Civil Engineering and Architecture 10(3): 1047-1055, 2022 http://www.hrpub.org
DOI: 10.13189/cea.2022.100321

Humanizing Unfriendly Buildings and Spaces by Architectural Thought (Case Study: Houses from Jordan)

Saqer Sqour*, Abdelmajeed Rjoub, Rami Alshawabkeh, Safa Al Husban, M.A.SH. Al-Taani, Ahlam Eshruq Labin

Department of Architecture, College of Engineering, Al al-Bayt University, Jordan

Received November 18, 2021; Revised January 31, 2022; Accepted March 7, 2022

Cite This Paper in the following Citation Styles

(a): *[1] Saqer Sqour, Abdelmajeed Rjoub, Rami Alshawabkeh, Safa Al Husban, M.A.SH. Al-Taani, Ahlam Eshruq Labin , "Humanizing unfriendly Buildings and Spaces by Architectural Thought (Case Study: Houses from Jordan)," Civil Engineering and Architecture, Vol. 10, No. 3, pp. 1047-1055, 2022. DOI: 10.13189/cea.2022.100321.*

(b): *Saqer Sqour, Abdelmajeed Rjoub, Rami Alshawabkeh, Safa Al Husban, M.A.SH. Al-Taani, Ahlam Eshruq Labin (2022). Humanizing unfriendly Buildings and Spaces by Architectural Thought (Case Study: Houses from Jordan). Civil Engineering and Architecture, 10(3), 1047-1055. DOI: 10.13189/cea.2022.100321.*

Abstract Western architectural thought ruled and formed architectural practice throughout the last century. It introduced theories that reflected the inconsistencies of human lives and resulted in numerous complications in the built environment. This paper aims to present a view of the fundamentals of Muslim architectural theory, the basics that can control theory and practice in architecture. Thus, it recommends and examines a set of principles that rise from the Muslim thought; these principles highlight the need of fulfilling human needs by architects and designers. This research assumes the following assumptions: 1. Recreating buildings calls for re-forming human life. 2. The unity of social and built environment gives environmental relaxation. 3. Values gained from Islamic principles bring up general rules that can organize practice in architecture. Further, foundations extracted from these fundamentals can regulate architectural work worldwide. Based on humanity in the Muslim thought, this paper aims to develop a new theory to govern the present-day architecture. It concentrates on human parts in architecture. Further, its implementation side explains how buildings fulfill human needs. The research examines twelve human needs taken from Muslim fundamentals. However, the existence of these needs shows how close buildings are to humans. To achieve that goal, this research studied those needs in three Jordanian local houses. Two Jordanian architects designed those houses: Architect Ayman Zuaiter designed Al Tabbaa Villa and Family House and architect Bilal Hammad designed Dajani Villa.

Keywords Humanity in Buildings, Hierarchy of Needs in Architecture, Islamic Architectural Fundamental, Humanity in Houses

1. Introduction

Building and construction is the first form of human art. Humans started interacting with surroundings when they first started raising standing stones; those standing stones were stood for religious purposes. Next, humans used several stones to shape a circle and move around it to fulfill the spiritual needs. Later, humans found the first theory in architecture; the theory was based on relation between the column and the beam, in other words, the vertical architectural members and the horizontal architectural members. Finally, humans settled complete architecture.

The art of constructing buildings was started by Old Stone Age people, and then the ancient Egyptians, Phoenicians, and Mesopotamians. From there, humans set up their initial relationship between themselves and surroundings, thus finding out a calm and strong connection with the environment.

Ancient Egyptians influenced Greeks and Romans. However, the Greeks concentrate more on the physical parts of buildings and surroundings.

During these civilizations, psychological and social features started to disappear, and humans began to think of the abilities to control surroundings; thus, they ignored the social and spiritual side of life. In era of machines, architecture got worse, because human considered architecture as an entity or object, thus ignoring other sides of life within buildings.

