ASSESSING INCREMENTAL REFURBISHMENT AS AN ALTERNATIVE TO DEMOLISH & BUILD-ANEW: LESSONS FROM AN ARCHITECTURAL DESIGN STUDIO EXPERIENCE

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ABSTRACT

In this paper, we report on an attempt to test an alternative to the prevalent urban transformation practice in Turkey, which we made within the context and framework of an undergraduate architectural design studio. In Turkey, urban transformation almost always entails the destruction of the existing buildings and constructing brand-new ones when it comes to residential areas. This practice is ubiquitous and quite unchallenged. While urban transformation has historically been quite destructive in most countries, in recent decades there is an ongoing discussion its the alternatives, as well as various accomplished examples. Within this context, we tackled the transformation of a large residential area in Çanakkale, Turkey, for which a wholesale renewal endeavor is underway for some time, but currently is at a standstill. We started the studio with architectural and urban analyses of the area and carried out a questionnaire in order to survey the residents' demographic and economic profile, socio-spatial practices, needs and wants regarding their dwelling and its surroundings. Our studio brief precluded demolishing most buildings and asked for proposals for their revision and refurbishment along the lines of research findings and students' site plan decisions. The brief also required a level of strategic densification through new dwellings, social amenities, and commercial units, in order to increase the program and user diversity and to finance the whole endeavor. In what follows, we contextualize our position and contrast our studio experience with the dominant approach to urban transformation. We argue considering transformation as a process of piecemeal refurbishment of the existing fabric and incremental enhancement of the site with new buildings has advantages over the option of demolishing the entire area; especially in terms of the key notions of continuity, ecology, participation, and

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economy. We also dwell on the various benefits of this exercise in terms of architectural design pedagogy.

Keywords: Urban transformation, Incremental/piecemeal refurbishment, In-fill development, Community-led design, Architectural design pedagogy.

1. INTRODUCTION

Recent 'urban transformation' in Turkey has less to do with 'process' than rupture. Especially when it comes to the residential areas, urban transformation almost always means complete destruction of the existing buildings and construction of new ones with new design and increased floor space. Obviously, such a destructive transformation has a prevalent and long history that goes beyond the Turkish case of recent decades. Modernization of the existing urban fabric involved a good deal of destruction (of buildings) and replacement (of residents) since its historical European examples in the mid-19th century. These historical cases resulted from mass urbanization and were primarily driven by the implementation of modern urban infrastructure and improvement of public hygiene while serving economic, symbolic, and military purposes Turkish cities only experienced a comparable mass urbanization a century later, after the mid-20th century. As the rural population poured into the cities and the countrywide population dramatically increased, major cities witnessed an explosive expansion.[1] Destructive modernization of the existing urban fabric was rare and limited to cities like Istanbul (e.g., so-called Menderes destructions), which was already relatively sizable before the mass migration. However, after some decades, began a destructive transformation of the urban areas formed with the first wave of mass urbanization. In this paper, we contextualize this prevalent urban transformation practice in Turkey, and starting from the framework of an undergraduate architectural design studio experience we dwell on an alternative approach and its pedagogical value.

1.1. Context

Two dwelling types became prevalent in the rapidly growing Turkish cities after 1950: squatter settlements (*gecekondu*) and single apartment blocks on small parcels built by small-contractors *(yap-sat*) (Bozdoğan & Akcan, 2012; Tekeli, 2012). The former was produced informally by the new and low-income urbanites within their means usually on public land. The latter was produced by plot-owners and small contractors conjoining their resources, and it usually

[1] In 1950, the population of Turkey was 21 million, only a quarter of which lived in urban areas. By 2000, it was 69 million and 65% of it lived in cities; resulting in a nearly nine-fold increase in the urban population in the span of mere fifty years.

housed urban middle and upper-middle classes. As one can imagine, *gecekondu* became a subject of transformation much sooner. In the second half of the 20th century, urban transformation usually meant renewal of these informal settlements. This renewal brought densification and involved tearing down detached and small scale *gecekondu* houses and building apartment blocks along the lines of reclamation zoning plans that reproduce the same road structure for the most part. In the same period, the renewal of the apartment blocks was more uncommon.

In the last two decades, however, urban transformation not only became much more widespread, but also changed in character and scope. With the development and construction of larger plots by bigger construction firms becoming more common in big cities, one begins to see examples where former *gecekondu* areas are wiped out completely and replaced by denser and upscale forms of housing quite independent from the former urban morphology (e.g., Sulukule, Ayazma, Fikirtepe). Urban transformation, in this period, also started to include the apartment blocks produced during the first wave of mass urbanization. Much of this kind of transformation is plot-based and mainly mean the construction of higher apartment blocks (e.g., Kadıköy, Kurtuluş).

In the first decades of mass urbanization, dominated by *gecekondu* and single apartment blocks, it is hard to come by larger housing schemes. There were mainly two exceptions. First, there was a very limited amount of state-subsidized housing mostly produced as a result of the welfare atmosphere following the Second World War. Second and increasingly common was the housing cooperatives. Since the cooperatives were not restricted to smaller parcels like small-contractor apartments, they offered more opportunities in terms of urban morphology and planning of collective non-residential facilities. Yet, this opportunity was seldom seized, and cooperatives often became yet another way of reproducing common apartment blocks (Özüerken, 1996).

Because of their relevance to our study, it is worthwhile to dwell on the housing cooperatives furthermore. Despite their relatively low share in total housing production in Turkey, housing cooperatives acted as non-governmental organizations that fulfilled the housing demand of millions, mostly from the lower-middle and middle-classes. They proved their productive and organizational effectivity within the process of collective construction of physical and social infrastructure in many cities, especially between 1984 and 1993 (Geray, 2010). Housing Development Administration of Turkey (TOKİ), established in 1984, made a strong contribution to the housing sector with housing loans mostly provided to housing cooperatives until the early 2000s. The number of buildings produced by housing cooperatives has increased tremendously after the

establishment of the administration. The total number of buildings produced by the cooperatives in 1996 was approximately 8 times higher than the value in 1985 (Turkstat, 2010). On the other hand, this dynamism of collective housing production which is supported by the state (TOKİ) through cheap loans, has gradually lost blood in line with the changing economic policies.[2] Having almost completely abandoned its mission to support this unique mechanism of middle-class urbanization, TOKİ has mobilized all its assets and corporate privileges for mass housing production in the post-2000 period.[3]

Despite their limited share in the overall building stock, and their diminished importance, housing cooperatives are of special interest in our study. In this paper, departing from a design studio experience, we are dwelling on an alternative approach to urban transformation, in which urban space is adopted to present-day requirements and acquired new capacities through a 'process' rather than complete and destructive renewal. Cooperative housing areas are best suited to test this approach for a number of reasons. First of all, because many have larger plots they have a higher capacity for densification. This is important if such densification is needed to make the transformation economically viable, or programmatically more diverse. At a larger scale, densification also corresponds to a more sustainable urban development strategy, particularly adopting a compact city model rather than sprawling towards the outskirts of a city. Secondly, they provide more opportunities in terms of architectural and urban design in contrast to single apartment blocks. Thirdly, mobilizing their dwellers towards a collective transformation may be more achievable because of the collectivity and the network that produced them in the first place.

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[2] The first blow to housing production by the housing cooperatives was in 1993 when "the Housing Fund" was included in the general budget. Then in 2001, this fund was completely abolished. The total amount of cooperative housing in Turkey, which was around 18 thousand in 2001, decreased by almost half to 10 thousand in 2002.

