

Utilization of Moral Educational Curriculum with a Focus on Value Relationship Circulation in the Metaverse: Centered on Zhu Xi's Theory of Self-Cultivation and Governing People

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Abstract

[Objective] The purpose of this study is to propose a method to achieve the goal of value relationship circulation in the moral education curriculum, based on Zhu Xi. This is done when conveying cyber etiquette, which pertains to relationships with others, in order to solve ethical issues in the Metaverse.

[Contents] The focus on relationships with others in solving ethical issues in the Metaverse involves regulating impulsive emotions and establishing relationships with oneself before ultimately encouraging the observance of cyber etiquette. As a result, based on Zhu Xi, who corrects others by first disciplining oneself, relationships with oneself are established first, then relationships with others are formed, and relationships with society/community, which do not discriminate against those who are different, and relationships with nature or transcendental beings, which reflect on mistakes each time, can be expanded.

[Conclusions] This study proposes a method to achieve value relationship circulation, the objective of the moral education curriculum, based on Zhu Xi when teaching cyber etiquette with a focus on relationships with others.

[Keywords] Metaverse, Cyber etiquette, Zhuzi, Self-discipline and governing the world, Relationships with others, Value relationship Circulation

This work was supported by the Ministry of Education of the Republic of Korea and the National Research Foundation of Korea (NRF-2022S1A5B5A17043207).

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메타버스에서 가치 관계 순환에 중점을 둔 도덕과 교과 활용 방안: 주자의 수기치인론을 중심으로

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요 약

[연구 목적] 본 연구의 목적은 메타버스 윤리 문제를 해결하려고 타인과의 관계에 해당하는 사이버 예절을 전달할 때 주자의 수기치인론에 기반해서 도덕과 교과 목표인 가치 관계 순환에 달성하는 방안을 제시하기 위한 것이다.

[연구 내용] 타인과의 관계에 초점을 두고 메타버스 윤리 문제를 해결하는 것은 충동적인 감정을 조절하면서 자신과의 관계를 이룬 다음에 비로소 사이버 예절을 지키도록 유도하는 데 있다. 왜냐하면 충동성을 절제하면서 이루는 자신과의 관계부터 이루지 않으면, 사이버 예절을 지키면서 아바타를 배려하기 어렵기 때문이다. 그로 인해 자신부터 닦아서 타인을 바로 잡아주는 주자학에 토대를 둘 때 자신과의 관계부터 이룬 다음 타인과의 관계를 이루어서, 나와 다르다고 차별하지 않는 사회·공동체와의 관계, 잘못할 때마다 성찰하는 자연·초월과의 관계로 확장할 수 있다.

[결론] 본 연구는 타인과의 관계에 초점을 두고 사이버 예절을 가르칠 때 주자학에 기반해서 도덕과 교과 목표인 가치 관계 순환까지 이루는 방안을 제안한 것이다. 즉 현대의 개인정보 침해 문제 또한 주자학에 기반해 개인정보를 침해하고자 하는 충동부터 조절한 다음, 사이버 예절을 지키게 하는 육성 시뮬레이션 방법으로 아바타의 개인정보를 존중하고, 공정성을 추구하며, 잘못할 때마다 성찰하는 가치 관계의 확장으로 해결할 수 있다.

[주제어] 메타버스, 사이버 예절, 주자, 수기치인, 타인과의 관계, 가치 관계 순환

I . Introduce

Recently, there has been an increase in educational practices such as career experience education, safety education, and subject education in the metaverse. In the metaverse, where learning activities are possible, “Meta” means processing, abstraction, transcendence, and “Verse” is derived from universe, meaning universe, real world. The combined term metaverse refers to a virtual world, where learning takes place through interaction.

As the number of learning activities in the metaverse increases, there are ethical, social, and environmental problems over a wide range. In fact, for teenagers and those in their 20s, they cite sexual content 68.7%, hate speech and harassment 56.7%, suicide 41.3%, fake news 39.8%, copyright infringement 24.4%, animal abuse 21.4% as problems (Broadcasting and Telecommunications Commission, 2022: 18).

Therefore, discussions on solutions to problems occurring in the metaverse are partially taking place in the dimension of educational goals (the values pursued by education). In the 2015 Moral Educational Curriculum (Appendix 6), for elementary school students, the focus is on ‘relationships with others’, and “What should be kept in cyberspace? (Cyber etiquette, law-abiding)” is presented. Furthermore, the goal pursued in the Moral Educational Curriculum should not only focus on ‘relationships with others’, but also achieve the goal of value relationship circulation. In the 2022 Revised Moral Educational Curriculum (Appendix 6), the focus is on ‘relationships with society/community’, and “How to solve problems occurring in digital society?” is presented. Furthermore, in the 2022 Revised Moral Educational Curriculum (Appendix 6), the goal of the moral educational curriculum is to achieve the circulation of value relationships. These things are seen as having to achieve the goal of value relationship circulation even if they focus on a specific relationship area and deliver the content system. Therefore, in this study, it is necessary to analyze whether the goal of value relationship circulation can be achieved even if the content system is delivered focusing on a specific relationship area by comparing the 2015 Moral Educational Curriculum and the 2022 Revised Moral Educational Curriculum.¹⁾

This study is to explore ways to achieve the curriculum goal of value relationship circulation

1) In this study, we will compare and analyze the 2015 Moral Educational Curriculum and the 2022 Revised Moral Educational Curriculum, but since textbooks organized according to the 2022 Revised Moral Educational Curriculum have not yet been published, when analyzing centered on moral textbooks, we will look at textbooks organized according to the 2015 Moral Educational Curriculum.