In modern times, many architects like Le Corbusier, the well-known architect, stood as examples for producing alienation in architecture. On the contrary, humans started the environmental pressure groups; these groups started their movements against those who consider architecture an entity. Their ideas where part of the organic architecture, the buildings concern with greenery, landscape, climate, and nature. These environmental groups did not form clear theories, but they had strong relationships with different theories like Gaia, cosmic, and other similar ideas. These groups tried to bring back the social and spiritual need to buildings, to strengthen the relationship between the built environment and the social and psychological environment.

For all the above-mentioned reasons, this research elaborates social and psychological human needs in buildings; it focuses on existence of those features in buildings.

2. Literature Review

Several researchers have carried out field studies on alienation and humanitarian architecture. Internationally, there has been considerable research on the lack of human side in modern buildings. A study entitled Atmospheres: Feeling Architecture by Emotions, conducted by Elisabetta Canepa and others, shows that investigational method is appropriate to estimate the atmospheric view. It reveals that experimental methods are appropriate to evaluating atmospheric perception and suggest which architectural features interact with the empathic sensibility of the observer [1].

Another study in Bosten, USA, carried out by Caitlin Carey, discussed the hostile architecture through which societies come across homelessness. The study examined hostile architecture and urban concerns in such a way the place itself discourages specific undesirable manners [2].

Also in USA, Moshe Safdie tried to seek the truth by finding beauty in architecture and urban designs. He reflected on the words of Louis Kahn: “Let a building be what it wants to be.” According to him, it is understanding the lifetime aimed in a building [3].

Other studies such as the one done by Chadalavada have examined hostility in designs against humanity [4]. It assumes the city should give its best to all those who live in it; they could be the rich who like an excellent view of the skyline from their terraces or the poor who settle in it. The study assumes a city can be recognized as liveable only when it accepts the homeless and those in need of small houses.

Robert Nelson from Australia conducted another study discussing the unfriendly modern buildings there [5]. He discusses the reasons that make one space attractive and pleasing and another space hostile and unwelcoming. He summed up that the ingredients that are used to create social presence are often present in old architecture, while these values are mostly missing in modern architecture.

In Canada, Peter Dawson did research on unfriendly buildings in Canada [6]. The study was an attempt to encourage designing successful sustainable houses by realizing the social and traditional influences on building design.

Dorita Hannah conducted another study in New Zealand, where she discussed public buildings during the twentieth century. She concentrates on the public buildings that cause social alienation [7].

In India, Gaurav Rabhjot and Kaur Gangwar studied the Traditional Houses of Ahmedabad. Their research concluded that these houses fulfilled most of the human needs: they have efficient buildings within small neighbourhoods. They accomplished space efficiency, climate comfort, and application of sustainable construction materials. Those houses used water harvesting and earthquake resistance buildings. Those houses also fulfilled the aesthetic needs [8].

3. Human Needs in Architecture

The renaissance period in Europe was when the humanity movements in architecture started. It was the start of human architecture in the western thought. However, humanity disappeared during the beginning of the twentieth century; this was because of the 1st and 2nd World Wars, and other wars here and there. However, the second half of the twentieth century witnessed the time in which human features returned to architecture. Thus, architecture witnessed realization of the environment, emerging manners, and introduction of new technology. Afterwards, behavioral, human, and social movements emerged.

Further, some authors highlighted these facts claiming: “to achieve the comfort of human, there should be a collaboration between morals, ethics, essentials on one hand, and the artificial environment on the other hand “[9]. This writer shows cooperation must come from the efforts of many contributors, like architects, designers, or planners, “who should adopt space not only as a physical place but as a combined community” [10]. However, it is important to consider that architects play an important role in creating “the proper atmosphere for human by providing sources of calmness and relaxation” [11]. Besides, governments must have the power to control the whole projects, to keep in

consideration, the importance of social benefits [12].

