
Interpretation and Application of “Water” as Medium for Landscaping Design: Case of The Language of Flow in Fountain

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Abstract

The traditional medium materials of public art are basically solid forms, while artist are often obsessed with water for its variable form. This paper took water medium as the main research object, and further studied on fountain in modern public art from the respects of material characteristics, historical development, formal semantics, key applications and so on. In addition, the paper drew a conclusion of theoretical method and principle of water application in fountain through actual cases study. In that sense, the interpretation and application of water could better understand its special properties and cultural connotations, create an artistic fountain with permanent vitality, meet public spiritual needs, construct a harmonious urban public space, and ultimately achieving the public art value of fountain.

Keywords: Public art, Water, Medium, Fountain, Application

1. Introduction

“Public art medium” refers to the artist in the creation of public works of art in the artist's mind and the elements of beauty projected in the art creation associated with materials (such as stone, steel, gypsum, mud, plastics and in modern science and technology widely used in

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sound, light, electricity, etc.). In order to form an original public art symbol system, it is the artist's mind, the extension of the will and the perfect combination of artistic materials (Jianggefeng, Zhang Yi, 2014).

Water is a common but special media material, artists and designers often use the water media to create a rich form of public works of art, especially with a long history of the fountain, it is the crystallization of the artist's wisdom, is the city's public space to bake atmosphere, regulate the microclimate, beautify the environment an important element, it is the popular art form that the public is favored by.

2. Key characteristics of water media

Compared with other materials in public art, water has unique properties in morphology, sound, color, smell, sensory experience, etc., as shown in table 1, water not only has morphological plasticity, syllable, color special and other physical characteristics, but also has a variety of perceptual characteristics such as touchable, olfactory, temperature variability and so on.

Table 1 comparative analysis table of characteristics of water and other media materials

Materials	Physical properties				Sensory properties
	Form	Voice	Color	Smell	
Water	Solid/Liquid/Fog	Water	Colorless	Fresh	Visual/Auditory/Touch/Smell
Metal	Solid	Null	Null	Null	Visual/Touch
Stone	Solid	Null	Colorful	Null	Visual/Touch
Porcelain	Solid	Null	Colorful	Null	Visual/Touch
Wood	Solid	Null	Colorful	Null	Visual/Touch
Gypsum	Solid	Null	White	Null	Visual/Touch
Glass	Solid	Null	Colorless	Null	Visual/Touch
Plastic	Solid	Null	Colorful	Null	Visual/Touch
Concrete	Solid	Null	Grey	Null	Visual/Touch
Ribbon	Solid	Null	Colorful	Null	Visual/Touch

2.1 Plasticity of water media

Water in public art usually exists solid, liquid, fog three forms, under certain conditions can be changed between these three forms, many artists use this feature can make the original static works show the characteristics of dynamic change. The art of street behavior in Paris, France (Fig. 1), a dress frozen by a large ice cube seems to imply that people in trouble, with the change of temperature, time ice melts into water, water evaporates into fog, giving people different thinking and feeling. The ice water wall of New York's Teardrop Park (Fig. 2) is a blend of ice and water, which forms ice in winter and ice drops between rock seams. In addition to the strong plasticity of solid water media, liquid and foggy water media can be combined with sculpture, installation and other forms of public art integration, but also through the artist's direct creation to form a dynamic spray of water and spray, a separate composition of "water sculpture."



Figure 1 Street art behavior in Paris, France (Baoshi degree & Wang Huaifeng beam, 2006)



Figure. 2 New York Teardrop Park ice water wall

2.2 The syllables of water media

The stream ripples, the rain patter, the drop clatter, the water gurgling, the spring drumbeat ... Using the natural properties of underwater sound for syllable control can produce sounds with specific emotions and uses. The "Sound of musical instruments" emitted by the hundred springs in Villa Este caused public shock; the dripping sound of the water grotto in the traditional Japanese courtyard brought a secluded and profound feeling to the courtyard; the water banging in the fountain of the theme garden of Shanghai emotional Rain House made a clear sound on the glass, causing the public to interact ... People can be attracted to the sound of water before they reach the water, so the characteristics of the water medium can make a sound, making it easier for the public to identify and remember.

2.3 Color particularity of water medium

Water medium is colorless and transparent, but because of the particularity of the material often makes it changeable color. First, German artist Herbert Dreiseitl has likened the dynamic water to "white water" (whitewater), where the state of motion, the masking of the surrounding environment, the reflection and refraction of light can make the otherwise transparent water visible. When the surface is broken and bubbles enter, these bubbles form a lot of small spheres that reflect the sun, making the water more visible and, in particular, showing depth (Delessaire, 2008). Different dynamic changes of water appear to varying degrees of white. White is the most pure and clear color of nature. Secondly, the water medium under the refraction of sunlight can also appear rainbow color or in the light of the rendering of colorful color.

