

**Professional scientific sessions for art, architecture and urban planning Thursday evenings**  
**Held in: Conference hall of Herampey Consulting Engineers**  
**Date: 06.02.2020**  
**Title: Space Layout.**  
**Speakers and Panel Members: Mrs. Azadeh Mohajer Milani and Mr. Hamed Golshan.**

The first speaker was Mr. H. Golshan. Presenting the path that he and Mrs. Milani followed in the University of Tehran, he expressed his gratitude to Mr. Mahmoudi for the years that he spent with him during his years of studies.

Continuing his speech Mr. Golshan talked about the grammatical content of space layout and how it was interpreted regarding its professional, practical and philosophical applications. Mr. Golshan began to talk about the essence of space layout to pass then to the ethnography and anthropology of the issue.

Talking about the relation that exists between architecture that is a language, having a structure and how should we discover it, finding their internal connections and relationships. He presented two works of professor Bill Hillier, that works at the UCL of London, the first published in 1984 entitled "Social Logic of Space" and the second has been published in 1996 entitled "Space is the Machine, where he talks about a configurational theory of architecture, using at applying it in the urban design, considering the city as an urban object that has a deep structure to be considered and studied.

Continuing Mr. Golshan asserted that the theory of space layout has been considered in the issues like the completion of history of architecture, modelling, spatial analysis and behavior. He asserted that in this theory (between architectural design and urban design or layout) there is a connection, where we consider the effects of the buildings and cities on the spiritual world of the people that are in contact with. Human visual and motional characteristics in architectural spaces form them, forming also social relationships. Talking in simple words sometimes we find a relationship between a road and the amount of incidents that occur there, or the design characteristics caused the happening of the incidents. In this context we can pose questions related to the urban layout in order to fix the amount of crimes or the trend of economic prosperity. Talking about local cases he referred to the case of Imam square in Tehran, with the economic output that has Lalehzar street or other adjacent commercial areas.

Mr. Golshan explained that human societies consider urban layout that gives a direction and is source for their organization. This concept helps the researchers to define various components of the urban entirety like the growth of the city, the material price of the land how much is possible and permitted by the municipal authorities to build in a specific area etc.

Trying to explain the mentioned theory Mr. Golshan reported that the movement of the people is linear and they interact in convex spaces, including visual fields that finally can create other

adjacent spaces.

Mr. Golshan presented the case of Borujerdi's house in Kashan, in order to present the issue in a simple way. Showing the plan of the house, he asserted that all the users would cross the central corridor to arrive to the central yard and the cupola. In this case the visual space includes the two mentioned spaces. Moving on each space is substituted with the new one, but at the same time the spaces are interconnected and are part of an entirety.

Presenting the map of Borujerdi's house Mr. Golshan showed and divided various spaces in base of the circulation rate. There are spaces that are mostly used and others that have a limited use in the context (the spaces were defined with the identification of different colors).

Trying to present the critical approaches related to the issue of spatial layout Mr. Golshan mentioned a researcher of MIT Mr. Carlo Ratti that had a dialogue from 2003-2005 with Bill Hillier, asserting the linearity of the plans and they can be interpreted.

At the conclusive part of his speech Mr. Golshan presented the Iranian researchers that have worked on the issue like Mr. Gholamhossein Me'marian that is a professor of architecture in the university of Elm-o San'at. He published a book entitled "the analysis-critic of architectural space", used for a decade by the researcher Mr. Abbaszadegan. Mr. Golshan mentioned also Mr. Omid Rismanchian, Mr. Aliakbar Heidari in Yasouj and Mr. Ali Tajer in the Bu Ali University.

Mr. Golshan concluded his speech asserting that through the knowledge of space layout it's possible to identify the spatial organization, the spatial structure of architecture and the hidden secrets of urban textures and neighborhoods.

The second speaker of the session was Mrs. Azadeh Mohajer Milani.

Talking about space syntax Mr. Milani explained that there are series of theories and techniques for the analysis of the spatial structural composition. She also mentioned the researchers Bill Hillier and Julian Hanson, that with the simulation of social possible impacts have helped the urban planners and programmers in their activities.

Talking about the analysis of roads connection network Mrs. Milani explained that there are three manners for its realization. The first is the connectivity, the second is the selection and the third is the distance of the depth.

Talking about the connectivity she explained that using the shortest routes to reach other parts of the roads network they measure the distance. Through this process of measuring the routes are defined through the use of different colors. The entire process of analysis aim to forecast the path that people can preferably use.

Talking about the selection of measurement she explained that the process can be imagined in an easier way if we consider the flow of a water source that is continuously divided at the crossroads. In this manner the roads that accumulate the larger quantity are considered the most trafficable streets.

The most visual manner of analysis is the distance depth that measure the linear distance from the central point of a street to the center of other parts, in order to have the possibility to trace a graphic design of the connectivity of the streets.

Mrs. Milani reported that in the website of Space Syntax related the theories and tools we can read that “Space layout is a science based approach based on humanitarian sciences that studies the relationship between the spatial configurations and a large spectrum of Social, economic and environmental phenomenon. This phenomenon include patterns like the movement, the density, the use and value of the land, the urban growth and social distinctions, the distribution of security, crime and their interaction”.

Mrs. Milani presented also the available software like “Space Syntax Limited”, “deepmaX”, “Synatax QGIS” that can be used for online training courses. The guide book of space layout manners has been edited by Kinda El-Sayed and Colleagues (2014) used for educational purposes in UCL.

Mrs. Milani presented the space layout manner a tool for helping the architects to see the possible impacts of their projects through a simulation of potential people that should be involved and move in the path. The theory can be applied in different parts of the world in fields like archeology, criminology, informatics technologies, human and urban geography, anthropology etc.

Concluding her speech Mrs. Milani explained that this is a technique to analyze the urban qualitative and quantitative factors. Related to this issue many Iranian cities have been studied, mostly by Iranian researchers that are resident abroad. The city of Tehran too, has been considered a study case in order to understand the related problems and possible solutions.