Academically, Abraham Maslow opined that the human needs form basis for evaluating social benefits. Maslow divided human needs into many steps such as need for food, water, shelter, aesthetics, self-realization, security, love, and belonging [13]. Maslow put human needs in two categories: physiological ones, including security, and psychological ones, including aesthetics [14].

Another sociologist described human needs according to the personal privacy, considering boundary for every person when dealing with others. He defined this boundary as the distance a person needs to keep when dealings with others. He separated such distances [15]:

- Warm: Up to 15 cm.
- Individual: 30 cm to 50 cm.
- Social: 120 cm to 210 cm.
- Public: 360 cm and more.

Another scholar suggested the boundary of privacy to be less than 46 centimeters, while personal distance is 45 to 120 cm. He considered public distance to range till 750 cm [16].

These distances are important for architects and designers because they need to understand them to design spaces within buildings, thus stressing the containment. Here, a well-known planner highlighted containment as the main feature that shows humanity in cities [17].

Different thinkers are of the view that human needs in architecture can be space, border, group, signs, friendship, social status, communication, security, and safety [18]. These factors are important for planners for understanding the whole built environment. Further, other writers insisted that architecture must fulfill all the needs of humans. One of them wrote: "The aim of architecture is to create spaces where people feel human and more alive" [19]. Another scholar has confidence in the design of public spaces such that they take into consideration privacy and calmness [20].

It is important to understand that image of the city is not only visual, but it also includes behaviors, social values, norms, traditions, and social life of people. An example for that is what Amos wrote: "if a road is judged as an area to rest, chat, and dine, the behavior will be different if it is categorized as a place to pass through only" [21].

4. Muslim Thought and Human Needs

In Muslim thought, architecture is not only a building; it is the relation between buildings, surroundings, and the society. It is the buildings and life within them. Therefore, this paper reviews some human features gathered from the Islamic thought. Some western authors got the similar idea: architects must include human lives within buildings when designing the building [22].

In the Islamic thought, there are as many as thirty human characteristics; these characteristics came from the Muslim architectural fundamentals. The aim is to fulfill the human side in buildings. The followings are among them:

1. Human scale in architecture,
2. Privacy and containment,
3. Balanced regional planning,
4. Rights of privacy by hidden entrances,
5. Calm and relaxation,
6. Friendly ties with nature,
7. Affordable tasks with local materials,
8. Safety and security,
9. Different alternatives of levels,
10. Balanced economy and simplicity,
11. Social solidarity and respect,
12. Creating interesting spaces for comfort and aesthetic purposes.

5. (Al Tabbaa Villa), Case Study

Researchers of this paper selected three samples of traditional Arabian houses to trace the existence of human features in buildings. This research explained the first case study in details, whereas it included the other two in the summarized table.

Al Tabbaa Villa in Amman, Jordan, is the main case study. The Jordanian architect Ayman Zuaiter was the designer.

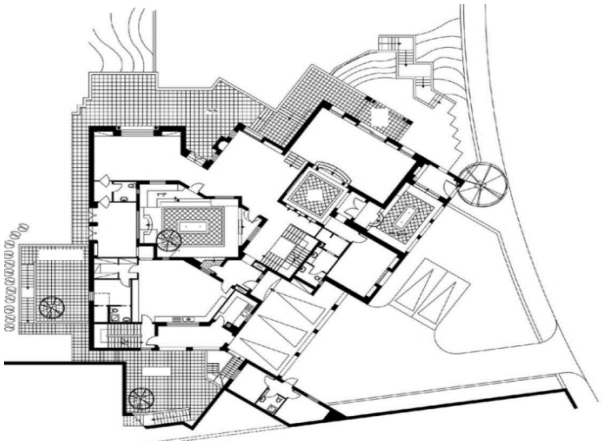


Figure 1. Al Tabbaa Villa which shows the different interesting spaces: courtyard, bent entrances, public spaces, and private spaces.

