

Arab World Institute Jean Nouvel

EVDA 621 Formal Strategies in Architecture | Case Study Analysis

Yiming Su



PROJECT: Arab World Institute, Paris (Institut du Monde Arabe)

ARCHITECTS: Jean Nouvel

CLIENT: Institut du Monde Arabe

PROGRAM: 25,000 square meters of museum, library, auditorium, conference and meeting rooms, cafeteria, and offices.

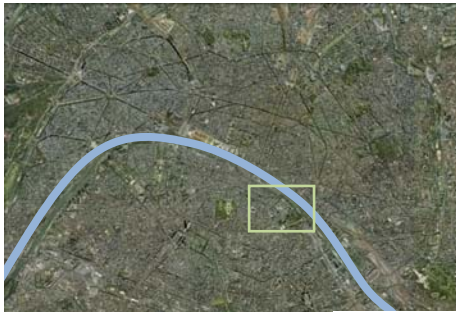
STURCTURAL SYSTEM: metal structure; curtain walls.

MAJOR MATERIALS: aluminum, glass.

Part I Form

Since the completion of the Pompidou Center, there is no building in Paris evokes as much discussion and anticipation as the Arab World Institute. This building is a physical symbol of the friendship between France and the Arab world which makes it facing the contradiction of Arabian and European culture. Also, because of its special location, it becomes the connection of old and new Paris.

Jean Nouvel and his team won the competition of a contract to design the Arab World Institute in 1981, and the building was constructed from 1981 to 1987. The team was given a complex program with a complex site. As the headquarters of a foundation organized to encourage a development of different culture, the Arab World Institute requires a 5,000 square meters museum, a cafeteria, an auditorium, reception space, a 100,000 square meters library, meeting rooms, support facilities and offices.



Zoom In Area
The Seine



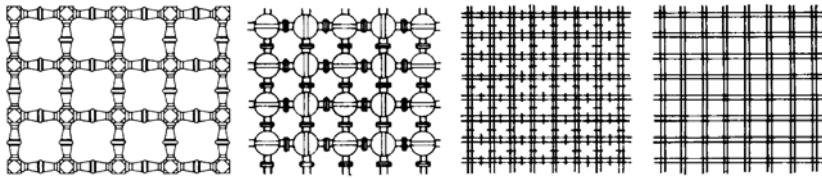
Notre Dame
Zoom In Area



Curved Façade

Old and New

The Arab World Institute is located on Rue des Fossés Saint Bernard in Paris, France. The building acts as a buffer zone between the Jussieu Campus of Paris VI University and the Seine. The river facade follows the curve of the waterway and helps reduce the hardness of a rectangular block, adapting itself to the view from the Sully Bridge. At the same time the building also appears to fold itself back in the direction of the Saint Germain des Prés district. The building's transparency encourages the sense that the Arab World Institute is not a gateway but a scrim separating old and new. The building itself is split in two and the driveway between, in line exactly with the towers of Notre Dame, terminates in an internal court, with a fountain at its base echoing the fountains of Arabian palaces of 1,000 years ago.