by teaching cyber etiquette focusing on ‘relationships with others’ to solve the metaverse ethics problem. It is difficult to specifically grasp how to achieve the goal of value relationship circulation when teaching cyber etiquette focusing on ‘relationships with others’ according to the 2015 Moral Educational Curriculum. In cyberspace, education using the metaverse emphasizes the high reality of education, but the exploration of its philosophical basis is insufficient. Therefore, this study will propose a moral educational curriculum implementation plan based on Zhu Xi (朱子, 1130-1200)’s theory of self-cultivation and the governing of people to deliver cyber etiquette focusing on ‘relationships with others’ and achieve the goal of value relationship circulation. Zhu Xi’s view of self-cultivation (修己) and governing people (治人) as an organic body can be a useful foundation for achieving the goal of expanding value relationships from relationships with oneself to relationships with oneself again. Above all, Zhu Xi’s detailed commentary can be useful for establishing the basis for the circulation of value relationships. To examine the implementation plan of the moral educational curriculum based on Zhu Xi, this study will be conducted by focusing on literature such as 『the Moral Educational Curriculum』, 『Moral Textbooks of Elementary School』, and Zhu Xi’s 『Great Learning』, 『Classified Conversations of Master Chu』. The content of this study will examine whether it is possible to achieve the goal of value relationship circulation by delivering cyber etiquette focusing on ‘relationships with others’ in Chapter II. In Chapter III, we will review what realistic discrepancies exist when applying the implementation plan based on Zhu Xi in the Metaverse to achieve the goal of value relationship circulation.

II. Exploring the Possibility of Value Relationship Circulation Based on Zhu Xi’s Philosophy

In this chapter, we will focus on delivering cyber etiquette, which appears in the 2015 Moral Educational Curriculum, to solve ethical problems arising from relationships between avatars in the metaverse. We will also examine whether we can achieve the Moral Educational Curriculum goals by teaching cyber etiquette, which focuses on ‘relationships with others’.

To solve ethical problems in the metaverse, we need to deliver “What should we observe in cyberspace?” (cyber etiquette, law-abiding), which is mentioned in the 2015 Moral Educational Curriculum. Here, cyberspace refers to a virtual space created by computers and the internet, a

three-dimensional world staged using computer systems. Cyberspace has a metaverse where you can engage in activities similar to reality through avatars, and the metaverse is a virtual space that is widely used as an educational platform recently. In the metaverse, learners have to move physically for learning, and they experience the virtual space as if they were moving in a real environment. In such cyberspace, there are cyber etiquettes that must be observed just like in the real world. The cyber etiquette that should be observed in the metaverse should be delivered with a focus on ‘relationships with others’ in the 2015 Moral Educational Curriculum. In the elementary school 5th grade textbook organized by this curriculum, there is a content that In order to create a happy cyber world, we should not use words that violate etiquette, and we should think and speak from the perspective of friends (Ministry of Education, 2022: 91).

In the 2022 Revised Moral Educational Curriculum, elementary students are taught “How can we solve problems occurring in digital society?” focusing on the ‘relationships with society/community’. Here, digital refers to storing information such as music, movies, games, photos, videos, and conversations as digital information composed of numbers made up of 1 and 0. The digital society processed by digital information is closely related to the metaverse, a virtual world. The metaverse is a world that is expanding into a digital world made up of digital information on the one hand, and on the other hand, the digital world is expanding into the real world and converging (Kim, 2022: 5). In such a metaverse, ethical problems occur just like in the real world, so it is inevitably required to have a sense of information and communication ethics through moral education.

The 2015 Moral Educational Curriculum teaches the cyber etiquette that should be observed in the metaverse with a focus on ‘relationships with others’, but the 2022 Revised Moral Educational Curriculum teaches problems occurring in the metaverse in the digital society with a focus on ‘relationships with society/community’. Then, why should we deliver the rules that should be observed in the metaverse with a focus on ‘relationships with society/community’ rather than ‘relationships with others’ in the future?

Currently, ethical issues arising in the metaverse include prejudice and discrimination, the black box of AI algorithms making decisions without human intervention, personal information protection, security and safety issues (Benjamins, Rubio & Alonso, 2023: 692-693). Not unlike real society, there are also issues of digital exclusion, sexual crimes, lookism, and property rights. These ethical issues in the metaverse are not problems that can be solved through ‘relationships with others’, but social problems that need to be solved at a societal level. Since these ethical issues in the metaverse occur in cyberspace where social and cultural activities can

be conducted based on social connections, they fall under the domain of ‘relationships with society/community’. Even if we only look at the protection of personal information or sexual crimes, these are not problems that can be solved through ‘relationships with others’, but problems that occur at a societal level and therefore require collective solutions. This is because, as in the case where the Ministry of Science and ICT enacted and implemented metaverse ethical principles in 2022, societal intervention is necessary to solve metaverse ethical issues for community stability. Therefore, the 2022 Revised Moral Educational Curriculum needs to focus on the ‘relationships with society/community’ domain to solve ethical issues arising in digital society. However, since textbooks organized according to the 2022 Revised Moral Educational Curriculum have not yet been distributed, this study will inevitably examine the 2015 Moral Educational Curriculum.

The cyber etiquette mentioned in the 2015 Moral Educational Curriculum is focused on ‘relationships with others’. To promote adherence to cyber etiquette in cyberspace like the metaverse, it is necessary to deliver educational content to fifth-grade elementary school students, such as “In cyberspace, it is necessary to think from the other person’s perspective and have consideration that understands the heart” (Ministry of Education, 2022: 93). This is content that you should have an attitude of caring for and respecting avatars while keeping cyber etiquette in the metaverse. In fact, avatars that often violate cyber etiquette and engage in violent speech may have difficulty maintaining harmonious relationships with other avatars due to their disrespectful attitude. Even in the metaverse, you need to keep cyber etiquette to harmonize with avatars, so you need to practice keeping cyber etiquette to form ‘relationships with others’.