[3] In this new era, TOKI uses public resources for particularly profit-oriented prestige projects for mostly upper-income groups, but not for social housing targeting the increasing housing demand of urban poor and/or middle-lower classes particularly in large cities. The case of Istanbul Metropolitan Area would be preeminently the best example to comprehend the radical shifts especially in scale, density and target population that occurred in urbanization of large cities in Turkey between the 2000s and 2010s, when many of the prestige and mega infrastructure projects were built through the zoning plans of TOKİ. By promoting high-end residential projects over social housing, perpetuating the city's uncontrolled growth, destroying the city's ecological thresholds, and forcibly relocating the urban poor through numerous urban renewal projects, TOKI has established a questionable legacy. The neoliberal landscape of mass housing consists of a new urban blight: disintegration of public spaces, degradation of social links, and segregation of social classes. For a comprehensive study on this subject see Altınok, 2012.

1.2. Scope & Method

We studied this approach in the third-year undergraduate architectural design studio we taught in Spring 2018-2019 at İstanbul Bilgi University, Department of Architecture.[4] The subject of the studio was the transformation of a dominantly residential area. The brief precluded demolishing most of the buildings in the area. This diverted decidedly both from the prevalent urban transformation approach for the residential areas in Turkey and from the brief of the 2014 national architectural competition for this area which was an example of this prevalent approach. In this paper, we dwell on how this alternative approach compares to the prevalent practice but we do not necessarily contrast the studio findings with the projects proposed for the 2014 architectural competition. The school projects and competition projects have different priorities and constraints; moreover, they correspond to different expertise levels. The site and construction conditions we defined for the students differ from that of the competition brief too. It is nevertheless possible to see the competition projects as examples of prevalent large-scale high-density urban transformation practices.[5]

In what follows, we start with briefly contextualizing the destructive modernization of the urban fabric in a larger historical framework. We dwell on the literature on its alternatives such as incremental transformation and refurbishment. This forms the theoretical context, after which we introduce our case study: the studio and the urban transformation project we worked on. In order to compare the approach we adopted with the prevalent transformation model, we define a number of topics, on which, we think, the two significantly diverge. As our approach prevents demolishing the buildings for the most part, one of the topics

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[4] Architectural education is four years in Turkey, after which students earn a bachelor's degree. This is a professional degree that gives the right to enroll in the Chamber of Architects and license to practice. There are various options for a master's degree, which is optional.

[5] In the 2014 architectural competition, one of the teams adopted an approach parallel to our studio brief. They suggested keeping, rehabilitating, and retrofitting the existing buildings. The competition requirements were met by adding more buildings, while preserving the urban form as much as possible. To the best of our knowledge, theirs was the only project with such an attitude. Three members of that team were invited to our studio to give lectures, Elif Yeşim Özgen Kösten, Hatice Büşra Al, and Emre Kishalı. The rest of the team comprised Melis Uysal, Zeynep Gamze Mert, Saliha Durgun, with Burak Sümen, Kubilay Bıyıklı, Zeynep Yiğit, Gizem Özçidem, Fatih Mehmet İpek, Burcu Saral, and Ennur Bayraktar. Kösten also published an article on the issue focusing on the competition, see Kösten, 2016.
It is possible to examine some of the competition projects here:
<https://www.arkitera.com/etiket/canakkale-belediyesi-sosyal-konutlar-mevkii-kentsel-yenileme-ulusal-mimari-proje-yarismasi>

we want to evaluate it through is 'continuity', which refers more than mere preservation of the buildings. Another important topic is 'ecology'. The approach tested in the studio requires less construction activity, less materials, and it is less destructive to the existing flora. We dwell on the issue of 'inclusivity' in relation to the survey with the residents of the area. Our findings helped the students to better relate to the site and its users; moreover, it rendered the whole endeavor less abstract. On the other hand, we believe it also helped the residents to better express themselves, their use of the dwellings and the area, their needs and wishes. We also dwell on the issue of 'economy' as it is a crucial aspect of transformation projects. We discuss briefly, how the alternative approach is economically viable.

2. BACKGROUND OF CONCEPTUAL FRAMEWORK

2.1. Contextualizing Destruction

Modernization has often been associated with destruction. Marshall Berman posits 'rapid and often cataclysmic urban growth, creating new human environments while destroying old ones' as one of the distinctive features of modernity (Berman, 1982, p. 16). It is hard to imagine how it could be otherwise when the sheer speed and scale of urbanization brought around by the processes of modernization are considered. Leading industrial countries witnessed this rapid urbanization in the 19th century, in the course of which London grew from 860,000 to 6,500,000, Paris from 550,000 to 3,350,000, Berlin from 172,000 to 2,400,000 of New York from 63,000 to 4,250,000, and Chicago from virtually none to 1,700,000 (Chandler & Fox, 1974). This explosive increase entailed rapid outward expansion in all cities, and densification of existing urban land where applicable. The expansion destroyed the natural and agricultural land surrounding the cities. The seemingly out-of-control growth, infrastructural deficiencies, and sanitation problems led to viewing the city with a clinical eye, as a diseased condition, cancerous or even monstrous deformity (Choay, 1969, p. 10). This, in turn, played a part in the destruction of the rapidly formed city in the name of rehabilitation, sanitation, and regulation. The paradigmatic example in this sense was the modernization of Paris by Haussman and Napoleon 3rd.

This attitude was adopted and radicalized by the early 20th century modern architecture. The position of the most prominent figures of modernist architecture *vis-a-vis* the existing city had notoriously been negative. This had everything to do with the fact that the critique of and the intent to replace the industrial city was very central to the formulation of modern architecture (Figure 1). That is why most modernist city visions were products of an internal logic offering systematic solutions to housing, work, leisure, and transportation. Just as

these city visions aimed to replace the existing city rather than searching for continuities and improvements, many modernist projects were conceived as partial implementations of the comprehensive city visions, less interested in an effort of forming connections with their actual urban contexts. In the after-war decades, however, the general outlook towards the existing city changed even within the modernist circles, such as CIAM. Starting with a 'clean sheet' was deemed unrealistic by members of Team X, for instance, who rather promoted a 'new realism' that is more about 'going on' and 'acting in a given situation', which entailed a more genuine effort to understand the existing, 'found' urban condition (Smithson, 1968, p. 85).

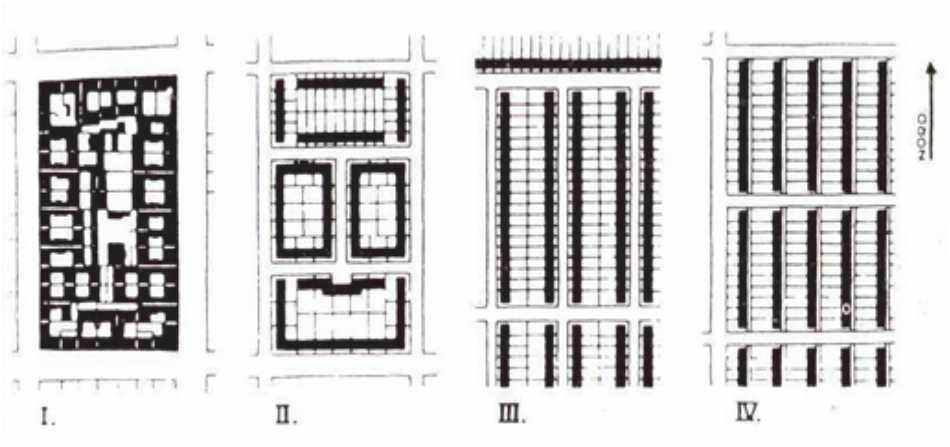

Figure 1. Ernst May's diagram in Das Neue Frankfurt of 1930 demonstrating an evolution from 19th century city block to modernist freestanding linear housing slabs (*Zeilenbau*).

