Dialectic Between Architecture and Water: An Analogy Among Bachelard Philosophy and Eliade Theory

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Abstract

Architecture, a field that brings together all areas of science. It draws these resources from the elements of nature, and is inspired by the human civilizational accumulation to build these morals foundations which constitute its symbolic conceptual essence. The water, considered as a source of imitation and interpretation for all artists because of the contradictions it brings together.

The interest of the subject is motivated by the existence of a theoretical dialectic between architecture and water relationship. The article tackles the problem of the intellectual differences existing between the rationality and the symbolism of the conceptual use of water in architecture. On the basis of a comparative historical approach and an analogy between G. Bachelard’s philosophy and Eliade’s theory, a vision of conceptual representation based on the imaginary and on architectural interpretations is recommended.

The utility of history will be paramount in the elaboration of hypotheses which are verifiable in the sense that the rational mind of the scientist is always in search of novelties. The objectives are divided into two parts: A formal perception and acquisition of new knowledges about water related to architecture. The expected results are repulsive for the researchers to emerge from the ordinary in the stigmatized reflection, since it has been possible for a wise man to build an ark out of wood for millennia; And that from a simple mirror the intelligent man had given life to an architectural space.

Key words: Architecture, Dialectic, Rationality, Symbolism, Water.

INTRODUCTION

The relation of architecture to art is indisputable, as long as architecture is, by excellence, defined as “The Art of Building”, so “The accurate artist does not imitate the forms of things, but he interprets their essence” (R. Milani, 2005). The correlation between architecture and art causes researchers to take charge of an important link, but lost, of the chain of themes studied in the theory of architecture, due to its imminent consistency in all architectural projects, whatever their styles, their conjunctures, their areas or their ideological foundations.

This link, considered as an omnipresent element in the architectural project, whether material or symbolic, figurative or conceptual, is simply other than the Water element. Water, as a component of nature, is a source of imitation and interpretation of all artists; because of its being, its fluidity and stagnation, its wealth and destitution, its availability and inadequacy... in short, because of all the contradictions it brings together. The dialectic of the relationship between architecture and water calls for an original retrospective, in order to cover a clear vision of its various aspects, given the variety of approaches to its perception, the complexity of its representations and the tenacity of its relevance in the universal architectural theory.

The present study proposes to spread this dialectic, especially in its theoretical aspect, drawing its apology on the basis of a cross between the philosophy of Bachelard and Eliade’s theory concerning the water and its historical architectural interpretations.

AXES OF RESEARCH

(1) Approach of historical perception of the relationship between water and architecture, between scientific rationality and artistic relativity.

(2) Critical and intellectual study of the link between architecture and water.

(3) The dialectic between architecture and water according to Bachelard’s philosophy and Eliade’s theory.

(4) Analogy of the dialectic on the relationship between architecture and water.

OBJECTIVES AND METHODOLOGY

The contradiction between rationality and relativity, considered in general as an intellectual disadvantage, is invested differently in this research, as an advantage in the definition of the objectives and the expected results. Because of the complexity of the training of architects, combining a scientific and artistic spirit at the same time.

The study of an empirical object in an artistic way makes use of a particular method of analysis, based on the historical approach to draw the lessons.

Consequently, the expected objectives of this research will be classified into two major parts:

1- A formal perception of the artistic exhibition of a scientific object.

2- The acquiring of new knowledges about water related to architecture.

The methodology applied to achieve these objectives will be based on the Critical Analysis of the different thoughts relating to the specific points of view of the development of knowledges and that of architectural philosophy in relation to water.

For this, the use of stories from the past, drawn from different contexts in time and space, but converging on the same subject (that of water in relation to architecture), is essential in order to develop a historical perception approach.

HISTORICAL APPROACH

The dialectic between architecture and water can be interpreted through a critical reading of two illustrative stories selected in two different contexts, from which several lessons will be retained, for the purpose of intellectual, philosophical and scientific clarifications.

The conclusions selected form two main groups in this study:

- The first, in relation to the intellectual and philosophical aspect.
- The second, in direct relation with architecture.

