ITU A|Z • Vol 15 No 3 • November 2018 • 123-137

Transformation in a housing-design story: Reading the spatial typologies of apartment projects in Hatay-Izmir

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Received: December 2017 • Final Acceptance: September 2018

Abstract

The politics of central government or incentives determine new design-systems of housing plots as well as housing units. Especially after the enactment of the law of urban regeneration for risky areas, regeneration of areas under disaster risk, there has been an acceleration in knocking down old buildings and constructing new ones in inner cities. Thus, this paper focuses on the changes in housing typologies in Hatay-Izmir, in terms of space syntax parameters through the time period 1960-2000, and interprets the final plan-solutions within the perspective of urban regeneration.

By accelerating implementations of the urban transformation projects in Hatay region, alternative plan-typologies coming from the past have undergone the so-called "re-design and transformation" process; however, they have actually been substituted by the "never-changing" plan-templates of the apartment typology. We will examine these changes in plan typologies and spatial organisations of the mentioned apartment-projects on the same plots by utilizing the method of space syntax and visibility analysis (VGA). Transformations in spatial configuration in two periods are interpreted through their relationships to shifts in meaning of privacy and daily life represented by degree of permeability and connectivity of housing-unit-plans based on spatial analysis.

Keywords

Housing units, Permeability, Plan typology, Privacy, Urban transformation, VGA analysis.

doi: 10.5505/itujfa.2018.26566

1. Introduction

Currently Turkey is experiencing a fast urban transformation, not only in large urban blocks, but also in plot-by-plot developments within the inner city neighbourhoods. This transformation has two reasons; firstly it is the construction sector, which is always put as the main driver of the economy in Turkey, and secondly the Law 6306 which legitimized the process of deconstruction in the name of building better earthquake-resistant buildings. This cyclical deconstruction and construction processes are defining the current built environment and social life.

Early urban-transformation works date back to the beginning of the 20th century. Modernization efforts had a big influence on the transformation of traditional house-forms and urban fabric, which were exchanged with modern styles. Hatay, a district located in the southern part of Izmir, was proposed as a new residential area in those periods by Le Corbusier (1887-1965), and realised with initial development plans by the subsequent Turkish architects. Therefore, Hatay has been developed by the opening of the main street, Inönü Caddesi, in the 1950s, especially with family houses and their gardens. However, soon after the construction of the main street, vertical and horizontal expansion of the district was triggered by particularly two regulations; 1965 condominium act, and following this act 1985-development plan. With these arrangements those 3-storey family-houses were replaced with 5/6-storey, even higher apartment blocks, especially on the main street; as a result urban form became very dense. And now, there is another endeavour to erase these buildings, which once represented a period of time and a way of life.

There is a variety of work on the transformation of large-scale urban blocks. Surprisingly, plot-by plot developments and their transformation have not been closely examined. In this study, the aim is to compare the buildings, which were knocked down—or knocking down—with the Law 6306, and newly built soon after. Five old, and their replacements, five new buildings are compared with each other in terms of spatial organisation. This study conducted four types of analysis: the first part concentrates on the abstracted spatial-diagram analysis revealing the functional relations within the syntax, and last three cover the visibility graph analysis of connectivity (large spaces with a wider view), integration (accessibility within the whole structure), and step depth analysis (number of directional change). In the literature review, the transformation of main spaces in the previous spatial organisations, mostly the *sofa*, where everyday life practises are seen, and where the visitor (outsider) at first glance meet with the resident (insider) is focused on. Therefore, together with the recent plans, this in-between space between the outside world and inside world alters into a narrower so-called space "corridor," and entirely changes the interactional spaces, and the accessibility values together with the segregation of private spaces and the spaces flowing into each other. Throughout this paper, it is aimed to discuss how the concept of privacy changed via the syntax of spaces within the recent apartment typologies and repetitions. However, it is interesting that while the private spaces become segregated with a corridor and directional changes, in a few layouts, entrance space becomes the substitute space for the sofa (by copying the size of it) as well as the "corridor" and degrades the privacy with a panoptical view.

2. Literature review: Meaning and use of the sofa

Transformation observed in a habitus is, most of the time, related with the changing public and private habits of the inhabitants. Built environment serves as a mirror for the life-styles of the society. Like Pierre Bourdieu stated (1996), society and human being primarily belong to the "place" they live in, rather than to a social group they live with. City is a habitat constructed by the well-knitted relationships of the inhabitants (Bourdieu 1998). Thus, it is a mutual relationship between the habits and habitus to construct each other, in the course of time. Similarly, the house as the core living-unit of human being is also constructed by the relationships

of the family in itself, and the ones between the family and society. Construction and erosion of the memories belonging to a place are both related with the human relationships in the society, and the dynamics of changing life-styles. Capitalism sets its operation mechanisms in oblivion rather than in remembrance (Deleuze and Guattari 1987), which can easily be followed in building production-mechanisms of the society, and even in the drawings of those buildings.

The Republic of Turkey has passed from all phases of identity construction, during the 20th century—after the Turkish War of Independence (1919-1923)—via the construction of the living habits which were planned to be re-shaped by the new habitat and Modern architecture (Baydar 1993; Bozdoğan 2001; Akcan 2005). The late history of the housing projects constitutes a prolific example for the reflection of a changing living-habits of the society onto plan typologies, especially by the emergence of apartment typology as the Modern and functional residential-architecture (Ünsal 1939; Ziya 1931). The new Modern face of the new Republic has aimed at more for the social interactions inside the houses (*at salons*), while increasing the individual privacy by separating the rooms of inhabitants. Thus, the most legible transformation is observed in the evolution of the space called sofa which had been used for gathering and living space in traditional Turkish houses: it transformed into a transition space in the Modern housing units with the name of "corridor."