The 'desire' for the wholesale destruction and reinvention of the city was left for the most part in the mainstream architecture and urban discourse after the 1960s. On the contrary, many seminal studies from this period were motivated by an effort to better understand, learn from, theorize, or salvage the existing city (Lynch, 1960; Jacobs, 1961; Rossi, 1982[1966]; Venturi, Scott Brown, & Izenour, 1972; Ungers et al., 1977; Koolhaas, 1978). This shift in the position of the architect/designer *vis-a-vis* the city can be viewed as one 'from writing to reading', after which reading the multiple signifiers in the city, trying to create meaning, and rewriting it by picking up the existing clues became more important (Gandelsonas, 1998, p. 133). Attaching a renewed importance to what is already there fueled various forms of contextualism for a while, yet after the 1980s, the importance given to context again diminished, especially through criticism of its more simplistic, conservative, and restrictive aspects. Today, Rem

Koolhaas's emblematic motto,[6] seems to acquire a much wider currency and application than he intended.

A parallelism can be observed in planning theory, which in the 1960s and 1970s also distanced itself from the more destructive approach. Many critics were questioning the philosophy behind massive urban renewal, which was essential for the realization of modernist ideas, such as that of Corbusier's (Hall, 2002, p. 52). Many concerns in terms of the social objectives of planning were being raised, initially evident in American city planning. Essentially, the argument was that physical or spatial planning had failed many of the people that it ought to have helped, because it had not started with sufficiently clear and explicitly social objectives. In particular, critics pointed to the many examples where American urban renewal had simply displaced low-income residents from inner urban areas without providing alternative housing, leaving them worse off than before (Hall, 2002, p. 129). These were the years when the diversity of people's experiences, aspirations and social worlds became increasingly evident, as civil rights movements challenged systemic injustices, not only of class, but also gender, race, ethnic and religious background, and physical ability (Healey, 2012). Since the 1960s, the legitimacy of insulated technocratic decision making by planning authorities has been challenged,[7] citizen participation in planning has become widely accepted, and the concepts of deliberative democracy have been imported into planning theory. Public participation and democratization in planning became the main ingredient of almost all reforms in planning, largely in the context of the civil rights movement (Marcuse, 2012).

The rise of democracy demand in planning theory continued into the 1970s. However, the social concerns began to lose weight with the deconstructive effects of the postmodern paradigm shift in political discourse in the 1980s, despite the critical urban theories of the era.[8] In the 1990s, therefore, a new planning theory

[6] In his 1994 essay on large buildings Koolhaas argued beyond a certain scale architecture acquires the properties of bigness, and one of them is no longer being a part of any tissue. Such a building, then, 'exists, at most coexists. Its subtext is fuck context'. See Koolhaas, 1995, pp. 495-516.

[7] Paul Davidoff questions this 'technicalist' view of the planner's role and argues that planners should involve themselves more actively in the political process by acting as 'advocates' for client groups within the public, especially disadvantaged or minority groups whose interests were not well represented in the process of planning (Taylor, 1998, p. 85).

[8] The critical urban theory that has made important contributions to the historical evolution of urban theory, was first consolidated in the late 1960s and early 1970s through the pioneering interventions of radical scholars such as Henri Lefebvre (2003 [1970]), 1996 [1968]), Manuel Castells (1977 [1972]), and David Harvey (1976). Despite their theoretical, methodological, and political differences, these authors shared a common concern to understand the ways in which, under capitalism, cities operate as strategic sites for commodification processes (Brenner, 2012, p. 3).

came to prominence which viewed planning as an exercise in 'communicative action'. Theorists drew more heavily on communication than on negotiation literature and, in doing so, they concentrated especially on the rather abstract philosophical work developed by the social theorist Jurgen Habermas (Taylor, 1998: p. 112-113). Not only the epistemological break in political discourse but also the doctrinal change in the regime of capital accumulation and the neoliberal agenda stirred up unemployment and its attendant economic hardship that hit especially the most disadvantaged groups in society along with the middle class (Taylor, 1998, p. 147-148). In Turkey too, there is hardly a shortage of the problems caused by gentrification and displacement. Neither the concern for the disadvantaged nor participation played an important part in recent urban transformation.

The 'demolish & build-anew' model is not simply widespread and dominant in current urban transformation in Turkey; it is pretty much the only model to the extent that its alternatives are almost never searched for. At times this has to do with the issues on the structural integrity of the existing buildings, especially in the face of earthquakes. In such cases, seismic retrofitting is an option, but one that is chosen more frequently in public buildings, rather than residential buildings.[9] The appeal of newer houses is fed by various sources. Most of these are on the economic side. The rising dwelling prices in the last two decades, especially of newer buildings, made renewal through destruction economically viable.[10] In most of these two decades building loan conditions and interest rates were rather advantageous. In some cases, municipalities encouraged the urban transformation by increasing floor space ratio allowed for the plots (e.g,, Kadıköy). On the administrative side, new legislation in 2012 made transformation much easier.[11] Last but not least, there were also the cultural aspects. The desire for

[9] According to Istanbul Governorship data nearly 1000 public buildings underwent seismic retrofitting since 1999. <https://www.ipkb.gov.tr/en/what-is-ismep/b-component/retrofitting-works>

[10] Dwelling Price Index issued by the Central Bank of Turkey was 48,13 for 2010 and 117.10 for 2019.

[11] Beside its function to overcome administrative impediments in large-scale urban transformations, Law no. 6306 "Transformation of areas under the risk of disaster" or "Urban transformation law" as it is commonly known, gave both central and local governments the opportunity to further increase their political power and to suppress citizens through "disaster rhetoric". The law facilitates local municipalities to redistribute benefits through the supervision of central power, and this process calls forth a new form of patronage relations. The mainstream "partnership model", the cooperation between municipalities (mostly governed by ruling party) and construction companies, essentially facilitate the consolidation of existing hierarchical relations and centralization of political power. In this scheme, the state manages the opposition of landowners by offering a combination of benefits and punishment (Eren, M. Ö., & Özçevik, Ö., 2015) and can actually remote-control the whole process with a carrot-and-stick strategy.

new homes, cultivated by the prevalence of real estate ads and aggressive marketing, was inevitably related to other forms of consumption. Moreover, one can even perhaps relate the lack of alternative models of urban transformation with the overall lack of practices of recycling and upcycling in Turkey.

2.2. Literature review on Incremental Housing and Refurbishment

This study mainly deals with the discussions on two main phenomena: [1] incremental housing and its role in the scale of production of urban space, [2] the problematization of "refurbishment or demolition" dichotomy, particularly for housing estates that produced based on Modernist design principles.

Incremental change in housing includes the ability to renovate, alter and extend existing spaces for new uses, services and technologies or the addition of entirely new spaces to an existing building (Griffin, 2007). This flexibility in building processes that has been mostly appreciated by many scholars may reflect itself as a controversial phenomenon in urban scale in terms of managing cities' urbanization dynamisms. The literature on the phenomena of incremental development in both architectural and urban scales comprises two main approaches. In the first approach, there is a great deal of studies of scholars who assess the lessons from history of *self-help* informal and/or vernacular housing where the phenomenon is most common and visible. In this cluster, some scholars focus on building process including expansions and improvements over time - especially the examples from the Third World countries (Acioly, 1994; Malaque et al., 2015; Turner & Wakely, 2015; Harnish, 2018), while others focus on government-assisted incremental housing and its finance (Amoako & Boamah, 2017; Offia Ibem et al. 2012). In the second approach, a smaller amount of studies contextualize the phenomenon from the perspective of urban planning and design. Within this cluster, some scholars mainly criticize incremental change and 'incrementalist planning' in terms of city management (Hall, 1997; Ünlü, 2011), some suggest incremental change to be a tool for urban densification through infill development (Barker, 2019; Forsyth, et al., 2016; Tillner, 2013), some examine case studies for incremental low-cost housing (Wainer et al., 2016), while others adopt the perspective of citizen participation (Lizarralde, 2011; Hasgül, 2016) or sustainability (Romaya, 2002; Terracciano, 2017). As the second phenomenon we deal with for this study, the refurbishment of Modernist housing estates corresponds to another controversial debate. The main dichotomy here is whether or not to preserve housing estates aging both ideologically and socio-spatially; and more importantly, whether these urban areas will be marketed through gentrification projects.[12] Indeed, while