The Story of the Palace of Baghdad Caliph (M. Tournier, 2011)

“Once upon a time, a Caliph of Baghdad wanted to decorate the two walls of his hall of honor palace (Fig.01). He sent for two artists, one from the East, the other from the West. The first was a famous Chinese painter who had never left his province (Fig.02, Fig.03), the second, Greek, had visited all the nations, and apparently spoke all the languages. He was not only a painter; he was also well-versed in astronomy, physics, chemistry, architecture. The caliph explained their purpose and confided to each one of the walls of the hall of honor.

“When you’re done, he says, the court will meet with great fanfare. It will examine and compare your works, and the one that will be considered the most beautiful will be worth to its author an immense reward. Then, turning to the Greek, he asked him how long it would take him to complete his fresco. And mysteriously the Greek replied: “When my Chinese colleague is finished, I'll finish” Then the caliph asked the Chinese, which asked for a period of three months.

“Good,” said the caliph. I’ll split the room in half by a curtain so you do not bother, and we’ll meet again in three months. The three months passed, and the Caliph summoned the two painters. Turning to the Greek, he asked him, “Have you finished?” And mysteriously the Greek answered him: “If my Chinese colleague has finished, I finished” Then the caliph questioned in turn the Chinese who answered: “I finished”. The court met two days later and went to the hall of honor to judge and compare the two works. It was a magnificent procession where one saw only embroidered dresses, plumes of feathers, gold jewels, chiseled arms. Everyone gathered first on the side of the wall painted by the Chinese. It was only a cry of admiration. The fresco was indeed a garden of dreams planted with trees in bloom with small lakes in the shape of beans that were crammed with graceful bridges.

A paradisiacal vision that never tired of filling eyes. So great was the enchantment that some wanted to declare the Chinese
winner of the contest, without even taking a look at the work of the Greek. But soon the caliph drew the curtain which separated the room in half, and the crowd turned round, and let out an exclamation of stupor amazed.

Figure 1. Baghdad palace- Source- www.failedarchitecture.com

Figure 2. Painting Legend- Source- www.sergiupopovici.wordpress.com

Figure 3. A Chinese painting-Source- www.sergiupopovici.wordpress.com

What had the Greek done? He had not painted anything at all. He had just set up a Huge Mirror that went from the ground up to the ceiling. And of course this mirror reflected the garden of the Chinese in every detail. But then, will you say, in what way was this image more beautiful and more moving than its model? The garden of the Chinese was deserted and empty of inhabitants, whereas, in the garden of the Greek, there was a magnificent crowd with embroidered dresses and chiseled arms, plumes of feathers, gold jewels and chiseled weapons. And all these people moved, gesticulated and recognized each other with delight. Unanimously, the Greek was declared winner of the contest”.

The Ark of Noah and the Great Flood (Ibn Kathir, 1996)

Noah, a prophet desperate by the polytheistic attitude, of categorical and relentless refusal to believe in One God by his people surrendered himself to God by expressing the wish to exterminate all unbelievers on earth. God’s will and His sentence decided to fulfill the vow of his prophet Noah; the latter had spent almost a thousand years of his life in the preaching of his monotheistic religion; “And indeed We sent Nuh to his people, and he dwelt among them a thousand years less fifty years, and the flood carried them away when they were in a state of injustice” (Al-Ankabut 14, Holy Quran)

In His revelation, God had commanded Noah to build a great Ark, in which he had to carry his family members who believed in God and only one couple of all creatures on earth, to save them from the great flood that would cleanse the
earth (Fig.04). Noah then began, after God’s revelation, the construction of a Great Wooden Ark, which He took forty years to complete. (Ibn Kathir, 1996)

“God then commanded his prophet and his apostles, and all couples of living creatures on earth, to protect themselves in the great Ark” (Hud 39, Holy Quran). For at the moment of the execution of His verdict, He turned the sky, waved the seas, shook the rivers, and caused the springs of the whole earth to sprinkle, flooding it in a great devastating and purifying flood (Fig.05). “And they but we saved him and those who were with him in the ark, and we drowned those who treated Our signs as lies, they were really blind people” (Al-A’raf 64, Holy Quran). This is how humanity will be born again, with the couple of the prophet and his believing offspring in God.

