THE CONCEPT OF OPENNESS IN THE ARCHITECTURAL CONTEXT

建築的文脈における「開放性」の概念に関する研究

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Objective
This research focuses on the comprehension of the openness as an operating concept within the architectural context. It is the exploration of different expressions of openness as an element of spatial and temporal articulation between an interior and an exterior to it.

The objective is to show how, that first a better understanding of the concept of openness then an exploration of the different practices of the concept in traditional and modern architecture will lead us, (through putting in practice the concept of openness from the design of the general composition until the creation of the places or atmospheres), to fulfill modern man needs departing from any determined program, physical, symbolical, cultural or social context.

Keywords: concept of openness, notion of limit, notion of interior/ exterior, duality openness/closure.

開放性の概念、領域性、内部性/外部性、開放/閉鎖の両義性

1. INTRODUCTION
Through the openness, human being regulates its relation with the surrounding world, with other humans, with nature and with God. To see, to hear, to breathe, to feel the exterior being at the interior are existential needs on which depends the human well being imprinted throughout the openness and his existence in the surrounding world.

Therefore, with the Modern movement, a new idea of homogenous free open space and of continuity between interior and exterior rose. This new idea might have been generated by two facts:

• Modern movement aimed at making architectural forms free from tradition allowing it to attend to functional imperatives and social reality.

• With the technological progress, the expression, the form, the orientation became more a choice of the conceivers independently from any technological, cultural or climatic constraint.

"Everything can be exchanged, inside and outside, private and public (...) but the universe does not change. What change, that which is constructed differently, are our thought, art, architecture and the incalculable number of our uses. In this way invisible houses are established everywhere. And the distracted bird that comes in through the window and cannot find the way out suffers far more from the limits of a kind of a mental house than the apparent walls of the construction of stones, of tiles and of wood into which he entered by chance11.

The desire of continuity between interior and exterior during the modern movement was usually manifest through an excessive use of glass and steel facades in almost all over the world.

Gordon Matta Clark is one of the architects who tried to show that to

Fig. 1: Work of Gordon Matta Clark, showing an attempt of combining openness and closure.

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It is practically impossible for human beings to perceive, conceive, or imagine anything whether it is an object or a space, concrete or abstract and continuous, without giving that which is perceived a certain form, without imagining that this continuity has an end.

Through our evolution in space and time, we never stop being confronted by theses 'limits'\(^{40}\), which continuously remind as of our vulnerability and human condition.

"The power of God is infinite but human nature has its limits"\(^{39}\). These limits are those of our own constitution and the limits of the space that constitute obstacles, which we train ourselves to overcome, to exceed.

No territorial limit can escape the fact of overstepping, no territory either can or wants to be completely closed\(^{41}\). As human beings, we have this aptitude to extend ourselves beyond the limit, to overstep it physically with our bodies or else mentally thanks to our senses. My freedom, I will enlarge my cell, I will continue the door's song, it is a door the door, but this door has no door, but I may go out from the inside of myself\(^{35}\). The extension through the limit presupposes the existence of an event, stimulation, and a preparation within the limit that could be concrete and material as well as fictive.

Our visual accuracy can for example constitute an obstacle to our sight in the sense that it doesn't allow us to see further then a certain distance. A concrete partition (a wall) is also an obstacle to our sight. In the first case, the openness can be a telescope that can make as experience the heavenly space thanks to our view or the computer's screen, which opens up a virtual world the existence of which we did not suspect. In the second case, the openness could be just an interruption of that partition.

In sum, the perception of the openness is related to our 'senses'\(^{36}\). This is to say that there is an openness to one of our senses and walking body when it, (the sense), is extended beyond the limit that was first beforehand closed and impermeable.

Consequently, with the elimination of the obstacle to our senses, we will be able to receive information coming from the other side of the limit. Apart from the previous example related to the eyesight, the same phenomenon occurs with everyday awareness with the rest of the senses like smelling, hearing...the exterior atmosphere. All this is called 'to make the experience' of the other world, be aware of what is happening outside throughout the openness of the limit.

3.1. The openness and the communication interior and exterior

"In sum the openness plays a role a little bit similar to the human's senses, in as much as they permit us to see, to breath, to understand the surrounding city"\(^{49}\).

The openness supposes thus the communication between 'the here' and 'the beyond', the somewhere else, the other side of the limit. In fact the presence of a limit, a frontier in the spaces determines two spaces or areas, even if they are similar, the position of the observer (related to the limit) and his identification to one of the spaces permits us to discern an "interior from an exterior"\(^{49}\). The rapport between interior/exterior is manifested above all with by treatment of openings on walls. It is through the wall that sky and land meet, and in the manner of this meeting is incarnated the being in the human being's world (l'être de la terre de l'homme)\(^{7}\).
Therefore the openness gains different expressions and configurations to provide the overstepping. Filtering and adjusting the exterior parameters (light, view and aeration), a limit can simultaneously be an obstacle to some parameters and openness to others.

