1956: xiv)

It may be possible that the virtual space of a metaverse with Chinese characteristics could have a Chinese identity. Certain metaverse locations may have a moral identity. The identity of space itself may relate to the Daoist concept of the “uncarved block,” which is the idea of simplicity (*pu*, 朴) and refers to unworked wood. Neo-Confucian philosopher Wang Yangming stated that outside the mind, there is no grain to the wood (无心外之理). The wood of the universe, prior to being shaped, has not yet experienced a condensation of *qi*, but only the seed of its identity in the *li* combined with the natural virtue, *de*, of the space.

The uncarved block refers to doing only what is necessary and natural. Necessary means “necessary to the achievement of a certain purpose and never over-doing. ‘Natural’ means following one’s *Te* with no arbitrary effort.” (Feng, 1948: 100) It suggests that when an identity is driven by the need to increase satisfaction of desires, it leads to the opposite result. Laozi notes that “the five colors blind the eyes; the five notes deafen the ears; the five tastes injure the palate, riding and hunting make one’s mind go wild with excitement, rare treasures hinder right conduct.” (Laozi, XII) The identity of the space in the metaverse may be related to Deleuze’s notion of the fold, which is “a temporal concept that signifies the spatial-temporal dynamic in the process of subjectivation and identity formation.” (Qian, 2016)

Daoist concepts of simplicity also relate to the relinquishment of arbitrary effort. Arbitrary effort includes the desire to increase knowledge for knowledge’s sake, for “when cleverness emerges, there is great hypocrisy.” (Laozi, XVIII) It is possible that creation of the metaverse should be like Cook Ting, who, when cutting an ox for Long Wen-hui, explained that “a good cook changes his knife once a year – because he cuts. A mediocre cook changes his knife once a month – because he hacks” but that he, himself, had the same knife for nineteen years. (Zhuangzi, 1964: 47) “To the Chinese mindset, even though space emerges as an absence and exists outside of the physical description of a form, it provides man with boundless material for imaginative associations, the image beyond image, the landscape beyond landscape.” (Li, 2002)

A final Daoist consideration in the identity of the metaverse may be the theory of nonaction (*wuwei*, 无为). Nonaction does not mean that one should take “no action” or “do nothing” but rather that one should not act where action is unnecessary, and that one should act “without artificiality and arbitrariness.” (Feng, 1948: 99) Nonaction, in this sense, may refer to the algorithmic governance of the metaverse, as it takes no specific action, yet through it no actions

are left undone. This accords with the idea that “the ideal Daoist ruler is characterized by ‘actionless action’.” (Chang, 1956: viii) Nature flows effortless through the Daoist ruler “so that government, like everything else about him, is a spontaneous natural production. Hence the ruler himself is one who has no deliberate intentionality; in this sense he does nothing, because he is spontaneously natural in everything.” (Chang, 1956: viii)

5.0 Conclusion

Not every Daoist concept can be applied to the metaverse. Daoism is not a comprehensive framework designed for the metaverse. A fundamental question that underlies the application is how a framework about “naturalness” can be applied to a fundamentally artificial construction. Despite this, the Daoist cosmological framework might be useful as a lens through which to consider elements of the metaverse from a holistic perspective.

When A.I.T. Chang chose to view intangible forms in architecture through the lens of Daoism, he did so because Chinese philosophy was designed for architecture, but because certain elements of Chinese philosophy provided a conceptual method of understanding and expressing concepts that were not suitably explicable otherwise. Chang passed the first Buddhist level of ‘seeing mountain and water as mountain and water’ (看山是山，看水是水) traversed the higher level of cognition, seeing the interconnectedness of things without their uniqueness, where mountain is not mountain and water is not water (看山不是山，看水不是水), to the final level of cognition, where one can see the wholeness of things and the uniqueness of things along with the essence of universal connections, where mountain and water are again mountain and water. (看山还是山，看水还是水) (Zhao et al., 2021:330) Ultimately, “the moral-ethical impetus driving Chang is what we can probably call beauty, and his words attempt to capture this elusive commodity through the lens of Laozi.” (Chang, 1956: xiv)

In a similar way, the metaverse presents something unformed and beautiful, as the *li* of the flower that has yet to coalesce its *qi* and blossom into the fragrant bud. The metaverse may be more than an artificial piece of land, a virtual Palm Jumeirah created as a financial experiment.

(Burbano, 2021) Instead, the metaverse has its own *li*, its own *de*, its own natural virtue. Ultimately, different metaverse locations will reflect the socio-political viewpoints of those who created them and our inner nature. “The Daoist thinker and Zhuangzi commentator Guo Xiang defines inner nature as the personal aspect, allotment or share every has in *Dao*.” (Kohn, 2020: 77) While each metaverse will have its own *li*, “the realization of *li* requires a material basis.

It is possible that there will be multiple metaverses in the future, despite the suggestion of some, such as Elon Musk, that the metaverse is little more than a buzzword. (Dailey, 2021). Some metaverses may lean towards Western notions of decentralization, autonomy and even anarchy, while others veer towards increased censorship and control. Based on present levels of government and private interest, there will almost certainly be a metaverse created by the Chinese government with heightened regulations. Confucian ethics may underpin the reasoning and justifications for these regulations and may also explain why Chinese citizens might be willing to accept restrictive regulations. Additionally, Chinese philosophical concepts such as Daoism and Neo-Confucianism may present a conceptual framework through which to discuss certain aspects of all metaverses.

There is a story about the inventor of chess and the great king to whom it was presented. When the game of chess was first demonstrated, the king was deeply impressed and wanted to reward the creator. He offered the creator anything he desired. The inventor of chess asked for one grain of rice on the first square, two on the second square, four on the third square, eight on the fourth square and so on exponentially. The king readily agreed.

However, to the king’s great dismay and anger, by the time he got more than halfway through the squares, it wiped out the granaries for the entire kingdom. At square 64, there would be over 18 quintillion grains of rice, more than double the grains of sand in the world. The lesson being that exponential growth cannot be sustained. (Knapp, 2011) However, “the metaverse is an

ecosystem where scale returns increase with diminishing scale costs, and therefore it can grow endlessly.” (Zhao et al., 2021:32)

Outside the metaverse, the real world is subject to the law of diminishing marginal returns. The rising costs of education, housing, food and other physiological necessities have created in the world a disillusionment, a breach of the Rousseauian social contract and an opportunity for disruption. The discovery of the metaverse, the parallel virtual element of the already extant universe, provides humanity with new territories to explore, conceptual ways to define these new lands and may allow us to keep moving towards square 64 while remembering that the chessboard exists only within our hearts and minds.

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