The *sofa* as the gathering space and the main organisational-element of the house was inherited from the traditional Turkish house, and tried to be adapted into the Modern houses with Modern architectural interpretations (Baydar 1993). By the Modern tendencies, it became more linear, and refunctioned as a transition space. It was labelled as sofa, though functionally it turned into an entrance space. In the course of time, because it has completely lost its peculiar function of gathering, it began to be labelled as *hôl*—and, in some examples, as *salon*. At the end, it has refunctioned as a transition space with the label of "corridor"; however, most of the architects have continued to label this space as *sofa* or *hôl.*

In the drawings of traditional Turkish houses, the labels were not written on the plans; the inhabitants were already allowed to assign any function to any room according to their specific ways of using. By the introduction of these rationalist approaches, all of the rooms in the plan drawings began to be labelled, and their functions began to be assigned by the architect. Today, everything is planned by the housing production mechanism, functions are stated and drawn on the plan strictly without any permission for the inhabitants to interchange the functions of the rooms regarding their life-styles. Both the architect and inhabitant are dependent on the housing consensuses appeared with a template and dictating the same design. The transformation story of the *sofa* and surrounding rooms is legible in different plan drawings via the diversity in labelling of these spaces (Figs. 1, 2, 3).

3. Previous studies on housing units related to space transformation

So much research has been conducted about the analysis of changes in the spatial organisation of housing units and its relation to privacy-need inside homes. Some examples focus on the change of plan typologies that were built in different periods in Turkish domestic architecture. For example, Güney (2007) analyses visibility structures of different house plans that were built between the 1920s and 1990s, and house plans were grouped into three genotypes. The author states that the most integrated spaces for the three periods are the central halls where daily activities took place. This analysis shows that visibility analyses are more sensitive than permeability analyses as it is able to account for variables that permeability analysis is not able to do so, such as the size of the openings between spaces. In another article, Güney and Wineman (2008) focused on the changes in the transition spaces of the 20th century of Ankara apartment-blocks. The analysis shows that "transition-space-centred spatial organisation" that was initiated during

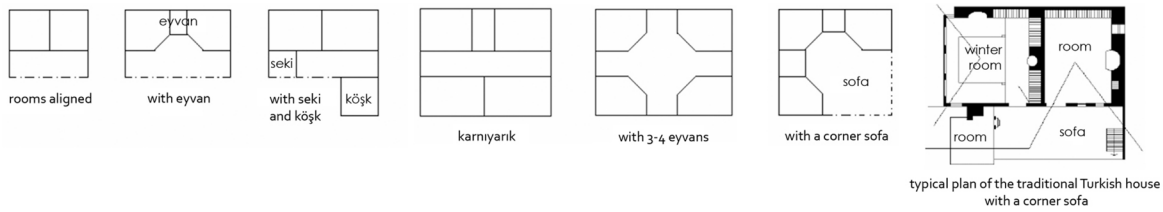

Figure 1. *The phases of evolution in plan organisation of the traditional Turkish house. Source: Günay 1998 (The labels are written by the authors of this paper).*

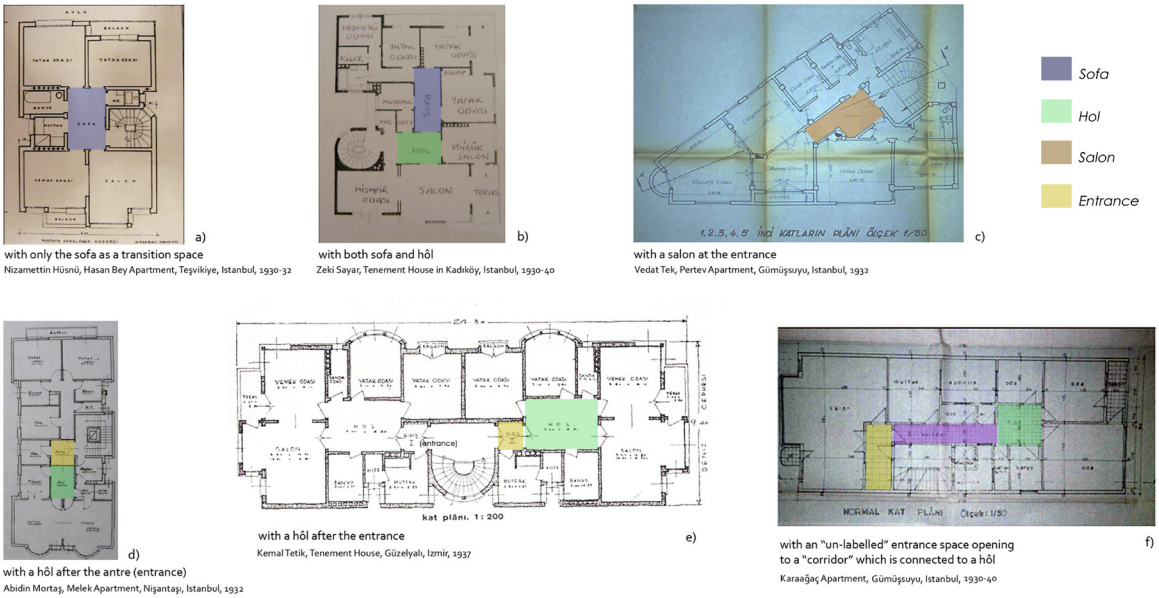

Figure 2. *Plan examples having a central space labelled as sofa, though it was used as a transition space between the rooms like a widened corridor. Sources: a,b,c,d,f. Ançel 2008; e. Tetik 1937.*