Henri Gaudin says about Ciriani: "There is in Ciriani something very interesting expressed, that opposes the European idea of closing to the American idea of opening. Prior to the light, it is about the transparency.

When we join up together the transparency to the light and to the control of its intensity, we end up with the question of closing. A perfect illustration is the ‘brise-soleil’ that is a way to diffuse the light, but also a double wall. If the visual transparency is respected, the idea of transparency in some way is denied."

Nevertheless, we cannot think about openness without thinking about the limit. The concept of openness is thus related to the concept of closure.

3.2. Human’s openness to the exterior by interior necessity (Psychology of perception)

The work of Christian Ricordeau and Gaston Bachelard allow us to realize the duality of the human being that is constantly torn between interior and exterior. This observation is at the origin of the perception and creation of space that shows itself through the openness of a limit, as it is the case in ancient Greek and Egyptian monuments. "Above all it is about attaining what architecture has been desiring since the Egyptians: an open communication between interior and exterior. It is a very old desire to live inside with the luminous comfort of the outside. We find it in all the Greek paragons, or simply in the painted landscape that covered all the interiors of the centuries since."

According to Gaston Bachelard, the duality openness/closure, in an architectural structured frame is determined to answer our needs to feel secured, sheltered and to be able to extend ourselves: "(...) at the surface of being, then, at that site where the human being wants to manifest himself/herself and hide, the movements of openness and closure are so numerous, so often inverted, so charged with hesitation that we could conclude with this formula: the human is the species of the half open.’"

3.3. The concept of openness and closure and the duality interior and exterior

These needs to feel sheltered and to be able to extend ourselves take many forms in our real live experience and qualify our existential space in inside and outside, private and public, interior and exterior, sacred and secular.

The limit is nothing but the expression of an answer to this duality. It develops separation and connection, obstacle and overstepping, closure and openness.

The relation of openness/closure gains then other connotations reflecting the relation human beings want to maintain with the exterior: the shown/the hidden (related to the view), the transparent/the opaque, the obscure/the clear (related to the light), the exteriorization/the interiorization etc.

The diversity of answers related to the relation openness/closure is due to the diversity of cultures, climates, and functional programs; to the used techniques and to the manner we think and conceive space. The spatial configuration, the dimension of the openness, the texture, the color of the limit, the position of the observer related to the openness and of the openness related to the limit, the implicit or explicit character of the openness, are geometrical and formal parameters on which is based the lecture of the expression and the perception of the openness. We can end up with participation, intercourse or with a simple relation between interior and exterior.

4. SECOND PART: THE CONCEPT OF OPENNESS OPERATED IN THE EXISTENTIAL SPACE

The openness is the answer to human’s needs such as (view, air, light, sound and articulation with the exterior). Through answering simultaneously or separately to the stated needs, the openness makes the surrounding world (which gathers the physical context as material, color, topography and vegetation, seasons, weather and light and the socio-cultural context) and ‘the exterior’s qualities manifest’. It makes us experience ‘different moods inside’. The creation of the moods at the interior space is related to the function of the place (a kitchen, a dining room, a bedroom...) and to the spiritual dimension of societies which is reflected through their life style, customs, tradition and religion.

For a better understanding let us first, try to explore the openness (related to our senses (view, light, and aeration) and walking body, separately of different works of architecture toward different ‘surrounding worlds’.

4.1. Articulation through the general combination between openness and closure

a. Private and public

The enclosure of a house, the combination between openness and closure is culturally defined to open up to the surrounding world, revealing its ‘presence’ and to offer a retreat from it making ‘withdrawal possible’.

Withdrawal and feeling of intimacy and privacy are related to society and culture. The following examples give us a further explanation.

i. In the Medina of the Sahel of Tunisia

The house in 1970 was generally introverted and organized around the courtyard. The construction of the intimacy of the family, its protection, goes in the traditional society by an attention brought to the openness. "All the openings are points of articulation that should be controlled: their use, their site and sometimes the symbolic investment (...). The doors are disposed in ‘in and out’ for the entrance (...). The layout of the windows in front of the road is very rare’.

