

An evaluation over houses formed with spatial openings and space within a space relation: Loos typology

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Abstract

Person meets his shelter need finding spaces to hide in by the instincts such as feeling safe, being protected and so on. Besides the opening that was used for entrance and exit to the shelter, human had created voids on the shell in order to get light and air inside. The openings which are created firstly on surface and the second dimension turned out to be architectural elements defined such as windows and doors. In the architectural context the openings which are separating the spaces from each other are created in the third dimension; defined as structural openings. Through the historical process, with the development of space the openings have transformations and changes also. Being created on the surface of the space shell, they have roles with the main space and sub-spaces to relate with each other. Aim of the research is to be able to define the relations created between the spaces with the structural openings. Within the study, the forming new space examples will be cited and the mediary voids ensuring continuity and visual transitivity between these spaces will be hounded in the house spaces. The connection between the structural openings and the following relations will be researched through the spaces of Modern Architecture, Adolf Loos (1870-1930) spaces. Loos spaces different from the accustomed spaces were formed by the level differences and voids aim to get light inside, this shows his effort creating space within a space relation in his houses. According to this typology, the spaces are constructed successively and perpetually, and by means of these organized openings they communicate in each other.

Keywords: spatial opening, space within a space relation, Loos typology.

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1. Introduction

The feeling of being covered and protected by planes of a volume having dimensions that allow to enter inside is the mother reason of sheltering action as being from the basic needs. Behalf of being able to provide the continuity of secured and welfare environment, the action of finding volume can be defined as the seeking shelter of human being. According to Kuban, this volume turned out to be a space with inciting the being by the instincts such as protection, hiding, and nesting to live in the limited volumes in a manner of separating and insulating from nature (Kuban, 2006). Space needs some qualities that make it livable and to achieve the space with this livable conditions there are something made by the user. Space is space with the human being; human exists with dwelling in. When human dwells, he changes the qualities of the interior. The changing interior quality is the reason of being living under a shelter; using the inside of a volume. It can be explained in a way that, the space human start to live or dwell is the place that human is closest to his extinction, in the manner of Heidegger arguing '*being and time*'. If we call the space that the human lives in as a dwelling, it can be named as a house in a general comprehension. Bachelard qualifies the house as its time that is passed in it by the user, so as, the house is not just a product, it is a dwelling (Bachelard, 2013).

As same as the other architectural products, dwelling also has a shell which is forming its boundaries. These boundaries differ from in the way of its qualities and quantities. For instance, the elements of shell can be the heavy, strong things or light, porous planes. To think the space without its boundaries is a must. Besides the top cover (called roof), the vertical elements of the space boundary have an important place forming the space in general and they called as walls and help with the partition of the interior. There are some applications on these elements to achieve the spatial arrangements. They provide the relation between interior and outside of the space. When there are any applications such as emptying some parts or playing with the heights of the planes, it means that the elements (planes) play role of connecting the spaces. These elements become the main provider of space communication. They tell us about the area's characteristics that they limited, according to the decisions of design such as measurement, character and composition (Ertek, 1994). As it is proved from this idea, applications on vertical elements provide relations between the sub-spaces that is little spaces in the whole space, which they limit. Spaces start to contact with each other, having a relation of space within a space.

2. Spatial Openings

Before the communications of the spaces, there is a main step which can be the first form of openings and is for the basic human needs. Besides the instinctive needs such as hiding and protecting from the outer conditions, there are also some concrete reasons in order to satisfy the physical needs. According to Uluengin, space should take light inside so as it to be read. Furthermore, the physical action of entering and leaving the space to use its interior is another reason of having openings. Second, to gain fresh air inside is the must of having openings on the shell. From the beginning, the need of shelter created these physical needs and when human hides, he wanted to create openings or used the ones naturally formed such as using the caves. Additionally, they used openings in the human made shelters after they experienced the facing the needs of openings. They started to create openings with their basic shelters (Uluengin, 2000). As an historical background, it is possible to see the first examples of openings in the ancient temples, such as Erechtheion (421-406 BC).

* Heidegger, M. (1971). *Poetry, Language, Thought*.

