A New Kind of Urbanism for All

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Abstract

The goal of this paper is to re-evaluate the strategies of formal organization in architecture, which are called ‘mat-building’ and ‘mat-urbanism’, exploring their potential to contribute to the creation of built environments for all in the 21st century. The idea of mat-building was first delineated by Alison Smithson in 1974, in her article ‘How to Recognize and Read Mat-Building’, by means of its traditional and modern examples. Mat-building can be considered as a viable design approach that can respond to the crucial need for equally accessible, adjustable and adaptable urban environments for all people all over the world. The study tries to point to the new ways for developing creative ideas and design strategies, and emphasizes the significance of inclusive design in contemporary architecture and urbanism.

Keywords: Mat-building; mat-urbanism; design strategies; design for all; inclusive design

1. Introduction

Today, both in Turkey and in other countries, there is a crucial need for equally accessible, adjustable and adaptable urban environments for all people. Usability by all, providing equal access for everyone and responding to the various needs are important while designing urban environments. In the International Conference in Kristiansand, Norway, September 2003, the importance of inclusive design in built environments was emphasized by Rudolph Brynn (2003: 4): “There is a need for user participation, accessibility initiatives in transport and built environment, and for the Design for All principle.”

Inclusive design at the urban scale is a new concept that has been applied to the field of urban design only recently. Today the quantity of exemplary inclusive design projects cited in research papers and other publications are insufficient for guiding architects and planners in the implementation of inclusive design. They are hardly focusing on urban design issues. It is important to search for new ways, creative ideas and design strategies in order to achieve the goals of inclusive design. For this purpose, this paper examines the potential of a design strategy for accommodating everyone’s physical and social needs in relation to the built environment beginning at the initial stages of the architectural design process. As suggested by Eren (2004: 2) “It assumes that 1960’s mat-building with its five characteristics can provide an architectural basis for the successful implementation of inclusive design.”

2. Literature Review

The investigation will be based on a literature review that aims to understand the state of the art of mat-building and inclusive design. New connections and methodological implications of these two approaches will be searched in a context that is formed by the new theoretical stances in architecture and urbanism.
2.1 Mat-building and Mat-urbanism

Smithson (2001: 91) described the mat process and defined mat-building as follows: “Mat-building can be said to epitomize the anonymous collective; where the functions come to enrich the fabric and the individual gains new freedoms of action through a new shuffled order, based on interconnection, close knit patterns of association and possibilities for growth, diminution and change.”

Mat-building emerged in the late 1950s and early 1960s as a consequence of the dissatisfactions within CIAM and with the principles of functional zoning. A group of younger architects within CIAM, called Team 10, came together to develop this new language of architecture and urbanism. They introduced terms like ‘association’, ‘neighbourhood’, ‘cluster’, and ‘organic analogies for growth and change’ against the idea of functional zoning. This new language yielded mat-building. The Smithsons presented these new approaches, by means of diagrams, at the first meeting of Team 10. Clusters, patterns of growth and change, layering of the functions, city and its networks were the key terms defined by the Smithsons in order to decipher the techniques of mat-building. Beginning from its first formulation, mat-like configurations are capable of sustaining social interaction and of accommodating human activity.

The emerging mat-building approach was evoked also in Le Corbusier’s unbuilt Venice Hospital project in 1964. With Berlin Free University in Berlin (1963-74), Candilis-Josic-Woods and Manfred Schieldhelm attempted to show the environmental responsiveness of mat-building in a university context. The guiding ideas of these two buildings reappear in today’s structural and infrastructural organizations. The contemporary significance of mat-building is explained by Hashim Sarkis (2001: 13): “Today mats are appearing everywhere. We call them fields, grounds, carpets, matrices. The mat answers to the recurring calls for efficiency in land use, indeterminacy in size and shape, flexibility in building use, and mixture in program. In the face of these challenges, and in every other design published in every other magazine, the mat claims to address a wide range of problems preoccupying contemporary architecture.”

Stan Allen updated mat-building to meet the design challenges of the contemporary world and reinterpreted Smithson’s 1974 essay in relation to the current problems. Allen (2001: 121) distinguished a series of characteristics that appear in mat-building examples:

1. A shallow but dense section activated by ramps and double-height voids.
2. The unifying capacity of a large open roof.
3. A site strategy that lets the city flow through the project.
4. A delicate interplay of repetition and variation.
5. The incorporation of time element as an active variable in urban architecture.