In the metaverse, in order to respect and consider avatars while adhering to cyber etiquette, one must first establish ‘relationships with oneself’. This is because one becomes accustomed to respecting avatars after controlling violent impulses and establishing ‘relationships with oneself’. The moral textbook also states that ‘relationships with others’ presuppose the control of ‘relationships with oneself’. That is, the moral textbook states that in order to establish ‘relationships with others’ by adhering to cyber etiquette, In cyberspace, in order to become the master, you need to cultivate the power of restraint that can control your own cyber life (Ministry of Education, 2022: 93). This means that in order to establish ‘relationships with others’ that respect while adhering to cyber etiquette, one must first establish ‘relationships with oneself’ that has the power to control cyber life. The reason is that even if the focus is on ‘relationships with others’ and cyber etiquette is delivered, if one only wants to do as one

pleases according to impulse, one cannot respect and consider avatars. Therefore, based on the Zhu Xi philosophy that argues that a person who first cultivates his own morality has a good influence on others, the Moral Educational Curriculum also clearly suggests that ‘relationships with others’ should be established on the premise of ‘relationships with oneself’.

Zhu Xi says that one must first have the habit of behaving that keeps etiquette, pursue principle, and correct one’s mind, and then go on to correct others (*Daxuezhangju*, preface).²⁾ This is to cultivate virtue at the lesser learning (小學) stage, then act according to the morality realized at the great learning (大學) stage, and have a good influence on others to recover their morality. This is like an organism, where the inner sage (內聖) and outer sovereign (外王) are interconnected, cultivating one’s own morality first and then exerting a positive influence to equip others with morality as well. Based on Zhu Xi’s philosophy, one can establish ‘relationships with oneself’ by suppressing internal impulses and repeatedly acquiring moral habits. After that, one can establish ‘relationships with others’ by acquiring moral interpersonal skills and not harming others outside.

For example, in the metaverse, avatar A, who often swears, can point out that avatar B does not use correct and polite words. At this time, Avatar B can say that he can trust and accept the advice when the avatar who speaks correctly advises him to speak correctly. This is because in order to adhere to the cyber etiquette that one should speak politely, one must first establish ‘relationships with oneself’ by controlling violent tendencies and cultivating the habit of not swearing. Through this, it is sufficient to project moral characteristics into a dialogue system based on a large language model or an avatar in the metaverse (Grinbaum & Adomaitis, 2022: 257). Based on Zhu Xi’s philosophy, an avatar can realize that other avatars dislike an avatar who swears, just as I dislike it. As a result, an avatar who has established ‘relationships with oneself’ by cultivating a habit of controlling violent speech can speak polite words to avatars while adhering to cyber etiquette, and thus can respect avatars. Knowing that other people also like what I like and speaking politely in the metaverse is exactly the Confucian a moral path that uses oneself as a measure to think and examine others and direct them to the right path (絜矩之道). This a moral path that uses oneself as a measure to think and examine others and direct them to the right path (絜矩之道) presupposes that one first cultivates one’s own morality and then considers avatars. In Confucianism, the root of the family is the individual who is a

2) 大學章句·序, “人生八歲, 則自王公以下, 至於庶人之子弟, 皆入小學, 而教之以灑掃, 應對, 進退之節, 禮樂, 射御, 書數之文, 及其十有五年, 則自天子之元子, 衆子, 以至公, 卿, 大夫, 元士之適子, 與凡民之俊秀, 皆入大學, 而教之以窮理, 正心, 修己, 治人之道. 此又學校之教, 大小之節所以分也.”

family member, the fundamental force that leads the family harmoniously is oneself, and the fundamental problem of governing the world is one's own problem.

Zhu Xi says that self-cultivation and governing people are all governed by one principle. Because propriety (禮) is not only one of the nature of benevolence, righteousness, propriety, and wisdom (仁義禮智) that individuals should have in their hearts, but also a universal virtue required in society (*Lunyujizhu*, yanyuan).³⁾ Universal propriety is a form that completes individuals, families, countries, and the world, so it is a comprehensive concept that includes various rituals related to individual behavior, and social relationships. Since the principle of all things is one, a person who has a principle in his heart can establish a rule that is universally used in society based on it as a standard. This is equivalent to being able to do peripheral things such as correcting people's mistakes based on the principle in the heart (*Daxuezhangju*, chapter一).⁴⁾ Although there are first and last things in the root and the end, the fine and the coarse, they are used at the same time (*Zhuziyulei*, volume十五).⁵⁾ The reason is that the root of self-cultivation and the end of governing people are pierced by one principle. Although it is important to analyze self-cultivation and governing people separately, what is more important is that they must be interconnected through the service of sincerity based on the standard (Kim, 2007: 335-336).

Then, as Zhu Xi's self-cultivation and governing people all penetrate through one principle, can we encompass 'relationships with oneself', 'relationships with others', 'relationships with society/community', and 'the relation with nature' as fundamental core values to achieve the goals of moral educational curriculum?