In the architecture of Islam, profane and sacred spaces are expressions of a religion and its view of the world rather than that of a particular political or economical system. Withdrawal naturally implies the creation of an inner domain, the courtyard, ‘where the memories of the more distant environment are gathered’. From ancient times, in town houses like roman cities, the courtyard served as the core of this inner world of private dwelling. The courtyard had also a role of distributing fresh air to the surrounding interior spaces.

ii. In the Traditional Japan

In the traditional Japanese house, the enclosure is soft. The garden is considered to be part of the interior of the house. The lightness and the transparency between private and public give the impression that there is no privacy, no intimacy. “In fact privacy is preserved not physically but..."
through distance, and Japanese refer to the most private part of the house, or the most sacred part of a shrine as the deep inner recess"[12].

With the influence from Europe, "even though Japan has kept the openness face to the nature (the garden to which they give a spiritual dimension), the house presents to the exterior world a blind front (...). On this side of the high fence, we do not worry about being heard or being seen through the house"[13]. This example shows that the notion of limit is mentally and socially determined. As a matter of facts, it is important to notice that the distinction between interior and exterior in Japanese traditional space is often unclear.

In Arabian Medina, for example, there are several transitional spaces between interior and exterior but the perception of what is interior and what is an exterior remains very clear and obvious.

iii). In Venezuela

For the Native American of Venezuela, apart from the sense of modesty, other elements like "the feeling of personal value, of territoriality and the idea of the individual's place modify the attitudes toward the intimacy"[14], and afterwards towards the space's openness. "It's those elements that determine if a community house is left opened and not divided (...); In fact, the Yaguas in the Amazon (or the house of the Piaroo Indians in Venezuela) live in a big opened house. They obtain the intimacy by a social convention that permits to anyone to make themselves absent and in fact absent by turning one's back to the center of the house"[15].

iii). In the United States

Around the 70th, a new symbolic in relation with nature appeared. Nature became a determinant element of the form and the orientation of the openings. "It is possible that the modern house is orientated to the view, the sea, the sun and the sky; and so that orientation and the freshness replaces the religious orientation and the symbolic of the past. A new symbolic take over as an idea: health, suns, and sports"[16].

b. Sacred and profane

In the sacred spaces, the openness of the enclosure does not aim at articulating the interior to the surrounding landscape but at articulating the profane to the sacred, at making us feel that transition.

i). Christian and Islamic

The openness is the articulation between horizontal and vertical, darkness and light: The Christian sacred spaces as well as the Islamic ones seem to have a similarity concerning the articulation between profane and sacred.

Openness through the envelope aims at a more general interpretation of the relationship between earth and sky, dark and light. "(...) the fearful and disorienting zone of darkness breaks apart what has been from what is yet to be. (...) An effect continually exploited in religious architecture to separate profane from sacred space, (...) creating a perilous rite of passage, the dark entry hall swallows up a visitor in a ritual death and gestation. (...) This kind of shadowy initiation, and passage from darkness into light appears in one form or another in most religious architecture"[17].

Therefore, in Christian architecture, the openness is always elevated in order to give the impression of a vertical ascending light.

"The earth always remains the dark (...) and the sky the domain of the light, (...) The earth, thus, is substance and form, the sky illumination and order.

And their relationship is always the difference between down and up, that is horizontal and vertical"[18].

Modern Christian architecture: In the 'Couvent de la tourette' of le Corbusier, the openness, is vertical. It articulates the ground to the ceiling (the earth to the sky) creating this way a rising movement, which by being infinitely repeated represents the eternity. (See Fig.2)

ii). Japanese Shinto and Buddhist temples

In Japanese shrines and temples: The most dominant characteristic of Japanese Buddhist temples and Shinto shrines thinking is the idea of birth, death and resurrection. The combination of openness/closure represents this idea in almost all temples and shrines.

As already Henry Plummer has noticed, Fushimi Inari shrine in the south east of Kyoto (dedicated to the comings and goings of the rice god Inari), represents a more powerful image of the central Buddhist believes that the whole of life is an endless flow of resurrection. The hypnotic repetition of thousands of gates tightly aligned creates a rhythm that pushes away the everyday world and makes it possible to notice and feel the evolution of subtle overarching passages. Thus he states that "(...) Each gate is a bleded red birth of what it is to come and bleded red death of what has been, forming a long chain of sudden initiations and sudden ending, flickering hot and cold so that a walk uphill is a blur of lifetimes"[19].