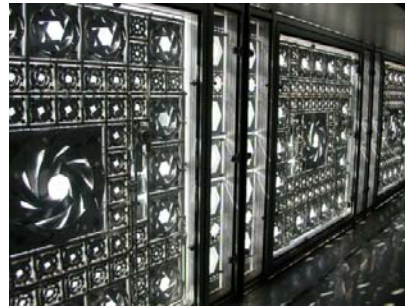
Different Forms of Mushrabiya



A Mushrabiya Window

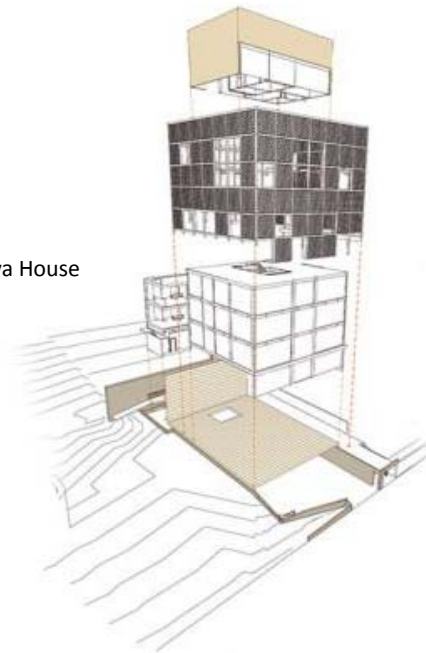


A Single Panel on the South Façade of the Arab World Institute



South Façade of the Arab World Institute

A Typical Arabian Mushrabiya House



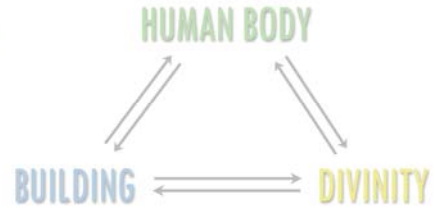
Arab and Europe

The south façade's extraordinary sun screen is the Arab World Institute's metaphorical tour de force. Its 27,000 diaphragms, organized in 113 panels, operate on the principle of a camera lens. The lens' polygonal openings echo Arabian geometries. The huge 30 by 80 meter façade acts as a giant mushrabiya. This subtle interpretation perfectly combined high-tech modernity with traditional Arabian architecture form. "Visitors should know that this building is Arabian," says Nouvel.

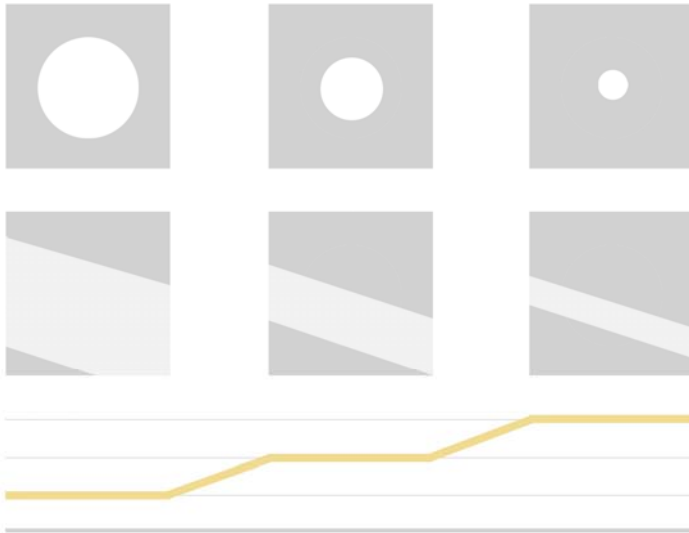


Part II Body

“The analysis of bodily space has led us to results which may be generalized. We notice for the first time, with regard to our own body, what is true of all perceived things: that the perception of space and perception of the thing, the spatiality of the thing and its being as a thing are now two distinct problems. The Cartesian and Kantian tradition already teaches us this; it makes the object’s spatial limits its essence; it shows in existence *partes extra partes*, and in spatial distribution, the only possible significance of existence in itself. But it elucidates the perception of the object through the perception of space, whereas the experience of our own body teaches us to embed space in existence.” said M. Merleau Ponty in “The Synthesis of One’s Own Body”.