[12] For comprehensive discussions on this issue, see Crawford et al., 2014; Ferreri, 2018; Bell et al. 2014.

some of the scholars suggested the total transformation of these residential areas by pointing out the market realities, some suggest the refurbishment option as a participatory, owner-driven[13] and sustainable solution. For the latter group of authors, refurbishment can deliver significant improvements in energy, environmental and health performance, which can lead to cost savings and improved living standards for residents, and can cause less disruption to communities and residents. Engaging residents in regeneration decisions is therefore crucial and has resulted in successful refurbishment of a number of social housing properties (Bell et al. 2014). According to Crawford et al. (2014), the varying aspects of refurbishment and demolition (such as costs and impacts for residents, energy and carbon, water and waste, health, wellbeing and housing improvements, resident empowerment and involvement etc.) are complex and interact with each other. What is needed is a more balanced inter-disciplinary view of what housing interventions mean for people, and who the winners and losers are in the short and longer term.

Despite the emphasis on the multidimensionality, a considerable amount of studies focus merely on the energy efficiency aspect of the subject. Such approaches[14] mainly suggest viable design solutions for different cases with goals such as: *energetic improvement, typological improvement (redistribution of the available dwelling space, reorganization of interstitial spaces, addition of buffer spaces within the envelope) and architectonic improvement* (Riccardo, 2006).

3. CASE STUDY

We use our architectural design studio experience as a case study. As the method we deploy in this paper is studying our findings in this case study in comparison with the widespread demolish & build-anew model we start with introducing the studio and the case, after which we will dwell on the points of comparison.

In our studio we consider architectural design as urban intervention. It is important that the students see the area not simply as an urban plot, but as a specific, inhabited place subject to diverse urban dynamics. We expect the student projects to be driven by extensive analyses of the urban context as well as the study of the relevant precedents. Within this framework we studied a residential neighborhood in Çanakkale, a city in North West Turkey along the Dardanelles, the narrow strait that separates Asia and Europe along with Bosphorus. The area is colloquially referred to as 'social housing quarter' *(sosyal konutlar mevkii).* It lies on the eastern edge of the city center and runs between two dominant east-west

[13] See Maharaj, 1989; Sendra, 2018.

[14] See Kovacic et al., 2013 and Carpino, 2018.

lines in the urban macroform, Sarı Çay on the south and Piri Reis Street on the north (Figure 2).

Figure 2. Satellite photo showing the project area within the urban macroform.

Figure 3. One of the identical apartment blocks in the area (Photo by the author, March 2019).

Despite what its name suggests, the dwellings in the area are not social housing. The area was expropriated with the intention to be used for social housing first. But later, it was sold to and were produced by a number of housing cooperatives in the early 1980s. It is approximately 10 hectares big and comprises 860 dwellings. Most of the apartments, and consequently the flats are identical (Figure 3). In any case, there is a very limited number of building types, many of which follow the same site layout pattern. This results in a quite homogenous residential neighborhood, with a few identifiable sub-areas. The whole area is intended for transformation for some years but this endeavor is currently at a standstill. The project for a new scheme was acquired through a national competition in 2014 (Figure 4). The brief of the competition presupposed the destruction of the existing buildings and suggested almost tripling the building density.[15]

Figure 4. Çanakkale Social Housing District Urban Renewal Project Competition, 2014, 1st Prize.
Design Team: Oknur Çalışkan, Mehmet Zeyat Hattapoğlu, Jülide Alp, İbrahim Alp.

It is questionable if the architectural quality of the mostly identical apartment blocks currently in the area is particularly special. Yet, they certainly are representative of the low-cost dwellings of an era. Built in the early 1980s, the buildings are not very old, yet still many of them are somewhat time-worn and most flats need refurbishment and modernization. On the other hand, the urban

[15] See <https://www.arkitera.com/yarisma/canakkale-belediyesi-sosyal-konutlar-mevkii-kentsel-yenileme-ulusal - mimari-proje-yarismasi>

fabric they form and the open space quality of the neighborhood is rather unique for Çanakkale (Figure 2, 5). The area has a site plan reminiscent of modernist layouts with its relatively linear housing blocks set back from the roads and set apart from each other by open green areas. Whereas the city center is a typical dense apartment block fabric and the newer residential areas deploy mostly point blocks, here the buildings form a loose fabric and quite defined open spaces. Nearly all buildings and flats enjoy direct access (physical or visual) to green open spaces.

One of the priorities in our architectural design studio brief, thus, was to recognizably preserve the overall structure and ratio of open spaces. The studio brief, in stark contrast to the competition brief, also stipulated that nearly all the buildings were to be kept. Students were expected to offer spatial and structural betterment for these existing buildings. However, the building density of the area was to be increased by means of new buildings (Figure 6). Up to 12,000 m^2 of new dwellings or temporary accommodation (e.g., dormitories, hotels) was to be designed. Introducing new dwelling and accommodation types that the area lacked at the moment was encouraged so as to increase the diversity in the neighborhood.[16] Similarly,

[16] The brief allowed students to propose demolishing a maximum of 10% of the existing dwellings. This margin was mainly given for pedagogical purposes, as it enabled the students' design schemes more flexibility, resulted in richer variety, and offered more opportunities to transform the area along with the results of their analyses. Since the densities and the spatial qualities of the building blocks vary within the project site, many students preferred to create better-performing open spaces for the densely packed blocks by eliminating some of the existing structures. According to our observations, this elimination, which the students generally did in order to improve the open space quality and the light or air intake performance of the buildings, largely coincided with the survey results: those who were not satisfied with their house and its immediate surroundings (or who tended to renew their properties) are relatively clustered in such dense building blocks. According to our studio brief, students who decided to demolish a building or building section had to propose as many units as they eliminated apart from the required new units.

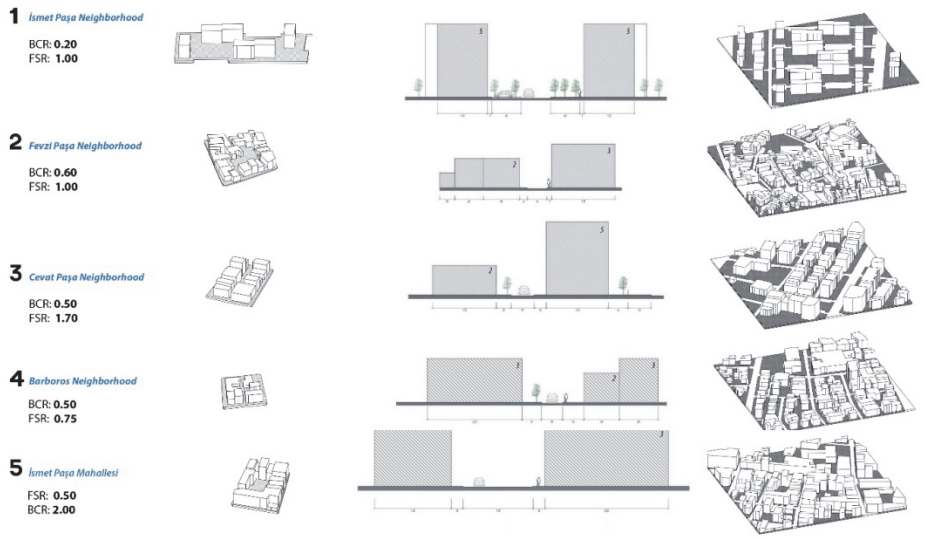

Figure 5. Various residential typo-morphologies in Çanakkale. Başak Cevahir, Elif Soylu, Nebile Ertürk, Selen Küçük.

