



1950S-1970S: MAT URBAN AND TURKISH ARCHITECTURE

Arzu İrem MOLLA AHMETOĞLU^{1*}

¹: İstanbul Teknik Üniversitesi, Mimarlık Fakültesi, Mimarlık Bölümü.

Abstract

Grid means the guiding infrastructure of controlled formation. The modular grid allows modular coordination, and the use of modules can be seen as the foundation of "Formal Rationalism". We can trace this concept of form even in world's deep cultural history. In the first half of the 1600s, Nicolaus Goldman's development of design proposals over grid in architecture should probably be considered as a result of the intellectual rationalization of the day. In the Modern Architecture Movement, the grid, which is a rational solution tool, has started to make room for itself once more. During sixties this grid-based scheme was soon applied by Schadrach Woods at the Free University of Berlin (1963), and University College Dublin (1964) which both have no urban context. Later university planning became a new stage for developing the idea of 'grid-based mat-urban' among architects world-wide. On the other hand, Anatolia, where Turkey stands today has rich historical architectural developments which can be seen as early samples of grid-mat architectures. Upon these heritage Modern Turkish architects contributed the development of modernist grid and mat architectures of the world by producing some very early examples. Here we want to introduce two of them from 1950s and 1970s in Turkey.

Keywords: Grid, Mat, Modern, Turkish Architecture.

Grid means the guiding infrastructure of controlled formation in architecture. The modular grid allows modular coordination, sizing of proportions and positions, determining, arranging and controlling placement of objects. The use of modules can be seen as the foundation of "Formal Rationalism"². The rational and effective use of right-angled spaces can be considered as a situation that encourages design on square-shaped modules in architecture. It is clear that design using the grid also supports open or closed system prefabricated constructions with the dimensional coordination it provides.

Renaissance Architecture of the 14th and 16th centuries developed over the regular geometric features of Roman Architecture. Architecture entering the 17th Century with this knowledge should have been expected to produce a theorist. Nicolaus Goldman took over this task³. In the first half of the 1600s, Nicolaus Goldman's development of design proposals over grid in architecture should probably not be considered a coincidence, but a result of the intellectual rationalization of the day¹ (Figure 1).

* Sorumlu Yazar: mollaahmetoglu@itu.edu.tr

¹ Peter Cook, *Architecture: Action and Plan* (London: Studio Vista, 1967).

² Jeroen Goudeau, "The Matrix Regained: Reflections on the Use of the Grid in the Architectural Theories of Nicolaus Goldmann and Jean-Nicolas-Louis Durand," *Architectural Histories*, 3(1), p.Art. 9 (18 May 2015) <https://journal.eahn.org/articles/10.5334/ah.cl/>

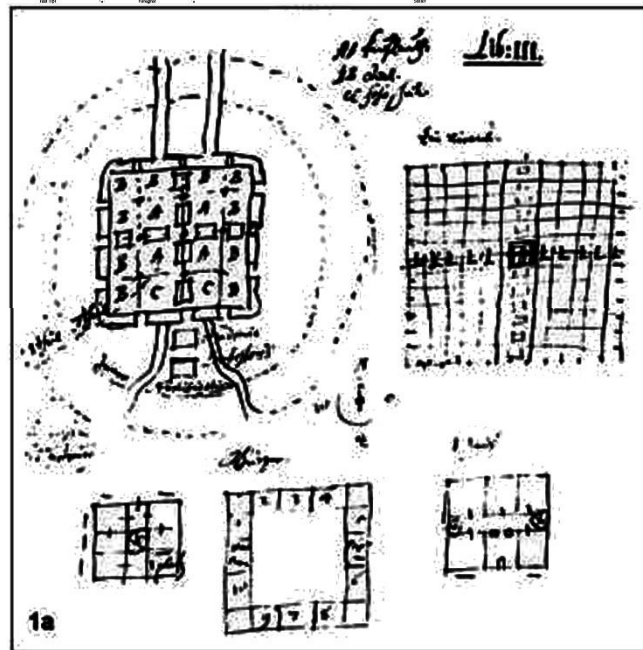


Figure 1. Nicolaus Goldman's proposals over grid.