4-2. Articulation through the openness to the view

'To see' is an act that is socially determined and not only a physiological phenomenon. The following example shows how the materialization and the technology used to put in practice the concept of openness reflects each culture's selected vision of the surrounding world and the desired moods inside the spaces.

a. Private and public

i). The Arabian Medina (Tunis and Cairo)

The expression of the openness is determined in order to allow the inhabitants:

i)-a. 'Not be seen':

Not to be seen from the exterior and to preserve their intimacy from the indiscreet eyesight. Apart from the creation of a private inner world, the

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courtyard, the conception of the door in traditional houses (like Dar Lasram) materializes this idea. (See Fig.3)

Indeed, with the influence from the French colonization in Tunisia and the English colonization in Egypt, "with the disappearance of the interior space, the courtyard, the only openings of the house, being the windows or the balconies; the traces of appropriation had been lead to move and to extrovert. At the same time, we notice (...) phenomenon of fence, cluster of wood sticks, curtains, etc. phenomena that should be referred to the concern of not being seen from outside"20). (See Fig.4)

i)-b. 'To be seen':

Around1970, in countries like Tunisia and Cairo in Egypt, after the independence from the French protectorate and the English colony, a newly enriched society grew up. In this case, thus, we can see that a new way of thinking and new social values merged from the influence of occidental culture: a symbolic of social success. The expression of the limit and openness had been influenced by the tendency to show this supposed prestige. "In some examples like Tunisia and Cairo in Egypt, we can see how occupants, taking advantage of the thickness and the depth, develop between ostentation and exteriorization the relation between interior and exterior"21).

i)-e. 'To see without being seen':

The mouchcharabieh was originally used in townhouses of Arabian medina such as Tunis, Syria, Egypt, in order to allow women to see the urban street without being seen.

This was made possible with the density of the mouchcharabieh texture and with the difference of enlightenment between inside and outside. From far, (The mouchcharabieh is always situated in the elevation) the observer cannot see the interior space since it is darker than the exterior.

"The principle side includes eventually an opening and a kind of metal shutter toppling over or gliding the texture of which is more dense: The more we have to be closer the more its mesh is tightened"22). (See Fig.5)

ii). In Modern architecture

In 'L'institut du monde Arabe', in Paris, Jean Nouvel achieves spatially a symbolical idea of the selection of light and view and by showing again that high technology can revive traditional principles (of the mouchcharabieh of Arabian Medinas), make them more appropriate to the context. The expression of the openness of this building, (Fig.6), shows the whole socio-cultural structure by materializing the mental way of thinking and introverted character of arabo-islamic societies. Like this precedent example, exploding the fact that 'there is no view without light', Japanese architects also invented subtle combinations between openness to the light and to the view until reaching at some point a mood of holiness, of spiritual contemplation.

iii). In Japanese traditional architecture

In Japanese traditional architecture, the openness to the view is not only meant whether or not to show simply the scenery. Rather than that, it aims at designing the openness related to the scenery as well as designing the scenery related to the openness (since the garden is considered to be part of the interior space itself). This process of twinning the scenery with the disposal of openness, view and openness to the view show a certain hint for a metaphysical state, a character of holiness. The following examples show how this is made possible.

iii)-a. ‘See without being seen’:

In the machiya, although the texture of the limit is very different, the principle is the same than the one put in practice in the Arabian mouchcharabieh. "The views and diaphanous effects through the skeletal walls vary enormously from side to side. Generally during the day, those insides can see out, while those outsides cannot see in. Looking out from a dark interior, the views is percolated and fuzzy, while from the street looking in, the same screen turns perceptually opaque due to brightness contrasts"23).

Therefore, like the following example, (Fig.7), nowadays in Kyoto, people's attitude regarding the screens that are covering many balconies of new buildings show that there is still a concern of not being seen from the urban exterior. This example shows that this kind of openness (which is very common in occidental countries) still does not fit to some Japanese's lifestyle.

iii)-b. ‘Seeing and not seeing’:

Very often in Japanese architecture, different texture of the openness blurs the view outside.

In the urban landscape, in machiya, Japanese screens are often used in order to allow the viewer 'to see and not to see' (b) the exterior.

In Zen monasteries and tearooms, screens are often used to help
reaching a state of holiness where contemplation of the nature was also regarded as necessary. “Echoing the densely packed lines of forest or bamboo grove, that natural screen around the perimeter of Japanese sanctuary, the wooden grills met a twofold need, seeing and not seeing at once. The screens work as optical devices to simultaneously detach and connect”24).

iii)-c. Openness to the View and extraction from physical reality

iii)-c-1. Transforming the view into light and shadow:

Many disposals of openness show Japanese taste for extracting the viewer from the physical reality into a spiritual state:

The shoji is a white paper that transforms the scenery into light and shadow, into nothingness, bodiless and makes us strongly feel ‘the present moment’25. “The spotless white paper has eliminated all that is clearly visible and intelligible, replacing the data of perception with diaphanous and bodiless sketches of things, fleeting apparitions which cannot be grasped by eye or mind, and which float on the screen in a metaphysical state. Things make an appearance (...) like the indirect presence of visiting spirits”26).

