On Sculpture and Time

Xiong CAO

Lecturer at Inner Mongolia Normal University
Doctoral candidate at Moscow State Stroganov Academy of Design and Applied Arts
caoxiong2000@163.com

*Corresponding author

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Abstract. This article mainly discusses the relationship between sculpture and time and reflects on the timeliness of sculpture and the sculptural of time with various conceptions. Besides, this article employs interdisciplinary knowledge and art events to explore the relationship between sculpture and time, for example, constructing a logic and assemble the parts into a whole from multiple perspectives, including historical, religious, physical, psychological and contemporary art event perspectives. And the theoretical exploration itself is a philosophical reflection.

Origin of Sculpture

The “origin” of everything is the beginning of the study of the timeliness of an object. Currently, the earliest well-founded discovery about seeking the origin of sculpture in art history are those famous small sculptures with “Venus” as their motif in Europe in the Paleolithic age, and this enormous history is at least about 35,000 BC if in figure. Besides, Venus of Hohle Fels made of mammoth ivory (refer with: Fig. 1) found in German in 2008 is said to be the oldest sculpture in the world found so far.

Figure 1. Venus of Hohle Fels (Baden-Württemberg, Deutschland).

If we say the earliest sculptor was primitive people in the Aurignacian era, then myths can also find us a more specific originator of our sculptors. The legend of seeking the origin of sculptor should be credited to Ying Shao, a scholar in the Eastern Han Dynasty, who wrote in Fengsutongyi that: “It’s said that there was no man when the heavens and the earth were created, Nüwa made a men with clay. To spare time, Nüwa threw ropes into mud, then pulled the rope, and the splashing mud become man. So the rich and the noble are made with clay; the poor and lowly are those who are made with rope.” [1] In the dictionary, sculpture means making people and things with something like clay. Nüwa (a goddess in ancient Chinese mythology) was sculpturing in the capacity of the mother of mankind. We may say that she is not only the creator of the world and goddess of the creation, but more importantly, she can be goddess of sculpture, who truly realized the mutation of “sculpture” from inorganic to organic life. If we’re going to set a unit of measure of energy of sculpture, I suggest “Nüwa rope”, sculpturing a human body is one Nüwa rope.
This idea comes from American science fiction writer and physicist Mr. Isaac Asimov, who invented a unit of measure of pulchritude “millihelen” naming after Helen, the stunning beauty who launched thousands of worships and started a war. This example can compare with sculptured human theory in implications. Likewise, if modern people want to create a religion for the sculpture industry, they may consider worshiping the goddess Nüwa.

Unruly Dimensions

In terms of the history of styles, be it specific genres - classicism, modernism or futurism, sculpture is the most temporally logical form of expression of all art styles. The classical sculpture is like a heroic symphony accompanied by harp and composed by golden ratio in ancient Greek and Roman times, which set rules and etiquettes for descendants with its rationality. While futurist sculpture gives the microphone to Boccioni Umberto, his voice of technology combined with rumbling heavy metal gave an experimental physics lesson to artists against the backdrop of industrial waste gas (refer with: Fig. 2). His work Unique Forms of Continuity in Space represents a swaggering robot in the movement. Boccioni used this model to tell people sculpture not only can express a frozen moment, but also can embody persistent, boundless and tangible motion caused by energy and speed, suggesting physical movement has open dimensions of space and time.

Figure 2. Sculpture: “Unique Forms of Continuity in Space”, 1913, Artist: Umberto Boccioni.

Three dimensions are length, width and height in math, and are length, temperature and energy in physics, while time is an attribute of four-dimensional space. Speaking of the timeliness of sculpture is to discuss sculpture from the perspective of three-dimensional space to four-dimensional. We live in a four-dimensional world made up of three-dimensional space and one-dimensional time. In a manner of speaking, time curve is an infinite leading line, sculpture may not have an end in space-time curve. But based on prophesy of general relativity theory, Hawking and Penros prove that space-time has two singularities, and physical timeliness starts with the singularity in the big bang and ends with the singularity in the black hole; all laws and predictabilities cease to be effective in singularities.

In Four-Dimensional Worm, the third article of Genius or Psychotic, the author Gao Ming found a genius idea of a psychopath when talking with him: “Actually, we’re all four-dimensional creature, besides space, we also exist in timeline, but we must comply with the laws of time flow...‘Absolute four-dimensional creature’ is a creature that truly exists in four-dimensional world. To it, living in the four-dimensional world is just like we live in three-dimensional space. That is to say, a part of its body is not three-dimensional and is immaterial...You can imagine, if time is divided into paragraphs, then in every period of time, human can only see a part of it, not all of it...For it, we are not what we look like now, because its vision transcends time, so in its eyes, we are all something like a wriggling insect...Absolute four-dimensional creatures can see our death before they see our birth, without causalities. Actually, I understood this already: time is not fleeting, but we are.” [2] At
this time, in timeline, before this “absolute four-dimensional creature”, human is just a piece of dynamic work being observed, isn’t it?