The villa consists of different spaces spreading around the courtyards [23] (Fig. 1). The lower floor of the house includes guest spaces, services, dining rooms, kitchen, personal office, bedrooms, and other spaces, while bedrooms spaces dominate the upper level, besides the terraces overlooking the courtyard and neighboring spaces.

In Al Tabbaa villa the architect shows consideration for the human scale. Therefore, architect designed different spaces, heights, and measurement (Fig. 2).

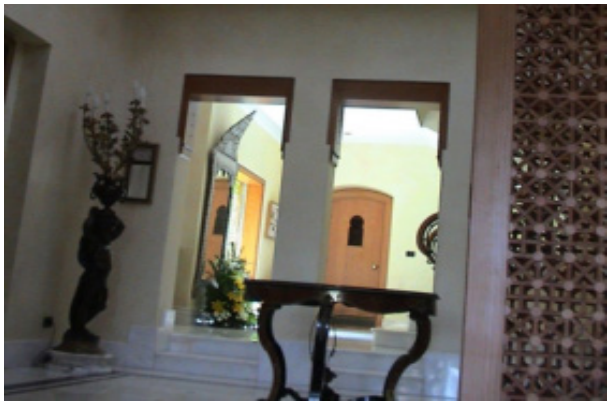


Figure 2. Al Tabbaa Villa with full attention to the human scale

The architect of this villa designed many balconies and terraces overlooking the courtyard (Fig. 3). Therefore, the villa marks the human life of the residents of Jordan by maintaining privacy. Thus, the villa represents traditions, norms, values, customs, and other sides of the Jordanian social life.

Figure 3. Al Tabbaa Villa: Privacy and containment achieved through using plants and overlooking to the inside patio.

The villa creates an environmental solution and provides psychological comfort. It introduces interesting internal surroundings for better communication. It also creates spaces that strengthen and encourage calm social relations between neighbors.

Al Tabbaa Villa has suitable rooms and comfortable spaces for better life within these spaces. Further, the villa contains wooden windows to create natural lighting, along with terraces overlooking the surroundings, the inner courtyard, and lower-level spaces.

Al Tabbaa Villa achieved balance with neighboring houses by creating harmony with the context of the city. The harmony in the house comes from materials used, heights of buildings, colors, unity, and elevations. Thus, the building presents inclusiveness in the architecture and urban design of the city (Fig. 4).

The villa displays strong social ties and care for neighbors by designing enough spaces between the villa and neighboring houses; these distances between houses create healthier relations among residents. They reduce causes of problems caused between neighbors. Further, the design of Al-Tabbaa Villa prevents neighbors from violating each other's privacy, hence eliminating clashes among neighbors. Thus, this reduces abuse of nearby residents and directs to kind and respectful neighborliness.

Figure 4. This picture shows the well-adjusted Villa with the surroundings and urban fabrics.

Al Tabbaa Villa introduces different kinds of entrances. The architect did this to ensure the right of privacy and safety (Fig. 5).

Figure 5. Al Tabbaa Villa: Different entrances to consider privacy and security.

The villa achieves healthy atmosphere by using different types of natural lighting. This helps achieve environmental comfort, calm, relaxation, and better communication (Fig. 6). Thus, it seizes benefit of the natural light and air, allowing them to enter different spaces.

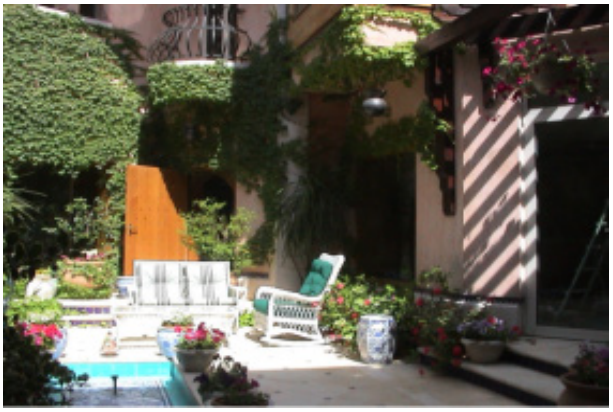


Figure 6. Al Tabbaa Villa: Wooden openings show different sources of energy and light to gain climactic comfort calm, relaxation, and communication.