Modern Movement in Architecture

Radical Soviet architecture of 1920's paved ways to the 'Modern Architecture' movement, which we consider to be nothing more than a radical attempt in architecture of intellectuals. Following the Russian movement, the series of CIAM Congresses started in 1928 to create a transnational platform. First, a clear definition of the modern city was made at the Congress, in 1933. Common features of these plans were to disregard the existing city and to propose independent blocks on a grid base structure over emptied ground. (Figure 2)

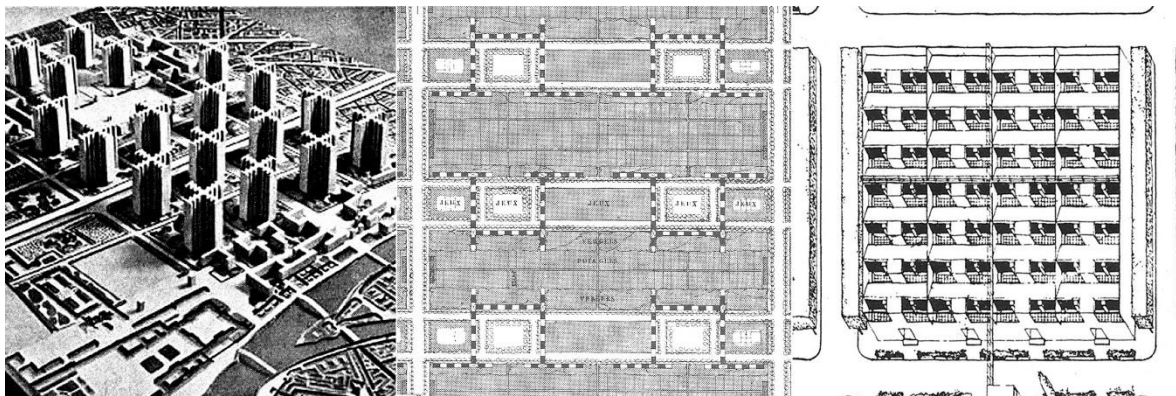


Figure 2. Corbusier grid plans.

Intellectual milieu of the nineteen fifties: attempts for 'humanization' of the man-made environment

After the Second world War, this 'functional and rational city' model was built by many known and unknown architects in different places and scales, due to the housing shortage on the one hand, but in our opinion, mainly due to its universal character it became a tool of the intellectual approach to social problems. The validity of such a simple response - blocks in

the void - to the complex problems of old cities began to be criticized after the 1950s, especially by young architects – although many of them had worked for Corbusier.

All over the world, starting from the late 1950s, through the 1960s and the 1970s, there were harsh radical intellectual reactions in the everyday life of the post-war period. Italian Neo-realistic Cinema (1950s-1960s), Cahiers Du Cinema and French New Wave Cinema (early 1950s) in France, Gutai in Japan (1954), Situationist International (1957) and then Herbert Marcus' One Dimensional Man (1964) and Hippiess, Guy Debord's Society of the Spectacle (1967) and finally, radical social criticism and uprising, such as the events of 1968, led the cultural life.

Although the first opposition to the Athens declaration came from the Dutch Doorn Group in 1954, the CIAM under Corbusier and Giedion gave the organization of the 1956 Dubrovnik congress to this group. The group began to call itself Team 10; a monolithic modern movement had given way to a social research group. Eventually at the 1959 Otterlo convention, CIAM died and Team 10 rose from its ruins.

One of the two urban model concepts discovered by Team 10 in the late 1950s was derived from the concept of "gemeinschaft" (irrational social relations) and social theories based on perception psychology⁴. These ideas were embraced by Shadrach Woods, the Smithsons, and Aldo van Eyck. The Smithsons proposed that the social hierarchy replace the functional hierarchy of the Athens Declaration. According to Team 10, the street is the extension of the house and the child learns the world outside of the family for the first time on the street.

Frampton also notes that Aldo van Eyck, a member of the group, was different from the others because he had an anthropological background; he concerned with primitive cultures and their timeless environmental forms. According to him, it was proved that the architectural profession was incapable of developing a strategy or aesthetics about the urban realities of the mass society; he also thought that this bad situation was caused by the cultural void resulting from the loss of the vernacular. According to Aldo van Eyck, man was essentially the same, always and everywhere⁵.