2.4 Multi-sensory characteristics of water media

In terms of sensory characteristics, in addition to the most basic visual and auditory, water media sniffing, touchable, fluidity, temperature variability and so on can bring people a variety of sensory experience. For one, water can not only produce negative ions to improve air quality, so that people experience a fresh breath through the sense of smell, but also through the surrounding grass flavor, floral fragrance, soil flavor and other fusion to produce a pleasant smell. Second, different flow rates, form of water has a different touch, slowly flowing water let people feel the feeling of being gently hit, moist, light fog makes people feel happy and kind. Third, the flow rate and rhythm of water, the ripple of water ripples, changes in the direction of flow, and so on will cause people to produce a change in motion, just as the sudden change of the fountain water posture will be surprising. Finally, people's temperature

perception of the water medium is the thermal characteristics of the water medium, solid water gives people chills, liquid water gives people cool, foggy water can be warm.

3. Evolution of the use of water media in fountains

The fountain originated in the west. At first, Westerners used fountains to connect canals to provide drinking water to the public, and the fountain, as a social life center for citizens, resembles the wells of ancient China. Along with the development of Western water supply system, the way of public water intake gradually changed, fountain water source from scarce to sufficient, and gradually became the royal aristocracy in the courtyard of art. Under the impact of the urban park movement and the art Reform Movement, most royal gardens are open to the outside, and the fountain gradually moves from closed art to public art. Therefore, from ancient Greece to modern times, in the space and time dimension, the use of water media in the fountain function, form and the sensory experience of people have undergone a series of changes (table 2), experienced from single to diverse, objective to subjective, euphemistic implicit to bold direct process.

Table 2 Analysis table on the evolution of the use of water media in fountains

Time	Function	Form	Sensory	Represent
Greek	Shower /Drinking	Sculpture-based, Water as supplement	Taste/ To-uch	The Greek fountain of the Pergamon Museum
Rome	Shower /Drinking /Decorate	Sculpture-based, Water as supplement	Touch/Vi- sual	Roman bathroom Fountain\The fountain site of the ancient city of Pompeii\Hadrian Villa Fountain
Middle Ages	Drinking /baptism /Decorate /Irrigation /Entertainm ent	Sculpture-based, Water as supplement	Touch/ Visual	Fountain of the Cathedral of Peruja, Italy\Alhambra Palace's Lion Fountain
Renaissa- nce	Drinking/ba ptism/Decor	Sculpture-based, Water diversification	Auditory/ Visual	Villa Este Hundred Springs\Water

Time	Function	Form	Sensory	Represent
	ate/Entertainment			Theater\Dragon Fountain\Trevi Pool Fountain
Baroque	Drinking/Decorate/Entertainment/Metaphor	Sculpture-based, Water diversification	Visual /Auditory	Four Rivers Fountain\Palace of Versailles La Do na Fountain\Apollo Pool Fountain
Modern times	Art	Water-based, Sculpture as supplement	Visual /Auditory /Touch	Water Bridge at the Paris Colony exhibition\Geneva Ultra High Fountain\Louvre Pyramid Fountain

3.1 The function evolution from practicality to art

The human wisdom of water access, fountain water supply and so on to expand the public demand for water from life to aesthetic transformation. "Fountain City" Ancient Rome retains a large number of decorative fountains, these fountains experienced natural disasters, the destruction of war after the Middle Ages again gushing. The reborn fountain is associated with irrigation and religious baptism, and begins to have entertainment features, and the Earl of Atua Garden fountain can be unintentionally triggered by tourists. The reform of art often breeds the emergence of new things, and the water in the fountain carries a deeper artistic language under the influence of Baroque Christian art, which emphasizes symbolism--the four rivers conquered by human civilization by the four River fountain metaphor. And modern well-known artists and designers Jean Dingley, Pei, Clesse Odenberg and Daniel Buren and other people jointly designed the fountain is used as urban public works of art to attract attention, the enhancement of human environment and aesthetic awareness marks the complete separation of fountain water supply system and urban living water supply system, The artistic aesthetic function of the fountain completely replaces the drinking function.

3.2 Evolution from line to form of "water sculpture"

The American philosopher Susan Langues once put forward that "art is the emotional symbol form of human beings", and the form of water in the fountain is the concrete

expression of the artist's emotion and popular emotion, which has unique characteristics of dynamic change. Sculpture in ancient Western fountains occupies an important position, the simplest fountain structure is the water directly from some animal sculpture nose out of the mouth and natural fall, or under the action of pressurized device directly into the air to draw a concise and wonderful arc. The Baroque period is the transition period of dynamic water-shaped evolution, the fountain of the Palace of Versailles, the Fountain of the Summer Palace, the water is constantly changing like fireworks, compared with the ancient Greek and Roman fountains in the form of more diverse and complex forms. The promotion of water media status in the fountain is most typical of the iconic fountains in modern France, the United States, Geneva, the Middle East, Saudi Arabia, Dubai and other countries. Influenced by the art reform movement and the technological revolution, the fountain language expressed by artists and designers using water media is becoming more and more artistic, and the fountain has gradually been hailed as "water sculpture", and the fountain Bit created by the German artist Juries Poppe. Fall spelled out different words through the water medium to record news stories.