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To classify the openings with the usage of them in the space, there are two ways to define them. First of all, the openings start on the second dimension; on the plane. The openings in the second dimension are generally created on the vertical elements of the space; the walls. It is impossible to say that there is a connection between two or more spaces without any opening. According to Ching, the openings determine the level of closure scale. To classify the types of openings it can be said that there are three general types: in, inter, corner. They are enclosed with the solid parts of the plane remaining from the whole plane (Ching, 2011). In architecture, some two dimensional openings are specialized as doors and windows, they have specific functions. Window is an element used mostly on the facades of the buildings and door is the element used for the entrance-exit and transition of spaces. The elements limiting the spaces describe the third dimension. The planes come together and uniform a volume. To unify or connect the volumes planes need openings on their structures. Besides, these planes come together and form a space, then if the space or spaces between them operate together and can vary as new spaces. For instance, according to Ching, making some subtractions from the main space in variable ways can lead to form defined inter-spaces. Conversely, because of the possibility of providing circulation among the spaces is created with the openings in the unified space, the single space have additions to it. This shows that openings can have a place in third dimension (Ching, 2011).

3. Space within a Space

Increasing space creation of walls to bigger volumes can be achieved with the meeting of more walls and more space. If there is a need to unify those spaces, there should be some mediary like openings. When the said situation comes to earth, the spaces start to communicate with each other. Space relations depend on how they meet and on which stage they connect. This situation is expressed with some kinds of spaces by Ching that: space within a space, intertwined spaces, adjacent spaces, spaces connected with another common space. If a space is included by a wider space, this two starts to communicate. The closure degree of the sub-space is determined by the relation of covering space and sub-space. When the some parts of volumes are used as common as an intersection, they also can connect. The closer spaces, the more facade they share. The applications on the facade planes allow the spaces communicate. If there is another space between any two spaces and these two spaces contact with the help of this tertiary space, they have a common space (Ching, 2011). Openings provide this communication and basically doors meet the transition needs between these spaces. Besides this, the facade which the door is located on, becomes the primary plane, because it is defining that surface. According to Abercrombie, doors provide insulation and circulation and they can resemble the valves among the organs; the synapses among the brain cells; junctions between the machine parts (Abercrombie, 1990).

Planes are the most important elements of the spatial fiction and they play great role in the definition job of the architectural volume. When the vertical planes make some sections in the whole uninterrupted volume, they cause forming visually blocked but not splitted new spaces. Those spaces created without being splitted from each other but only having cut visual communication, are the spaces intertwined and they form open plan (Ching, 2002) See Fig. 1.

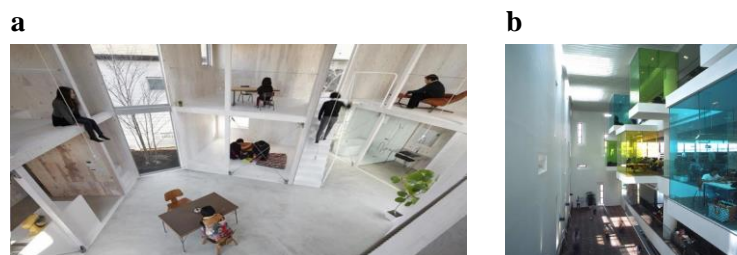


Figure 1. (a) Japanese House, Japan; (b) Bishan Public Library, Singapore

4. Loos Typology

Besides the openings on the shell, there is a spatial acquisition in the third dimension of the openings in the space. Applications forming the sub-spaces and providing the common relation among them can be created with the openings on the partitions and the structural openings while the construction. These elements providing the communication among the volumes in the third dimension help creating open plans and form fluid spaces.

Modernist movement helped appearing new design quests, such as purifying the space from decorations and handling the fictional aspects of the spaces. The spaces created with the help of this idea appeared with the usage of space and elements as design tools. Every fitting in the space is used for creating the space. Therefore, it is possible to see these spatial decisions in the new architectural products of Modernist period such as Adolf Loos (1870-1933) buildings. The things that he claimed about the decorations and ornamentations are surplus for an architectural product generated his percept about designing buildings. On the contrary with the Arts and Crafts Movement, Loos created his spaces without any ornamentation. His writings about this claim and interiors created on this way affected the new pioneers and become source of inspiration (Massey, 1990). Loos created his spaces being adhered to his claims; not with the ornamentations but with the arrangements of furniture. For instance according to Colquhoun, Loos used the spaces with low ceilings as central areas in his space typology. These rooms are surrounded by other sub-spaces and become the miniature social areas. Then, Loos adapted this typology to his other multi-storey house designs (Colquhoun, 2002).