In 1957, Aldo van Eyck introduced the concept of "labyrinthine clarity" in his Amsterdam Children's House project, with the idea of stretching the threshold between universal concepts such as "home and city" and "interior and exterior" for a symbolic mediation⁶. This project can be considered as the pioneer of the idea of the 'mat-urban', with the characteristics of a self-sufficient small city⁷ that covers the floor like a carpet instead of unrelated point blocks, has streets in its holistic structure and contains houses and independent units on these streets. Here, we claim that this architecture with layered occupancy and gaps, closures and connections can be described better by 'layered lace'.

As a result of the disturbances against the formations directed by the above mentioned early CIAM meetings, after the Second World War and after the Amsterdam Orphanage (1955), produced by Aldo van Eyck, under the influence of his ethnographic anthropological studies in Africa, the tree structured (main body) mega structure proposals of Smithsons (Berlin, 1957) and Candilis-Josic-Woods (Toulouse le Mirail, 1961) became popular.

⁴ Alan Colquhoun, *Modern Architecture*, (Oxford: Oxford University Press, 2002).

⁵ Ibid.

⁶ Ibid., 276-279.

⁷ Herman Hertzberger, *Aldo van Eyck: Hubertushuis = Aldo van Eyck: Hubertus house*, (Amsterdam: Stichting Wonen/Van Loghum Slaterus, 1987), 11-12.

On the other hand C. A. Doxiadis, with his Pencap University project in 1959, which was designed against CIAM principles, in our opinion, became one of the first pioneers of the system which was defined as mat-urban in the future with its layout and dimensions and the vehicle traffic prevention⁸ (Figure 3).

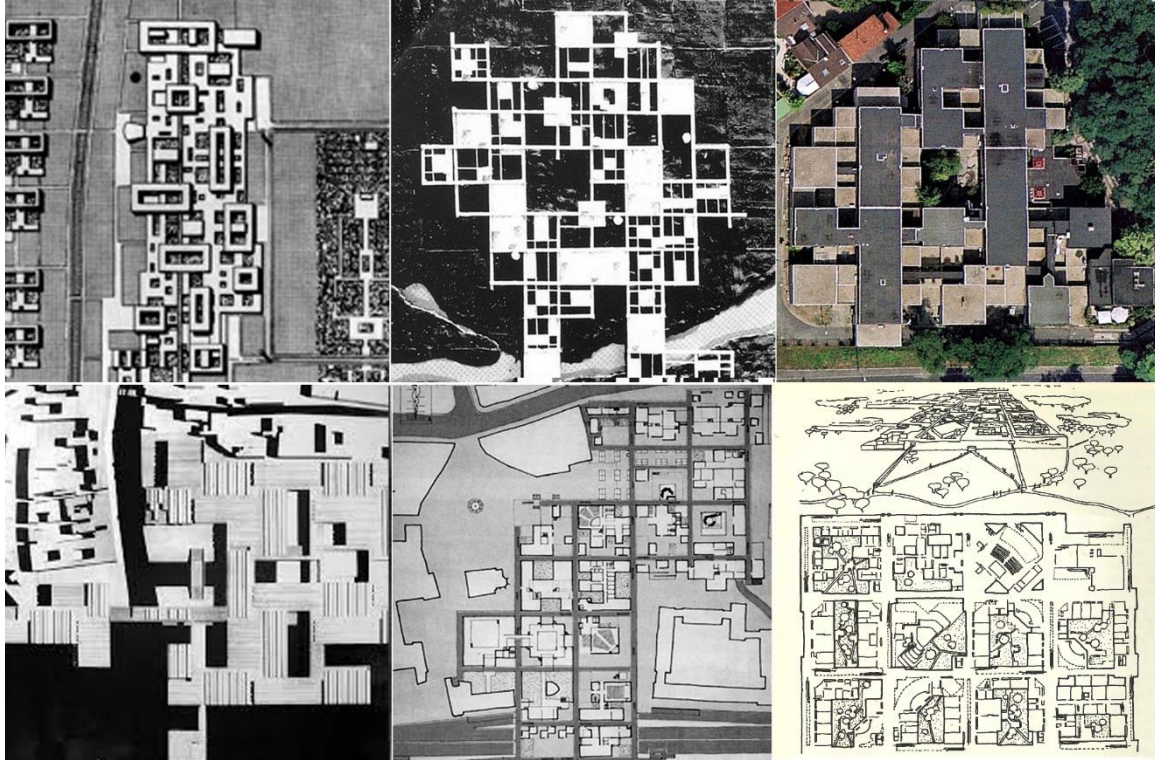


Figure 3. a-Doxiadis, Pencap University, b-Kurokawa. Agricultural City, c-Candilis, Josic, Woods, Craft Center of Seves, d- Corbusier, Venice Hospital, e- Candilis, Josic, Woods, Frankfurt, f- Shadrach Woods, Berlin & Dublin

Another interesting fact is that the Venetian Hospital designed by Corbusier in 1963 also constitutes a complete example of "mat urbanism". This horizontal-permeable project, adjacent to the traditional texture of Venice, is an indication that Corbusier, accepted the idea that he once not interested.