DIALECTIC BETWEEN ARCHITECTURE AND WATER

The Philosophy of the Imaginary of the Revealing Water of Gaston Bachelard, in Relation with the History of the Mirror of the Greek

The philosopher Gaston Bachelard, a rationalist epistemologist, offers a material approach to symbols that he calls True Symbols. The true symbols were “the four fundamental symbols: water, air, earth and fire ... these symbols would express the deep layers of the human imagination and the relationship of our will with the world”. (Ibn Kathir, 1996)

In his book, Water and Dreams, he combines the imaginary of poetry with the palpable spirit of water. Because, “water is therefore the symbol of an appearance that can hide something else ... But pure, the water of the fountain also reflects the image of the sky reflected in it ... It creates the microcosm of the macrocosm and introduces between the two, human narcissism”. (G. Bachelard, 2010). Since, “… the water thus reveals, it attracts and aspires, it reveals to itself” (G. Bachelard, 2010).

The report of the caliph story and the mirror with the thought of Gaston Bachelard coincides with The Time, so “the water materializes the time, the first clocks were with water, clepsydras, the liquid is so tied to time, that Time is said to flow like a flowing liquid” (G. Bachelard, 2010). This poetic and cutting factor was the essential element neglected in this story, since the astonishment of the caliph was fulfilled at the very moment of the unveiling of the part conceived by the Greek and which was materialized by the great mirror; this glass mirror which is nothing other than a material consecration of a reflection inspired by that of water.
Lessons from Story of the Palace of Baghdad Caliph

On the Theoretical and Intellectual Level

“Before ice and mirrors exist, men only discovered their image in water”. (C. Tarot, 2007)

- The universality of knowledge and knowledge as well as the artistic language; in this case, the researcher may encounter several illustrative examples of the transmission of knowledge from one generation to another, from one civilization to another and from one region to another.

- Flexibility in the regrouping of ideologies of an ethnic, religious and geographical variety in a space, (Note that the territory of the Abbasid Empire stretched from China’s borders to Europe).

- Human intelligence in interpretation in general and especially in all that relates to nature.

- The availability of contact between several horizons for the purpose of a dialogue of civilizations of notoriety.

Specifically to Architecture

- The imitation, to perfection, of nature in a reduced geometrical space.

- The accumulation of knowledge and know-how with a certain ductility.

- The richness of the history of architecture by the variety of its sources of inspiration.

- The cumulative historical, cultural, intellectual and thoughtful innovation in the composition of Muslim architecture. (Fig. 06)

- The collaboration of different architectural cultures drawn from the antecedent and contemporary civilizations of the time (from Mesopotamia, Egypt, Greece, China...) in the foundation of art and architecture Muslim.

- The contribution of Muslim architecture to the regrouping of ideas, ideologies and universal intellectual skills for its own climax in addition to the notoriety of the transmission of knowledge and universal know-how.

- The perfection of the work through the realization of the ideal in an architectural space (translation of the gardens of Eden into a wall and reflection of what is stagnated by a mirror to make it move).

- The limit of the unlimited, according to a Platonic philosophical thought of the materialization of the ideal. (Fig. 07)

- The transcription of the notion of paradise (very vast), in a reduced geometrical space.

- The promotion of the spirit of innovation and unlimited creativity by the spirit of competition.

Figure 6. l’alhambra-Source www.bing.com

Figure 7. The-water-mirror bordeaux- Source- www.tripadvisor.fr
The Symbolic Theory of the Water of M. Eliade, in Relation with the History of the Flood

“Mírcea Eliade is a famous historian of religions, although much discussed and debatable, but he theorized the idea of a Transcultural Symbolism, common to all men and attached to the oldest forms of religion, to old paganism, and would be worth for the water as for all the other great fundamental symbols, the sky or the mountain”. (C. Tarot, 2007)

The most striking in this story, in relation to the object of research, which is water, is the symbolic value of this substance in the expression of the ultimate power.