If this article needs a continuance, at that time we may use fifth-dimensional attributes of sculpture to find its way out. According to classic Einstein theory, mass can be converted to energy: \( E=mc^2 \), so, a small mass can be converted to enormous energy, or, sculpture is also within what Hawking call the range of positive energy. With this theory, we may make an abstract hypothesis about sculpture’s form of energy, so another form to express its timeliness may be: \( t=mv/F \) or \( t=W/P \). Hence, the classification of art disciplines can also generate new horizontal logic classification: art energetics, art time, art temperature and art scale. Then we discuss sculpture in these contexts. After that, maybe we could use pop-style dialogue to describe, B: fortunately we all know sculpture, because sculpture is us; A: only when \( E=mc^2 \), sculpture is sculpture.

Ups and Downs of Tactile Sense

_The Book of Rites & The Great Learning_ writes: “everything has ins and outs, beginning and end, those who know the sequence are close to the laws.” [3] It indicates that sequence of cognition is psychological temporal logic of people in the scope of art. In the 19th century, Baudelaire claimed that sculpture a barbarous and concrete thing that any husbandman can understand a sculpture, but a painting will perplex him, because he cannot touch reproduced object. Art historian and psychologist Gombrich once mentioned that for children in baby room, real three-dimensional wood horse and horse in the picture are totally different in nature in his article, and the reasons why toys like Teddy Bear and Winnie the Pooh were so popular. Then he analyzed the controllablity, toy attribute and specific “laden meaning” of three-dimensional objects based on psychological needs of children, and hence discussed psychological needs at different stages and more extensive functions of sculpture.

Figure 3. “Trajan Offering Mirror Relief”, Temple of Hathor, Dendera Egypt.

In the 18th century, German physician, philosopher, natural scientist and painter Carl Gustav Carus had interpreted art history as a shift from tactile sense to visual sense, that is, visual sense after tactile sense. And he proposed that: “the development of sense organs of any organism all start from sense, namely tactile sense” [4]. Sculpture is made and perceived through tactile sense and is three-dimensional knowledge. The same is true of historical facts, the arts of mankind also started with engraving, as people use solid, clumpy, tangible objects to practice art. In history, many perceptual psychology scholars found that how people perceive three-dimensional world has an indirect influence on the position of sculpture in art history. Great Arab scholar Haytham who lived in the 11th century proposed that “no visible thing can be comprehended only through visual sense”; in the 18th century, Bishop George Berkeley discussed how retina with only two dimension perceive three-dimensional problems in the depth in this work _Essay towards a New Theory of Vision_, and drew the conclusion that we must use tactile sense and kinesthesia to acquire a knowledge of space and solidity; while in the end of the 19th century, Austrian art historian Mr. Riegl said the specific
reason why Egyptians avoided describing the three-dimensional is that perspective depth and shortening will introduce a subjective component to the picture, so Egyptians described things based on what presents by tactile sense, so they can reflect more “objective” and eternal status of things unrelated to changes of viewpoints (refer with: Fig. 3).

Thus, what things shaped by tactile sense symbolize is “eternity” in psychological cognition of ancient Egyptians, which is a metaphor of the highest position of tactile in history. While in the 19th century, Austrian art historian Hegel believed art development is not about advancing and retreating or high and low, and he put forward that “changing between two poles” is the law of art development. Two opposite poles in the context are “visual sense” and “tactile sense”, based on the fact that from ancient Greek art to Roman art, from the Renaissance to Baroque is a conversion process from “tactile sense” to “visual sense”. While the transition from impressionism to post-impressionism reflects the shift from “visual sense” to “tactile sense”. Because of the shifting process, time characteristics of art are not developing, but are swinging between the two poles.

Shape of Time

What’s the shape of time? What’s the form of sculpture of time? Civilization of ancient Babylon invented a magic timer which has been used by human for thousands of years long and by virtue of the laws of shadows cast by sun-sundial. In a manner of speaking, this is human’s first attempt to substantialize time and clearly a time-themed sculpture made of stone and copper. While in Esoteric Buddhism, there is a symbol of time and Samsara called “hour wheel”. Its concrete form is a Mandala wheel built by wood structure or colored sands. Its match is Kalachakratantra, the last classic of Esoteric Buddhism, which stands for the peak of esoteric doctrines and gives the most complicated and the most authoritative interpretation of world view of Esoteric Buddhism. This may be a Buddhist interpretation of “wheels of history”. When Selim II of the Ottoman Empire erected a 30m-high copper crescent moon on the top of the dome of Hagia Sophia in Turkey, this sculpt is deemed as the sole time benchmark by Moslems. In the Koran: “crescent moon is the timer of human affairs and pilgrimage”, for example, Ramadan starts from the day of the emergence of crescent moon and the date of Lesser Bairam is also decided by imams by ascending tower to watch crescent moon. On tall domes or spires of mosques, time has already educated his followers with the three-dimensional crescent moon (refer with: Fig. 4).

Figure 4. Crescent crescent moon Tower Dubai.