Shadrach Woods and Manfred Scheidhelm answered Aldo van Eyck's thoughts with the concept of 'city in miniature' at the Frankfurt-Romerberg competition (1963)⁹.

This grid-based scheme was soon applied by Woods at the Free University of Berlin (1963), and University College Dublin (1964) which both have no urban context (Figure 3).

Instead of the CIAM cities, which consisted of independent-sterile buildings that caused alienation, contrary thoughts that lead to concepts such as "cities like buildings" or buildings like the city" took their place in the architectural literature in 1974 with Alison Smithson's famous article, with the definition of 'Mat Urban'. These humanitarian approaches have evidently evolved from the information updated from the vernacular settlements outside Europe.

⁸ Constantinos Apostolou Doxiadis, *Ekistics: An Introduction to the Science of Human Settlements*, (New York: Oxford University Press, 1968), 445.

⁹ Shadrach Woods, "The Educational Bazaar," *Harvard Educational Review: Architecture and Education* Vol.39, No.4 (1969), 116-125.

History of Anatolian Architecture and ‘mat urban’

Anatolia, where Turkey stands today, has a history that makes the Western Culture-Eastern Culture distinction meaningless. The current cultural situation in Anatolia, has been reached with thousands of years of evolutionary traces on the geography, left by consecutive and overlapping arrivals of Pagan, Christian, Islamic and Secular cultures.

When we take a glance at the history of Anatolian geography and at both formal and informal, and permanent and temporary architecture activities, it can be clearly seen that the emergence of these proposals is a natural result rather than a surprising situation.

An important example of historical Anatolian settlements, Çatalhöyük Neolithic City, dates back to 7400-5200 B.C. and is an important proof of transition from village to urban life. the dimensional proximity of the houses in the city exhibits a settlement based on social consciousness, equality and unity.

Another example worthy of mention is the underground city of Derinkuyu in Middle Anatolia. It is another example of dense aggregation, both horizontally and vertically. The strong covered bazaar tradition in Anatolian geography, stands out as an important example of ‘a city like a building’ with the accumulation of layers (over the clustering of time). The Bazaar of Bursa is a typical example of this. Nowadays, especially ‘once a week’ open-air markets, with ‘instant city’ like temporary clusters, continue to be living examples of the ‘group form’ and mat-urban

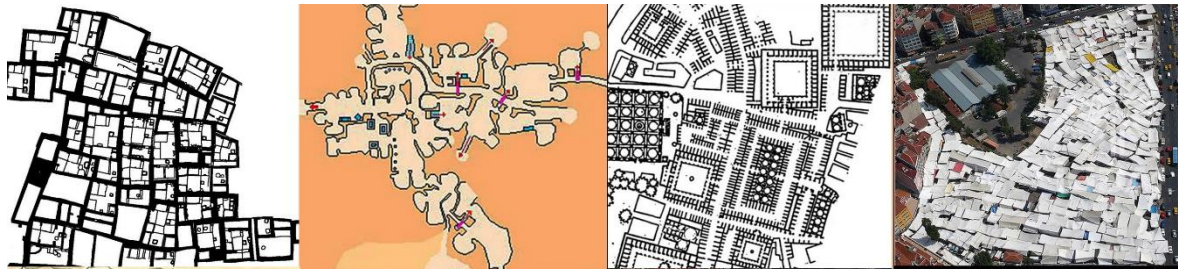


Figure 4. Çatalhöyük, Derinkuyu, Bursa Bazaar, Temporary open Bazaar of Kadıköy.