Relationships between Divinity, Human Body and Building



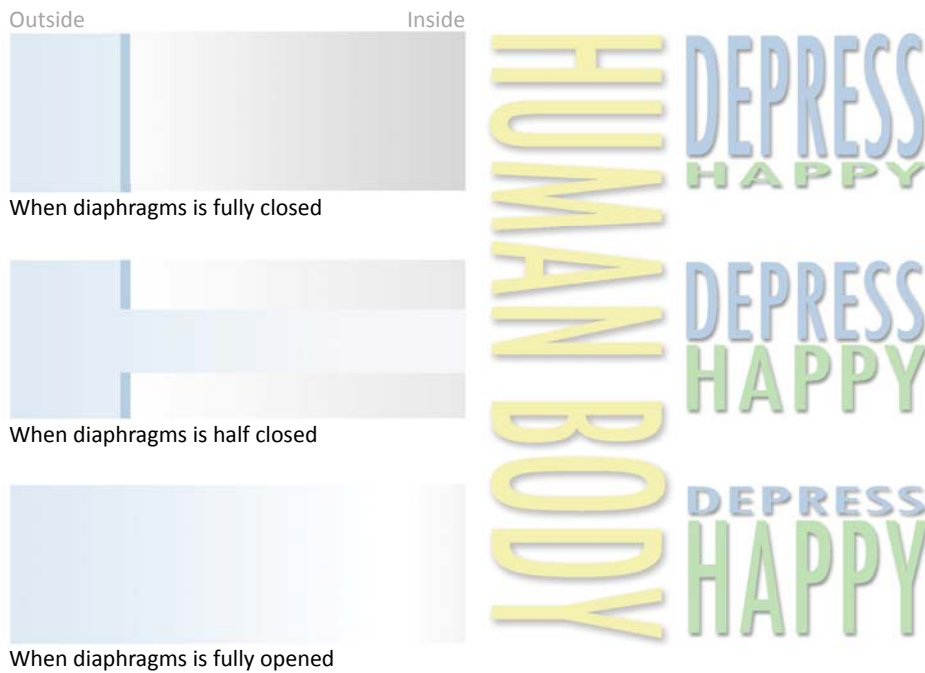
Diaphragms, Light and Divinity



Divinity, Body and Building

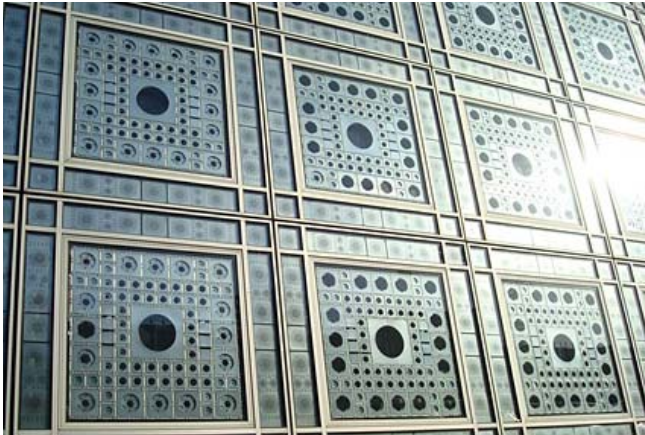
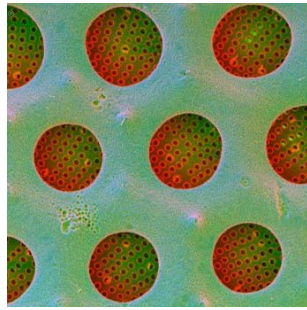
What is the relationship between divinity, human body and building? It could be a linear process. In a simple word, building creates divinity which caught by human body. Also, it could be similar to a chemical reaction. The building acts like catalyst which speed up the production of divinity in human body. Furthermore, it could be more complicated that these three parts all have an acting force and a reacting force between each other.

Interestingly, divinity has a very close connection with light, especially in the realm of architecture. Jean Nouvel once said, "Light is an entity. It can be used as a material in a building." In Arab World Institute, he did exactly what he said. He not only used light as a material but also played with it. He created a façade with thousands of diaphragms which operate on the principle of a camera lens changing the natural light coming into the building. The smaller the openings on the diaphragms are the less light will come inside which results a more mysterious atmosphere making human body catching more divinity.