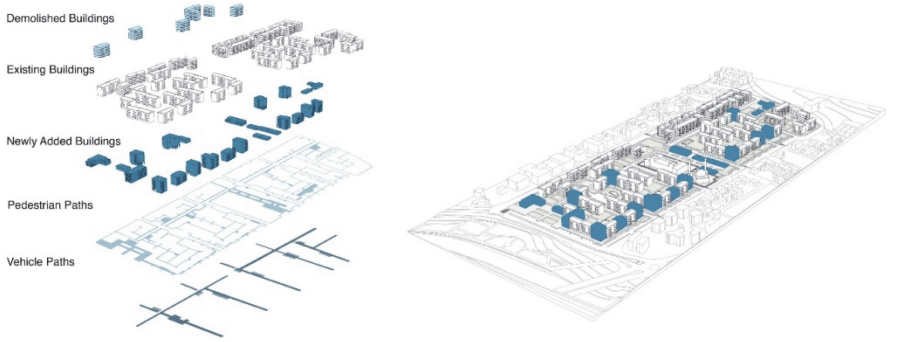

Figure 6. Drawing showing the existing, added, and demolished buildings in a student project. Ceren Göçmen.

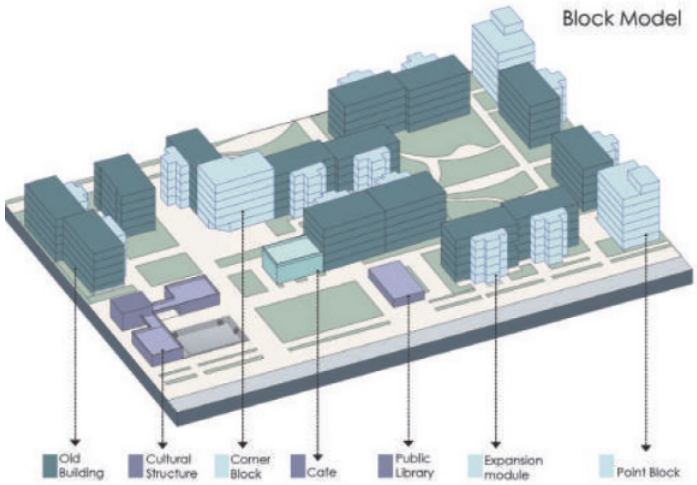

Figure 7. Schematic view showing densification by means of new blocks, modifications on the existing blocks, and introduction of non-residential functions. Gizem Atalık.

increasing the programmatic diversity was also a discussion point (Figure 7). Intending to enhance public life in and around the neighborhood, the brief suggested the design of new public facilities around 5,000 m^2 and a limited amount of retail up to 2,000 m^2. The specific function, character, and capacity of all these non-residential buildings were to be decided by the students according to their individual architectural position (Figure 8,9). There was a seven-story limit for the whole scheme. Next to the revision of existing buildings and the design of new ones, students were also expected to rethink the entire landscape, all open spaces and the street network (Figure 10).

Prior to focusing on their individual projects, students collectively carried out two kinds of research: on the topic of housing as a subject, and on the various aspects of their site. For the former, they studied relevant precedents of housing units and layouts, they made case studies on other building types that they intend to propose for the site, they looked into cases of 'refurbishment' and 'infill development' in the contexts of social/public housing and co-housing. For the latter, they carried out analyses on the following topics: [1] the history of architectural and urban change in Çanakkale and the current projects/trends that are going to potentially affect its future, [2] urban morphology of both the city and its identifiable sub-sections, [3] land use on an urban scale and building use in and around the site, [4] transportation on a walking scale and on the urban scale, [5] urban economy, [6] topography [7] climate.

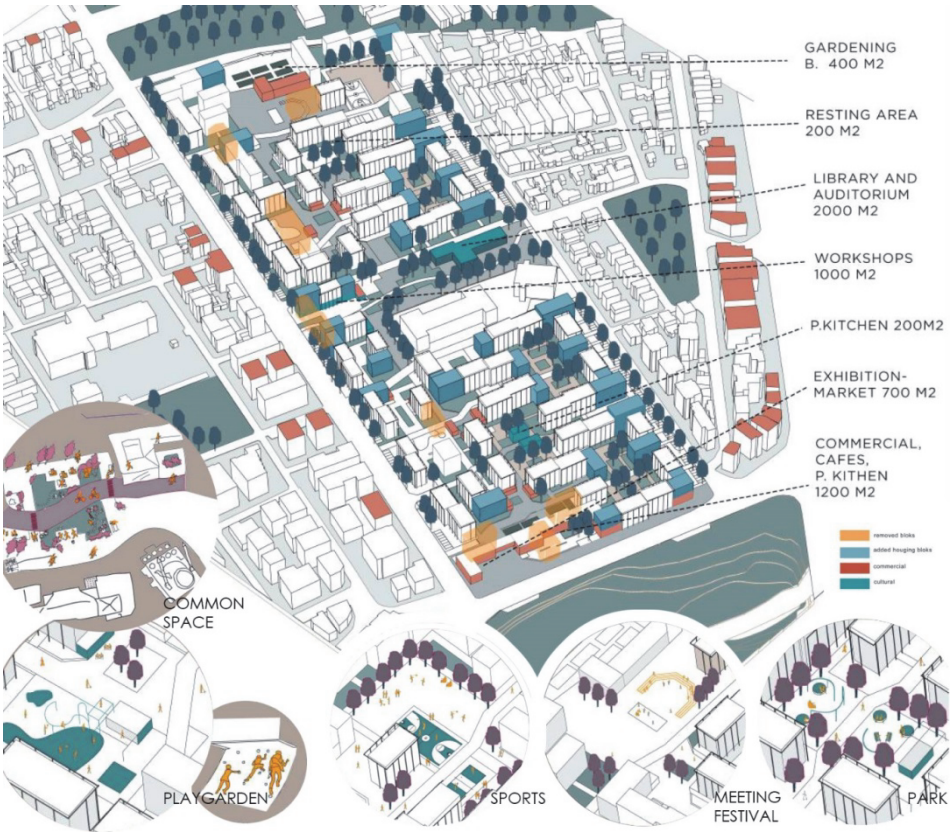

Figure 8. Drawing showing the proposed public facilities and retail. Ayça Özgün.