iii)-c-2. Openness to the view and power to hold the eye:

In Japanese architecture several technologies are put in practice to make us stare at the scenery. All the disposals of openness are more or less based on one principle: composing openness and view from the periphery (figural shape) to an unreachable point, which belongs to the exterior landscape. In Japanese architecture, openness is treated like a composition of a painting within a frame.

iii)-c-2-jj. Figural shape and dynamic scenery:

“The figural shape”27 (symmetrical, circle or rectangle, static gestalt) has an optical power to hold the eye. This effect is always enhanced by the ‘dynamic shown scenery’28, and by a ‘focal luminous point’29 (at the center). There is a balance between stability and instability, tranquil and excited at once. Sometimes “intersecting lines”30 or a form of a cross helps reaching a mood of meditation and concentration.

iii)-c-2-jj. The untouchable landscape (filled with ghosts and energy, dry landscape):

The abstracted dry landscape is very famous in the Zen monasteries; its dynamic composition catches the eye throughout the openness and helps tranquilizing the mind.

“The omphalic image is filled with ghosts of energy and light rather then solid matter. Like the sacred Shinto mirror, or a garden of white sand, this luminous center can’t be touched or possessed, can’t be inhabited or gotten into, but nevertheless reveals itself as a physical absence that is spiritually entrancing, a source of bliss. To repeat a Zen phrase: The eye sees it, but no hands can take hold of it. The moon in the stream”31.

iii)-c-2-ji. Translucent margins, from the hazy to the bright:

The use of white paper, margins of white paper screen (from the hazy) around the opening to ‘the brightness (at the center)”32 gives a kind of holiness and helps to reach a state of spiritual contemplation.

There are several examples of modern Japanese architects who applied traditional principles in their projects like “Tadao Ando and Maki33.”

4-3. Articulation through the Openness to the light

There are many kinds and qualities of natural light. These changing qualities depend on two parameters: Time and place.

Time: The intensity, the color and gradient of light change with time.

“Vertical light and horizontal one, direct light and reflected light, clear light and blue light of the dawn, warm golden light of the crepuscule, midday dramatic light, solid light as to cut with a knife and many others, etc.”34.

Place: “The quality of light for instance varies from place, but it is difficult to grasp its varieties before it is made manifest by means of a built form”35.

The following examples will show how, traditional architecture, with the use of several technical processes could make manifest the quality of the environment’s light and express the mood of the action which will take place inside.

i). In the Arabian Medina

The ascending light coming from the sky had a very strong symbolic: “The axis from where goes down the light appears like fundamental element of symbolic structure of the house. It proposes not only a horizon but also a beyond. We will find again a vertical order that hierarchies the spaces starting from the houses, secular spaces of terrestrial life, to raise up to the sacred heavenly and luminous”36.

ii). In Japan

In private dwelling as well as in religious spaces, light and shadow constitute an important medium to provide a mood of meditation.

As Henry Plummer notes in his book, in Japanese traditional architecture, the openness is made in order to allow just enough light to set off the darkness, the shadows of the interior spaces.

In private dwelling: The treatment of light and shadow is of particular interest. “The beauty of a Japanese room depends on a variation of shadows, heavy shadows against light shadow, it has nothing else (...) In a cavernous Minka of the kind that survives in Takayama (...) Darkness tends to obscure the enclosure, and rather then counteract this effect, the Japanese builders of old seem to have deliberately enhanced the consuming power of shade. Recesses are made deepest where daylight cannot penetrate. Dark woodwork absorbs excess light. Space is folded in ever dim layers”37.

In religious spaces: “The ritual sequence normally begins with a dark
entrance and culminates in reviving light not quite of this world. A sequence that is certainly a central experience of that great shrines, temples and monasteries of Japan, as well as the small tea house, which evolves from the way of Zen33).

iii. In modern architecture

Today treating of light combine between two cultures, Western and Japanese. Today's Japanese modern society is very careful about comfort, about having a warmer interior with less humidity. "The optical quality which most sets apart the atmospheres of traditional and modern buildings in Japan is the former thickness of shade. (...) People today are bound to prefer the comfort and clarity of a brighter world. But in the lonely mountain temples and old wood houses of Japan, one can still glimpse that ancient beauty of tender mellow blackness spread out in every gradation. Huge overhanging roofs developed to shelter the interiors from rain and summer sun, allowed only the softest and dimmest light to reach the outer veranda32).