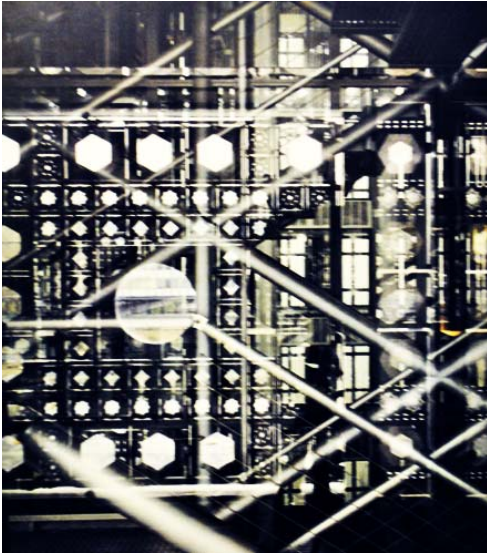
Inside and Outside

Towards a building, “inside” and “outside” are more literal. The definition between “inside” and “outside”, at most of the time, could be a wall, a window or a door. Towards a human body, “inside” and “outside” are more abstract. “Inside” could be defined as emotions, sensations, thought and soul. “Outside” could be the environment surrounding the human body which, at the same time, could be the “inside” of the building. Obviously, they are not two separate systems. The “outside” of a building can affect the “inside” of this building while the “inside” of the building can affect the “inside” of human body. It is a linear process. In Jean Nouvel’s design, he made this process into a dynamic one. The changeable façade can reorganize the light indoors thus change the feelings of human body inside the building.



Metaphor

The most remarkable metaphor in Arab World Institute is its thousands of diaphragms on the façade. It imitates not only the form, but also the function of pores on the skin of human body. On human body, pores are used for body temperature regulation. They are the primary method of cooling. Same as these pores, the diaphragms on the façade are part of the cooling system of the whole building. They are controlled electronically from a photovoltaic sensor which permits 10 to 30 percent daylight, thus keeping the temperature inside the building at a favorable level. When these diaphragms are opening or closing, it seems like skin is breathing.



Part III Technique

“After three thousand years of explosion, by means of fragmentary and mechanical technologies, the Western world is imploding. During the mechanical ages we had extended our bodies in spaces. Today, after more than a century of electric technology, we have extended our central nervous system itself in a global embrace, abolishing both space and time as far as our planet is concerned. Rapidly, we approach the final phase of the extensions of man, the technological simulation of consciousness, when the creative process of knowing will be collectively and corporately extended to the whole of human society.” said Marshall McLuhan in “Understanding Media”.

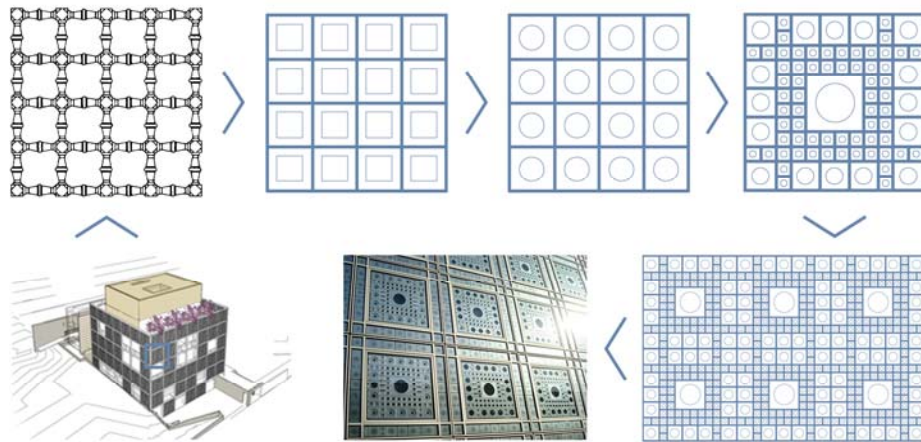


Fig 1

Technique and Culture

In the form part, I mentioned that Jean Nouvel uses metaphorical tour de force on Arab World Institute's façade to present the connection between Europe and Arab. He uses Mushrabiya, the traditional architecture form of ancient Arab as a paradigm. It is notable that he tries to translate ancient Arab culture into a more modern and sophisticated language.