Turkish Professional ‘Mat-Architecture’ Experiments

We will discuss respectively two architectural implementations from the 1950’s to the 1970’s in Istanbul along with similar concurrent developments of mat-urban ideas in Europe. These examples, located in Istanbul, seem to have fictionalized the goals that are indicated by the concepts of mat-urban and group-form naturally. These are, in our opinion, the natural results of the continuation and evolution of a spontaneous memory of Anatolia, without any theoretical background, originating from the cultural richness of the deeply rooted geography and the accumulation of the vernacular; and can be regarded as the naturally reached premises of the ones produced as theories in the West.

We see that a pioneering example of the concept of mat-urban architecture in protecting urban life is realized in Istanbul, in 1959, right after Aldo van Eyck's Amsterdam project and well before Woods' unrealized Frankfurt project. It was the ‘Manifaturacılar Carsisi’ (Bazaar of Drapers’ Corporation) project. Architects M. Hepgüler, D. Tekeli, S. Sisa, very successfully implemented the alternative mat-urbanism against the Athens Declaration or

“contextualism” in urban rehabilitation with this project. They do not suggest separate blocks of the functional city or hybrid buildings of the contextualist approach to the cleansed historic environment. With this project, the architects were developing an extraordinarily important new approach for the survival of historical settlements. This project also sets an initial example for urban rehabilitation models such as 'city in city ', 'city in pieces', 'city in miniature', ‘metabolists' 'megastructures' and, more recently, Morales's 'acupuncture concept.

Manifaturacılar Carsisi as a project was obtained by a contest in 1959 as a result of the process which started with an architectural project competition in Istanbul in 1958. This project is a reflection of the Turkish permanent and instant market tradition, as its architects have stated. Manifaturacılar Carsisi is a rather early example of the building-city concept in universal modern architecture with its ‘lace’ character. The city enters and exits from many different points inside the building; in addition to integration with the city physically, the integration with the internal and external circulation system also gains a physical character. In the project shops are placed at an angle around the courtyards that provide a view through Sinan’s famous Suleymaniye mosque. The courtyards around which the shops are located are lined with different spatial effects along the boulevard, again connected by internal pedestrian paths. Pedestrian circulation is separated from the heavy vehicle traffic of the boulevard. At the back, a road arranged parallel to the boulevard provides shuttle transportation, and parking lot entrances (Figure 10).