In the 2015 Moral Educational Curriculum, there are core values corresponding to 'relationships with oneself', which is sincerity, 'relationships with others', which is consideration, 'relationships with society/community', which is justice, and 'the relation with nature', which is responsibility. Among the core values of the moral educational curriculum, sincerity is similar to the sincerity (誠) of Confucianism, consideration is similar to forgiveness (恕), the pursuit of correctness is similar to righteousness (義), and the responsibility of reflecting on mistakes is similar to loyalty (忠). In Confucianism, loyalty and forgiveness (忠恕) correspond to benevolence (仁). Loyalty and forgiveness are not vague, so they cannot be separated from

3) 論語集註・顏淵, “故爲仁者必有以勝私欲而復於禮, 則事皆天理, 而本心之德復全於我矣。歸, 猶與也。又言一日克己復禮, 則天下之人皆與其仁, 極言其效之甚速而至大也。”

4) 大學章句・經一章, “明德爲本, 新民爲末。”

5) 朱子語類・卷十五, “說爲學次第, 曰, 本末精粗, 雖有先後, 然一齊用做去。”

sincerity, and benevolence encompasses righteousness, propriety, and wisdom (義禮智) (*Lunyujizhu*, Liren).⁶⁾ This is because, as in Confucianism, virtues all penetrate through one principle, sincerity, forgiveness, righteousness, and loyalty also encompass the fundamental value of Confucianism, benevolence. Based on Confucianism, the core values of the moral educational curriculum can be encompassed by benevolence, which is a virtue that loves all things and pursues fairness in society (*Zhuziyulei*, volume 六).⁷⁾ Because core values such as sincerity, consideration, justice, and responsibility also do not deviate from the act of loving all things.

Then, as Zhu Xi's self-cultivation and governing people all penetrate through one principle, can we encompass 'relationships with oneself', 'relationships with others', 'relationships with society/community', and 'the relation with nature' as fundamental core values to achieve the goals of moral educational curriculum? In the moral textbook, it is stated, When writing or commenting in cyberspace, write with a sense of responsibility for the information and stories you convey (Ministry of Education, 2022: 93). This content is about cultivating core values such as responsibility, which prevents avatars from being hurt by the comments they write as a result of reflecting on and improving their mistakes. It also provides the potential to strengthen introspection through learning for people who use avatars in the virtual world (Twining, 2009: 512). The core value of responsibility is not a core value corresponding to 'relationships with others', but a core value corresponding to 'the relation with nature or transcendental being'. Therefore, it is necessary to clearly state that when teaching cyber etiquette focused on 'relationships with others' to foster consideration, it cannot be separated from conveying responsibility corresponding to 'the relation with nature or transcendental being'. Questions about the problem surrounding moral values come only from practical interest and importance. Based on Zhu Xi's self-cultivation and governing people, when delivering cyber etiquette focused on 'relationships with others', it is necessary to promote the connection to 'the relation with nature or transcendental being', where one introspects oneself and takes responsibility for one's own mistakes, in order to approach the goal of achieving value relationship circulation.

For example, it teaches learners how to respect personal information and copyright if their personal information and copyright have been infringed (Ministry of Education, 2018: 89). In fact, avatars like children sometimes fail to protect personal information such as addresses and

6) 論語集註・里仁, “忠恕一以貫之, 忠者天道, 恕者人道, 忠者無妄, 恕者所以行乎忠也。 ; 程子曰, 以己及物, 仁也, 推己及物, 恕也。”

7) 朱子語類・卷六, “仁是天理, 公是天理。” ; 朱子語類・卷八, “凡天理, 人欲, 義利, 公私, 善惡之辨, 莫不皆通。”

phone numbers in the metaverse (Gyeonggi Daily: 2023). If you experience this directly and realize the need to protect personal information and copyright, you can form a moral habit of 'relationships with oneself' by imitating the exemplars of protecting personal information. By imitating the practices of exemplary people and applying what we have learned to create our own behavioral repertoire, we can ideally bring about positive changes in our moral tradition. Based on Zhu Xi's self-cultivation and governing people, after establishing 'relationships with oneself', one can establish 'relationships with others' by respecting the personal information of avatars while adhering to cyber etiquette. By revealing one's true humanity in relationships with people, one can truly become a good person (Gardner, 2003: 161). When teaching cyber etiquette, it can be promoted to expand to 'relationships with society/community' that pursue fairness through ethical decision-making that infringing on personal information is wrong while forming 'relationships with others' with consideration. Then, it can be guided to expand to 'the relation with nature or transcendental being' by encouraging introspection and improvement whenever mistakes are made. The 2015 Moral Educational Curriculum aims to internalize the core values that expand from oneself to others, society/community, and nature or transcendental being, and to establish the basic elements of character in practice (Ministry of Education, 2015: 4). This can achieve the curriculum goal of forming a value relationship circulation by teaching cyber etiquette focused on 'relationships with others'.

In the metaverse, there are cases where sexual harassment, sexual molestation, and sexual assault incidents occur targeting children (JoongAng Ilbo, 2022). Avatars who witness such incidents can easily imitate them. To prevent the imitation of bad behavior, it can be encouraged to imagine the incidents that occur by imitating bad examples through moral education and understand why they should not be imitated. Understanding while working is knowing through the mistakes made while working. Even in the metaverse, people who feel ashamed every time they violate cyber etiquette can truly know and keep the reason why they should keep cyber etiquette. Based on Zhu Xi's philosophy, people who experience conflicts with avatars every time they imitate bad examples can realize the reason why they should keep cyber etiquette and practice cyber etiquette (*Lunyujizhu*, yongye).⁸⁾ After achieving 'relationships with oneself' through moral habituation, one can achieve 'relationships with others' by empathizing with and respecting the pain of avatars who have suffered cyber violence. In cyberspace, it can be encouraged to have a considerate attitude that understands the other

8) 論語集註・雍也, “然必先明諸心, 知所往, 然後力行以求至焉.”

person's mind and respects the other person's thoughts and opinions (Ministry of Education, 2022: 93). Then, it can achieve 'relationships with society/community' by pursuing fairness through humanity. Every time you violate cyber etiquette, you can also achieve 'the relation with nature' by making ethical reflections and not being mistakes. Since all of these do not deviate from humanity, it is possible to achieve value relationship circulation with a heart that loves all things based on benevolence (仁). The educational use of digital avatars in the metaverse can be a useful means when it allows learners to experience the next stage in advance, such as value relationship circulation.