According to Eliade, “without water, one dies of thirst. With too much water one is drowned, the water is thus associated with the destruction as in the theme of the deluge, (which), symbolizing the necessity of the destruction of the water destroys the old worn-out world, and from its same water reserve of life will emerge a new world. For Eliade, water is therefore associated with the cyclical vision of the world, and therefore of time, the one a succession of deaths and rebirth ... finally, for Eliade, water has a sacred value”. (C. Tarot, 2007).

Eliade himself summarizes his thought: “the principle of the undifferentiated and the virtual, the foundation of all cosmic manifestation, respectful of all germs, the waters symbolize the primordial substance from which all forms arise and in which they return by regression or by cataclysm They were at the beginning, they return at the end of any historical or cosmic cycle They will always exist, though never alone, since the waters are always germinating, enclosing in their unfragmented unity the virtualities of all forms. In cosmology, in myth, in ritual, in iconography, the waters fulfill the same function, whatever the structure of the cultural ensembles in which they are found” (M. Eliade; 1949) So water has only one symbolic everywhere.

“It precedes all forms and supports all creation.” Immersion in water symbolizes regression in preformel, total regeneration, new birth, because immersion amounts to dissolution of forms, integration into the undifferentiated body of pre-existence and the coming out of the water repeats the cosmogonic gesture of the manifestation. The contact with the water always implies the regeneration, on the one hand because the dissolution is followed by a new birth, on the other hand because the ‘immersion fertilizes and increases the potential for life and creation”. (M. Eliade; 1949)

Several Lessons Can Be Concluded

On the Theoretical and Intellectual Level

The value of water is universal, beginning with the destructive and creative waters of the flood.

- The major question that arises in relation to Eliade’s thought in relation to the Flood is, therefore, obviously not to know whether or not there were deluges, but rather, to know what is the reference to mythical thinking when speaking of the deluge, “... which is a classifying and differentiating thought (a myth puts order in the universe to distinguish spaces, waters, women, forms of love, etc.)” (C. Tarot, 2007).

- Now, the treatment of the subject of the flood as a contingent historical and religious fact, may induce another vision of the symbolism of water that has no relation to the thought of Eliade, who saw it as a cosmic event obeying a necessity; whereas it may be the result of the punishment of human beings for their faults and arrogance towards the power of God.

- In both cases the approach to the value of water is indisputable, whether sacred or secular it is Essentially Universal.

Specifically to Architecture

- The Flood of Human Settlements, Regeneration, the Renaissance, a New Spirit, a New Art, the Removal of Antecedent Footsteps, etc. here are several consequences and results of the deluge that have influenced the architecture, its styles and modes of representation.

- Several articles and whole works have been devoted to the subject of the deluge, but at no time do we find a reference to the consequences it has caused on the architecture. If one thing is certain, the result of all the known floods is always devastating compared to the architecture, which can give some idea of the results caused when it comes to a deluge.

- The Flood, seen in Eliade’s mind, was beneficial to architecture, as it brought a new world to the detriment of a worn-out old world, and consequently the development of new cities, establishing a new architectural style and implementation mode.

- For, there are only architectural traces of the various human settlements that have preceded the Great Flood, those that have been built in hard or those that have been forged by nature (like the various caves where humans have taken refuge for their shelter).
This presupposes the recourse of previous civilizations to the flood to the establishment of their cities on the heights of the hills by using the stone as a primordial material of construction, while avoiding, consequently, the floods on the plains and by keeping their shelters in tough.

So, the inference made from this approach is that the feeling of fear due to this natural disaster had prompted a new reflection in the mode of urban settlement and the use of building materials in architecture.

The other point in relation between the history of the flood and architecture (especially naval architecture) concerns the Ark itself, as an architectural object, since it was the second lever in this story after the water.

The logical question that arises is: How was this wooden Ark designed to support the burden of all creatures on earth with the men who followed Noah, as well as his resistance to the devastating forces of the waters?

To answer this question, it is necessary to recall some notions of physics concerning water and wood, that is to say the methods of construction of floating structures.

Wood with its light weight characteristics, low density and high resistance to different types of forces (torsion, compression and traction), in addition to its availability at the time, was the best construction material for a boat or an arch.

While the molecular composition of water and its density allows objects made of wood to float and immerse.