Technique and culture are usually considered to be in a conflict position. In another word, they are in two different dimensions. However, to architects, it is always a crucial and tough question to find a strategy of how combining them together. Translation, imitation, etc. has been used by architects as effective ways to create connections between them. Fig 1 is trying to demonstrate the relationship between technique and culture and how they are connected.

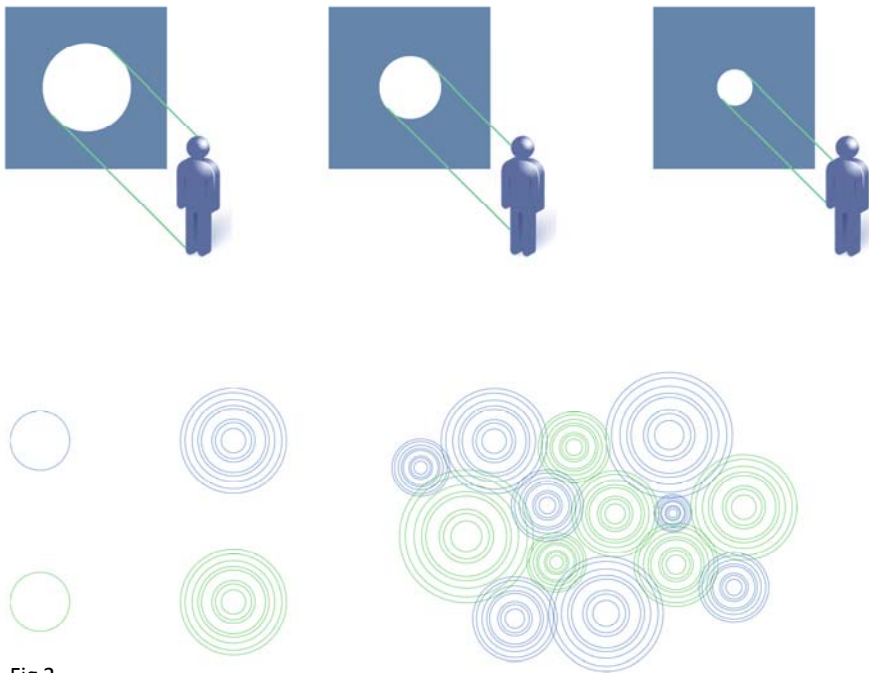


Fig 2

Technique and Divinity

In the body part, I discussed about divinity. I pointed out that divinity has a very close connection with light, especially in the realm of architecture. Jean Nouvel once said, “Light is an entity. It can be used as a material in a building.” In Arab World Institute, he did exactly what he said. He created a façade with thousands of diaphragms which operate on the principle of a camera lens, changing the natural light coming into the building. The smaller the openings on the diaphragms are the less light will come inside which results a more mysterious atmosphere making human body catching more divinity.

Divinity seems to have a direct connection with the size of holes on the high-tech panels of façade. With the helping of camera lens and computer technology, the connection is no longer rigid. Instead, it becomes a dynamic process which makes divinity and architecture having an opportunity to permeating each other. (See Fig 2)