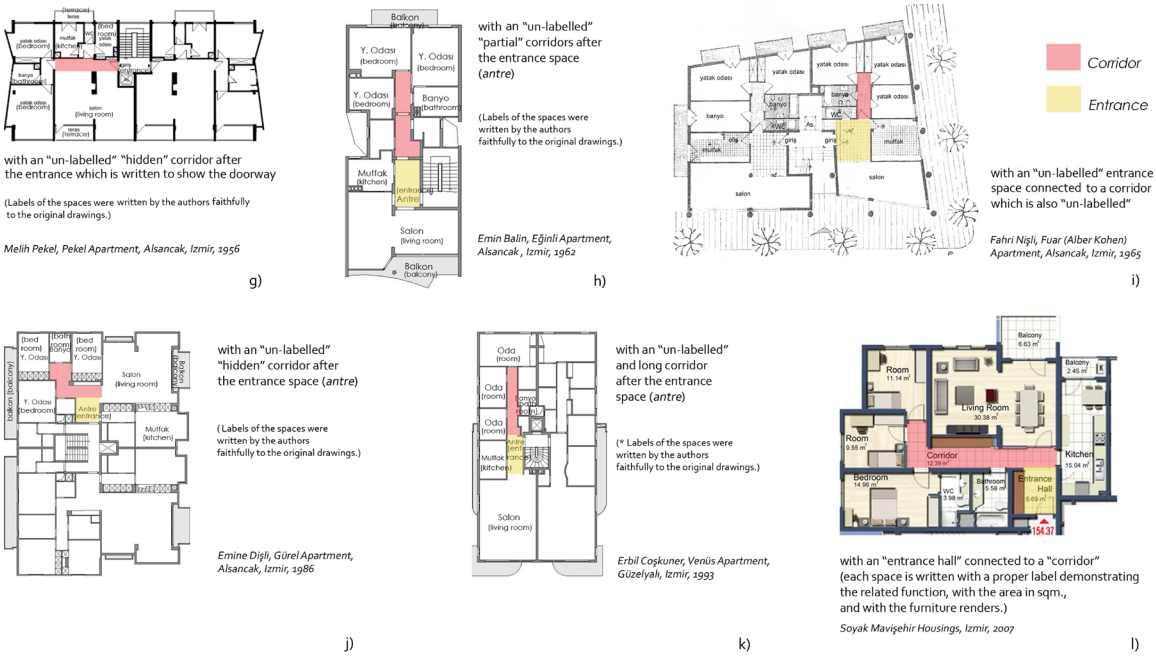

Figure 3. *Plan examples having a corridor—whether labelled or unlabelled—to provide transition between the rooms. Sources: g,h. Güner 2005; i. Nişli 1961; j,k. Archives of Izmir Metropolitan and Konak Municipalities; l. Soyak 2009.*

the late 19th century in traditional Turkish houses has been continued through the 20th century in apartment plans. However, as authors underline in their study, spatial organisation of the houses becomes more segregated during time and this exemplifies the changes in family structures, towards privatization of the individual in the household, as well as privatization of the family in society.

Another articles from the example in different countries focus on the changes in spatial organisation of housing units and its relation to privacy of the family, changing technologies, new expectations of the families and changing social codes of private lives. For instance, Alitajer and Nojoumi (2016) in a later paper, questioned the privacy degrees in relations to changes in the spatial configurations of traditional and modern houses in Hamedan (Iran). Summarized from the integration, connectivity and depth values of houses, the author concluded that privacy value is lack in modern houses in Hamedan in relations to changes in spatial configuration and new technologies.

Amorim (2001) presented the change in the spatial organisation of vernacular, eclectic and modern dwellings, built in Recife (Brazil), from the 18th to the 20th century. He argued that while the first house-plans are developed by flexible plan solutions that are not labeled strictly for a specific function, whereas the second ones restricted the use of space with specific labels. Similarly, Amorim and Griz, in a recent study (2015) dealt with the contemporary ways of living, which is investigated by the comparison of original projects of developers and customized projects of new buyers. A sample of 161 projects in Recife during the first decade of the twenty first century was the subject of this study. Results of the study are quite interesting: there is a standardization of original projects, while the customized by the new owners' projects vary in functional and configurational terms: service areas especially the maid's bedrooms become more segregated. Privacy space of family members is also highlighted in the plan solutions.

4. Methodological framework

This paper focuses on the changes in housing typologies in Hatay Izmir in terms of space syntax parameters through the time period of 1950-2016, and tries to interpret the final plan-solutions. Firstly, we collected data from the Province Department of the Ministry of Environment and Urbanization (PDMEU) on the risky buildings of Hatay district. Hence, we conducted an interview with PDMEU and Izmir Urban Transformation Incorporate (IUTI), and registered those risky buildings (approx. 74 buildings) on the map to see where they are dense. We examined eight apartment-plan typologies that were built by urban regeneration in the 2000s, and then, we compared the new plan-solutions with the previous six housing-examples that were built in the same plot between the 1950s and 1980s and demolished by the Law 6306.

The spatial analysis of the housing units is developed according to two variables: the functional one refers to functions according to labels shown in the projects, and the configurational one focused on the spatial layout to the procedures introduced by Hillier and Hanson (1984). The configurational properties explored in this investigation were accessibility and visibility. We selected different types of buildings: both from the main and side streets.

5. Spatial analyses of housing units and discussion

5.1. Abstracted plan-diagrams analysis

Transformations in design of housing layouts (Fig. 4) may also be demonstrated by using the technique of abstracted plan-diagrams, as shown in Fig. 5. In Building-C-old (Fig. 5a), the entrance space and the corridor were separated, so that one had to pass from the living room to reach the corridor. The living room was not only a gathering space, but also a transition space. This situation decreased the privacy of the inhabitants in the living room and the (bed)rooms, while increased the privacy of the kitchen and wet cores. In the layout of Building-C-new (2014) (Fig. 5b), the L-shaped corridor is the only transition space distributing the

Figure 4. *Plan drawings of the old and new buildings.*

inhabitants to the other spaces. The living room is placed at the end of the "L," which keeps it only with the function of gathering, while increasing its privacy. There is a contrary relationship between the living room and bedrooms in terms of the syntactic organisation regarding the distance to entrance space.