The 2022 Revised Moral Educational Curriculum is no different. In a digital society where problems such as sexual harassment occur, 'relationships with society/community' should be harmonious, first of all, 'relationships with others' that empathize with the pain of others must be achieved. This is because avatars who cannot empathize with others do not have the will to solve the metaverse sexual harassment problem that occurs in the digital society. And to respect the avatar who has been victimized while empathizing with his pain, first of all, 'relationships with oneself' must be achieved by restraining impulses. That is, if you know the reason why you should not sexually harass through the experience of being sexually harassed in the metaverse and restrain impulses to achieve 'relationships with oneself', you can achieve 'relationships with others' by empathizing with the avatar who is sexually harassed. And by striving to solve the sexual harassment problem occurring in the metaverse in a fair way for the peace of the community, 'relationships with society/community' can be achieved. Then, it can achieve 'the relation with nature' that pursues a sustainable life with all things. Even when implementing the 2022 Revised Moral Educational Curriculum, it is possible to achieve the goal of value relationship circulation by penetrating all relationship areas with humanity based on Zhu Xi's self-cultivation and governing people.

Is it possible to achieve the goal of value relationship circulation in moral educational curriculum while defining each relationship area?

The 2015 Moral Educational Curriculum and the 2022 Revised Moral Educational Curriculum have the difficulty of achieving the goal of value relationship circulation while separating 'relationships with oneself', 'relationships with others', 'relationships with society/community', and 'the relation with nature' respectively. This study will solve this difficulty based on Zhu Xi's theory of self-cultivation and governing people. Zhu Xi annotates disciplining oneself to do good for others (修己安人) in Lunyu (論語) and systematizes the way of self-cultivation and governing people (修己治人) based on the Ancient Text Daxue (古本大學) (*Daxuezhangju*,

preface).⁹⁾ Among the eight categories (八條目), Gyeokmulchiji (格物致知), Seongui (誠意), Jeongsim (正心), and Sushin (修身) correspond to self-cultivation, and Jega (齊家), Chiguk (治國), and Pyeongcheonha (平天下) correspond to governing people (*Zhuziyulei*, volume六十五).¹⁰⁾ This is conceptually distinguished as inner sage (內聖) focused on individuals and outer sovereign (外王) focused on the community. Based on this, moral educational curriculum can also be divided into ‘relationships with oneself’, ‘relationships with others’, ‘relationships with society/community’, and ‘the relation with nature’ according to the area.

However, the way of self-cultivation and governing people is intertwined with self-cultivation that fulfills the inside and governing people that takes place outside. Like an organism, a person who brightens the nature of benevolence, righteousness, propriety, and wisdom by disciplining himself establishes a universal etiquette norm based on this principle to facilitate relationships with others. A person who brightens the virtue in his heart through cultivation and does not cover it with mixed temperament or human desires induces others to brighten their virtues and corrects their mistakes (*Daxuezhangju*, chapter一).¹¹⁾ Song Dynasty Confucian scholars emphasize the educated human image of inner growth and personality completion through education (Ko, 2012: 258). This is because a person who cannot become a role model by disciplining himself from the inside cannot correct the wrong by influencing others outside. The problem of self-cultivation, which is a cultivation problem, and the problem of governing people, which is based on it to educate others, are interconnected (Shin, 2010: 121). Based on this, moral educational curriculum can also achieve value relationship circulation based on humanity after achieving ‘relationships with oneself’ that fulfills the inside.

Then, is it possible for a person who has not achieved ‘relationships with oneself’ to accidentally achieve ‘relationships with others’?

A person who does not first discipline himself does not know the shortcomings of the person he cherishes and does not know the strengths of the person he hates. The reason why correcting others comes first in disciplining oneself is because people are biased towards what they cherish, despise what they despise, and are biased towards what they fear and respect (*Daxue*, chapter八).¹²⁾ Generally, when emotions surge excessively, people cannot see as they

9) 大學章句·序, “顧其爲書猶頗放失, 是以忘其固陋, 采而輯之, 間亦竊附己意, 補其闕略, 以俟後之君子。……然於國家化民成俗之意, 學者修己治人之方, 則未必無小補云。”

10) 朱子語類·卷六十五, “大學中明德便包得格物, 致知, 誠意, 正心, 修身五箇, 新民便包得齊家, 治國, 平天下三箇。”

11) 大學章句·經一章, “明德爲本, 新民爲末。”

are that there are shortcomings in the people they cherish and there are strengths in the people they hate. And generally, people tend to rebel and harm others by hating what people generally like and liking what people generally hate. Therefore, a gentleman must not have bad qualities before requiring others not to have bad qualities, and there has never been a person who does not value others who could teach others (Chan, 1963: 91). Because a person whose body is not disciplined does not follow what is generally oriented, people do not agree with his judgment and do not follow it (*Daxue*, chapter 八).¹³⁾ Generally, people do not follow a person who violates humanity, so it is impossible for him to govern the community (*Daxuezhangju*, chapter 八).¹⁴⁾ Therefore, Zhu Xi advises students to reach a level where they objectively understand humanity by discussing with their peers (Ivanhoe, 2000: 51). For example, an avatar who hears discriminatory remarks in the metaverse can be painful. Even if an avatar who does not stop making discriminatory remarks after seeing it recommends to avatars not to make discriminatory remarks, there are few avatars who will listen to him. Therefore, the task of correcting the mistakes of avatars can be done by an avatar who first has morality.

III. Implementation of Moral Educational Curriculum Based on Zhu Xi's Philosophy

To solve ethical problems in the metaverse by teaching cyber etiquette, it is necessary to examine what realistic discrepancies exist. This is because there can be a discrepancy between the etiquette of Zhu Xi, which is based on Zhu Xi's philosophy, and the cyber etiquette that must be established in the metaverse. Therefore, this chapter will identify the realistic discrepancies that occur when delivering cyber etiquette based on Zhu Xi's philosophy and discuss solutions to overcome them.