3. Methodology

The question of how inclusive design can be brought together with the five characteristics of mat-building is examined through the analytical diagrams formulated by the author. This study tries to analyse their overlapping aspects in order to integrate inclusive design with architectural and urban design by means of this design strategy (Figure1).
3.1. Mat-building’s shallow but dense section activated by ramps and double-height voids
Unlike the high-rise buildings, mat-building’s low-rise character takes the advantage of an equally accessible circulation network (Figure 2). Ramps in mat-building are integrated with design. The use of mat-building gives also the possibility of flexible design features so that the buildings and urban fabrics can be structured in an inclusive way which can provide different choices of access for its users. It can organize activities in one or two storeys’ height so that it minimizes vertical movements and provides flexible movement patterns, flexible circulation networks and choices of access. Moreover, a simple designed circulation between the ramps can eliminate the confusion within the structure and enable easy use of the spaces. Mat-building can offer the possibility of using the spaces with low physical effort and travelling comfortably with the help of the ramps.

3.2. The unifying capacity of a large open roof
The unifying capacity of the roof structure can combine diverse demands of users and equally accessible spaces underneath. The diversity of the urban fabric can be achieved within the mat-like structural organizations (Figure 3). People with special needs can be accommodated equally with other people in the society under the unifying capacity of the roof structures. With the potential of a continuous roof structure it is also possible to create nodes, specific points, links, main and secondary circulation networks that can direct users and lead them easily to the intended spaces. Moreover, under the unifying capacity of the roof structure, it is
also possible to provide adequate spaces and enough clear areas for temporary or permanent human activities.

![Diagram](image)

**Figure 3. The unifying capacity of the roof structure for the diverse functions of urban fabric. Eren, 2004**

**3.3 A site strategy that lets the city and the landscape flow through the project**

In mat-building, it is possible to create an uninterrupted continuation of the urban fabric into the spatial organizations. The floors, slabs and other building features can be considered as an extension and continuity of the landscape. A continuous flow between the buildings and the site can accommodate an easy and comfortable access to buildings without the need of any specialized solutions (Figure 4). The Fair Housing Act (1997: 13) mentions the importance of an accessible site design as follows: An accessible route of travel is the key unifying element that facilitates the safe and independent use of a site and its buildings by all people, especially people who use wheelchairs or walking aids or who walk with difficulty. Thus, the integration of this characteristic of mat-building with inclusive design can ensure spaces which are equally accessible for all.

![Diagram](image)

**Figure 4. An easy access from the site to the built environment. Eren, 2004**

**3.4 A delicate interplay of repetition and variation**

Mat-buildings take also the advantage of repetitive systems, which can allow spatial structures to expand and change to respond to the changing needs of a variety of users. An environment designed with the variation and repetition characteristics of mat-building allows more users to participate in and experience that environment. For Susan Goltsman (2001: 19.2), “social diversity is very much linked to physical diversity”. If the repetitive design elements are usable and safe for everyone and can be designed also in variation, then it can be stated that with the inclusive design approach in mat-buildings, hazards and errors are minimized (Figure 5).
3.5. The incorporation of time element as an active variable in urban architecture
Considering the changing social and physical demands of users over time, mat-buildings can offer spatial organizations that have the potential to change and adapt throughout the lifespan of the users. Mat-building is an important design strategy in terms of providing a flexible and open system which can allow the process of change, growth and modification over time. It can accommodate design features which are accessible, adaptable and usable in all stages of life.

Key Concluding Points
- It is important to note that inclusive design requires a design strategy that can allow its principles to be put into practice.
- Architects and planners should take a closer look at how inclusive design can be developed systematically and integrated into contemporary architecture and urbanism.
- Mat-building can define an organized field where diverse functions of urban life are unified and their internal relationships become more important than the overall structure.
- The repetition of the inclusively designed building types at the urban scale can also open up the possibility of inclusively designed cities in Turkey and other countries.
- Future research in this emerging new area can also involve further development of mat-building and other appropriate design strategies for the implementation of inclusive design.

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References