Besides, the house Achieves friendship with nature by using different spaces for thermal comfort and to help better communication.

Al Tabbaa Villa has achieved easiness and is reasonably priced. It achieved acceptable living spaces and affordable local materials such as stones and wood. It achieved the safety and security through using railings and alternative entrances (Fig. 7, 8).

Figure 7. Al Tabbaa Villa: Safety and security had been achieved using different features such as railing.

Further, the Villa uses traditional features such as wooden windows and other local building materials.

Figure 8. Al Tabbaa Villa: The main entrance with different alternatives.

Besides, Al Tabbaa Villa has fulfilled the privacy by introducing proper places within the house like the courtyard and terraces, to guarantee calm and relaxation (Fig. 9, 10).

Figure 9. Al Tabbaa Villa: Balconies overlooking each other's and outlook view inner courtyard. Also, to achieving a balanced economy and simplicity.

Figure 10. Al Tabbaa Villa: The attracting courtyard and different levels for social solidarity and social ties.

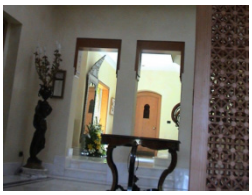
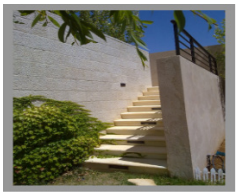
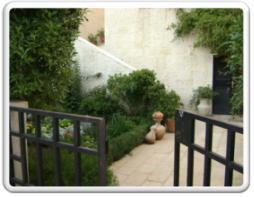
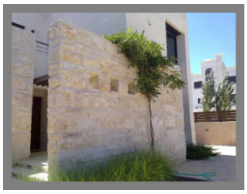
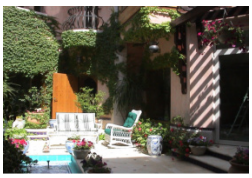
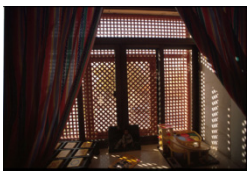
Figure 11. Al Tabbaa Villa: using trees and plantations to create different interesting spaces for aesthetic needs.

On the aesthetic part (Fig. 11), Al Tabbaa Villa has numerous achievements. The villa presented meshed panoramic views of the courtyard, plants, attractive levels, interesting decorations, and wooden windows. These factors jointly create sources of relaxation and gladness.

Spiritually, the villa represents the fundamentals of Islamic thought: first, buildings, which include designing square shapes, and second, using plantations and water to confirm source of life.

6. Humanity in the Case Studies

The under table shows the results of studying spaces, building characteristics, and materials in the following three case studies: Al Tabbaa villa, Al Tabbaa Family House, and Al Dajani Villa.

	Human Aspects In Different Buildings	**Villa Al Tabbaa.** Architect Ayman Zuaiter. Pictures Prepared by: Muminat B. Mustafa & Faten Zboun	**Family House.** Architect Ayman Zuaiter. Pictures Prepared by: Eiman Ramadan & Abu Zatoun	**Villa Al Dajani.** Architect Bilal Hammad. Pictures Prepared by: Randa Al Khateeb
1.	Human scale			
2.	Privacy and Containment.			
3.	Balanced regional planning.			
4.	Rights of privacy, Hidden entrances			
5.	Calm and relaxation.			