The metaverse is an educational space where a nurturing simulation that applies cyber etiquette can be repeated without the constraints of time and space. The nurturing simulation makes you feel a sense of achievement by growing an avatar correctly by implementing

12) 大學·傳八章, “所謂齊其家在修其身者, 人之其所親愛而辟焉, 之其所賤惡而辟焉, 之其所畏敬而辟焉。”

13) 大學章句·傳八章, “五者在人, 本有當然之則, 然常人之情, 惟其所向而不可察焉, 則必陷於一偏, 而身不修矣。”

14) 大學·傳八章, “此謂身不修, 不可以齊其家。”

instincts such as maternal love or paternal love in the digital world. The educational reality of the metaverse, which enforces cyber etiquette through a nurturing simulation, is as shown in [Figure 1].



[그림 1] 메타버스 교실에서 형성하는 아바타 간의 교육적 관계

[Figure 1] educational relationships formed between avatars in a metaverse classroom

(<https://www.youtube.com/watch?v=PhRsJW8-UEA>)

The cyber etiquette kept through the nurturing simulation maintains the relationships formed in the metaverse smoothly. That is, an avatar who knows how to care while keeping cyber etiquette respects the opinion of an avatar who asks to be quiet, guides an avatar who says he is hungry at lunchtime to the cafeteria, and helps an avatar who left his passport at home when experiencing a travel product development center.

However, just as there are learners who do not keep etiquette even after learning etiquette in the real world, they may not execute in the metaverse even after learning cyber etiquette. For example, in a metaverse classroom, an avatar who says to be quiet can say, “You be quiet!”, and an avatar who says he is hungry in the classroom can tease, “You’re like a pig.”, and an avatar who says he left his passport at home can tease, “You’re like a fool.” Saying unkind words while violating cyber etiquette makes the avatar uncomfortable, even in the virtual world. In fact, in the statistical data on unethical behavior experiences and witnessing in the metaverse where various activities such as learning, games, and interactions take place, 38.3% responded that there are remarks or behaviors that cause discomfort (Ministry of Science and ICT, 2022: 69).

Every time an incident occurs where cyber etiquette is known but not practiced, we can encourage practice as we know it based on Zhu Xi’s philosophy. Zhu Xi emphasizes forming good habits from the lower stages, the exploration of virtues in the upper stages, and piercing the principles embedded in actions (*Mengzizhizhu*, *gaoziI*).¹⁵⁾ A person who has mastered the

upward can form a habit of embodying the principles learned in the body. Based on this Zhu Xi's philosophy, in the metaverse, we can have a belief that we should not harm others by looking at avatars that do not keep cyber etiquette. As a result, the reason for keeping cyber etiquette can be truly realized and practiced. This is because knowing and acting are both intertwined as if you realize something new as you apply what you know (*Zhuziyulei*, volume 十四).¹⁶⁾ In the metaverse, every time you harm others by not keeping cyber etiquette, a sense of shame arises in yourself, so an avatar who reflects on his mistakes based on this feeling can keep cyber etiquette. The climax of knowing is connected to action. Based on Zhu Xi's philosophy, even in the metaverse, an avatar who has directly experienced what unethical speech leads to can form a habit of keeping cyber etiquette and achieve 'relationships with oneself' first.

Realizing and keeping the reason why we should keep cyber etiquette in the metaverse is to achieve 'relationships with others' based on 'relationships with oneself'. That is, in the metaverse, it may be difficult to keep cyber etiquette while caring for and respecting avatars without presupposing 'relationships with oneself' that suppress animalistic impulses and express good emotions correctly. In the metaverse, if an avatar with morality knows how to care for avatars through a nurturing simulation rather than doing as he pleases, he can achieve 'relationships with others'. If you respect and understand avatars, you can gradually make correct decisions and achieve 'relationships with society/community'. In the metaverse, if you can repeatedly make correct decisions while imagining violating cyber etiquette, you can reach 'the relation with nature or transcendental being' while acting responsibly. This is to achieve the goal of value relationship circulation by keeping cyber etiquette through a nurturing simulation in the metaverse.

However, Zhu Xi has never directly discussed the cyber etiquette that should be observed in the metaverse. That is, Zhu Xi has never directly discussed ethical issues such as murder, personal information protection, privacy infringement, and sexual crimes that occur in the metaverse. For example, in the real world, murder is an unethical act that is legally punished. In the metaverse, killing an avatar while interacting is also an ethical problem. On the other hand, killing an avatar while playing a game in the metaverse is not an ethical or legal problem. This is because the inhumanity in the real world and the inhumanity when playing a game in the metaverse are defined differently. Therefore, it is important to clearly convey the

15) 孟子集註・告子I, “聖賢千言萬語, 只是欲人將已放之心約之, 使反復入身來, 自能尋向上去, 下學而上達也。”

16) 朱子語類・卷十四, “知之愈明, 則行之愈篤, 行之愈篤, 則知之益明. 二者皆不可偏廢.”

difference between murder in the real world and murder when playing a game in the metaverse from an ethical perspective. Also, even though sexual harassment or sexual assault in the metaverse is an ethical problem, there is still no legal basis for punishment unlike in the real world. In the metaverse, pseudo-sexual acts targeting children using characters cannot be seen as direct sexual intercourse or similar acts, so it is difficult to punish under the Sex Trade Punishment Act or the Youth Sex Protection Act (Kim, 2022: 77). In Korea, sexual crimes in the metaverse can be seen as obscene crimes using communication media under the Sexual Violence Act, but there is a gap between the real world and the metaverse in that there are no regulations to punish the perpetrators of sexual violence between avatars. Therefore, it may not be simple to derive solutions to these metaverse problems based on Zhu Xi. This is because Zhu Xi has never directly discussed sexual crimes, personal information protection issues, and privacy infringement issues that occur in the metaverse. Therefore, it is important to clearly highlight the gap between the real world and the metaverse when delivering moral educational curriculum based on Zhu Xi's philosophy and keeping cyber etiquette.