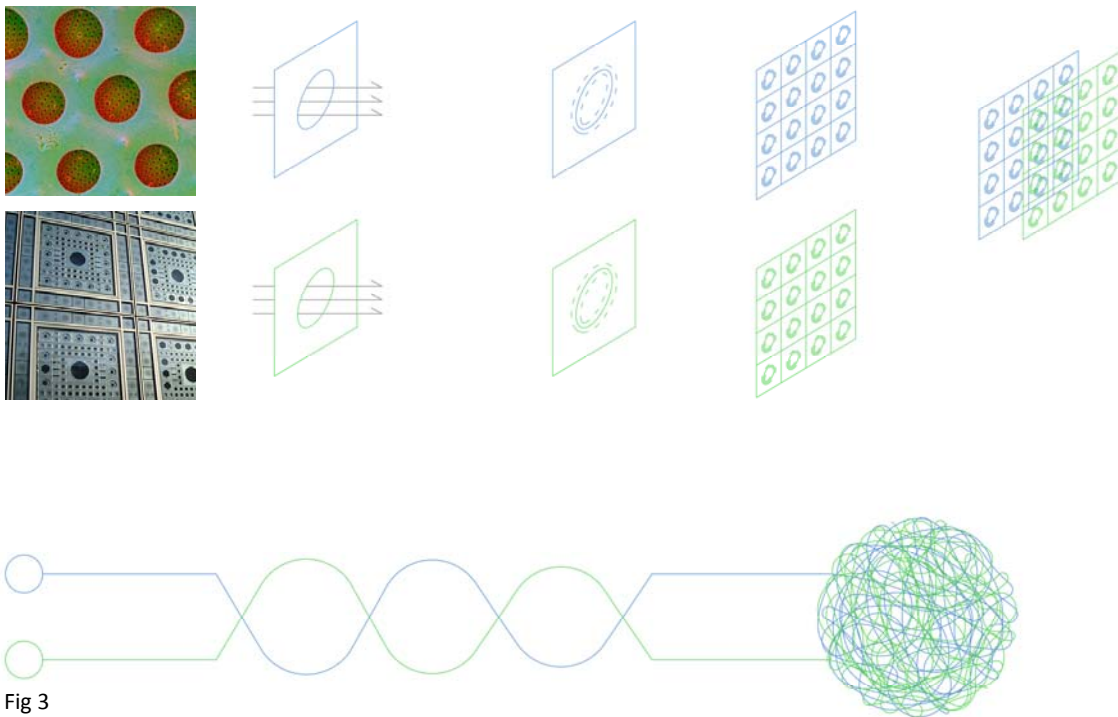


Fig 3

Technique and Metaphor

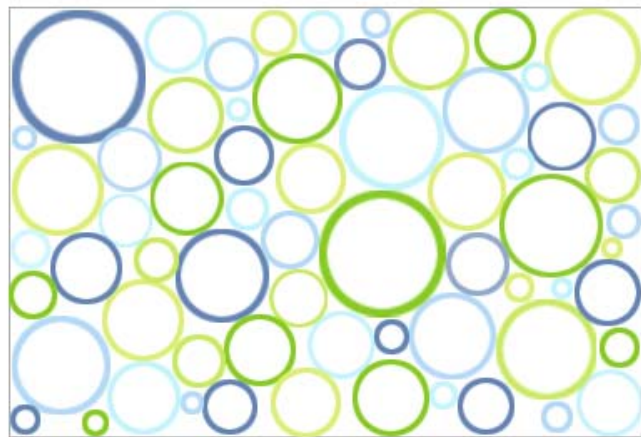
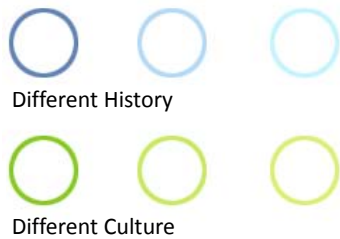
The metaphor in Arab World Institute, which is mentioned in the body part, is its thousands of diaphragms on the façade. It imitates the function of pores on the skin of human body. On human body, pores are used for body temperature regulation. They are the primary method of cooling. Same as these pores, the diaphragms on the façade are part of the cooling system of the whole building. They are controlled electronically from a photovoltaic sensor which permits 10 to 30 percent daylight, thus keeping the temperature inside at a favorable level.