With regard to the dimensions of this arch, the imagination is open to all suppositions; but what is indisputable is that they have been considerably consistent to allow an indeterminate number of creatures to access and be carried.

The best illustrative example of current events, in this case, is that of naval warships (aircraft carriers) designed to support the loads of planes, war engines such as tanks and armored vehicles ... in addition to all the equipment and the staff at their edges, navigating in all weather conditions.

The anecdote is that the ark was raised by one person (Noah) but for a period of more than 200 years (Ibn Kathir, 1996), while state-of-the-art technologies and colossal resources are at the origin of these new naval constructions, which are being built in record time. (Fig. 08).

RESULTS AND SCOPE OF THE STUDY

The scope of this study on the dialectic of the relationship between water and architecture drawing on historical, theoretical and scientific references will be summarized as follows:

Theoretical and Intellectual Results

The Relationship between Science and Religion

If the different religions evoked facts and stories of “scientific” experiences lived during a given time, it is obvious that they do not exclude this eminent report of science in the argumentation of the liver; and if the sciences tend to draw some accounts from the holy books to prove any theory with practical and experimental methods, we may say that the relation which must be established between science and religion must not be in conflict, but on the contrary, it will be beneficial through its complementarities for both.

Universality of Knowledge

The acquisition of knowledge in different fields by man, whether from east or west, north or south, from this era or another era, Christians, Jews, Hindus, Muslims or atheist; it is only a means to achieve its development in any case,

because the origins, beliefs or ideologies are insignificant in the face of what they bring more to Knowledge to achieve the Universality of Knowledge.

Divergences and convergences in the sphere of knowledge are the raw material for its development.

**The Utility of History**

History as a science can be ranked at the top of the pyramid of all sciences, as it can also be its basis.

Doing scientific research without resorting to the story of the research subject can lead to an inestimable error in time and objectives. So the recourse to history is a necessity and an indisputable obligation.

**Expanding the Critical Mind**

The stories that formed the raw material of the analysis in this study were selected so as to allow some compilation between the Mythical and the Legendary, on the one hand, and on the other hand, with the Concrete and the Material, in order to achieve new knowledge in architecture (essentially); While trying to bring in a mind of critical critical analysis.

**The Dialectic between Eliade and Bachelard Theories**

The juxtaposition between the teachings concluded from the two stories of the palace of the caliph of Baghdad and that of the ark of Noah and the great flood, summarizes the dialectic of the opposition between Eliade and Bachelard on the sanctity of water, despite agreeing on other symbolic values such as freshwater, living and current.

For Eliade, “she (water) is sacred from the beginning to the last drop”, while Bachelard ... says nothing of the sacred he leaves aside, with what he calls “Social Valorization some water” (G. Bachelard, 2010) Contrary to what Eliade claims, “the waters are not sacred in themselves, but become so because they are consecrated or sacralized...” (M. Eliade; 1949) Eliade tends to confuse sacred and symbolic, and that is why he is powerless to explain whether sacredness is intrinsic to water ... the sacred therefore depends on the places, times and practices that give it to things” (M. Eliade, 1963)

The conciliatory position between this opposition of theories will be best adapted to the values of water; it is sacred, as Eliade claimed at the same time as it is material according to Bachelard. In the sense that the sacred is not always the manifestation of the abstract, but it can be expressed through an object or a concrete thing such as water; while the development of social valuations of water can lead to its sacralisation. So whether sacred or material, water still retains its considerable value.

**Architectural Results**

The architectural interpretation of water drawn from religious traditions is of sacred value.

The symbolic practices on water in architecture are universal.

**The Shape of the Water**

The scientific experiment shows that there is no limit in the ingenuity of the design and construction of architectural objects; Since the story of Soloman with the Queen of Sheba demonstrates that the architectural and technical development in this kingdom were challenged by this Crystal Palace built on the water, “It is said to Enter the palace, But when saw her, she took him for a body of water and she discovered her legs, Solomon says It is a crystal-paved palace, She says My Lord, I have wronged myself and I submit with Solomon to God, Lord of the worlds”. (Al-Naml 27-45, Holy Quran).

