

Integration of Multi-family Housing using Open Building Methods in Turkey

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Abstract

This collaborative work introduces a graduate thesis project in progress, which aims to propose a strategy for development of multi-unit housing types integrating contemporary Open Building principles in an existing neighborhood context in Ankara, Turkey.

The paper first discusses the significance of this project within the curriculum of the College of Architecture, Planning and Design at Kansas State University. Next, it presents a rationale for examining dwelling patterns found in Turkish traditional neighborhoods and in surrounding urban housing examples.

The interpretation of this information has been conducted in the context of contemporary society and changing life style requirements. The resulting findings are expected to inform a conceptual design proposal for future development of a multi-family housing alternative based on a framework of Open Building.

A goal for this thesis project is to contribute to development of alternative multi-unit housing types that could potentially attract attention of housing sector organizations in the Turkish urban residential context to develop more integrated, supportive communities, where both personal and collective sense of cultural identity may be developed and expressed over time. The belief is that new approaches to dwelling design through implementation of Open Building principles, as well as integration of patterns and values from traditional dwelling culture, could contribute to future directions in design education and practice, and further enhance cross-cultural diversity and quality in multi-family housing.

Keywords: Turkish housing, open building, cross-cultural interpretation.

...architects, what ever good intentions they might have, cannot, and do not have to provide a solution to a problem like cultural identity. For cultural identity can only develop in time, through the continuity of the collective effort and consciousness of generations.

Didem Kilickiran, *Variations on Place and Identity*

Pedagogical Intentions

How can strategies for teaching principles, concepts and application of Open Building contribute to student learning about residential design, while also responding to the particular qualities of place, changes in culture over time, and various life experiences? Such questions have been recently initiated by participants of the seminar course Theory of Housing at Kansas State University, in addition to studios where several residential and mixed-use thesis projects provided opportunities for design application of flexible systems with capacity to accommodate variety of changing individual, family, and communal needs.

At KSU College of Planning, Architecture and Design residential design issues are introduced through sequence of projects, starting in integrated freshmen level Environmental Design Studios. These coordinated courses are taught by individuals from all three professional programs of the College including Architecture, Interior Architecture, and Landscape Architecture, offering initial exposure to various design scales, major spatial ordering principles, components of physical form, and basic functional relationships.

In the Architecture Program, faculty with both undergraduate and graduate students continue using residential design projects with gradual increase in programmatic complexity and integration of key dwelling issues. As the students progress through the curriculum, questions about role of architecture within changing socio-political environment get more specifically addressed relative to cultural context with pertinent symbolic meanings and physical aspects of dwelling.

These collaborative efforts in teaching about housing issues have been gaining momentum in recent semesters due to participation of more faculty with shared interests in residential environments, relying on design activities as vehicles for more comprehensive learning by integrating research, interpretation, design application, and evaluation process.

Understanding Housing Issues in Turkey

A graduate thesis project being discussed in this paper represents a work in progress, which attempts to analyze and offer interpretative design strategies to critical issues in a residential culture familiar to the student, in this case Turkish urban housing. (Figure 1.) This work also relates to several seminar courses developed from research interests of a selected group of college and departmental faculty, who serve as graduate thesis advisors and faculty members focusing on Middle Eastern urban issues, phenomenology of

dwelling, qualitative research, interpretation and design methods pertinent to cross-cultural studies.



Figure 1. View south across the citadel to Ankara city center

A relationship between contemporary housing and cultural identity in Turkey has been characterized with inadequacies in much of mainstream housing production relative to scale, cultural and psychological aspects, as well as functional, environmental, and communal issues.

After rapid urbanization during last several decades of the 20th century, housing problems in Turkey escalated. The changes in environmental planning policies, without consideration for the dwelling culture and traditional patterns, brought along a difficulty in adapting to high density high rise residential complexes and emergence of a sense of ‘place-less-ness’ among the population.

Even though the majority of population was used to living in individual wooden or masonry houses, during the 1950s growing Turkish communities turned to international housing types such as concrete frame mid-rise and high-rise apartment buildings for developing new settlements.

These multi-family housing complexes consisted of dwelling units based on typical floor plans including three bedrooms and a living room, and general lack of indoor and or outdoor communal spaces within the grounds of complexes. (Figure 2.)



Figure 2. Aerial view showing typical modernist settlement in Ankara

As described by the residents living in such mass-housing projects, surrounding spatial structure induced a sense of alienation among families, who found their experiences close to mere co-existence in large-scale new districts without knowing their neighbors. Those personal and collective experiences were in harsh contrast to the residents' former lifestyle, which is still predominantly present in villages as well as in traditional Turkish neighborhoods, both being interwoven by network of semi-private circulation system linked by nodes serving as gathering spaces suitable for social interaction.