The typology of Loos comes from the synthesis of the two types of houses: British and French. This is a third dimensional transformation of the floor plan. The spaces are arranged according to its functions such as the bedrooms are placed on upper floors that have conjunctions such little stairs to the other floors having different levels and ceiling heights. This construction type transformed the house typology into a spatiotemporal labyrinth in the light of complicating the notional perception of the space from outside. It is called the '*Raumplan*' by Loos which the fictional arrangements are created by spatial level differences (Colquhoun, 2002). Loos exemplified this fictional arrangement in his new houses: Tzara House, Moller House and Muller House (Beek, 1989).

Loos used his spaces next to the shell and in an order. When these spaces created a line by the walls of shell, there uniformed a box in the middle of the house. This central space is located higher from others in order to provide privacy and control. By the level differences, this space splits from the others and becomes independent. However, this space functions like a black box and needs to take light inside, so that some openings created on its shell. When there are the openings on the shell, this box starts to communicate with the others surrounding it. Thus, this black box gets light inside and with its upper level it functions as lodge in theatres; it is called '*Theatrebox*' by Loos (California, nd). According to Colomina, theatrebox can be seen in almost every house of Loos: mainly in Moller House, Muller House, Steiner House and Josephine Baker House (Colomina, 1988). See Fig. 2.

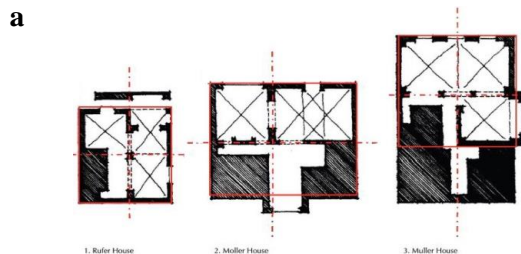


Figure 2. (a) Loos Houses, Raumplan Organizations

4.1. Muller House

In the Loos type houses, it is possible to see these arrangements most effectively in the Muller House (1928-1930). The house is constructed onto a slope of Prag hills. Like the Moller House which is constructed before in Vienna, the Muller House is also created with the same typology; using cubes. According to Loos, his has no plans, he has cubes. He started to space creating job with volu mes instead of plans, sections or elevations. As him, there are sequent, continuous spaces, rooms, sofas and terraces (Benjamin, 2006).

In the Muller House, the bedrooms are arranged on the sleeping area floor allowing only user to reach from the main circulation area, and the living rooms again on the living area floor. These two floors don't have any conjunction like the double-height houses of Le Corbusier (Beek, 1989). Spaces are constructed with levels. In this respect, the spaces are organized in a proper order. The level differences are provided by the stairs and the like. Spaces see each other despite these differences. With this design method, user can have different spatial experiences and user-space relation and user-user relations can have more suitable conditions.

The spatial leveling, in another word raumplan, has a role in the space to design the house confused and released on highest levels. The basic principle of Loos spaces' arrangements is the juxtaposition raised with the aim of providing visual relation. As an instance to this expression, the library and the woman's room, the living room and the dining room pair. From the landing placed next to the dining room, in order to go to that reading room, there should be used eight stairs. Again, the library is far away with only four stairs from the reading room. The reading room has two parts separated with three stairs: reading area and chat area. It is important to remind that, there is a long opening that the living room can be seen from the chat area (Gravagnuolo, 1982).

The whole things that were spoken before are the basic design decisions of Loos; leveling, intertwining, adjacency, being mapped and visual continuity. Theatrebox and raumplan were used as design methods by him. He used spaces as cubes, he arranged them and wanted them to communicate. He took the advantage of openings to provide this communicational relation. Thus, his spaces started to be spaces in spaces. See Fig. 3.