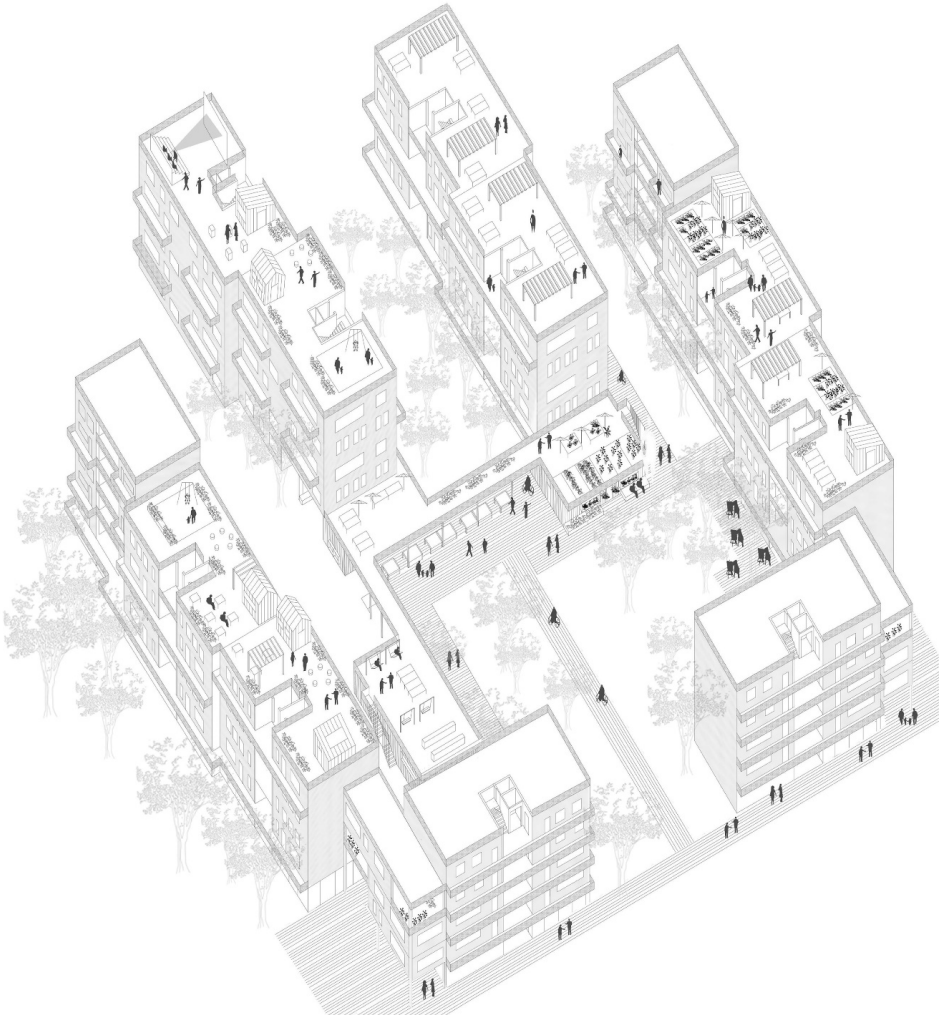

Figure 9. A proposal for diversification of uses in open space and in buildings. Ebru Okşaksin.

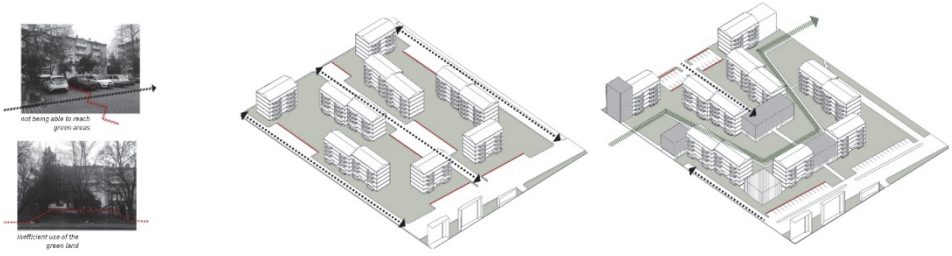

Figure 10. Diagrams showing the proposed densification and the landscape intervention. Elif Soylu.

4. FINDINGS OF THE STUDY

Studying on an alternative to the 'demolish & build-anew' model forms the core of our approach. It is obviously not that we reject this model, which may be the reasonable choice depending on the case. Yet, we wanted to question its almost unchallenged position. We also saw pedagogical benefits in doing so. Students were asked to question and think beyond the common market habits and practices. Beyond offering an alternative vision, this contributed to their capacity to come up with authentic design approaches different from the much-repeated commonplace schemes. They also acquired experience in criticizing the commonplace schemes through their architectural and social aspects. Due to the limited space of the paper, there is no way of including a meaningful number of student projects here. Yet, below are the main topics through which we want to discuss them:

4.1. Continuity

The main merit of our approach is that it allows the existing urban form to persist by adapting to the new expectations and taking on new functions. This helps to protect a housing scheme that is both unique in Çanakkale and representative of its period. However, the stakes go beyond the concerns of architectural and urban preservation alone. First of all, not demolishing the buildings allows the continuation of most spatial relationships, social praxis, personal habits, and collective memory. As it is a forty-year-old neighborhood, the area produced a number of various social relations. Our survey revealed that there is a considerable level of social cohesion and interaction among the residents. Routinely visiting the neighbors seems to be quite prevalent, especially among women. We have observed even the limited common space inside the apartments are used quite innovatively for socializing among neighbors. Residents also asserted that coming together on special days (e.g., religious holidays, weddings, funerals) is common and it strengthens social bonds. Many of these activities have strong spatial aspects and depend on spatial proximity and the availability of close collective open areas.

Second, the decision to not demolish the buildings extends to not destroying the open space as well. The brief required a level of densification; thus, the students were expected to design new buildings. Yet, in line with the spirit and the focus of the brief, most students tried to be as sensitive as possible as to where they choose to build. In many cases the areas that already have hard landscape (e.g., pavements, asphalt roads) were chosen as the new building sites. If not, students aimed for the least damaging solutions. In any case, just like the buildings, the open space was also treated not as some generic space that is kept simply

because the brief demanded, but as a specific place protected as much as possible for it is already inhabited by people, flora, and fauna. The continuation, in all of these senses, also were in the hope that it would help to prevent the potentially alienating effects of a wholesale transformation.

4.2. Ecology

That the cities contribute significantly to current environmental crises seems to be obvious enough. Since they house the majority of the world population, the cities draw plenty of resources and products. In return, they discard a lot too. What makes this more problematic is that because of the current global scale of trade networks, all this exchange happens over a large geography. Banal acts such as dressing oneself or eating may very well have trails that travel most of the globe. This raises many issues on what is at times called the 'ecological footprint' of cities (Massey, 1999). There is also the problem of a city's actual footprint. Cities may occupy just 2% of the total global land surface, however, their expansion has often been at the expense of natural or agricultural land around them.

As discussed at the outset, Turkish cities experienced a rapid increase in urban population after 1950. Çanakkale may not be one of the most populated cities in the country, but its population grew considerably. In the last five decades, the population of the city center increased five-fold.[17] This resulted in the expansion of the city center towards the mainly agricultural land surrounding it. Because of this and other various burdens that a larger urbanized area would bring (e.g., on transport infrastructure) a level of densification in the already built-up areas of the city seemed advisable. That is partially why the project brief required increasing the floor space ratio from 0.9 to 1.35.

Perhaps more importantly, on the issue of ecology, the condition of the studio brief to keep and rehabilitate the existing buildings prevented both the production of a considerable amount of debris and the use of even more new construction materials. Both the elimination of the former and the production, transport, and implementation of the latter would require much more resources and energy, along with creating environmental consequences. The revision and refurbishment option produced significantly less debris and required less construction.

Çanakkale has very fertile lands, and is among the cities that has a significant part in the total agricultural production of the country. Although obviously the large-scale agricultural production is not visible in the city center, the small-scale

[17] In 1970 census overall population of the city was 360,764 and that of city center was 27,042. by 2018 they are 540,662 and 136,002 respectively according to Turkish Statistical Institute data.

production is quite visible in the project area (Figure 11). Many gardens are transformed into allotments, which are intended for hobby, yet also contribute to the sustenance of the household. This issue was picked up by many of the students, who in their own proposals suggested to increase the cultivation areas. The production in this scale perhaps does not have a significant economic value. People do not sell what they produce or live off of their garden, but apparently, their hobby-scale agricultural production contributes to the home economy besides providing a case for so-called zero-mile food.

Figure 11. One of the many hobby gardens in the area.