If we consider how the modern metaverse ethical problems that Zhu Xi did not discuss can be solved in any way, first, modern metaverse ethical problems can also be solved based on Zhu Xi's self-cultivation and governing people. Zhu Xi says that disciplining oneself and correcting others' mistakes are all just one principle (*Zhuziyulei*, volume五十).¹⁷⁾ The inside and outside of self-cultivation and governing people can be said to be a consistent way, and the origin and beginning, the end and the last are not separated from each other, but are principles that are mutually inherent. Self-cultivation is the basis that makes governing people possible, and governing people is the expansion of self-cultivation. Since the virtues of oneself in the inside and the virtues of others in the outside are all the same, in the metaverse, if the role model first brightens his virtue and has a good influence, people can also brighten their virtue (*Zhuziyulei*, volume十五).¹⁸⁾ Always being cautious and preserving the principles in mind, a person can consider the heart of others based on a good heart and care for him. If you use your own heart to consider the heart of others based on the universal heart of human beings, we do not do what we hate to others (*Zhongyongzhangju*, chapter十三).¹⁹⁾ Just like the relationship between people, Confucian scholars emphasize the meaning of an independent self from social order and their deep relationship (Shun, 2004: 190).

17) 朱子語類·卷五十, “治己治人, 其理一也。”

18) 朱子語類·卷十五, “今且以明德, 新民互言之, 則明明德者, 所以自新也, 新民者, 所以使人各明其明德也。”

19) 中庸章句·第十三章, “施諸己而不願, 亦勿施於人, 忠恕之事也。以己之心, 度人之心, 未嘗不同。”

In fact, learners who see a friend with intellectual disabilities being bullied in the classroom can feel sympathy for the bullied friend (SBS News, 2022). Based on this sympathetic heart, we can consider the pain of a friend who is being bullied, remember the pain when we ourselves were bullied, and prevent bullying behavior (*Lunyujizhu*, yongye).²⁰⁾ In the metaverse, if you watch someone sexually harassing and bullying, a hateful heart can arise against such wrongdoing, and you can stop the wrong avatar. If everyone makes educational efforts to have a positive moral conscience, they can make conscientious judgments and moral actions in real life. As Zhu Xi argued, in the metaverse, an avatar that has virtues from the beginning can correct mistakes through relationships and have a good influence. People automatically receive good influence, like shadows and echoes spreading quickly, when they are close to people who brightly illuminate their virtues (*Daxuezhongju*, chapter十).²¹⁾ The development of a good self proposed in Confucianism is also important, and goodness can be infected in the community.

Of course, in the metaverse, the sense of reality can be lower than in the real world when giving and receiving good influences. Nevertheless, in the metaverse, every time an avatar makes a good speech, it can have a good influence on the avatars. For example, if there is an avatar making hate speech in the metaverse, the avatar who sees it can imitate the wrong as it sees it. On the other hand, if there is an avatar making a beautiful speech in the metaverse, the avatar who sees it can also receive a good influence. It goes without saying that the influence of the role model will lead to the learner's analysis. In the metaverse, as the number of avatars keeping cyber etiquette while giving and receiving good influences increases, we can create a fair and good virtual community. In such a virtual community, a newly entered avatar also has the possibility of imitating a good role model, and it is possible to achieve the expansion of value relationships by reflecting every time it makes a mistake different from the role model.

Secondly, since people's hearts are universally the same, we can reestablish the rules that should be observed in the metaverse based on the humanity discussed by Zhu Xi. The biggest feature of the ethical problems that occur in the metaverse is that there are no regulations yet to regulate cyber violence committed by avatars that are identified with users, crimes of directly attacking avatars, avatar murder, avatar sexual violence, etc. From this point of view, the rules that should be observed in the metaverse can be determined based on the nature of benevolence, righteousness, propriety, and wisdom (仁義禮智). That is, if you commit murder

20) 論語集註・雍也, “以己及人, 仁者之心也。於此觀之, 可以見天理之周流而無間矣。”

21) 大學章句・傳十章, “上行下效, 捷於影響, 所謂家齊而國治也, 亦可以見人心之所同, 而不可使有一夫之不獲矣。”

while interacting with an avatar in the metaverse, you can define murder and other wrongs as immoral acts based on benevolence (仁) of Zhu Xi. Sexual harassment, sexual assault, personal information infringement, and privacy infringement can be defined as wrong acts based on wisdom (智) and acts that harm others against propriety (禮), and can be defined as mistakes that need to be reflected based on righteousness (義) (*Zhuziyulei*, volume 六).²²⁾ In fact, the part where Zhu Xi discussed the heart of hating the wrong behavior that deviates from propriety (禮) can be useful in solving the ethical problems that occur in the metaverse. This is because in the metaverse, you can feel upright every time you keep cyber etiquette through simulation, and you can feel ashamed every time you violate cyber etiquette. The requirement that all institutions and technologies achieved by humans serve humans and can be controlled by humans can be said to be the ethics of Confucian human relationships (Keum, 2001: 63). Even in the metaverse, people who know the things that happen when they violate cyber etiquette can keep cyber etiquette so as not to feel the same shame as before by reflecting on the mistakes they made before. In this way, in modern times, it is possible to newly establish rules that can be applied in the metaverse based on the nature of benevolence, righteousness, propriety, and wisdom. In fact, (through experience in the metaverse) students can show a high level of understanding and are particularly proficient in the analysis between ethical concepts/theories and virtual/real experiences (Houser et al., 2011: 264).

