THE ROLE OF VIRTUAL ARCHITECTURE: PHENOMENOLOGICAL PERSPECTIVE

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Abstract:

Virtual reality (VR) will soon allow users to access experiences that have never before been possible. Many cultural institutions such as museums, tourism sites, or libraries will undoubtedly utilize VR more for historical, scientific, artistic, and educational learning and enjoyment. Human cognition includes both physical and virtual experiences and thoughts, and we need to understand how and why different cognitive media such as real, visual including VR, or text object are differently recognized by people. Based on phenomenological consideration and analysis with the case of Korean built heritage, this theoretical study suggests the philosophical and theoretical frame for the usage and role of VR in cultural discourse of the community. Further research may seek to identify differences between the experiences of participants exploring those forms through experiencing both physical and virtual cultural heritage objects.

Key words: virtual archaeology, digital archaeology, cyber-archaeology, cultural heritage, documentation, 3D reconstruction

1. Introduction

The loss of cultural heritage leads to the loss of cultural identity for the community, and the symbolic built heritage gives the foundation of social and concrete development (Stephens and Tiwaria 2015). Built heritage is believed to be one of the most influential and fundamental objects among several tangible cultural heritage such as clothing or food. It is because a built heritage is the stage or space where the social activities could be realized with both tangible and intangible heritage (Lee 2013).

Compared to its regional neighbours in East Asia, Korea has suffered enormous loss of historical materials including cultural heritage, which led to the current situation lacking the diachronic Epistemological frame due to mainly two reasons; 1) the major wars with its neighbouring countries such as the invasion from Genghis Khan in 13th century, and Japanese invasion in 16th century, and 2) its rapid modernization and industrialization in 20th century. There also existed a rather scornful attitude about the artists from mid to late Joseon dynasty (17th to 19th century) based on strict Neo-Confucianism. This attitude was even harsher on the professional artist group compared to the ones belong to the royal court.

As a result, current discourse on the tradition of Korea mainly focuses on its relatively recent era, late Joseon dynasty (17~19C) and the discourse on the traditional architecture is no exception. Thus, this lack of diachronic and substantial cultural heritage leads the shortage of visible tangibility in built heritages, clothing, and art paintings. In this regard, there lies the gist of the identity issue in Korean society, that is, absence of entities and sense of reality. The current discourse for Korean national cultural identity seems to be confined in idealism. That is, as Lee said (2013), there have been many studies in Korean study dealing with the idea, concept, or notion without the entity or reality by asking the metaphysical questions such as "What is the definition of something Korean?" or "What is the identity of beauty of Korean?" (Lee 2013, p.3). And this tendency also leads to the neglect of more active usage of the existing visible resources. I believe that via the inductive process, the individual entities with the concrete shapes develop the identity of the cultural community and also create the discourse on how to utilize them. Afterwards, those visible entities become the perceptible objects of Korean culture.

2. Phenomenological point of view

Hence, it is argued that we need to apply a strict view for the cultural discourse as it seems a necessary work to have the cultural discourse with minimizing any possible biases from the knowledge gained from the society or existing education on the cultural entities. It is suggested to apply the philosophical methodology from Phenomenology in order to analyze the human cognition on the cultural heritage. Before introducing the detailed methodology, the basic theoretical background of Phenomenology is briefly reviewed. Edmund Husserl, the father of Phenomenology, explained that the actual meaning of the sentence, "I think", is in fact "I think (something)". That is because human consciousness is always the consciousness of (toward) something. This is

called 'Intentionalität (Intentionality)'. Park (2007) explained that the object in your mind might not exist without Intentionalität. He added that "this does not mean that it is not existing in the real physical world but means that it just can not be the perceptible object for us"[1]. Husserl named such a process that activates the hylomorphism (cognitive materials) and constitutes the meaning of the object 'Noesis', and its outcome 'Noema'. Thus, Noema is the content itself that appears in the operation of awareness.

In order to understand Noema, which is beyond the scope of expressions from the language, Husserl suggested the methodology called 'Epoche', in other words, suspension of judgment. Park (2010) argued that this is the right process for Epoche as the language contains the biases or ideology of the specific speech community. If we apply this process to the perception on cultural heritage, we may find that there are different perceptions or impressions on the same heritage between the community who are familiar with this heritage based on plentiful information, and the foreign community without such information[2].

Thus, we would like to define this study's scope of Epoch as the perspectives of the member of the society (community) on cultural objects with minimized bias from any metaphysical impression or the education effect, but instead, only from their sheer experiences on the objects. After this process, the object in human cognition is finally ready to be analyzed. Yoon (2010) argued that the important work in understanding the senses is the correct understanding of how the cognition is composed by (different types of) experiences rather than the discussions focusing on the object itself (p. 390). For this purpose, tthrough phenomenological classification, four types of cultural heritage (excluding imaginary heritage) within the human cognition are illustrated.

In this classification, 'self-identity' means that something that a person recognizes as an existing thing. Vice versa for Negative self-identity. So this axe is based on 'human cognition'. 'Real existence' means something that physically exists in the real world. Vice versa for 'Real non-existence'. However, 'Real non-existence' is something that had existed until some point in history but disappeared for several reasons.