In Building-B-old's typical plan (Fig. 5c), the welcoming-space was followed by a corridor with the highest publicity, while the (bed)rooms and wet core had the highest privacy. The unit covered the whole storey with its rooms at all four facades which were surrounded by a linear balcony—though only two of the rooms had connection with it. In the layout of Building-B-new (2015) (Fig. 5d), although there are two plan types, the design-templates have subtle differences. The highest publicities belong to the corridors, which are followed by the living rooms having lower publicities by syntactic organisation. The highest privacies are provided in the (bed)rooms placed at the end of the long and narrow corridors.

In Building-A-old (1963) (Fig. 5e), we have two different plan-typologies, though they almost have the same spatial-order organised by two partial corridors. Like the other old versions, in plan-type-1, the highest publicity, again, belonged to the living room by

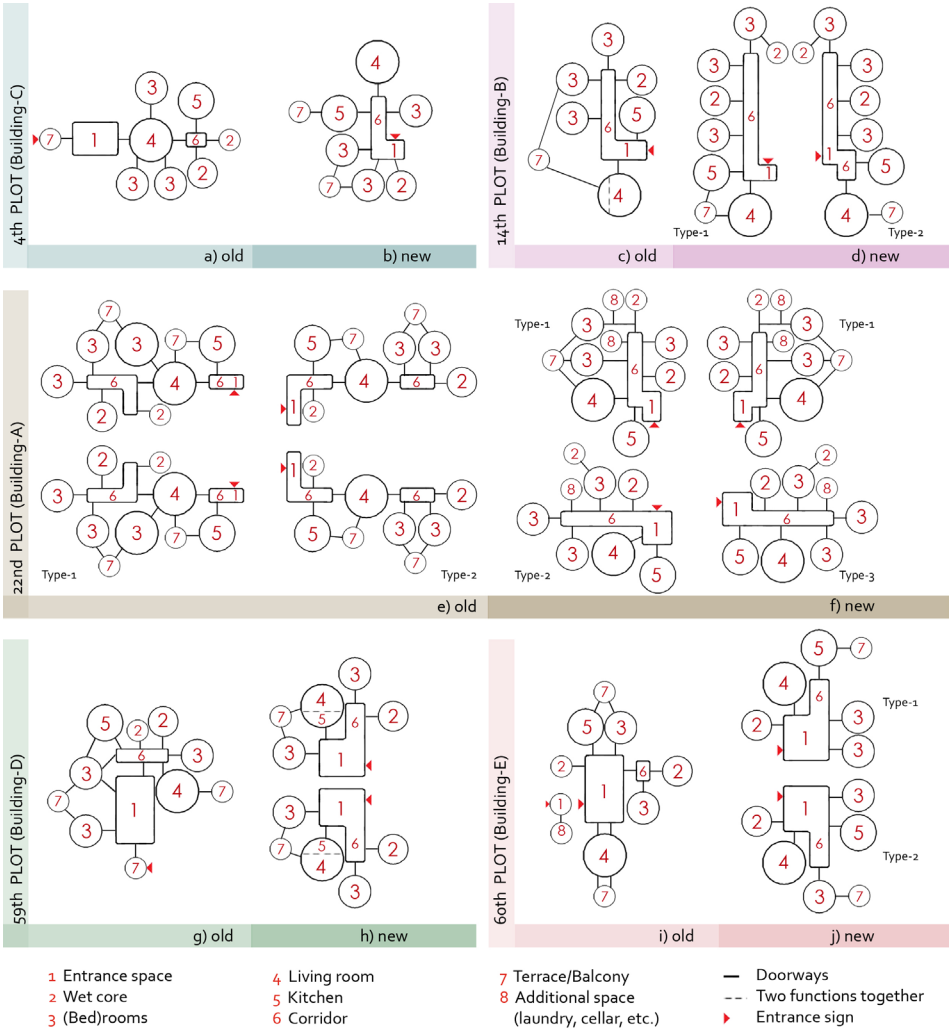

Figure 5. *Abstracted plan-diagrams demonstrating the spatial organisations of the repeating floors in both old and new implementations*[1].

which one could reach eight different spaces out of ten. In plan-type-2, the living room organise the rest of the spaces with a sub corridor, which increased its publicity, while two (bed) rooms had the highest privacy by syntactic organisation. In Building-A-new (2013) (Fig. 5f), there are three different plan-types (type-2 and type-3 differ from each only in terms of form and direction of main entrance); however, all these three plans have almost the same design-template. The corridors are the only transition spaces providing passage to the other rooms.

In Building-D-old (1958) (Fig. 5g), the entrance was provided by a terrace, and the entrance space was designed wider to cover both functions of gathering and transition—which is similar to the solutions with a sofa. Its plan had the most permeable circulation-network, and the highest complexity in terms of accessibility. For example, different than the other cases, one of the (bed)rooms was reached by three different spaces (entrance space, kitchen, corridor). Thus, the highest publicity was offered by the entrance space. However, the living room had a higher privacy by spatial organisation. Therefore, we may claim that, in this example, the living room was reserved only for the inhabitants, while the welcoming space was for the guests. In Building-D-new (2016) (Fig. 5h), there are two housing-units having the same plan-type. Although the entrance space is wider regarding the previous new-examples, it behaves as a part of the corridor and provides only passage. The kitchen is just a furniture of the living room: it is just a counter placed on the wall of the living room.