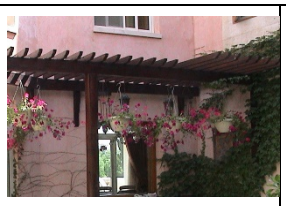
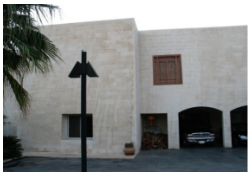
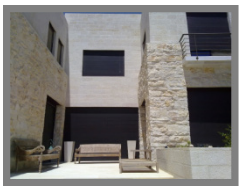
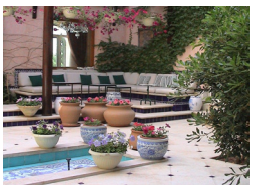
6.	Friendly ties with nature.			
7.	Affordable tasks, using local materials.			
8.	Safety and security.			
9.	Different alternatives: levels and entrances			
10.	Balanced economy and simplicity.			
11.	Social solidarity and social ties in an attracting courtyard.			
12.	Creating different interesting spaces for comfort and aesthetic purposes.			

Figure 12. A table shows the presence of specific human needs fulfilment in Al Tabbaa Villa, Al Tabbaa Family House and Al Dajani Villa.

7. Conclusions

As long settled by the planners, architects, and thinkers in the beginning of the twenty first century, architectural field should concentrate on values and ethics. Separation of architecture and ethics results in illness, brutality, clamor, and noise, as architecture reflects life of people. That is why an unpleasantly built environment represents dull and harmful life.

This paper examined the scale of humanity level obtained from Muslim thought in three modern Arabian houses. The three houses used local material in local style.

The main case study is Villa Al Tabbaa designed by Ayman Zuaiter and other two cases are the family house, designed by Ayman Zuaiter, and the Dajani Villa, designed by Bilal Hammad. The researchers found that both houses fulfilled most of the human considerations, which included concerns introduced by the Muslim thought.

Importance of this research lies in a need to recall humanity to architecture and urban design. Thus, architects

and designers should bring back the human principles to architecture and reintroduce human environment urban fabric for better surroundings and comfortable life. If not, the architecture field will be a source of disturbed environment and harmful life.

Recommendations

Investigators of this Research propose the succeeding suggestions to bring back humanity to the architectural field:

- Urban and architectural discipline urge for further serious research to understand the fundamentals behind forming the buildings and surroundings.
- Academically, the education field in architecture and urban planning demands more studies taking in consideration principles and social values of different societies.
- Architects and critiques should revise history of architecture to study the human aspect in buildings throughout history, to benefit from the past to use for future.
- Researchers and architects should conduct more studies on human architecture, considering application of human concerns in different buildings, with respect to the varieties in regions and countries.

REFERENCES

[1] Canepa, E., Valter S., Anna F., Laura A., Giovanna L., Carlo C., "Atmospheres: Feeling Architecture by Emotions: Preliminary Neuroscientific Insights on Atmospheric Perception in Architecture," International Journal of Sensory Environment, Architecture and Urban Spaces, vol.5, p. 27, 2019. URL: http://journals.openedition.org/ambiances/2907; DOI: https://doi.org/10.4000/ambiances.2907

[2] Carey, C., "Hostile Architecture Aimed at People Experiencing Homelessness in Boston, Massachusetts", A Spatial Analysis. Conference: Society for the Study of Social Problems (SSSP) 2018 Annual Meeting Affiliation: University of Massachusetts Boston, August, 2018, pp. 2-14. https://www.researchgate.net/publication/325718557_Hostile_Architecture_Aimed_at_People_Experiencing_Homelessness_in_Boston_Massachusetts_A_Spatial_Analysis

[3] Safdie, M., "Humanizing Architecture", The Journal of the American Institute of Architects, Architect, USA, November 24, 2015, https://www.architectmagazine.com/aia-architect/aiapractice/humanizing-architecture_o (accessed Nov. 1, 2021).