4.4. Artication through the openness to the air

i. In Japan

With local materials and quite simple principles, the Japanese invented a wide array of permeable screens that could sift and disperse, rather than channel the oncoming rays, acting more as a delicate filter then harsh aperture33).

ii. In Syria

In 1970, in Cairo and Syria, inside the rooms, "the kamarla (...) facilitates the ventilation of the central part of the room, notably, if it has a volume more high then the rest"34). (Fig.8)

5. CONCLUSION

Through this study, in order to understand the concept of opening before putting it into practice in the conception of architectural space, we have been lead:

1) Conclusion of the first part:

   To define the openness, (related to our senses and walking faculty), as the extension of our senses or our walking body through a limit, allowing us the articulation and communication with the other part of the limit, the exterior to us. Thanks to the work of Gaston Bachelard and Christian Ricordeau, we were aware of the duality openness/closure of human's being personality (that human wants to be able to extend himself through the openness but also needs to feel secured and sheltered).

2) Conclusion of the second part:

   In the existential architectural space, the diversity of answers given by the disposal of openness to fulfill this need and to regulate the relation human wants to have with his exterior, depends on many parameters:

   - The socio-cultural context, the physical context and the climate, the functional context, the materialization and the used technique and finally of the conceiver. After trying to study the influence of theses parameters on several expressions of openness, in different contexts of traditional and modern architecture, we concluded that, "The most important thing in a building is the type of answer, culturally defined, that we give to our needs. It is not the existence or the absence of a window or a door but their disposition and their orientation"35). We have seen in cases such as Japan and, Tunisia, Algeria and Syria, etc, that the import of a new culture and a new way of thinking did not fit to the context because people had their own different roots, way of thinking and life style.

   Thus, as Khan already stated: "The basic structure of being are given once for ever. Only the circumstance change and thus the need arise for ever new interpretations of these structures"36). It is important to know the characteristics of the exterior-surrounding world and of the desired atmosphere of the interior and to design the openness in order to make present the surrounding world and to create different moods inside (as Christian Norberg Schulz suggests for architectural design, in general). "Today, we do not any longer believe in a completely newer international architecture, but ask for works that are simultaneously new and old. To be new and old means to be rooted in locality and history"37). We have in fact explored appropriate solutions given by some post-modern architects, who could achieve this goal.

3) Final conclusion:

   Finally the aim of this study was to test the limits of the openness as an operational concept in the architectural design; it is believed that the following methodology will help us reaching this aim:

   The concept of openness should be practiced from the very beginning of the conception of the project as an answer to a 'given environment'60), by projecting ourselves in the physical and socio-cultural context (the ground in its social and physical environment).

   We should first think about what should be selected from the physical environment (light, view, air, and sound), then how should be the articulation between interior and exterior and how to combine openness and closure at the level of the composition in order to feel the surrounding (social and physical) world, to make the project belong to the place, to make it 'local'.

   Perhaps, being aware of the fact that the openness is not only visual transparency, but also that it is related to all the senses; we can end up with a more sensitive project to human being's needs. (Make human fully and pleasantly experience the space by means of feeling the varied moods inside).

   By combining and separating openness to our senses, we can give character and identity to the spaces creating different atmospheres. Thus Khan says: "When a space knows what it wants to be, it becomes a room,

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Fig.8: View of the Kamaria in Syria.
that is, a place which has a particular character. The character of a room is, as we have seen first of all determined by the relationship between light and structure. To make a square room is to give it the light which reveals the square in its infinite moods, (…) the moods created by the time of the day and seasons of the year are constantly helping you in evoking that which a space can be… “36).

We should design architectural space by also focusing on the openness, and not only the closure. In fact this study allowed us to have an idea about how openness could possibly be designed to fulfill human existential, cultural and social interests. We also discovered that Japanese traditional architecture excelled at fulfilling the later preoccupation by developing a process of designing space through the openness.

References:
1) Fortora (Guy). Architecture d’aujourd’hui n285, Avril 1993, article: “Une architecture sans mur ni toit”, p70.
2) Pascal. Penesse, ch 4, p380.
3) Balzac. L’intel, p176, p125.
6) Cornet (Marcel). Revue Urbanisme n162, article: “Le verre et la ville”.
15) Ibid 13, p91.
16) Ibid 13, p183.
18) Norberg-Schulz (Christian). The concept of dwelling, the way to figurative architecture, Electa/Rizzoli, New York, p75.
19) Ibid17, p80.
20) Ibid 4, p269.
22) Ibid 21, p191.
23) Ibid 17, p74.
24) Ibid 17, p76.
25) Ibid 17, p176.
28) Ibid 18, p85.
30) Ibid 17, p102.
31) Ibid 17, p108.
32) Ibid 17, p100.
33) Ibid 17, p174.
34) Ibid 21, p178.
35) Ibid 13, p85.