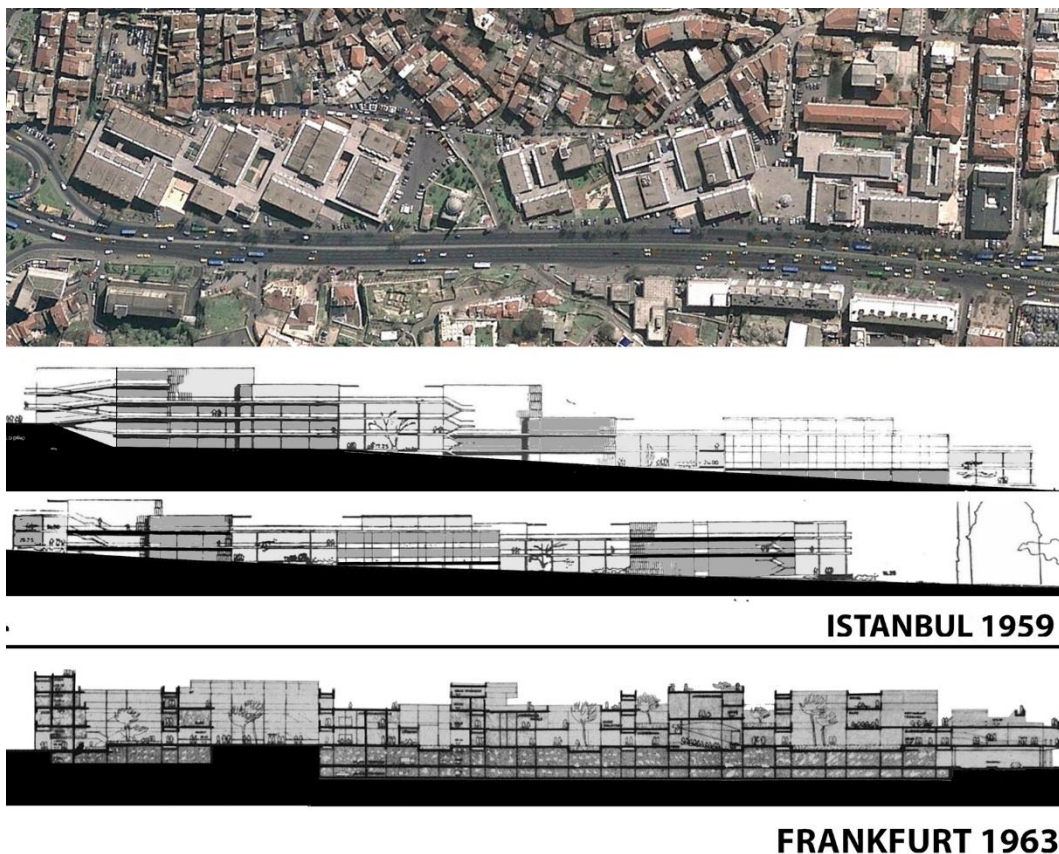


Figure 5. (a) M. Hepgüler, D. Tekeli, S. Sisa, 1959, Manifaturacılar Center (leftupper);
(b) Candilis, Josic, Woods, 1963, Frankfurt (bottom).

The suggestion of such a continuous 3d spaces system on a historical urban texture is also a separate pioneer. Candilis-Josic-Woods's unrealized Frankfurt project, proposed five years

later in 1963. Also ten years after the Manifaturacilar Carsisi, Giancarlo de Carlo's Matteotti Project of 1969-1974 was the first realized example of the search for humanization, with the pedestrian paths and bridges passing through the system in the West. And in 1973, Donald Ball designed Odham's Walk for the Greater London Council. The project proposed an effective solution to the problem of 'alienation' with its three-dimensional circulation system, which establishes the relationship between apartments within humane dimensions and relationships (Figure 12). In the same period, Fumihiko Maki's Hillside Terrace project was taking place in Japan.

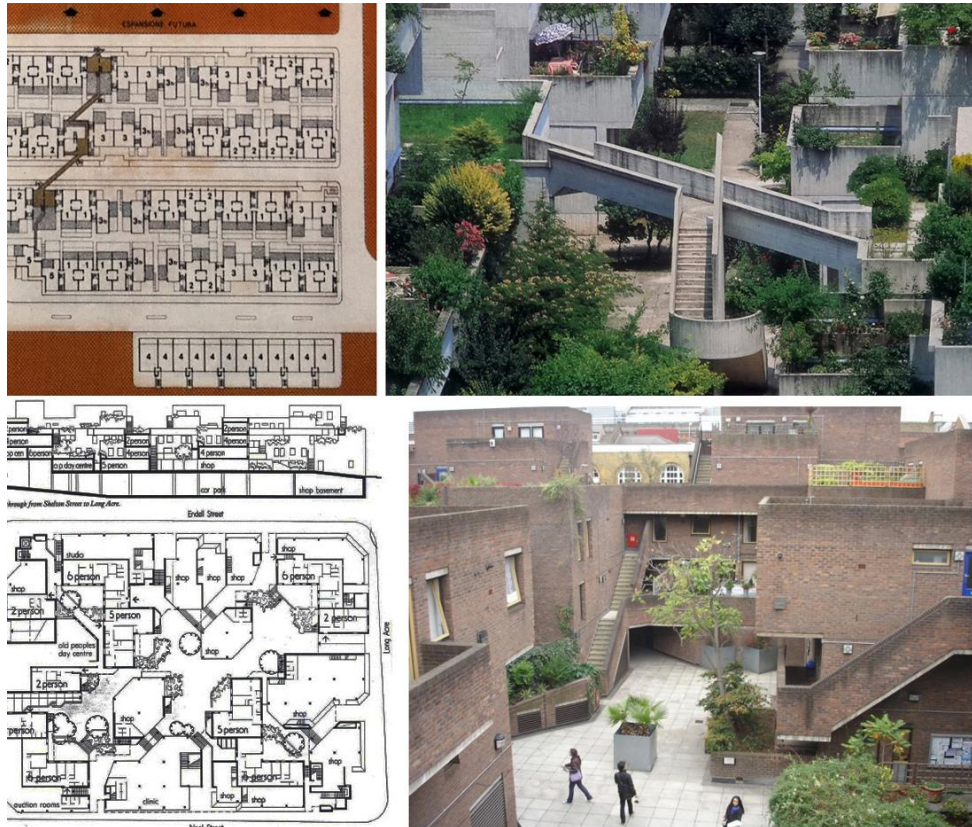


Figure 6. G. de Carlo, Matteotti 1969 (above two); D. Ball, Odham's Walk, 1973 (below two).