[4] Chadalavada, K., Sanjiv, E. S. "Defensive architecture – A design against humanity", International Journal of Advance Research, Ideas and Innovations in Technology, vol.6, issue1, pp. 247-251, 2020. https://www.semanticscholar.org/paper/Defensive-architecture-%E2%80%93-A-design-against-humanity-Chadalavada-Sanjiv/5660c30f1d9d557a240a34a06b20ef272da07f47

[5] Nelson, R, "Modern Australian buildings are unfriendly – and here's why", The Conservation, Australia, November 12, 2013. https://theconversation.com/modern-australian-buildings-are-unfriendly-and-heres-why-19432 (accessed in Nov. 10, 2021)

[6] Dawson, P. C., "Unfriendly Architecture: Using observations of Inuit spatial behavior to design culturally sustaining houses in Arctic Canada", Department of Archaeology, University of Calgary, Canada, vol. 23, issue 1, pp. 11-128, 2008,https://www.academia.edu/8928540/Unfriendly_Architecture_Using_observations_of_Inuit_spatial_behaviour_to_design_culturally_sustaining_houses_in_Arctic_Canada DOI: 10.1080/02673030701731258

[7] Hannah, D., "Architecture of Alienation", The Double Bind and Public Space Idea Journal, Co-construction Body Environment, New Zealand, vol. 5, issue 1, pp. 43-58, 2004. DOI: https://doi.org/10.37113/ideaj.vi0.219

[8] Gaurav Gangwar, Prabhjot Kaur, "Traditional Pol Houses of Ahmedabad: An Overview," Civil Engineering and Architecture, Vol. 8, No. 4, pp. 433-443, 2020. DOI: 10.13189/cea.2020.080405

[9] Sqour, S. M., "Human dimensions, and intellectual sustainability in architecture: A dialogue of human intellect of Islamic thought. Proceedings of Conference on Technology and Sustainability in the Built Environment", College of Architecture and Planning, King Saud University, Riyadh, KSA, p.81, 2010. (In Arabic).

[10] Sqour, S., "Urban planning and design in times of rapid-moving events in Jordan", Journal of Modern Science and Technology, vol. 2, issue 2, p.67, Sep. 2014. Http: https://www.openacessjournal.com/article-file/20201028091968114771saqer.pdf

[11] Cammock, R., "Primary Healthcare Buildings", the Architecture Press, London, p. 84, 1981

[12] Sqour, S. M., "Missing costs and benefits in private architectural housing projects", Journal of Architecture Research, vol.6, issue 1, p. 19, 2016. http://article.sapub.org/10.5923.j.arch.20160601.02.html doi:10.5923/j.arch.20160601.02

[13] Forti, A., Bisogno, P., "Research and human needs", Oxford, New York, Oxford Press, London, Passim, 1981.

[14] Maslow, A., "Motivation and Personality", Harper and Brothers Pub. New York, pp. 80–-101, 1954.

[15] Hall, E. T., "The Hidden Dimension", Double day and Co., New York, Passim, 1966.

[16] Sommer, R., "Personal Space: The Behavioral Basis of Design", Prentice Hall Trade, NJ, USA, passim, 2008.

[17] Lynch, K., "The Image of the City", Cambridge Mass Press, London, p.20, 1978

[18] Deasy, C. M., Laswell T., "Design, Places for People", Whitney Library of Design, Watson Guptill Pub., New York, p.17. 1985.

[19] Moore, G. T., "Architecture and Human Behavior: The Place of Environment-Behavior Studies in Architecture", Wisconsin Architects, USA, p.18. 1979.

[20] Cammok, R., "Primary Healthcare Buildings", The Architecture Press, London, Passim, 1981.

[21] Rapoport, A., "Human Aspects of Urban Form: Toward a Man-Environment Approach to Urban Form and Design", Franklin Book Co. Inc., UK, USA, Australia, France, p.11. 1980.

[22] Hooper, K., "Perceptual Aspects of Architecture", Chapter 8, Handbook of Perception, vol. 10, edited by Edward Carterette and Mortan Freedman, Academic Press, New York, pp.158, 168, 1978

[23] Secrets of Architecture, August, 2019, https://www.facebook.com/Secretsofarchitecture/photos/pcb.410449616250476/410448996250538 (Accessed in Nov.2, 2021)