Furthermore, when establishing metaverse rules based on the humanity of Zhu Xi, the following rules can be proposed. For example, (since people's hearts are the same, if I want to be respected) respect the avatar by keeping the propriety in the metaverse, (imagine the feeling when I hear abusive language) do not swear at the avatar, do not follow derogatory or hateful remarks, do not harm (murder, violence) the avatar while interacting, etc.

IV. Conclusion

This study was, firstly, to concretely propose whether the goal of value relationship circulation can be achieved by teaching cyber etiquette that corresponds to the area of 'relationships with others' based on Zhu Xi's theory of self-cultivation and the governing of

22) 朱子語類·卷六, “有箇宜底意思是義, 有箇讓底意思是禮, 有箇別白底意思是智, 有箇愛底意思是仁. 仁是天理, 公是天理.”

people. Avatars who learned cyber etiquette while playing good characters were able to maintain 'relationships with others' smoothly. Every time an avatar that does not follow cyber etiquette was seen, the professor was able to encourage them to keep cyber etiquette like a saint by changing the avatar into an avatar in the form of a saint and simulating the speech and behavior of a saint. A person with two more characteristics, such as conscience, who regulates between moral deviation and regulation and achieves harmony, was able to play a good character (Ewell et al., 2016: 435). However, Metaverse learning activities based on Zhu Xi's philosophy had to start with 'relationships with oneself', where avatars control violent impulses every time they speak, before achieving 'relationships with others'. This is because avatars who cannot control violent impulses through nurturing simulations cannot respect avatars while keeping cyber etiquette. Therefore, if you achieve 'relationships with others' on the premise of 'relationships with oneself', avatars who have heard discriminatory or hateful remarks can receive fair educational counseling services and achieve 'relationships with society/community'. Occasionally, when making discriminatory or hateful remarks, they were able to achieve 'the relation with nature or transcendental being' by making ethical reflections. This was seen as being able to achieve the goal of value relationship circulation by teaching cyber etiquette focusing on 'relationships with others'.

The significance of this study was, firstly, to concretely propose whether the goal of value relationship circulation can be achieved by teaching cyber etiquette that corresponds to the area of 'relationships with others' based on Zhu Xi's philosophy. In the 2015 Moral Educational Curriculum, 'relationships with oneself', 'relationships with others', 'relationships with society/community', 'the relation with nature or transcendental being' are each distinguished and described, and the content of keeping cyber etiquette for elementary school students corresponds to 'relationships with others'. Readers may find it difficult to concretely grasp how to achieve the goal of value relationship circulation, which is the goal of moral educational curriculum, by teaching cyber etiquette that corresponds to 'relationships with others'. Therefore, this study saw that it is possible to achieve the goal of value relationship circulation when teaching cyber etiquette focusing on 'relationships with others' based on Zhu Xi's philosophy. Zhu Xi's self-cultivation and the governing of people are conceptually distinguished, but they are connected to each other, just as they naturally have a good influence on others as soon as they cultivate themselves. When we base on Zhu Xi's philosophy, we can see 'relationships with oneself', 'relationships with others', 'relationships with society/community', 'the relation with nature or transcendental being' each conceptually distinguished, but we can achieve the goal of

moral educational curriculum that circulates from ‘relationships with oneself’ to ‘relationships with others’, ‘relationships with society/community’, ‘the relation with nature or transcendental being’. In other words, when teaching cyber etiquette through moral educational curriculum, we should focus on ‘relationships with others’. This is because, just as Zhu Xi’s self-cultivation and the governing of people are defined as each concept, they were able to distinguish ‘relationships with others’ from other value relationships. To achieve the goal of value relationship circulation, we can see self-cultivation and the governing of people as an organic body and achieve ‘relationships with oneself’ first, and then achieve ‘relationships with others’. After that, they were able to expand to ‘relationships with society/community’, ‘the relation with nature or transcendental being’. This research has the significance of presenting a concrete plan to achieve the goal of value relationship circulation by teaching cyber etiquette focusing on ‘relationships with others’, rather than raising criticism that it cannot achieve value relationship circulation.

Secondly, the significance of this study lies in its ability to apply Zhu Xi’s theory of self-cultivation and the governing of people to contemporary society, thereby proposing new solutions to problems arising in the metaverse. Zhu Xi, a scholar from the Southern Song Dynasty, had never discussed issues such as sexual harassment, copyright protection, property rights protection, and privacy protection that occur in the metaverse. Therefore, this study aimed to devise new solutions to problems occurring in the modern metaverse based on Zhu Xi’s philosophy. Zhu Xi’s interpretation of Confucius’s doctrine of loyalty and forgiveness (忠恕) as benevolence (仁) was entirely to emphasize humanity (*Zhongyongzhangju*, chapter十三).²³⁾ Just as Zhu Xi encompassed benevolence, righteousness, propriety, and wisdom (仁義禮智) under benevolence (仁), the values of honesty, consideration, justice, and responsibility required in the metaverse could all be based on a loving heart. When interpreting this, it was possible to see that the current problems of personal information and privacy infringement also occur because people do not love each other. This is because people who love others do not infringe on personal information or privacy but respect it. Therefore, through a nurturing simulation in the metaverse based on Zhu Xi’s philosophy, avatars can love and consider other avatars and not infringe on personal information or privacy at will.

23) 中庸章句·第十三章, “以己之心度人之心, 未嘗不同, 則道之不遠於人者可見. 故己之所不欲, 則勿以施之於人, 亦不遠人以爲道之事. 張子所謂以愛己之心愛人則盡仁是也.”

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