In the plan of Building-E-old (1975) (Fig. 5i), the entrance space was kept

[1]*All drawings of the cases of this study were either prepared after or obtained from the following sources: Archives of Izmir Metropolitan Municipality 2016, Karabağlar Municipality 2016, Konak Municipality 2016, Erginci Construction Company 2016, and Güler Construction Company 2016.*

wider to cover the functions of welcoming, gathering, and transition (out of the door it was even indirectly connected to a cellar). The partial corridor provided the highest privacy to one of the (bed)rooms and wet core by serving as the only passage for them. In Building-E-new (2016) (Fig. 5j), there are two plan types, though they are almost the same in organisation: the only difference is the room functions connected with the small corridors at the end by which kitchen and (bed) room spaces are interchanging their locations. The gathering function of the living rooms in both plans keeps them among the spaces having higher publicity.

In a final evaluation, we may claim that since the design properties of the spatial layouts and activities of daily living are intertwined each other, as one of the main proposals of this paper, these transformations between the old and new solutions are to be reflected in the life-styles of inhabitants, as well. In this framework, if we look at the diagrams in Fig. 5, to have a general outcome, we may claim that the feeling of privacy of the gathering spaces is increased by the new layouts, while the publicity could be observed more in the old ones. Almost all of the new layouts have the same plan-template in which the corridor is the only transition space, and the rest of the rooms are only connected to it. As a result, it has turned into a passage-way with a long and narrow form in comparison to the old transition-space solutions which have larger volumes allowing the function of gathering, as well—as similar to the *sofa*.

5.2. Visual graph analysis

5.2.1. Visual integration

The configurational properties explored in this investigation were accessibility and visibility (see Fig. 6). Table 1 shows the values of each house. Based on the visual integration values, we see that the all old houses have the more integrated values than the ones that were built after urban regeneration of the 2000s. Also, the most integrated two projects are Building-E-(old) (11,36) and Building-D-(old) (9,67) that were built in the 1950s and 1970s.

Table 1. *Values from the layouts of the buildings that were knocked down (old) and the buildings constructed (new) within the same plot.*

	Integration value	Connectivity	Step depth
Building a-old 1	7,8138	411,16	0,502104
Building a-old 2	9,2002	452,00	0,60486
Building a-new 1	6,9136	635,91	0,598343
Building a-new 2	5,4372	610,28	0,53055
Building a-new 3	7,0043	683,75	0,57309
Building b-old	7,2734	469,82	2,26226
Building b-new 1	7,7018	439,43	1,1691
Building b-new 2	7,2017	405,03	0,844147
Building c-old	9,1451	349,60	2,07442
Building c-new	8,1368	486,64	2,26687
Building d-old	9,6793	740,44	1,71372
Building d-new	7,8072	374,99	1,57081
Building e-old	11,3625	1195,18	1,62906
Building e-new	10,1152	412,89	1,54976

These old projects have big entrances opening directly into the living room and a long corridor (Building-D-old) or short one (Building-E-old) also, a partition wall in the living room of these two plans make possible to use the space flexible according to the expectation of the owners. As seen from the original plan drawings (new?) of these projects (Fig. 4), architects did not use labels for each room such as "living room," "bedroom," etc.

The most integrated one in the new plans is Building-E-(new) with an integration value of 10,11. The plan has central layout, and all of the rooms directly opens to the central entrance, extending to the main door. The accessibility of the wet spaces and bedrooms are almost the same with the accessibility of the living room. In other words, such kind of spatial organisation creates each space in a similar value of publicness inside the house.

The most segregated plan is the new version of Building-A (5,43). The living room is not directly connected to the entrance and main door-way. Rather we can access to the door of living