According to Park (2010), when human recognize an object, there are two types of experiences; 'Intuition' (Intuitive process) and 'Signifikation' (Signification process). The former involves the 'materie' (material) when he or she experiences it, while the latter does not. Park (2010) pointed out there is an important distinction between the two processes; that is, whether the materie is involved or not. The experience occurs in both cases but the former is 'the establishing process (of the perceptual object)' and the later is 'the non-establishing process'. The intuitive process with the material gives the person the senses that are 'full' (fülle, rich and

authentic), however, the significance process only gives the coreless relationship with the perceptual object and this object is only 'supposed' (vermeint) without the sensuous contact. Thus, when there becomes the 'full' unification between the cognition on the object and the intuition, then only the verification on the object becomes possible. In short, when there is the existing cultural heritage in reality that you can experience something with your own senses, your experience is more intuitive and fulfilled. In this respect, we would examine the possible impacts from the landmark built heritage on other types of heritage considering the phenomenological dynamics in the classified Table 1.

Table 1: Phenomenological classification of cultural heritage

	Real existence	*Real non-existence*
Positive self-identity	**Real object:** something existing in the physical world & people are recognizing it	**Object with Intentionality:** something existing in the physical world & people are NOT recognizing it
Negative self-identity	**Unrecognized object:** something existing in the physical world & people are NOT recognizing it	**Object without Intentionality:** something NOT existing in the physical world & people are NOT recognizing it

3. Role of Virtual Reality

Among the candidates that belong to "Object with Intentionality" in table 1, let us take the gigantic temple of Hwangnyongsa for example, which was built in A.D. 569 (or 645) and destroyed by Genghis Khan's Mongolian invasion in 1238. Hwangnyongsa temple is one of the most well known lost built heritages in Korea, which could be the symbol of ancient Korean culture not just in architecture but also in early Buddhism representing ancient Korean religion (Fig.1).
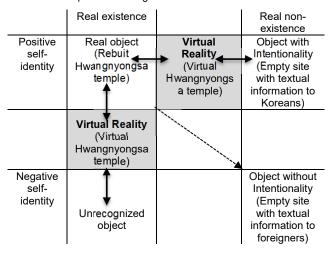

Figure 1: Hwangnyongsa Temple Site.

If the temple were rebuilt, the influence of its existence would be significant in various other types of cultural heritage. If Hwangnyongsa temple were rebuilt, its status would be transformed from 'Objective with Intentionality' to 'Real Object' in table 1. It is, however, not an easy task to rebuild a landmark built heritage due to several complicated issues such as the technology levels, theoretical rationales, or financial problems. As an

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[1] In other words, unless my consciousness reaches that building, there is no way that the building becomes the perceptible object to me (Park 2007, p. 76).

[2] In this study, we redefine the scope of Epoch, which allows the basic cultural backgrounds of the community members because it is practically almost impossible for them to exclude those basic backgrounds completely.

alternative or a preconstruction phase, there is an emerging technology, Virtual Reality (VR). VR, a rapidly advancing field in computer science, will soon allow users to access experiences that have never before been possible. The fields impacted are varied, but the institutions including museums, libraries, and sightseeing sites will undoubtedly utilize VR for historical, scientific, artistic, and educational learning and enjoyment (Grant and Woodland 2013; Moorefield-Lang 2015; Lewis 2015). As there have been very few studies analyzing the effectiveness of VR replacing the real object, understanding how the experiences of VR differ requires specific inquiry through phenomenological exploration and analysis. Among the four types of cultural heritage in table 1 in human brain (cognition), the VR is located as below (Table 2).

Table 2: Possible role of virtual Hangnyongsa in phenomenological classification table

	Real existence		Real non-existence
Positive self-identity	Real object (Rebuit Hwangnyongsa temple)	**Virtual Reality** (Virtual Hwangnyongsa temple)	Object with Intentionality (Empty site with textual information to Koreans)
	Virtual Reality (Virtual Hwangnyongsa temple)		
Negative self-identity	Unrecognized object		Object without Intentionality (Empty site with textual information to foreigners)

Human cognition includes both physical and virtual experiences and thoughts. Through experiencing both physical and virtual cultural heritage objects, a further research may seek to identify differences between the experiences of participants exploring those forms. We may find how and why a person feels or recognizes the different levels of medium (Real, Visual, and Text) of cultural heritage. Then, the next study may analyze the rationales of how the different levels of medium influence on the transformation from two Negative self-identity types (Unrecognized object & Object without Intentionality) to each type of Positive self-identity types

(Real objects & Object with Intentionality) in the Phenomenological heritage classified table. For example, we may investigate whether the virtual Hwangnyongsa temple has effects on other cultural heritage in various categories such as Object with Intentionality or Unrecognized object compared with other types of media. Besides, the research on the motivation to transform the two types of Positive self-identity may be studied. For example, we may investigate whether people want to see the real object, the physically rebuilt Hwangnyongsa temple, or are just satisfied with the virtual model of the temple (Fig.2). These are all interesting research topics that could be investigated based on the Phenomenological classified table.

Figure 2: Virtual Hwangnyongsa Temple.

By studying this, we may understand what kinds of media including the VR architecture would be most influential in recognizing the cultural heritage that does not physically exist, and how it could influence on the social recognition on the heritage.

4. Conclusion

When artifacts of cultural significance are lost due to wars or natural disasters, a generation of youth have no access to the history of their people. This study suggests the theoretical background for exploring the role of virtual reality including the architecture in cultural heritage study through phenomenological classification. This may contribute to a more clear understanding of best practices for education and appreciation of virtual cultural heritage. And the results from further researches may be applicable for many interdisciplinary fields such as architecture, tourism, library and archive study, and cognitive science

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