(a) Existential space: Zevi Bruno says: “In space, life and culture, spiritual interests and social responsibilities coincide, because space is not only a cavity ‘a negation of spatiality’, it is alive and positive”, Apprendre a voir l’architecture, Ed Minuit, Paris 1959,p85. Gustave Nicholas says: “Space is a living reality, it is charged with culture (…), it varies according to societies and systems of value and socialization”, La psychologie de l’espace, presses universitaires de France, Paris1959, p60.

(b) Technology: The openness gains certain shapes through the material limit, in order to show us the desired information. Each substance has its own potentialities and characteristics. The role of technology is to improve those connotations and valorize their potentialities.

(c) Limits: It is intended by limits those peculiar to the human condition (sensorial and walking faculty) and those to which he is confronted, creating by the way other limits in the virtual and concrete space where he evolves.

(d) About the perception of space: Christian Norberg Schulz says: “Our immediate awareness of the phenomenal world is done through the perception”, Systems logiques de l’architecture, ed Dessart et Mandaga, Bruxelles 1974, p31.

(e) Notion of interior and exterior: Pierre Von Meiss says: that “the interior and the exterior are not necessary the same as the covered and the uncovered. Human being has a tendency to consider the environment egocentrically. The famous notion of Bergson suggests an interior, when we are in the city or in a garden and we consider them as interiors. Conversely, the interior gains in intensity with the presence of an exterior”, De la forme au lieu, p121.

(f) About revealing the presence of the surrounding world and offering a retreat from it, Christian Norberg Schulz says: “A house has to keep and visualize the phenomena to make them accessible (…) Visualize the atmosphere of the place”, The concept of dwelling, p89.

(g) About the creation of moods, Khan says: “When a space knows what it wants to be it becomes a room, that is a place that has a particular character. The character of a room is, as we have seen, first of all determined by the relationship between light and structure. To make a square room is to give it light which reveals the square in its infinite moods”, The concept of dwelling, p205.

(h) To see and not to see: “The obscured outlines and textures become soft to the eye, losing resolution, making objects less clear and less solid, less prone to logical sight. Colors are faded, and brightness contrasts reduced”, Light in Japanese architecture, p140.

(i) The present moment: Jun’ichiro Tanizaki says: “But for me the most exquisite touch is the pale white glow of the shoji in the study bay; I need only pause before it and I forget the passage of time (…)”. Light in Japanese architecture, p140.

(j) The figurative shape: “The shape of the opening, or more accurately the shape of its light, will decisively affect its optical power to attract and hold the eye. Simple, symmetrical outlines such as rectangles and circles reflect the eye inward with greatest force, since they minimize and balance all distracting perceptual forces around the periphery, while visually weighting the center. (…) The results are especially captivating when the glowing subject in the frame is slightly tensed and dynamic (…)”. Frame and image complement each other to form a delicate balance between stability and instability, making the view tranquil and excited at once”, Light in Japanese architecture, p278.

(k) The focal luminous point: “We are induced to stare a blank and unattainable center, a square or circle emptied of almost all contents, yet framing, the most alive and vibrant sort of nothingness”, Light in Japanese architecture, p282.

(l) The intersecting lines, Carl Jiang says: “(…) Very frequently (mandala) contains a quadratary or a multiple of four, in the form of a cross, a star, a square, in the Tibetan Buddhism, the figure has the significance of a ritual (yinma), whose purpose is to assist meditation and concentration”, Light in Japanese architecture, p285.

(m) Translucent margins and focal point: Carl Jiang says: “Translucent margins have the added effect of trimming a view of distractions while extolling its presence (…)”. The view is given a halo of sorts, the kind of aura generally reserved for sacred images. This hint of holiness touches on what may have been an underlying intent of shakkei as it evolved in the Zen temple, to construct a mandala, a visual aid to help the viewer reach that state of repose and concentration necessary for spiritual contemplation”, Light in Japanese architecture, p280.

(n) “Maki and Ando have both explored ways to attract the eye at the heart as well as periphery of an opening, going so far as to place intersecting lines close to but just off the center of a luminous field”, Light in Japanese architecture, p280.

(o) Khan says: “the choice that you make of an element of structure should be also the choice of the character of light you may want.” Christian Norberg Schulz added, “Structure and material are thus considered from the very beginning of the design process in relation to light”, Architecture, meaning and space, p205.