Here, high-tech strategies are used to accomplish the metaphor. It closely connects skin of human body and architecture façade which superficially seem to be two completely different elements. Fig 3 is not only demonstrating this connection but also shows the combination process of them.



Part IV Space

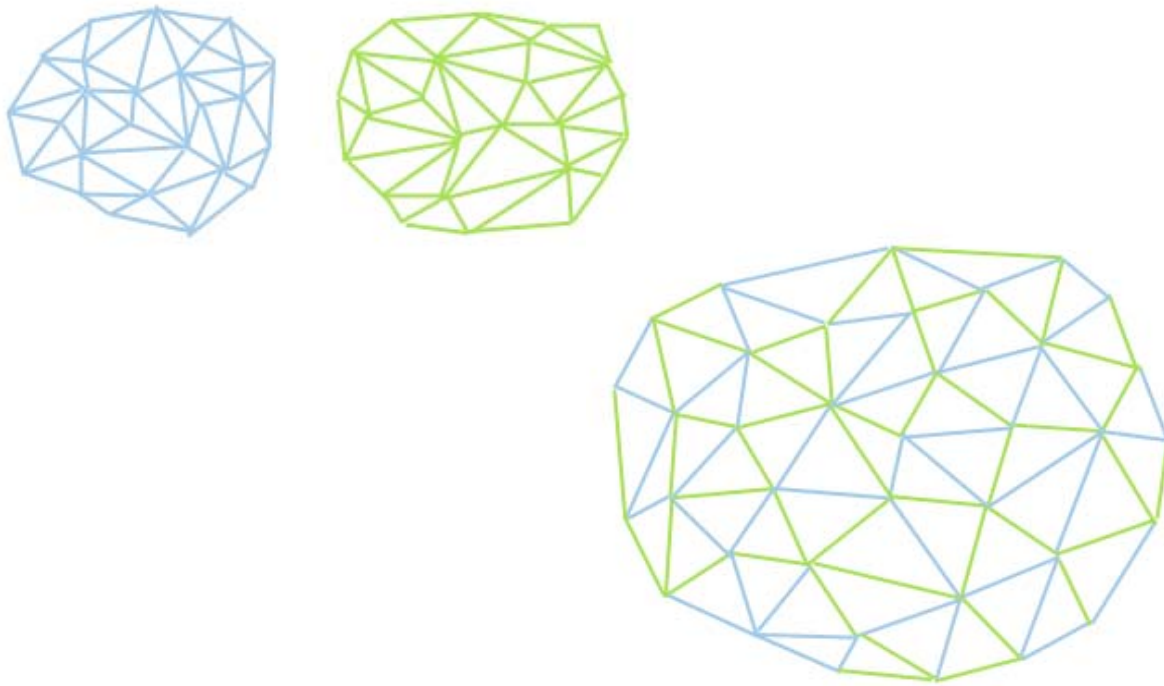
What is space? Manuel Castells said in “The Space of Flows”: Space, in social theory, cannot be defined without reference to social practices. It is an expression of society, and is a material product, in relationship to other material products – including people – who engage in historically determined social relationships that provide space with a form, a function, and a social meaning.



Space and Time

According to Castells' Space of Flow theory, since the space of flows is the dominant spatial form in the network society, then architecture and design are to be redefined. The space of flow blurs the relationship between architecture and society. Since the spatial manifestation of dominant interests now takes place around the world and across cultures, the uprooting of experience, history, and specific culture as the background of meaning is leading to the generalization of non-historical, non-cultural architecture.