In today’s physics, a symbol of time is “t”, the shape of t is a typical symbol of time. If we use coordinates to present dynamic time, then it is in the form of a pure directional curve. In Newton’s mathematical model, time is an infinite line, while Hawking invented the shape of time (refer with:
Fig. 5) in his *The Universe in a Nutshell* on the basis of Einstein’s general relativity theory. This book mentioned that “Einstein’s theory of relativity and a large number of experiments are mutually consistent, and it points out that time and space are intricately interwoven. People cannot bend space without involving time. In this way, time has shape. Then, it can only move towards one direction, just like the locomotives in the picture.”[5] Professor at Central Academy of Fine Arts and famous sculptor Mr. Sui Jianguo long reflects on attributes and changes of space and time philosophically and creatively materializes them, and the most typical one of his numerous works is an art event named *Untitled*. This is an experiment clearly materializing time. On December 25, 2006, he used a 1.5 mm stainless steel bar to soak the first drop of paint and photographed the historic moment of the work (refer with: Fig. 6). Since then, he set a rule: on a daily basis, dip in paint once or twice, and dip the second time after paint is dried, hence the shape of paint become bigger day by day.

This experiment now has showed a shape of a water drop as big as a head. And the author had another rule, that is, when his life stops, its growing also stops. The artist links his work with his life cycle and synchronizes his work with his life. This not only artistically shows the shape of time but meanwhile reflects consummate professionalism of an artist. There are a variety of metaphors for time, such as wheel, meteor, arrow, and running water, and the most awkward look may be a chunk of iron, for this always leaves a deep “stamp” on people.

**Fleeting Sculpture**

Human always plays an antagonistic and competitive game with the nature. When we see various zoolites and animal models in a museum, whether we think of what the nature has done. It creates everything and long conveys models invisible to us with stones. Also, in *The End of Life*, the tenth
article of *Genius or Psychotic*, a female “patient” who used to be a teacher put forward a classic viewpoint: stone probably is a life too, just in a different form. In the article, mental patient’s strange imagination brings us a logical and possible cognition: a life has eyes, nose, arms and legs, why stone can’t be another kind of life? Stone moves by being moved by wind, water, animals and so on. They seem still in our short-time observation with our naked eyes, they are moving in reality, but too slow, for our sense organs are not very sensitive to long-time change. “But stones are not willing to move, because they would die if they move...dross fell off worn stone may become soil, or sand, are these what the earth is made of? Nutrients in soil can grow grains and vegetables, animals and human eat them...Eating meat is the same, but just one more procedure! Then people because dust, or buried, rotten, and return to nutrients in those sands and soils, then those sands and soils containing nutrients get together again and constitute stone, stone is life...When they gather together, they are life!” The author if the thinking of an ant colony is a kind of loose form of life, the author could drew by analogy that stone is the same, sand and soil gather together, they will think and is life! “…From their perspective, we move too fast, live too fast, and die too fast. You build a house with stones, after several hundred years, the house may collapse already while stone has not felt any change yet, and stone is already an ordinary stone, since hundreds of years means little to stones. For stones, they can see us even if we stand on a place all our lives, too short”[2].

Human also endows natural stone with human imaginations and affections, even made a monkey born out of a stone and create a tremendous uproar. Samsara of everything is rippling in natural history of human, and sculpture is manmade work of art with nodes of masses. Age is a unit of time and a kind of cumulative description, and longevity is a kind of countdown description. Although sculpture can be reproduced, it originates from a stone or a tree from beginning to end. Human can verify the timeliness of stone according to the comparison of the half-life period and isotope of specific elements like radium and carbon, and trees also have annual rings for dating, while decomposition of stone and tree has temporal characteristics with a life span. Sculpting sets a life span for stone and tree, for internal and external reasons. At 11:20 am on May 4, 2014, CRI Online released news: “cracks are found in the base of Italian statue of David, which may collapse after 500 years. The news said this classic works, which have survived wars and earthquakes and lasted for over 500 years, now cannot withstand the visit of tens of thousands of visitors a day, as visitors’ footsteps and rumbling traffic nearby have had a serious negative impact on the statue of David (refer with: Fig. 7). Meanwhile, poor-quality marble used by Michelangelo to sculpture the statue of “David” may also one of the reasons contributing to its risk of collapse. The quality of the subject and the impact of objects on the subject make this shepherd boy who defeated Goliath finally reach the end of its physical life. Of course, humanism remains immortal.
science and technology are vying with each other in foretelling the future of sculpture. At this time, maybe our morals and etiquettes should establish rites and offer birthday congratulations or hold a memorial ceremony for great, classical sculpture.

In this paper, through making the sculpture be animate and temporal, and making the time be objectified and sculptural, the conclusion has been reached that the relationship between time and sculpture has extensive cultural, scientific and artistic characteristics. In the meantime, the method of interdisciplinary “migration” makes the sculpture subject get a new feature, so I advocate to reshape the sculpture subject by divergent thinking in the future.

References