3.3 Sensory evolution from single to integrated

At first the fountain provided drinking water and shower water to give people a simple taste or tactile experience, the fountain in the sculpture elements of the complex changes and water-shaped diversity together to give people visual impact and transformation. During the Renaissance, fountain creators focused on the control and design of water sound, Water theater, water temple and other fountains filled with dramatic musical effects, giving people the shock of hearing. Since then, the fountain has essentially been more lively than the expression of contemplative art, and the fountain hidden on the bottom of the garden road or round stool in the Este villa will suddenly spew wet visitors to satisfy the tactile experience. Modern fountain creators will be lighting art, music art into the fountain works, to bring the viewer a wealth of visual and auditory enjoyment. With the production of artificial fog technology, the use of foggy water media to create fountain works have sprung up to join the ranks of public art, moist, light fog to give people a unique sense of touch, Jeché and other experiences.

4. Design and application of water medium in fountain

4.1 Embodying artistic value

Artistry refers to the feeling in the direction of visual aesthetics, which is the visual

and emotional feeling that design works bring to people in terms of color, shape, material and other appearance (Ding Yuan,2010). With the continuous improvement of public aesthetic needs, works that do not meet the aesthetic needs of the public will be difficult to be accepted by the public.

The color particularity and morphological plasticity of water determine that hydro energy, as a good art carrier, carries the language conception of artists and designers, forms "water sculpture", and shows the artistic value of fountain. The Japanese EXPO ' s FOUNTAINS (Fig. 3), which caused a lot of public visual shock, was designed by the artist Noguchi Yong using the color of the water as an illusion, and the fountain was suspended in the air as if it had no connection to the ground, conveying mysterious beauty, while the pipes that actually supported the fountain were hidden in the vertical falling "white" Moving water. The Cosmic Spin fountain (Fig. 4) at the plaza of the five crossing in Beijing is Zhang Dong from the universe to the creation of time, which conveys the perception of time through spatial visual perception. Rotating platform such as time measurement non-stop rotation, rotation to a fixed position to trigger a short period of water spray, from the dynamic visual perception penetration into the connotation of the work, let people feel the eternity of the universe and the short time, break through the art of simple visual aesthetics to convey the boundaries, triggered a lot of public thinking.



Figure 3 EXPO ' FOUNTAINS

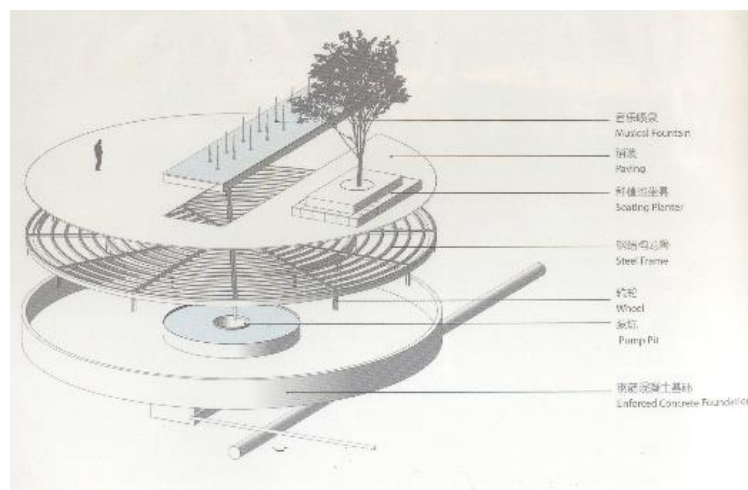


Figure 4 Five crossing Cosmic Center square Fountain (Zhang Tang, 2016)

4.2 Highlight Service Features

As an important part of urban landscape, urban public art is regarded as the furnishings in the outdoor environment, which is a work of functional and artistic symbolization, and plays a multiple role in the development of urban environment, which not only satisfies people's spiritual aesthetic needs, but also satisfies the demand of use (Wang Ning, 2016).

As a public art, the creation of fountains needs to have the function of providing services to the public, including ecological functions and interactive functions. For one thing, ecological function is the most basic service function, using the characteristics of water can reduce noise or improve local microclimate. Artists and designers at airports or highways and other noisy places, with a syllable fountain water sound effectively improve the ambient noise, to create a combination of urban and natural ecological livable space. The West Seoul Lake Park fountain near the South Korean airport (Fig. 5) is triggered by spraying water when the plane takes off more than 81 decibels of noise, masking the noise generated by the aircraft.

