The Meaning of the Being of Water in the Landscape

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Abstract: Landscape is the being of entities, not an aggregate of entities. To design a landscape is to explicate the meaning of this being, to make present the intrinsic beauty of this being, and finally, to realize liberties by our own authentic imaginations. The concept of landscape and that of design should be set free from restrictions imposed by the modern mechanistic view of nature, in this world of globalization and virtualization based on advanced information technologies. On water, which is the source of life and a primordial element of landscapes, I have presented my idea of Libertas Aquis (a new challenge to explicate the meaning of the being of water) to redefine landscape as a cultural strategy for preservation and development. Some examples on sustainable development, academic and practical, will be presented to attest this idea.

Keywords: Propositio Ontologia, Libertas Aquis, epistemology, move beyond modernity, preservation and development

1. Landscape

1.1 Landscape and design
Landscape is the being of entities, not an aggregate of entities. We concern ourselves through our bodies being there. Consequently, to design a landscape is to explicate the meaning of this being, to make present the intrinsic beauty of this being, and finally, to realize liberties. The problems of landscape and of design rest on misunderstanding this structure.

1.2 Modernization and landscape
Based on the combination of a metaphysical mindset and a material view of nature, as represented by Platonism, the loss of humanity and the destruction of the environment are possible negative consequences of modernization engendered by a mechanistic view of nature. The loss of humanity could easily pose mental and moral hazards for individuals and society, while the destruction of the environment has now escalated to a level at which it is manifesting its repercussions on a global scale. Similarly, the objectification of landscape by the mechanistic view of nature could easily reduce the primordial meaning of landscape, which is where we confront ourselves and which could move us beyond modernity.

1.3 Authentic landscape
It is not a coincidence that we have recognized the concept of landscape in this Modern Age of loss of humanity and the destruction of the environment. Authentic landscape as a being has the potential to control a variety of emerging complex occurrences and to realize a creative and affluent society. Nevertheless, in the inauthentic and objectified landscape generated by the mechanistic view of nature, we are losing sight of the authentic and the landscape is toyed with by the changing trends of the world. It means the choice between a diverse and affluent society and a homogeneous and poor society. A diversity of languages and cultures guarantees the unity of the authentic landscape. Furthermore, globalization and virtualization based on advanced information technologies have the same effect.

1.4 Sustainable development and landscape
Sustainable development, as defined by the United Nations - to meet the needs of the present without compromising the ability of future generations to meet their own needs –does not contradict an authentic landscape. In the middle and long terms, the pursuit of a superior landscape is in accordance with the economic and social needs of society. In the short term, we often encounter several tasks to be completed, and this presents a challenge to test our imaginations and creativity in practice. With them we can face such tasks, finding our new potentials.

1.5 Propositio Ontologia
Scilicet, I understand the context of landscape as a Propositio Ontologia, from the viewpoint of epistemology, the theory of knowledge. In this treatise, landscape as being will mainly be discussed. As for ourselves as ontological entities concerned with landscape and what would conclusively decide the meaning and sense of landscape (sub specie aeternitatis), that discussion will be left for another occasion. In addition, the meaning of Japanese culture in relation to landscape and water, which is significant in the move beyond modernity, will be dealt with elsewhere.

2. Water

2.1 Water and landscape
Water is the source of life and a primordial element of landscapes. Water in the landscape differs from a landscape of water, inasmuch as water has an ontological nature sui generis. Objectified water, like an objectified landscape, cannot solve the problems of the world water crisis caused by the objectification of water. Herein lies the main reason why conventional cultural strategies, discussed for many years, could not solve our water problems. In addition, herein lies the reason why we should continue to ask about the meaning of the being of water. The potentials of an authentic landscape and of authentic water, each of which has an intrinsic nature, could be integrated together and could have further potential to change the world.