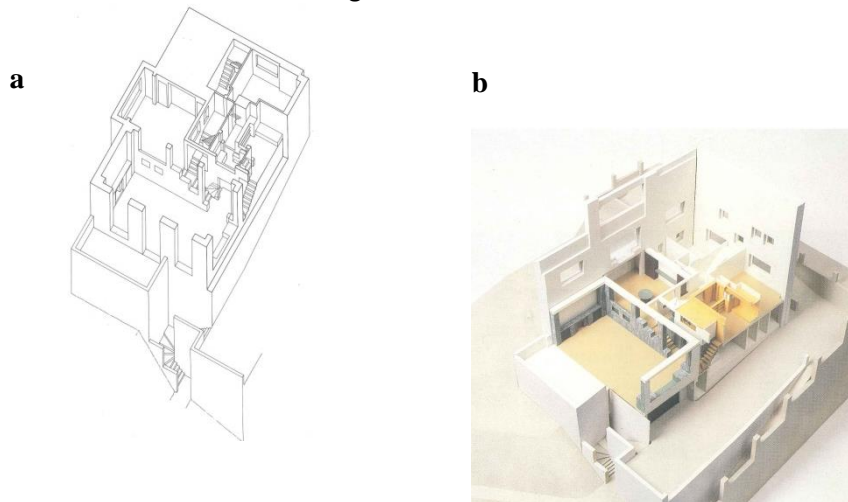


Figure 3. (a) Muller House; (b) Model.

5. Conclusion

If the space is accepted as a volume and can be entered inside, these actions are achieved with any void on its shell. Entrance action can be provided by an opening on the surface and every void application is defined with a function. Defined every function has a different contribution to the space.

For instance, the void that was used for entrance is turned to only entrance-exit opening-door over time. The natural spaces left their places to manmade spaces; correspondingly, the openings are transformed also. Openings are not just applied on surfaces; they are used in the interior space. They make the spaces gain different characteristic features. They connect the spaces and make them relate.

Spaces are designed in various ways. There are many ways of making spaces communicate. The most effective way is bringing them together and providing openings on shells of those said spaces. By those openings spaces within a space can be created, also the visual and physical relation can be provided. With the Modernism new space organizations and new methods are created. The spaces were tried to be more and plainer. Removing the ornamentations made the designer create spaces not areas. Like Loos, designers started to use spaces as design elements. Houses and other started to be formed with space organizations. Loos, tried to organize his spaces with his method raumplan: planning rooms-spaces. He created little, sequent spaces in the whole space. The openings used on the shells of those sub-spaces were the tools to provide communications between them. As a consequence, those spaces started to be whole space parts which cannot be separated from each other.

References

- Abercrombie, S. (1990). *A Philosophy of Interior Design*. New York: Harper & Row Collection.
- Bachelard, G. (2008). *Mekânın Poetikası*. İstanbul: İthaki
- Beek, J. V. (1989). *Adolf Loos - patterns of town houses*. M. Risselada in, *Raumplan versus Plan Libre* (s. 27-46). Delft: Rizzoli International Publications.
- Benjamin, A. (2006, August 5). *Surface Effects: Borromini, Semper, Loos. 1-36*. Sydney, University of Technology, Australia: Routledge.
- Ching, F. D. (2011). *Mimarlık, Bicim, Mekân ve Düzen*. İstanbul: YEM Yayın.
- Colquhoun, A. (2002). *Modern Architecture*. New York: Oxford University Press.
- Colomina, B. (1988). *On Adolf Loos and Josef Hoffman: Architecture in the Age of Mechanical Reproduction*. M. Risselada in, *Raumplan versus Plan Libre* (s. 65-78). New York: Rizzoli International Publications.
- Ertek, H. (1994). *İç Mekan Temel Tasarım İlkelerine Bir Yaklaşım*. Ankara: Hacettepe University.
- Gravagnuolo, B. (1982). *Adolf Loos Theory and Works*. Milano: Rizzoli International Publications.
- Heidegger, M. (1971). *Poetry, Language, Thought*. New York: Harper Colophon Books.
- Kuban, D. (2006). *Mimarlık Kavramları*. İstanbul : YEM Yayınları.
- Massey, A. (1990). *Interior Design of the 20th Century*. New York: Thames and Hudson.
- Uluengin, N. Y. (2000). *Türk-Osmanlı Sivil Mimarisinde Acikliklerin Gelismesi*. İstanbul: Yapı Endüstri Merkezi.