It is reported that the Beijing Botanical Garden Cherry Trench spray, which opened in 2014, can not only increase the air humidity to provide a good growth environment for rare and wet plant spruce, but also effectively adsorb dust in the air, which has a significant weakening effect on haze. Second, the interactive function of the fountain is the strong demand of the modern public for the public art in the urban landscape after being away from nature. The Crown Fountain in Chicago, USA (Fig. 6) is a classic embodiment of interactive functions, with the designer spewing out of the public's mouth by photographing and collecting the smiling faces of the public and presenting them as images in the form of a large sculpture now.

It has carried out a new interpretation of the ancient traditional fountain, replacing the traditional sculpture with the image of the citizen, although the water medium is only a simple line-like expression in form, but the simple spray water is just right with its dynamic characteristics to reflect the fun interactive experience process between the fountain and the citizens.



Figure 5 South Korea West Seoul Lake Noise Reduction Fountain



Figure 6 Crown Fountain, Chicago, USA

4.3 Enriching the sensory experience

Fountain is not only a product of visual art, but also a complex of multi-sensory

experience. In addition to the common visual and auditory design, water touchable, sniffing, temperature variability, fluidity and so on determine that the fountain can bring people touch, smell, Jeche, kinetic and other aspects of the experience, so in the fountain design and creation at the beginning of the public to deal with the different sensory experience of the comprehensive consideration.

To arouse public perception of the fountain's outward- to- inner experience, highlighting the public characteristics of the fountain. The fountain in Francois Mitterrand Square, France (Fig. 7) is full of psychedelic colors, sometimes gushing from the ground, sometimes fog rising from the ground, "white" moving water and fog let the public experience different visual, tactile, dynamic, Jeche contrast feelings. Harvard Stonehenge's Taj Fountain (Fig. 8) was created by Peter Walker with Foggy Water, which not only visually highlights the mystical color of the fog, attracting many public contacts with it, but also adapts to the changes in the time dimension for thermal design, giving a cool breath in the summer. Combine heating systems to add warmth to the campus during the cold winter months.



Figure 7 Fountain of Francois Mitterrand Square, France (Let Max Rocca, 2007)



Figure 8 Tyna Fountain, Harvard University

4.4 Baking Place Spirit

In the public art overview, Wang said: "The specific environment produces specific works, specific works absorb the special significance of the environment, so as to obtain an independent spiritual air field."

The spiritual atmosphere here can be understood as the spirit of the place, in line with the spirit of the site in the Fountain works in the form of the expression in accordance with the site environment, atmosphere and emotion, to achieve the work, environment, human integration and harmony. Catherine Gustafson adhere to the design of the site history and connotation of the excavation is to achieve the work and the spirit of the site of the key steps. Her artistic masterpiece Princess Diana Memorial Fountain (Fig. 9) is located in Hyde Park, an open British Royal Park.

Unlike the traditional fountain, the fountain as a whole seems that the form of water media does not express the sad hyperthyroidism in a vertical direction, but in the horizontal direction to give people a breadth of the extension and calm and cordial feeling, metaphorical Diana's calm and generous character, implicitly expressed to the princess's deep memorial feelings.



Fig. 9 Princess Diana Memorial Fountain Tang (photo)

5. Conclusion

For artists and designers, water is a green medium that nature gives them a variety of special physical and sensory properties, which can be combined with sculptures, installations, etc., and can also be used alone according to the emotional and artistic inspiration of the site. For the public, water has a variety of sensory stimuli, and is the object of human dependence since ancient times. For the fountain works, it is endowed with the name "Water sculpture" is the particularity of the water media material, water is the flowing language in the fountain.

The evolution of the use of water media in fountains is not simply a functional and formal change, it is necessary to constantly arouse the creator's deep thinking about the society and the attention to the public consciousness, so that the public can excavate the meaning behind the works through the surface form, Just as postmodernism conveys the interpretation of works of art, it should not stop at mere metaphysics. Therefore, fully understand the cultural and social history in which water and people are rooted in it, understand the sound, color and different forms of water, use the different form of water, so that the public on the fountain in the sensory and aesthetic experience with the past has a different feeling.

The fountain design is different from the design of other wading public works of art, it is a multi-sensory comprehensive product created by the artist with four-dimensional spatial

changes, with a variety of forms of water media and changeable form, it is a Western foreign product, from an ancient art development has become a new trend of public art creation and design in recent years. Therefore, the fountain design should avoid the impact of foreign culture, avoid such as the Western modern landscape is the same as the same, from the regional culture, the public, water media and other perspectives, close the work and people, people, people and designers between the distance, in the city to create a harmonious space for public communication.

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