2.2 World water crisis
The water crisis is mainly discussed in its negative aspects, in terms of preventing disaster, pollution, and shortages, which are also the results of modernization. A positive aspect of water in this respect is that it could force society to change its paradigm of thinking. In the world water crisis, the positive meaning of water plays a very important role, not only aesthetically but also economically and
2.3 Water resources
In the world water crisis, the pollution caused by industrialization and disasters caused by urbanization are challenges that should be met by the nation or nations responsible. The shortage of water pertaining to water resources implies something else. It is an unassailable truth that water is a precious resource as the source of life for all human beings. From this presupposition, we can deduce two opposite propositions: (1) precisely for this reason, it must be made the most of, in the national interest of sovereign nations, and, (2) also precisely for this reason, it should be redistributed among all human beings. This is quite a difficult problem to solve, and only the explication of the meanings of the being of water may be able to solve it. This discussion is not limited to water resources, however; but pertains to all precious resources.

2.4 Libertas Aquis
Sic ilicit, I understand the context of water, the sine qua non essence of life, as Libertas Aquis (a new challenge to explicate the meaning of the being of water), from the perspective of epistemology, an addition to "Project Hydroscape" on landscape. It is this concept that might be able to answer the questions not only of landscape but also of technology and art, life and beauty, et cetera.

3. Schema

3.1 Diversity and unity
The diversity of reality coexists with the unity of theory. The objectified objects of authentic landscape and water cannot coexist with each other, and if you dare to homogenize them, the characteristics of each, which is the meaning and sense of landscape and water, would be reduced or lost. Problems of diversity in the landscape, including the diversity of languages, rest on this. Nevertheless, the diversity of the landscape of my world guarantees the unity of an authentic landscape and water.

3.2 Objectification of modernization
Objectification in time and space not only makes everything specialized and divided but separates philosophy, science, and technology, which should constitute a unified edifice. It is entirely possible that objectified science and technology, which are not based on philosophy, could easily cause the loss of humanity and the destruction of the environment.

3.3 Scientiae Aedificium
My concept of landscape and water as being covers a very wide range of fields, from philosophy to science and technology, as well as both theory and practice. In relation to other scientific fields, it includes physical sciences and social sciences. The approach from philosophy is via the foregoing Libertas Aquis, that from science is Hydroscape Science, and that from technology is Hydroscape Engineering is shown in Fig. 1.

3.4 Theory and practice
To demonstrate my concept, I carried out several full-scale physical and social experiments, shown in the next two sections. This demonstration is done to ensure that the theory has a real-world application and is not just an abstract plan. Furthermore, the theory ipso includes the demonstration per se.

4. Design

4.1 Scientific approach
The potential of science exceeds its empirical terminus in an authentic landscape because the diversity of reality coexists with the unity of theory. The expression of water cannot be scaled down physically like other elements, because the Reynolds, Weber, and Froude similarity cannot stand together at the same time. Herein lies the importance of my full-scale physical experiments on water.

4.2 The texture of water
The texture of water has its own variety of shapes. Combining water structure and this texture in a good design will only be possible with the establishment of a hydraulics-derived estimation methodology. There have been many famous studies on mechanical stress (Chen and Davis 1964; Hagerty and Shea 1955; York, Stubbs and Tek 1953; Schlichting 1968), but almost no studies on the texture and shape of water in three dimensions except our works.

4.3 Full-scale physical experiments on water
Several types of full-scale experiments on falling and flowing water were carried out to accumulate basic data. Fig. 2 and Fig. 3 show examples of the results. The texture of falling water was classified into three categories for both free-falling and slope-falling types, according to an increase in Reynolds number: (1) stability of free surface, (2) transition, and (3) whole turbulence (Fig. 2). In the first category, the stability of the free surface was related to the growth of minute disturbances. Surface tension works as a counter force to the disturbances in free-falling water; and gravity in slope-falling water. The shape and texture of flowing water were classified into a further three categories according to the patterns of artificial roughness and Froude number: (1) repetition of a piece, (2) linear divided pattern, and (3) undivided complex pattern (Fig. 3). The principal hydraulics factors that determine the shape and texture are hydraulic jump, the mutual interference of wakes, and the volume balance of flowing water.