**The Imaginary of Water**

The Sacredness of water

In monotheistic religions, men, whether they be Jews, Christians, or Muslims, in spite of their differences, can agree on the faculty of God and his miracles transcribed by his prophets; The context in which was sent each of these prophets was specific, each of them possessed miracles, expressing the power of God while corresponding to their immediate surroundings, the story of the miracle of Moses and the sinking of the Pharaoh of Egypt is illustrative.

The Materialization of Water

Great esteem is reserved for architects and engineers as well as their buildings built on the water. This refers to re-reading the history of Soloman with the Queen of Sheba from a specific critical angle to architecture; Since it reveals an absolute truth of ability to build a hard building (the palace) from a Fragile material (the Crystal) on a base as fragile and unstable in its liquid form as the Crystal, which is the water.

Man, Water and Architecture, Lessons of an Experiment

Several articles and whole works have been devoted to the subject of the deluge, but at no time do we find a reference to the consequences it has caused on the architecture. The deluge was beneficial in relation to the architecture, since it established the establishment of a new mode of implantation translated by several architectural styles. The feeling of fear due to this natural disaster prompted a new reflection in the mode of urban settlement and the use of building materials in architecture.

Diversity and Complementarity, Interdependence between Water and Architecture

The works published on the history of architecture do not evoke the possibility of building an architectural object made entirely of glass on water. What could be called: Theory of suitability of glass construction on water.

Shimmering Water

- The imitation, to perfection, of nature in a geometric space reduced by the mirror of the Greek.
- The collaboration of different architectural cultures drawn from the antecedent and contemporary civilizations in the foundation of art and architecture in general.
- The limit of the unlimited, interpreting a main characteristic of water through the mirror. (Fig. 09)
- Finally, the realization of the reflection inspired by the water in the mirror, is only a form of visual, intellectual, and spiritual transmission aimed at demonstrating things in their true identities.

![Figure 9. Metalocus_lacime_shimao-the-wave_20- Photography by CAAI- Source- www.metalocus.es](image)

CONCLUSION

Architecture, as a mirror of civilizations, based on form, structure and aesthetics, according to Vitruvius, draws its theoretical foundations from society, from nature and from universal human thought.

Water, by its essential value in life, maintains a relationship of positive necessity with architecture.

Whether rational or relative, the dialectic of the relationship between water and architecture forms, on the one hand, a complementarity, a union and a fusion between the theories and intellectual precepts pre-requisite or discovered, with the interpretations reflected by architecture throughout its history; and on the other hand, it forms a shimmering representation of the abstract imaginary of the universal symbols materialized by means of figurative architecture.

Finally, The study of the dialectic between architecture and water through the crossing of the ideas of imminent thinkers such as Gaston Bachelard and Mircea Eliade, awakens in researchers the opening of the great doors of the theory of the architecture and its foundations towards the fertile fields of intellectual thought of architects, in thirst for more investigations and exploitation of knowledge.
RECOMMENDATIONS

This research recomanded that

a- The theory of architecture requires a rereading of its foundations concerning the sources of its principles and concepts.

b- For this purpose, the utility of a comparative historical approach and an analogy between the different pre-established theoretical thoughts and reflections must be constantly reconsidered or revisited in case they are not already explored.

c- That The dialectic among architecture and water be reviewed from the angle of an analogy between two major divergent thoughts. And that the first step to be taken in the theoretical domain of the relationship of conceptual inspiration, even of material representation, is supported by the life-giving elements in architecture.

d- Concrete examples of artistic or symbolic interpretations remain will be discovered and explored to verify the tenacity of this dialectic.

e- Several themes and a multitude of concepts have been evoked in this article just to awaken the consciousness of architectural theorists on the existence of a phenomenon of complementarities and symbiosis between architecture as that scientific and artistic entity with the water element with all the contradictions it brings together.

REFERENCES


21. THE HOLY QURAN.
24. www.bing.com
25. www.cvablog.com
26. www.failedarchitecture.com
27. www.guggenheim-bilbao.eus
29. www.jw.org
30. www.metalocus.es
31. www.quran4u.com
32. www.sergiupopovici.wordpress.com
33. www.tripadvisor.fr
34. www.wikipedia.org

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