According to various published studies on Turkish urban housing problems, the quality of block apartment complexes has for quite some time been in dire need of improvement and reform. It has been recognized how modernist residential architecture in Turkey reflects contemporary global challenges, and like in many other countries includes growing need for culturally appropriate housing environments. Confronted with the dilemma of duality and contrast between tradition and modernization, architects and planners have been increasingly engaged in search for solutions under influence of emerging political agenda, with a goal to create a national style, more sensitive to culture, tradition, and local forms.

Furthermore, very few design solutions have engaged the issues of essence to housing problems in response to psychological, social and cultural needs of majority of population, and new architectural design efforts focused primarily on superficial aspects, seeking to redefine national identity through 'appropriate' cultural image, mainly creating gated communities and contributing further to social stratification. At this time it seems

that design attempts that could recognize, interpret and demonstrate a respect for the lingering patterns of Turkish traditional family lifestyles, without neglecting and sacrificing contemporary architectural expression or aesthetic ideals, are yet to evolve.

Changing Resident Roles

As dissatisfaction grew within working and middle class communities experiencing inadequacy of housing production on one hand, and observing hectic design vocabulary experimentation on the other, fueled by political quest for expression of artificial Turkish national identity, many residents have often been forced to come up with urgent solutions relying on their own modest means.

One such form of alternative housing can be observed in a Turkish form of encroaching illegal settlements. Although characterized as both a disgrace and periodically a recognized contingency in political process, the settlements called ‘gecekondü’ mushroomed and continued to grow into large communities in proximity of urban centers nation wide. Interestingly, these vernacular phenomena were embraced within contemporary popular literature, as well as by environmental design theory being interpreted as important cultural manifestation of migrant mentality, in essential need for social and economic support and emotional comfort during adjustment process.

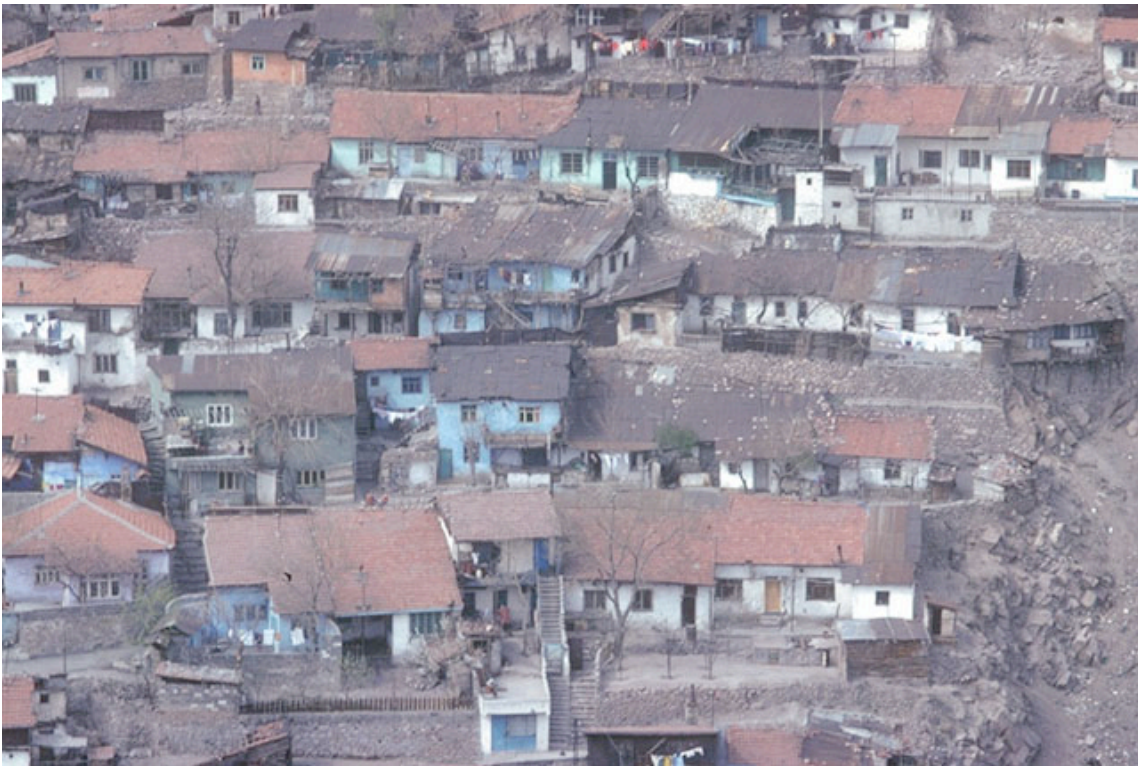


Figure 3. Aerial view, informal housing ‘gecekondü’ on a hillside near Istanbul

However, another strategy to create satisfactory solutions for communal housing problems gradually emerged and matured further, as residents attempted to develop more organized responses. Within apartment complexes where majority of Turkish population continue to live, efforts have been initiated to learn from earlier forms of planned Turkish multi-family settlements such as cooperatives of the 30's, attempting to convert more existing rental housing stock as well as new ones into similar collaborative entities.