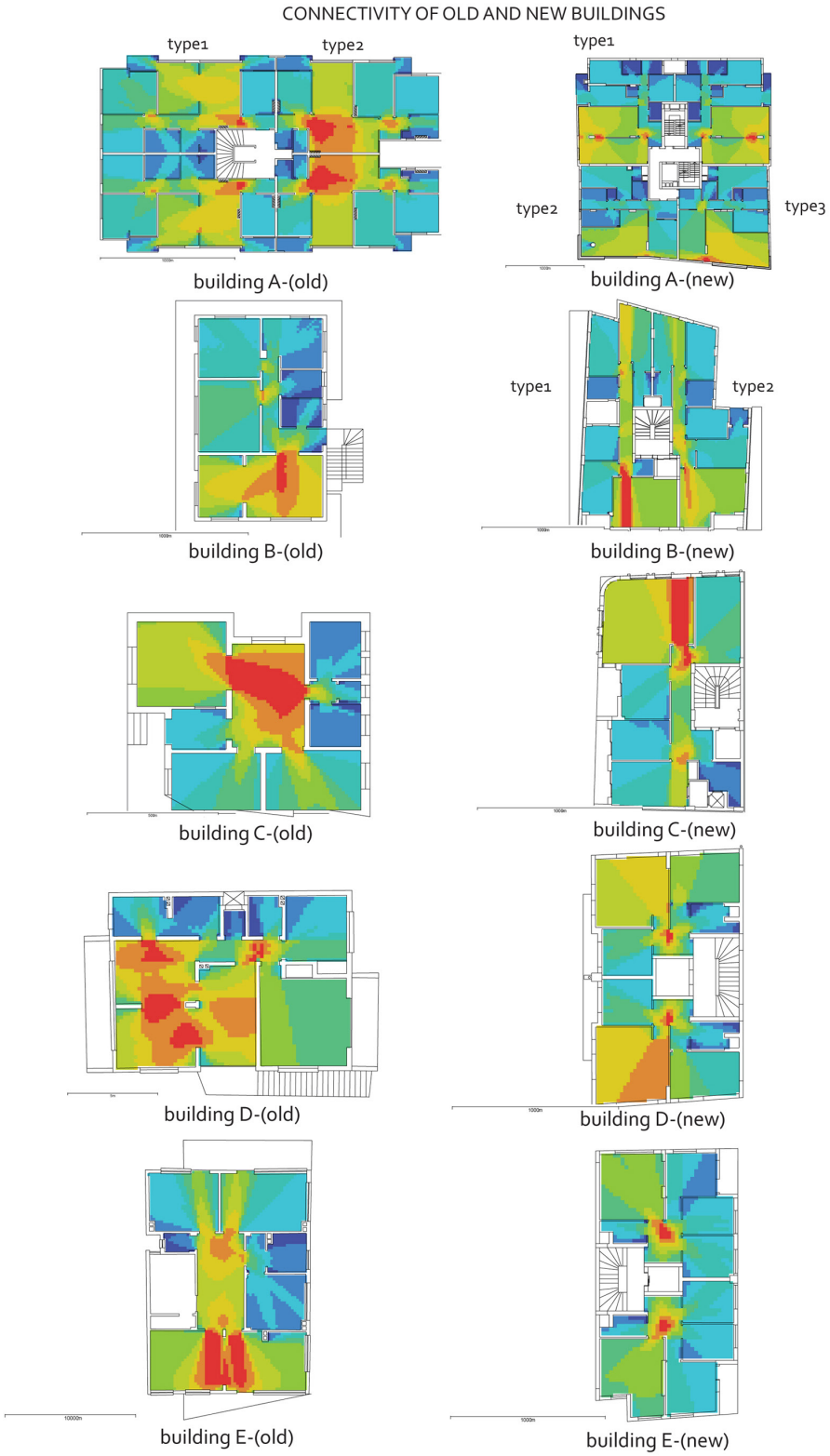

Figure 6. *Integration values from the layouts of the buildings that were knocked down (old) and the buildings constructed (new) within the same plot.*

room from the kitchen that is separated with a partition wall. In that respect, the living room functions more like a passage than it meets the need of gathering the household. With the position of the master bedroom, including its private toilet, in the spatial layout, the privacy value of this room kept high with its distance from the other spaces that have extensive activities like kitchen and entrance. Thus, the master bedroom is the most segregated space

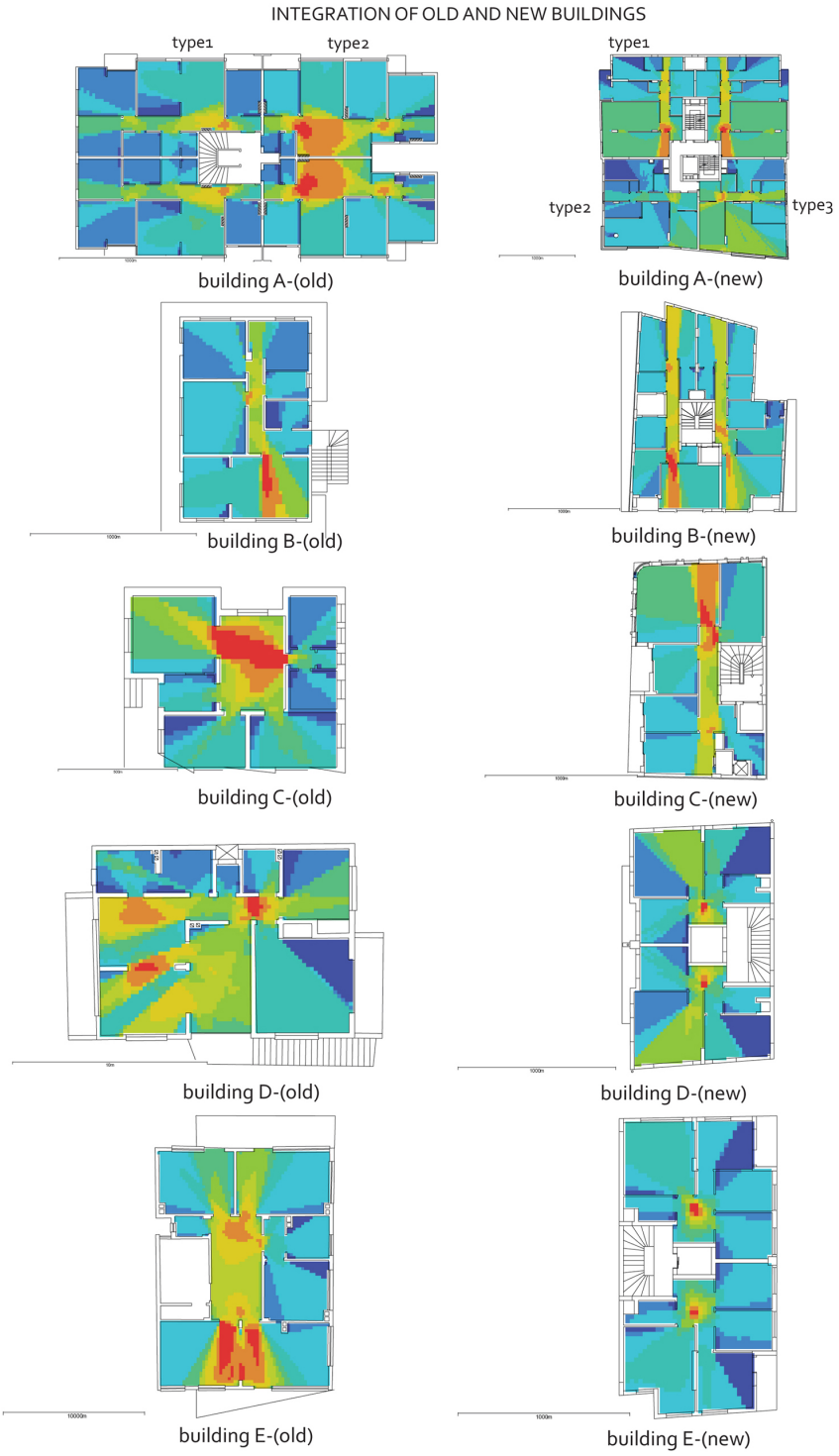

Figure 7. *Connectivity values.*

in the plan, although it is directly connected to the long corridor. What is surprising is the difference of integration values of the two plan-types that are placed next at the south part, in the same floor plan: their overall spatial-organisations look similar; however, the small changes like the position of the main door-way and the relation between the kitchen and entrance change the integration value of these almost similar plan-types.