The second project from Istanbul we will discuss is a housing project. Yesilköy Konut Kooperatifi Sitesi (Yesilkoy Housing Cooperative Estate), designed by architect Haluk Baysal-Melih Birsel in 1973, is also an experimental and research project, unusual for its time. It can be compared to the Matteotti project of Giancarlo de Carlo. But even in Turkish Architectural circles it was not known or appreciated for a long time. For example, a Turkish book dedicated to Haluk Baysal-Melih Birsel architectural works does not even contain this project.

This project can be seen as an example of Maki's cumulative form, as well as it can be evaluated as an example of a 'city-building'? (Figures 12,13,14).

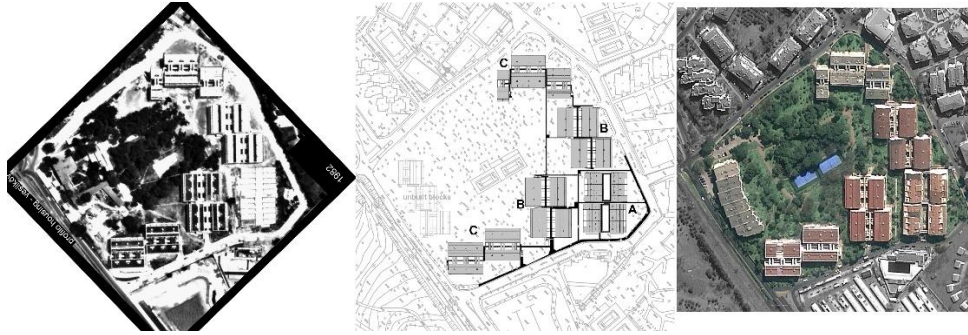


Figure 7. Yesilkoy Housing, site.

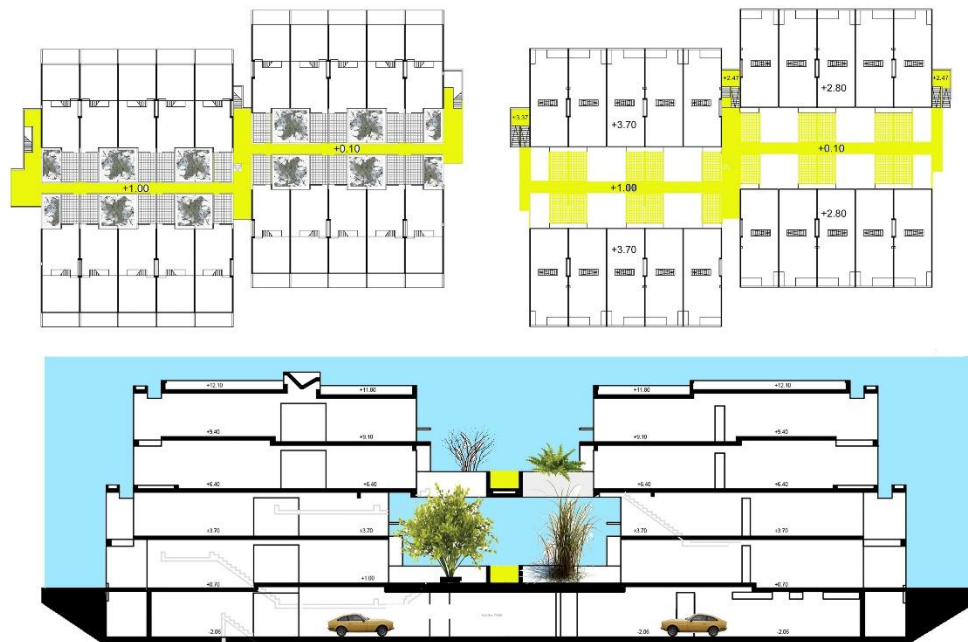


Figure 8. Block 'B'.



Figure 9. Block 'B'.



Figure 10. Block 'C'.



Figure 11. Block 'C'.

The quality and architectural pioneering value of the site, which the many of architectural circles did not realize, has been kept by the users to this day by careful protection. The fact that the extraordinary architecture they live in has influenced people who have not received any architectural education enough to take care of it also reflects its value.