As residents attempt to get more involved and start to participate in housing planning and development process, in accord with municipal, central, and diverse private interests, positive outcomes are beginning to testify in favor of collaborative approach as a desirable response to national housing question.

Sustainability and Quality Issues

First Turkish housing cooperative was created in 1935 in Capital city Ankara, and although this housing sector did not play major role in main stream Turkish residential production until fairly recently, during mid 1980's the interest for cooperatives grew more rapidly. Since early 1990's this trend reached the highest levels of implementation nation wide, producing a quarter of new housing annually.

Cooperative organizational structure underwent transformation from the early models where more financing was provided by public funds, to where they are currently constituted as NGOs providing freehold housing for the members and relying on services of non-profit home builders. However, cooperatives have continued to be supported by local and central governments through credits from public funds, supply of infrastructure, tax exemptions, and other financial means.

An example of firmly established and successful urban multi family housing development is the Batikent Project near Ankara, a largest Turkish mass housing estate planned as a cooperative for 50,000 dwelling units for lower to middle income groups, spreading over the area of 10km². (Figure 4.)

This project was launched in 1979, formed by groups including labor unions, associations of trades-people and artisans as Kent-Koop union, under the leadership of Metropolitan Municipality of Ankara. Being a first mass housing project that demonstrated the success of public and private partnerships in Turkish housing field, Batikent significantly impacted other cooperative developments in following basic objectives:

- Organize residents to strengthen their influence on housing policies through elected members;
- Use professional cooperative management strategies involving social and economic dimensions;
- Create a quality urban sector through the democratic participation of the public and cooperation among local administrations and civil organizations.



Figure 4. Batikent development: aerial view showing rows of modular housing

The impacts of Batikent Project include contribution to creating socially desirable integrated community and sustainable environment, enabling residents to provide input for housing and environment plans and projects, and maintaining affordability in Ankara housing market for both rental and owner occupied units. The project has been supported by European Resettlement Fund loan in 1980, it was recognized by International Year of Shelter for the Homeless trophy award in 1987, and won a competition prize at the 50th anniversary celebration of the foundation of the United Nations in 1995.

The ratio between housing and non-housing areas is equally balanced on the project site, with high standard open green areas developed for social and cultural activities and various age groups. In terms of the scale, two forms of housing have been planned in Batikent: two-storied units of 100m² of living space and small garden, and 5-12 story apartment buildings with units of 85-140m² of living space in addition to provided common use areas. The architectural character and design vocabulary of the project have also been thoughtfully developed with the input of resident representatives.

As Batikent and other housing cooperatives nation-wide gradually gained in popularity, offering more affordable and significantly improved quality of life for families who could afford the time commitment required for the interactive participation process, less organized types of lower income housing, ‘gecekondu’, have continued their hectic existence coping with difficulties in obtaining legal and financial support. However, the variety, personalized form, size and expression, as well as evidence of strong emotional attachment among the residents, may suggested that studying ‘gecekondu’ dwelling patterns and their rapid, affordable and practical construction process, may provide valuable insights into the essential qualities of these dwelling communities.

Interpretation, Evaluation and Feedback Process

As previously stated, the research intention of this thesis project has been to recognize key dwelling issues at individual/personal, family/group, and community/cultural levels, so that design responses that would be testing possible dwelling solutions could be informed and modified with the assistance of series of active participants, providing necessary input as follows:

A	Researcher -	-	-	-	- starting from personal dwelling experience;
B	Residents -	-	-	-	- providing interview descriptions;
C	Thesis committee -	-	-	-	- expanding sources and clarifying methodology;
D	Conference reviewers -	-	-	-	- offering research organization suggestions;
E	Presentation participants-	-	-	-	- raising questions and sharing comments;
F	Colleagues familiar with Turkish culture -	-	-	-	- evaluating interpretation and design response;
G	Others interested in this discussion -	-	-	-	- contributing to further proposal considerations.

This complex sequence of procedures will consist of several interrelated and simultaneous activities. A personal residential experience essay assignment, in form of descriptive account on meanings and qualities of dwelling environments, has already been conducted as an initial research stage (A). As a vehicle in residential research studies, personal accounts on dwelling experiences have been recognized by methods developed in descriptive qualitative research approaches. The role of this writing attempt is to initiate and bring forth subtle, emotional, and personal aspects of dwelling to individual authors, however it may also offer a glimpse into the dwelling culture depth, complexity and diversity, as well as major universal meanings, to be considered further within group discussion settings.