5. Proposition

5.1 Practical approach
Propositions can change the world. Even from an etymological approach, the tasks on landscape and water are not abstract but the
most concrete that there are. Objectified landscapes cannot solve the problems of landscape caused by the objectifications of modernization.

5.2 Preservation and development
Infrastructure-related activities on landscape can be considered as indicative of a complex relationship between preservation and development. Preservation concerns history, tradition, culture, and other attributes based on the climate and topography of a particular place. Development must be done to realize the future potentiality based on historicity.

5.3 Today’s practical landscape challenges
5.3.1 Full-scale social experiment on space
Fig. 4 shows a location-centric practice, The Hanoi Project. I have been asked to plan a Landscape Master Plan for Hanoi City (2004–2006), the capital of the Socialist Republic of Vietnam, where many cultural layers pertaining to the modern, French, Chinese, native and other cultures are evident. Furthermore, in Hanoi, typical development-related sociocultural features (both good and bad) can be found together. I believe that Hanoi has the potential to become the most beautiful cultural capital city of Asia and water has a very important role to play in this transformation.

The participation of citizens with regard to the preservation of cultural heritage is easy to envisage but very difficult to implement, particularly in developing countries. In addition to an ordinary household interview survey (sample size of 20,000), I have prepared a public image mapping survey in order to sketch their images of Hanoi on paper. In the hundreds of image sketches of Hanoi provided by its residents, they reveal their actual aspirations and desires.

5.3.2 Full-scale social experiment on time
Fig. 5 shows a time-centric practice, a river structure built with natural materials, The Ohide Project. A Samurai warrior named Naridom-Hyogoshigeyasu designed and built a river management system in Japan around 400 years ago. The Ohide River Weir is a modern interpretation of the relics of the old stone river weir. The width of the structure is approximately 70 m and most sections, except the machinery section, are made of stone.

It is a hybrid model of traditional river-control technology and modern machine technology, built with the intention of handing down, over the course of centuries, the region’s philosophy, and knowledge to future Samurai engineers. In a few years, the ‘presentness’ of the Weir will become a part of the surrounding environment, and the structure will become a part of history.

5.4 Imagination and creativeness
As a result of the paradigm shift of society from an industrialized to an information-oriented society, the negative aspects of modernization with regard to preservation and development have become increasingly complicated in nature and global in scope. The need to avoid the relinquishment of modernization and to adapt modernization instead to suit our needs with our imagination and creativeness, is increasing in our pursuit of an affluent society.

6. Vision
6.1 International governance on landscape
In this Modern World, the world is primarily an aggregate of dependent sovereign nations. Therefore, international relations can only be established by a strict contract between nations, wherein, any intervention exceeding the will of a nation often results in failure. Consequently, international cooperation on landscape must be limited to offers of theoretical and/or empirical information, unless based on strict agreements. From the perspective of an authentic landscape, diversity of landscape in a nation should be esteemed, rather than homogeneity. This diversity includes not only spatial aspects, but also temporal aspects of each developing stage of a nation.
6.2 Educational innovation on landscape
The main reason for the failure of education about landscape is that students are repeatedly forced to pursue a humdrum, specialized, and divided knowledge of an inauthentic and objectified landscape. The goal of education is the realization of a liberal idea. What is crucial is an authentic diversity, not homogeneity. In an authentic landscape education, the student should be taught to think with his/her own brain and to act with his/her own body, drawing on the whole edifice of landscape education, including philosophy, science, and technology, both theory and practice. Education directs the way the world is going, bringing up new generations. Figs. 6-9 show my lectures in universities, workshops, design studies and international conferences, and in each case, docendo discimus.

6.3 Tomorrow's landscape
Tomorrow's landscape is tomorrow's people. Continuously examining the meaning of the being of water in the landscape implies an explication of this fact, enabling us to realize sustainable development. Furthermore, through this examination, we can repeatedly rediscover ourselves in the world to come.

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