5.2.2. The visual connectivity

Fig. 7 shows the comparison of the connectivity images of both old and new housing-projects. Considering connectivity "as visual range from a point in the space," the spaces that are open to more directions have higher

values. In that respect, plan-types with more flexible rooms with wide openings and wide entrances have highest connectivity value like Building-E-(old) (1195,18) and Building-D-(old) (740,44). While the private zone of these two projects, including kitchen and wet spaces, were separated visually with a corridor, the living rooms were opened with wide openings to wider entrance spaces with the functions of gathering and transition, and they are visually most connected spaces. Building-C-(old) has the least connectivity value (349,60). The wet space and kitchen at the east part is separated with a small corridor, and this causes to the visual disconnection of these areas from the entrance and other parts in the plan. Also, the living room becomes visible only from the north part of the entrance, and it is not visually connected from the main door.

The analysis of new plan-types (in Fig. 6) shows that Building-A-(new) (the plan at the south-east part of the floor) has the highest value for connectivity (683,75). The entrance that directly connects to the main door and all rooms gives the possibility of wide range of view. Also the living room in Building-A-(new) has a wide range of view because of its opening to the kitchen part and entrance space. Two rooms and small laundry room is visually connected to the entrance, and it has lower privacy.

And Building-D-(new) is visually the least connected with a connectivity value of 374,99. The walls extending into the living room and withdrawal of the room at the south-east part of the house cause to the additional corners and obstruct the view extending to the main door and entrance, although all of the rooms are placed around a central entrance-space.

5.2.3. Step depth analysis

In space syntax literature, *step depth* is considered as a local measure defining the directional change within the space. Additionally, it is a type of *isovist* creating a polygon which all the points in that space are inter-visible. Depending on the specific space that is chosen within the layout, we can find how many turns one has to change from the specific location to the end. This type of analysis is not used very often compared to the other measures such as connectivity and integration. But it has a significant impact on way-finding studies (Hölscher *et al* 2009; Ueno et al 2009; Vogels 2012).

In our study, we could not make correlations with residents' movement and way finding, but we can still deduce important results out of this analysis. As a method, we specified the point where the resident enters into the housing-unit and stops. We have seen that entrance halls, which are organised one-step away from the corridor has higher VSD (visual step depth) compared to the other layouts. For instance, in Building-B-(old) and Building-C-(new) layouts are similar in terms of visual step depth, entrances are closer to the living spaces, and there is a clear demarcation between the living spaces and the private spaces, which are attached by the corridor to the entrance hall and living space (Fig. 8 and Table 1). In older housing-blocks, such as Building-D-(old), Building-B-(old), and Building-C-(old), there is not any staircase (vertical shaft) within the building. Those were mainly family apartments and their entrances were from the outside. Only in Building-C-(old), we see that the entrance is segregated from the *sofa*, which opens into the other rooms. Here, the reason could be that this house is one storey and directly opens into the public. Therefore, the VSD is quite high compared to the other layouts. One has to change direction in order to enter the other rooms. The *sofa* is a central space, where the visitor meets households and has higher visibility, integration and connectivity values. In step depth analysis, length of the corridor does not affect the VSD value but how it is organised with the entrance hall is important regarding the visual view. As we enter the unit, if we can see the corridor than the other rooms are two steps away from the entrance. If we have to make a turn, the depth is getting higher and segregation is increased. This could be discussed within the privacy issue of the (bed) rooms and wet cores. Most of the layouts have hierarchy within their spatial organisation; however, Building-D-