Thinking that the project started in 1973, it also gains value and importance as a development in parallel to the universal milieu and even as a leading development ahead of its time. The similar attitude between Carlo and Baysal's projects is interesting. However, in our opinion, Baysal has succeeded in creating a more transparent social environment. With this form, it can also be suggested that it is closer to Fumihiko Maki's group or cumulative form¹⁰ (Othaka, Maki, 1960)¹¹ (Maki 1964).

Here, it is understood that the lessons taken by the previous “vertical” Hukukcular Sitesi project (Lawyers Housing Development- architects Haluk Baysal and Melih Bırsel) also lead to the solution of “similar units coming together cumulatively and being broad and shallow – transparent – a part of the city”.

With its internal circulation system in the human scale, in other words, its ascending and descending street layout, characteristics of the connections and its character carried to the third dimension, it increases the chances of encountering the inhabitants and increases their perception of the environment in which they live. The characteristics of the housing units, which are quite different from the usual housing layout and which do not only stay in the horizontal plane but also reflect on the third dimension, offer rich opportunities in terms of both perceiving and using environment and therefore contribute to enriching life.

In this project, many pedestrian and vehicle connections with the city provided the city circulation to flow into the housing estate and to integrate with the circulation of the housing estate. In the first years of the application, the housing estate was not closed to its environment by gates and all neighboring citizens could easily use the inner circulation of the estate to reach their destination. This freedom, which has lasted until recently, has been hampered today due to ever increasing density of trespassing neighbors caused by the open market established next to it. It is clear that the construction of the Yesilköy Housing Estate, as a result of a collective attitude and approval by the cooperative, provided this idea of ‘not being abstracted from the environment’. The project is exemplary and valuable in this respect too.

The history of “grid and mat-urban” combination is as old as the history of architecture and planning. The reason for this is that it provides rational and easily defined human environments all over the world independent of local geography cultures.

REFERENCES

- Norberg-Schulz, Christian. *Existence, space & architecture*. London: Studio Vista, 1971.
- Broadbent, Geoffrey. *Design in Architecture: Architecture and the Human Sciences*. London: John Wiley & Sons, 1973.
- Cook, Peter. *Architecture: Action and Plan*. London: Studio Vista, 1967.

¹⁰ Masato Othaka, Fumihiko Maki, “Toward Group Form”, in *Architecture Culture 1943-1968: A Documentary Anthology*, ed. Joan Ockman (New York: Rizzoli, 2005), 324.

¹¹ Masato Othaka, Fumihiko Maki, “Toward Group Form”, in *Architecture Culture 1943-1968: A Documentary Anthology*, ed. Joan Ockman (New York: Rizzoli, 2005), 324.

- Goudeau Jeroen. "The Matrix Regained: Reflections on the Use of the Grid in the Architectural Theories of Nicolaus Goldmann and Jean-Nicolas-Louis Durand." *Architectural Histories*, 3(1), p.Art. 9 (18 May 2015) <https://journal.eahn.org/articles/10.5334/ah.cl/>
- Durand, Jean-Nicolaus-Louis. *Précis of the lectures on architecture: with, Graphic portion of the lectures on architecture*. Los Angeles, CA: Getty Research Institute, 2000.
- Smithson, Alison. *Team 10 Primer*. Cambridge: The MIT Press, 1968.
- Colquhoun, Alan. *Modern Architecture*. Oxford: Oxford University Press, 2002.
- Frampton, Kenneth. *Modern Architecture: a Critical History*. London: Thames and Hudson, 1992.
- Hertzberger, Herman. *Aldo van Eyck: Hubertushuis = Aldo van Eyck: Hubertus house*. Amsterdam: Stichting Wonen/Van Loghum Slaterus, 1987.
- Doxiadis, Constantinos Apostolou. *Ekistics: An Introduction to the Science of Human Settlements*. New York: Oxford University Press, 1968.
- Wood, Shadrach. "The Educational Bazaar." *Harvard Educational Review: Architecture and Education* Vol.39, No.4 (1969).
- Frampton, Kenneth. *Labour, Work and Architecture*. London: Phaidon, 2002.
- Maki, Fumihiko. *Investigations in collective form*. St. Louis: School of Architecture, Washington University, 1964.
- Le Corbusier. *Urbanisme*. Paris: Editions G. Crès, 1924.
- Othaka Masato., Maki, Fumihiko. "Toward Group Form." in *Architecture Culture 1943-1968: A Documentary Anthology*. ed. Joan Ockman. New York: Rizzoli, 2005.