As the major themes and research questions emerge from personal essay writing and discussion process, they will be incorporated within open-ended interviews, to be conducted with selected apartment housing residents and families (B). In this thesis the interview questions are seen as important interactive opportunity, and the information gathering process will include ten households. The interviews are expected to generate information regarding desirable cultural patterns and their relations with personal needs, family support issues, age-related considerations, etc.

While studying primary and secondary sources and developing appropriate research strategies, the student would continue to seek input from the thesis committee on a regular basis throughout research and interpretation stages (C). Upon the abstract submission for this conference, advisors' and the reviewers' suggestions directed the work further towards more specific strategies, to help enhance and reorganize the steps of Open Building implementation process (D).

During the conference presentation preparation and delivery process, the thesis proposal is expected to raise more issues and new questions regarding both research and interpretative approach, generating further discussion, and in that case the benefits from possible comments at the academic level would be invaluable (E).

While conducting this interactive sequence of research activities, the student would also seek input from selected individuals including other researchers and colleagues who share same and/or similar cultural origins and study interests involving Turkish urban and regional residential issues (F).

Integrating Open Building and Cooperative Housing

How can principles, concepts and application strategies of Open Building help improve the quality of housing production in order to better respond to demands of rapid cultural transformation and contribute to particular qualities of place in Turkish contemporary context?

Working according to levels would be utilized by understanding the character of the district and qualities existing urban fabric, toward developing the strategy for integration of new base buildings.

Adaptability would be addressed by studying the changing preferences and needs of the community, focusing on cultural shifts relative to residents of traditional neighborhoods, which would also inform selection of dwelling unit types within the structure of the base buildings.

Sustainability issues would be considered in accordance to the recommendations developed with public input by the residents who responded to surveys and interviews.

Variety with efficiency and subsystems dis-entanglement strategies would be considered through developing, combining and modifying various dwelling units in order to increase their functional flexibility, decrease conflict between space-defining elements and parts of environmental systems, and facilitate potential changes over time.

As these principles suggest, new multi-family design alternative based on Open Building application would put emphasis on project longevity and capacity for change over time. However, in addition to OB general and procedural issues, the planning strategies brought forth by the cooperative housing sector would also be implemented:

- Incorporating innovative financing strategies through public-private partnerships;
- Considering more horizontal instead of mainly vertical growth in new housing districts by reducing a scale and density from high-rise to mid-rise and low-rise buildings;
- Designing more variety and better quality dwelling units;
- Providing a variety of semi-private spaces at the ground level, in form of communal and commercial, climatically responsive, indoor and outdoor spaces, to encourage wider variety of life styles according to regional customs, climate, and site location.
- Transforming the upper stories of new and renovated buildings into stacked dwelling units of 1-2 levels, incorporating private outdoor spaces and semi-enclosed transitional spaces for flexible seasonal use.

- Developing roof terraces with more green, communal, and family-support spaces may also be considered where appropriate, etc.
- Residents would be expected to participate both initially and in long term process, as partners working side by side with the experts involved in the design, construction, financing, etc.
- Dwellings would be conceived with a capacity to accommodate variety of layouts and furnishings initially and over period of time, at the unit level, without disturbing neighboring units.
- Technical systems, infrastructure, and issues of regulatory approvals would be considered and applied in accordance with relevant Turkish housing policies.
- Base building and exterior ordering systems would be under the control of the ‘support’ level decisions.
- Kit of parts’, to be used as enclosure components and openings on a façade, would be determined along with the units ‘infill’ systems; the participatory selection process would proceed through a step-by-step collaboration and improvements in the future, etc.

Conclusions

As demonstrated above by the current level of development, this thesis project mainly outlines conceptual and basic logistical issues. However, it is hoped that the efforts to learn from comparing and integrating Open Building principles with existing strategies which have been successfully utilized in selected multi-unit housing design examples, as well as with enduring traditional Turkish housing patterns, will continue gaining clarity, strength and relevance.

While the research stage of the thesis will inform and propose interpretive design patterns for creating a series of alternative dwelling solutions, the design process will be based on interaction of analysis and application procedures. That stage will also be incorporating an evaluative review and feedback by architectural design students, professionals and researchers familiar with the cultural issues pertinent to contemporary Turkish society.

The hope for conducting this research/design/application sequence is to encourage a continuation of public debate toward culturally appropriate housing options, in order to examine current politically charged quest for stronger national identity by creating environments that would evoke a sense of belonging within contemporary Turkish society.

In conclusion, the paper authors hope that this learning process will take further directions, bring more questions, and gain broader participation in this ongoing process, so that the lessons to be gained here may inform development of similar graduate level cross-cultural and cross-disciplinary collaborative work, in the future of our curriculum and beyond.

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