Many students also aimed to keep, encourage, and expand the existing agricultural activity for its social benefits like increasing collectivity, interaction and cohesion among the residents. A very crucial benefit this activity also offered for the students was helping them becoming more aware of the advantages and importance of soft landscaping, water-absorbent surfaces in the urban areas. This, for many students resulted in avoiding unnecessary construction and the over-use of hard-landscaping.

4.3. Inclusivity

One of the ways that urban transformation in residential areas differs from the development of a completely new area from scratch is that the former usually involves many more actors. In cases where the ownership of the land is not fragmented, a new residential scheme can even be undertaken by a small number of actors. Whereas the transformation of sizable areas involves many, sometimes hundreds of owners. This not only increases the complexity of the process but affects some of its other aspects. In the transformation of residential

areas, at least some of the new dwellings are not produced for the market, for a generic consumer. Instead, they are produced for the owners of the existing homes. This potentially means that their demands and preferences may influence the design and qualities of the new scheme. Yet, this seems hardly to be the case. More often than not, the design and planning of transformed areas follow the same market trends as the new schemes.[18]

In our case, we wanted to first understand and then include the needs and wishes of the existing residents of the area in the design process as much as possible. To this end, a carefully designed household questionnaire survey was put together by the studio instructors (Figure 12, 13). Although more frequently seen in education in neighboring areas like urban design and planning, questionnaire is a method seldom used in architectural education. The approach frequently adopted by the architectural design studios that problematize the design of mass or multi-family housing is that the students tackle the social relations, changing demands and expectations of different social groups and individuals in a hypothetical framework. This is usually based on the description of 'generic' user types resulting from the hasty observations at the site. The market practice, in which the urban environment is reproduced on a large scale in a top-down framework, is no different: essentially, what design students call a 'user profile' becomes a 'customer profile' in the profession and the real estate market. Because we aimed at an architectural exercise in which students were expected to design a more nuanced transformation process rather than a total redevelopment of an old mass housing area, the questionnaire focused on revealing the expectations of the residents of the area.

The questionnaire was organized under seven main sections: [1] demographic profile, [2] employment status, [3] cost of living, [4] environmental conditions and agents of socialization, [5] housing comfort and architectural qualities, [6] the desire for capacity building, and [7] the process of neighborhood renewal. The set of questions under the first three sections served to describe the current social and economic conditions of the residents. In the fourth section, many parameters such as socialization, walkability, accessibility, the use of open spaces, and the competence of the present social amenities were considered. In the fifth section, spatial relations were addressed mostly from an architectural standpoint, particularly based on the condition and qualities of the existing dwellings. Finally, the sixth and seventh sections aimed to understand and measure how residents approach the issue of neighborhood renewal and to what

[18] For a recent research that focuses on the similarity of the plan schemes of various apartment block produced through plot-based demolish & build-anew model urban transformation see (Aksoy & Bingöl, 2018).

extent they are prepared, socially and economically, for a possible renewal process. We asked the residents, if the transformation is considered as an incremental refurbishment process, what is necessary to reconsider in their homes and in their immediate surroundings.

Instead of trying to come up with generalizations through the statistical results, we conducted the survey in order to reveal the knowledge of 'performative spatial practices' within an 'interpretative' methodology framework. We essentially encouraged students to learn not only from the spatial aspects of the place but also from its social aspects. Focusing on 'actual residents' instead of 'generic' user profiles and the forces that socially reproduce the space, has become a reflective process for the students, who tried to interpret the survey outcomes through their real communication experiences in the field. Thanks to this reflective process, while adopting alternative approaches to the existing destructive practice of urban transformation in Turkey, some of the students also were able to reconsider their own architectural position and discourse.

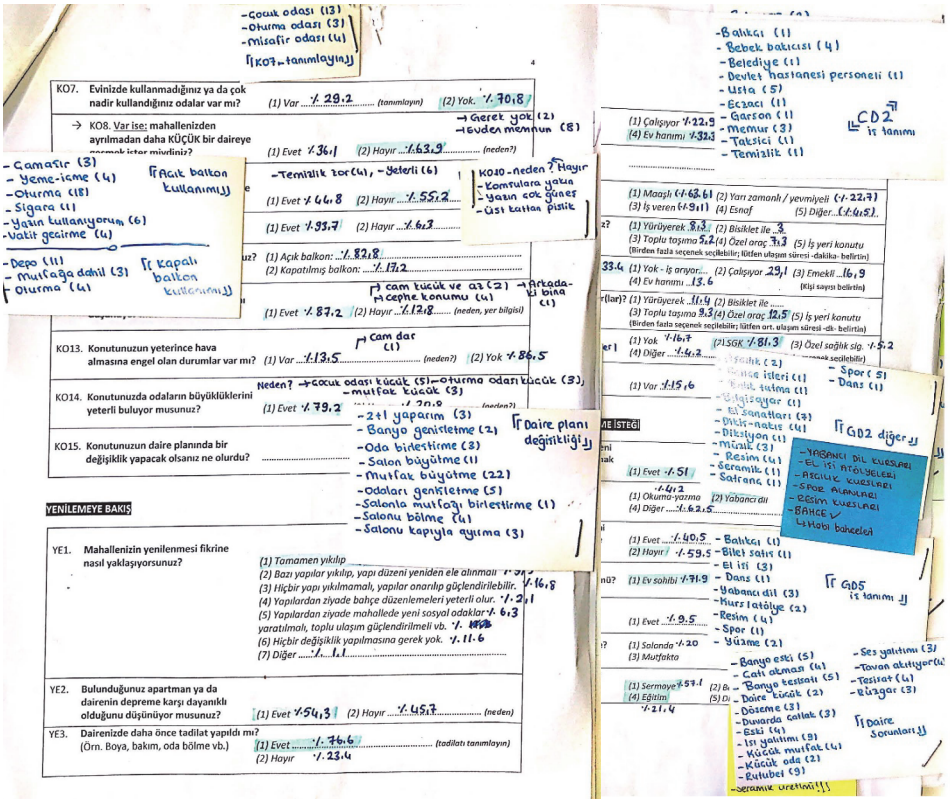

Figure 12. Some of the questionnaire pages filled by the students.

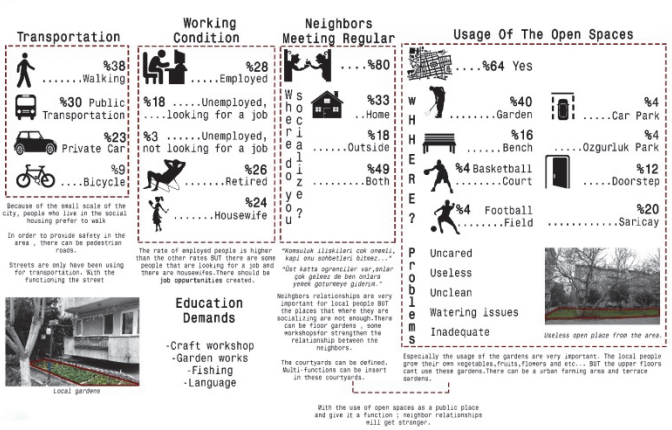

Figure 13. Some conclusions from the questionnaire.