(p) About local: Norberg-Schulz Christian says: “Any work of architecture belongs to a place, and therefore first of all is ‘local’, Architecture, meaning and space, p7.
和文要約

建築の開口や空間を通じて、人間は周辺環境、他者、自然や神と
の関係を規定している。見、聞き、体感、建物内部から外部を
感じるとき、人間が「開放性」や周辺環境におけるその存在を通
して創り出している実在的要因である。

本稿の目的は、建築的な空間をデザインしていく過程において、
また、異なる形で存在する要求、文化、社会的な問題への対応に
おいて、どのように「開放性」の概念を反映させることができるか
を、伝統的建築とモダンズ建築を通じて模索することである。

方法として以下の通りである。

人間の知覚・感情を通じての「開放性」の意味を論じるために、
理論上の検討を行った上で、「開放性」の概念を定義する。その
際Marleau Ponty, Jean CousinとChristian Riccirodeauの言語を参照
した。このアプローチは、「開放性」の概念は「閉鎖性」の概念や
関係性と深く相互関係があることを考慮する上で基本となる。

伝統的建築やモダンズ建築の空間において示されている「開放
性」の表現をみる。建築において、関係をとおした環境は、内部と
外部の間で機能的な要求（光・流動・通気・空間を時間的に模索）
を調節する異状の表現をもたらす。よって、内部と
外部の関係やそれらの接合の仕方を通じて、「開放性」の多様な表
現を見た。

得られた知見を以下に示す。

1. 「開放性」の定義

はじめに、「開放性」を人間の感情や歩行能力と関係する概念と
して定義した。すなわち、それは関係を通じて、関係や人間の身体
における外側との接続を可能ととするような、人間の関係であ
る。さらに、歩行している身体を通じて得られる自身の関係の限
界である。Gaston BachelardとChristian Riccirodeauの研究を参考にし
たことにより、以下のことを示した。それは、人間の性質の両義性
である開放・閉鎖、すなわち、人間は限界における「開放性」を通
じて自身を把自己できることを望むだけでなく、安全で保護されてい
ると想定した欲求が存在することが知られているということである。

2. 多様な「開放性」の表現とその依存

次に、伝統的建築やモダンズ建築を検討し、異なるコンテクス
トの中の様々な「開放性」の表現の解釈を行った。その結果を以下
に示す。

「開放性」にもとづいた空間的処理によってもたらされる多様な
建築的空間は、多くの指標に依存していると考えられる。具体的
には社会・文化的なコンテクスト、物質的なコンテクスト、面積、
機能的なコンテクスト、実存化、使われる技術、最後に建築家で
ある。

これらの指標が影響を及ぼした上で、建物において最も重要なこ
と、我々の必要性を満たす解決策の型であり、文化的に定義され
るものであると結論づけた。それは、面や空間の存在の有無は
なく、それらの位置や方向である。

外部の周辺環境や内部で要望される雰囲気の特性を知ることや、
周辺環境を観察化させ内部で異なる雰囲気を創出するために
「開放性」をデザインすることは重要である。

3. 結論

この研究の目的は、建築のデザインにおける技法的な概念として、
「開放性」の関係を検討することであった。そしてこれは最初に「閉
鎖性」ではなく、「開放性」に焦点を当て、建築的な空間について
考える必要がある。次に、人間の感覚的・文化的・社会的な実態の具体化のために、どのように「開放性」はデザインさ
れることが可能なのかを提示した。

具体的には、以下のように結論づけることができる。

物理的かつ社会・文化的なコンテクスト、すなわち、与えられ
た環境の条件に自らたてて企画を行う際と異なり、「開放性」
の関係は、与えられた環境に対する答えとする計画の極めて初
期段階に検討されるべきである。

周辺環境を感、場所に帰属するプロジェクトをつくり、それ
に「地域性」ともたらすために、我々は新たに、環境（光、眺
望、空気、音）から何を選択するのか、内部と外部の助けをどの
ように接合するか、構成の段階において開放と閉鎖をどのように
組み合わせたかを考えるべきである。

おそらく、「開放性」が感覚的な透明感だけでなく、すべての感
覚に依存しているという事実を勘で同様に、観察されるこ
とにより、より敏感な計画を実行することができる。（内部の変化
する雰囲気を感じることにより、人間に十分に寄与がされる感
覚を含む。）人間の感覚と「開放性」を組み合わせた場合、分
析することによって、性格とアイデンティティを、雰囲気の相違に
応じて空間に与えることができる。

「開放性」にもとづいた空間のデザインのプロセスを展開する
ことによって、最後の課題をも解決しうる点で、日本の伝統的
建築は優れていると考えられる。

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