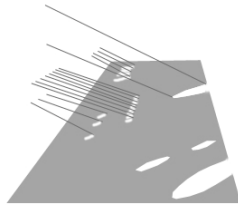
In Arab World Institute, we can easily find some clue of different culture in different period of time. The building itself is split in two parts by a driveway. The driveway in line is exactly with the towers of Notre Dame. In my understanding, here, Jean Nouvel wants to connect the building with the western culture and history. At the same time, this line terminates in an internal court with a fountain inside. Here, the fountain is a metaphor of Arab culture, which echoing the fountains of Arabian palaces of 1,000 years ago. This building could be a perfect example of Castells' "non-historical" and "non-cultural" architecture. In Castells' point of view, the time in "Space of Flow" theory is timeless time, in another word, the time is unchangeable. As a result, the space will become timeless as well. It will remain the same as time goes by.



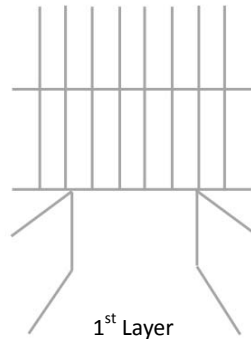
Space and Cultural Logic

As Kazys Varnelis pointed out in “The Rise of Network Culture”, during the space of a decade the network has become the dominant cultural logic. The economy, public sphere, culture, even our subjectivity are mutating rapidly and show little evidence of slowing down the pace of their evolution. Network culture is not merely an extension of the old information age. Today, networked connection replaces abstraction. Information is less the product of discrete processing units than the outcome of the networked relations between them.

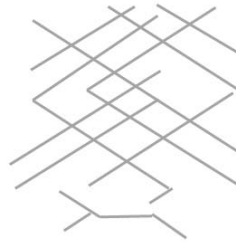
In my point of view, Arab World Institute itself is an outcome of Varnelis’ “Network Culture”. We can easily perceive this point from the location of this building. As an Arabian culture centre, this building is not located in any capital city of Arab world. Instead, it is located in Paris, one of the most important cities in Europe. According to Varnelis’ “Network Culture” theory, culture of the whole world is like a huge web. European culture and Arabian culture are two segments of it. In Arab World Institute, Jean Nouvel was trying to put these two webs together. However, he was not superficially put one web onto another. What he did was unweaving these webs and then weaving them together into one new web. That is why when walking in the space of this building we will not feel isolated from the outside – the city of Paris.



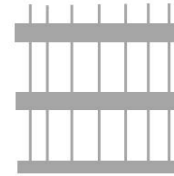
Visually Accessible Physically Inaccessible



1st Layer



2nd Layer



3rd Layer

Space and Mysteriousness

As I mentioned in the body and technique part, Jean Nouvel placed thousands of diaphragms on the façade, by controlling the openings on these diaphragms, the light coming inside became dynamic. As a result, a mysterious atmosphere is created for human body to catch the divinity. There is another solution Jean Nouvel was using to emphasize the sensation of mysteriousness. Most of the separations inside the building are glass instead of solid wall. In this way, to whom inside one space, the adjacent spaces become visually accessible but physically inaccessible. Naturally, people's curiosity is arisen. They will be eager to find a way to access these adjacent spaces. Furthermore, these glass separations create a deeper view. Through the glass, people can see different layers of spaces at the same time which makes them having an illusion of complexity and mysteriousness of these spaces.

References

- Thomas Vonier, Critique: Arab World Institute, Progressive Architecture Vol: 76, Date: 08/1995, Page: 62
- Daralice D. Boles, Modernism in The City – Paris, Progressive Architecture Vol: 68, Date: 07/1987, Page: 72
- Marco Casamonti, Jean Nouvel, 1st English ed. ISBN: 8864130136, 2009
- M. Merleau-Ponty, “The Synthesis of One’s Own Body”, in Phenomenology of Perception, 1962, 148-153
- Marshall McLuhan, “Understanding Media”, in E. McLuhan and F. Zingrone, eds., Essential McLuhan, Anansi, 1995, ISBN: 0887845657, 149-169
- Manuel Castells, “The Space of Flows”, in The Rise of the Network Society, 1996, 372-428
- Kazys Varnelis, “The Rise of Network Culture”, conclusion to Networked Publics, 2007