4.4. Economy

Urban transformation through demolish & build-anew model may have made economic sense for many cases. The construction sector has been the driving force of the Turkish economy in the last two decades. Rising real estate prices, coupled with increasing floor space rights in many cases, produced enough value that made such transformation economically lucrative. But, there is enough reason to search for its alternatives. In our case, preserving some of the qualities of the area is desirable for the reasons explained so far and it could be possible doing so while making economic sense. In such a large area with a relatively low floor space ratio, there are possibilities for keeping the existing buildings and increasing the building density without losing the qualities and overall ratio of open space to a significant degree. The new residential and commercial buildings can be used to finance both the construction of these new buildings as well as revision, modernization, and refurbishment of the existing ones. In order to do so, a housing cooperative, the very model that was used for the production of this area in the first place, can be redeployed.[19] In Turkey housing cooperatives

[19] According to Turner & Wakely (2015), cooperative alternatives, such as Community Land Trusts (CLTs) that has spread throughout the US, Canada, and the UK over the past 40 years reduce costs because the land is removed from the market to ensure perpetual affordability, and the mortgage is corporate and collective. Members thereby gain the initial reduction of capital costs (on the land and on the finance) and share the benefit of any future valuation of the property as a whole. When the comparative development is large enough to rent plots for nonresidential uses, public or commercial, the cooperators can reinvest the earnings in improvements that may also reduce charges or services taken over from former providers. Adding the great advantages of incremental development potential to that of recovering the traditional separation of land and improvement costs could eliminate the need for 'beneficiaries' and all that word implies.

have almost always been a way to attain owner occupancy. That is why many cooperatives discontinue and their ownership is divided as soon as the construction ends. This is true for our case as well. That is why a cooperative need to be reestablished here, at least for the transformation period, in order to procure the revision project for the area and oversee its implementation.

Moreover, what may have probably been seen as a more hypothetical suggestion at the time of the competition, when construction economy was still perceived to be strong and profitable, is perhaps as convincing as the demolish & build-anew today in the context of the crisis and stagnation in the sector and in the overall economy. Country-wide dwelling production decreased significantly in the last three years. More precisely it shrank -15% in 2017, -32% in 2018, and another -39% in 2019 according to the building permits statistics issued by the Turkish Statistical Institute.[20] Again the official statistics indicate that the construction costs of residential buildings more than doubled since the time of the competition.[21] Obviously, economic reasoning for dwelling production is quite complex, and it is hard to paint a picture of it by a few indicators. It nevertheless seems possible to argue that a large-scale construction endeavor in a peripheral city like Çanakkale is more unlikely than it was five years ago. A strategically constrained construction and renovation activity on the other hand would require less capital and may make more economical sense even with the possible marginal increase in construction costs due to the decrease in the scale (Figure 14).

5. CONCLUSION

Urban transformation is a complex phenomenon with many social, political, and economical aspects. In no way do we assume that we fully evaluated it through all these aspects within the modest framework of a semester long undergraduate architectural design studio. Yet, it does have its benefits to question the prevalent transformation method in the context of education. We would like to conclude by touching on these benefits, some of which relate to the issue of urban transformation, while others relate to architectural design pedagogy.

Historically speaking, urban transformation is usually a quite destructive act. The Turkish case of recent decades also followed this path. However, it is possible to observe some alternatives in recent discourse and practice. Inspired by these, we tried to imagine an alternative for a site, for which the prevalent demolish & build-anew model was already underway but is at a standstill at the moment.

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[20] Data retrieved from http://www.turkstat.gov.tr/UstMenu.do?metod=temelist.

[21] Construction cost index for residential buildings was 97,68 in January 2015 and 190.70 in December 2019. Data retrieved from http://www.turkstat.gov.tr/UstMenu.do?metod=temelist.

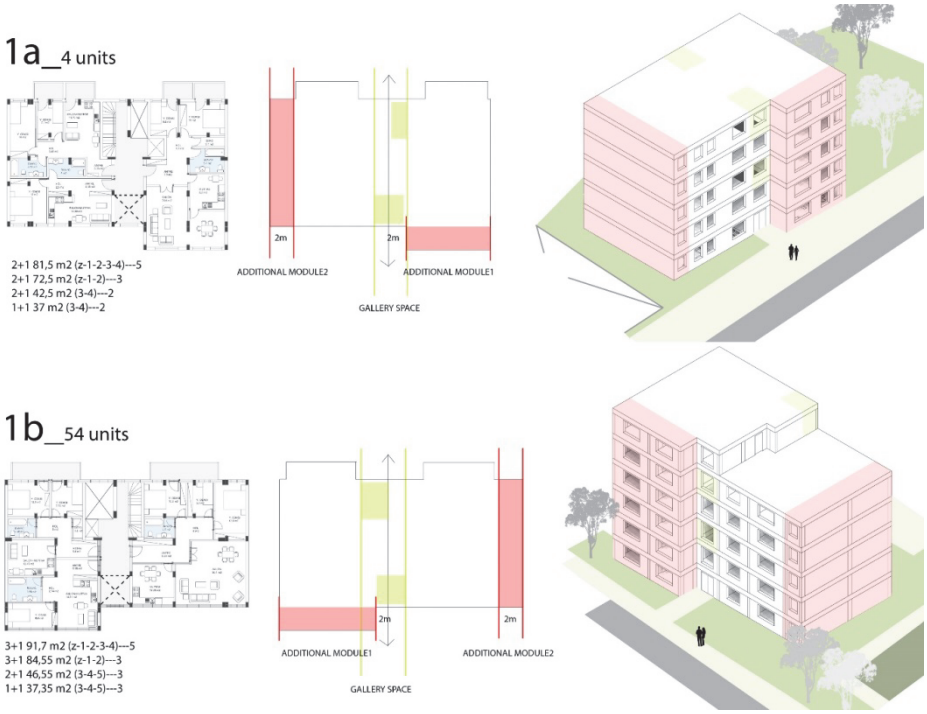

Figure 14. Some of the improvements and modifications proposed for the existing blocks and units. İpek Öztiryaki.

Some of our various motivations to do so were: [1] The area may be worth saving from an architectural and urban preservation perspective, as it is a characteristic example of low-cost mass housing of its time, [2] While buildings need refurbishment and retrofitting, the overall ratio of the open space is quite high and its current use is inspiring. The new scheme, quite independently from its architectural qualities, would definitely harm this as it involves almost tripling the building density, [3] Preserving the area would mean the continuity of social and collective practices developed over the last forty years, [4] Protecting the open areas would mean saving the considerable number of trees in the area, [5] Refurbishment would require less construction, thus consumption of less materials and energy, [6] A wholesale renewal would almost inevitably reproduce prevalent apartment types. Whereas a community-led, inclusive, and piecemeal refurbishment has the potential to be more nuanced and better tailored for specific needs of the residents, [7] In the current economic situation a large-scale renewal is becoming less likely in Çanakkale, while it is still possible to deliver a refurbishment, and finance it with the resources to be derived from the strategically limited new construction.

From a design pedagogy perspective, we aimed for and later observed a number of benefits of the approach we adopted. Some of which are as follows: [1] It fosters critical thinking. Students get an opportunity to first study and then evaluate the prevalent professional practices critically. It opens their minds to the possibility that alternative ways of approaching a problem is possible, even when there is a quite set and widespread model to accomplish it, and especially when that model has its limitations and rather problematic consequences, [2] It increases students' sensitivity to existing urban landscape. As stressed above, we have long been in a theoretical framework which attaches more importance to the existing city and prioritizes working within it. Unlike completely replacing a given area, improving on what already exists requires to develop a good understanding of it. So, studying the transformation of an urban area with the constraint of keeping its essential positive features encourages students for a genuine effort to understand it, [3] It helps students to better bridge the gap between the more abstract and representational field of architectural design and actual urban life. For almost any design task, architecture requires operating on it within its own representational media. But, while it is useful to transpose a site to the realm of representation, thus detach it from its actual context; it comes with a cost. At some point, mostly due to the intrinsic complexities of the design task, many conditions of the actual site wither, especially when these conditions are not incorporated by the new scheme. Having to preserve many aspects of the existing site helps retaining a connection with it. This connection is especially stronger when the act of preserving involves the existing life patterns of actual people that students themselves interviewed or the flora that they personally mapped.

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