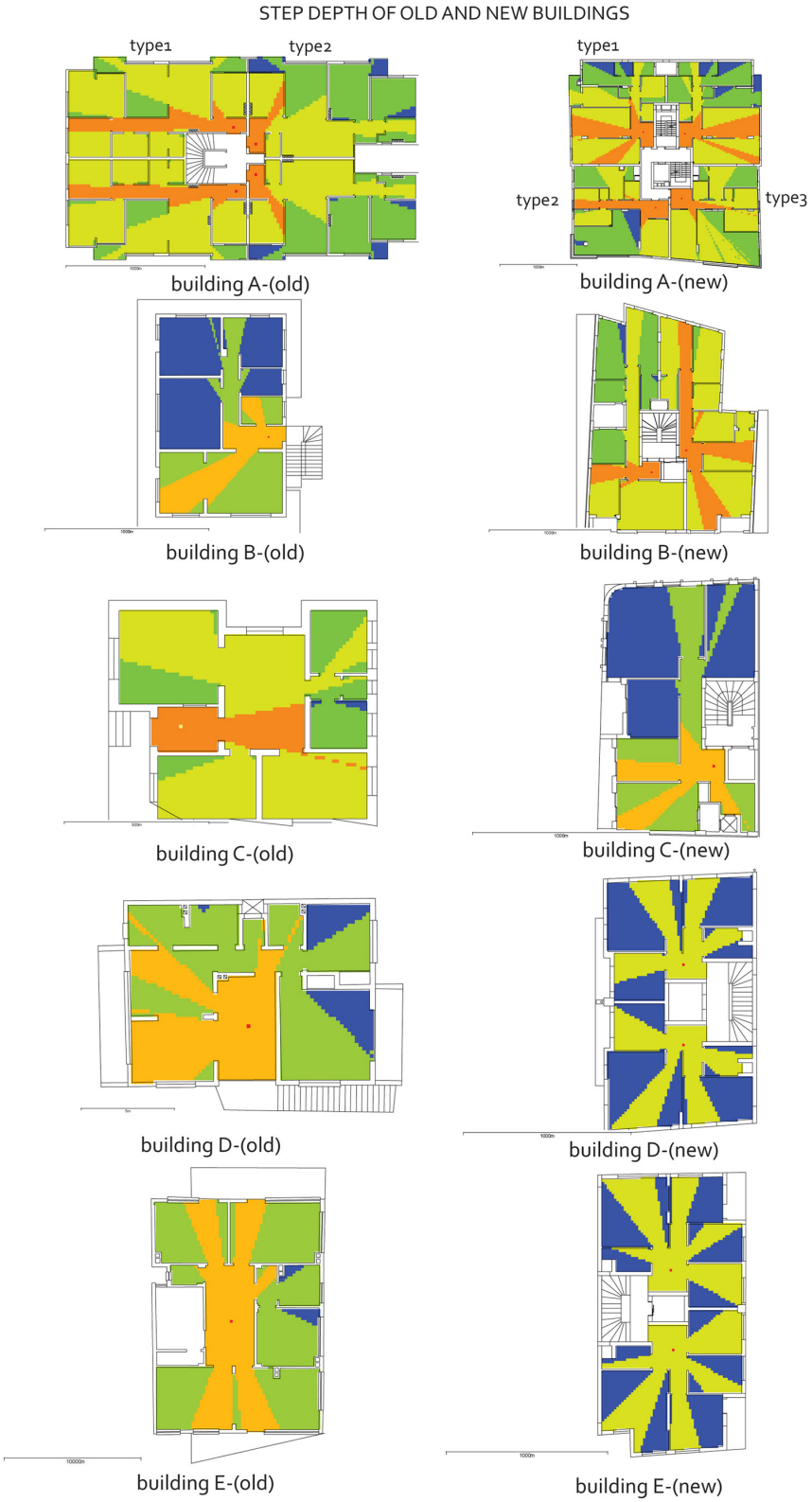

Figure 8. *Step depth values.*

(new) and Building-E-(new) have only two-step depths from the entrance hall. Entrance is the centre of the house and it has a panoptical perception. Every room is accessible in two steps and the entrance hall is narrower compared to the previous examples. In all of the layouts, living spaces are one or two steps away from the entrance hall, except the Building-A-(new). This could be because of the sliding doors, and the living space located at the corner for

having a wider outside-view. On the other hand, it is not visually connected to the entrance. Consequently, when the space is wider and more permeable it has better VSD values. Small and shorter corridors perform as a niche to connect the living and private, when the corridor has a more dominant role compared to the entrance, it loses its space quality. On the contrary, when the entrance has a panoptical role and very narrow, and easily accessible from the other rooms, privacy is lost. Therefore, it can be concluded that older layouts perform better regarding visual accessibility, privacy, and wider view issues. Thus, it is not only complexity, which makes the VSD high; it can have lower VSD but less privacy.

6. Conclusion

We see that the design logic locating the sofa at the centre of the house-plan as the main organisation element which had been large in volume and had the integrated-functions of gathering, transition and welcoming has completely been lost, in the course of time. The *sofa* had been used as the living room, but by the Modern tendencies, the function of living has been displaced, and assigned to a separate room. Therefore, we may claim that the functionalist principles have introduced spatial segregation/categorization/labelling according to the separated functions. As we have seen in the literature, specific spaces are assigned to specific functions which reduces the flexibility of space and the behaviour of inhabitants. Spatial organization becomes more segregated as well as the individual within the household and society. This resulted in the changing behaviour of the inhabitants through the construction of new apartments and functional residential typologies. (Ünsal 1939, Ziya 1931, Amorim 2001, Güney and Wineman 2008, Baydar 1993, Bozdoğan 2001, Akcan 2005). The sofa and its spatial-derivatives—having both gathering and transition functions—had the highest publicity in the old plans, while the living room (gathering) in the current typologies shares its publicity with the corridor (transition). The lives of the inhabitants were integrated to each other in the old plan-versions, and it was impossible to spend a day without seeing each other. On the contrary, in the new versions, inhabitants can bump into each other more in the corridor. This means that the lives of the inhabitants in the new plan-types are also segregated according to the functional distribution.

The other important point is the spatial layout of the new housing-blocks; although they are located in different lots and built by different developers, the order and positions of the rooms look similar. All have bedrooms, living room, kitchen and wet spaces, and all are placed around a corridor. On the other hand, the issue of privacy that divides sleeping and wet spaces from the social space (living room and kitchen) has been lost in the new plans. This definition is similar to that found in Alitajer and Nojoumi (2016) who mention that privacy value is lack in modern houses. In our findings, the living rooms placed next to the (bed) rooms and wet spaces without following any privacy issue. This is mostly related with the limitations of the lot, and expectation of developers. While the setbacks, plot coverage and building heights in Hatay district within the plot are strictly defined in the 1980s' development plans and not changed in years by the local authorities, the developers try to build more units to gain more benefits. Apart from the profit-based changes, almost nothing is proposed by the developers to constitute new housing-plan alternatives.

As a result, we may state that the segregation seen in the plans and living habits has constituted housing consensuses formed by the aims and activities of different actors from various professions and disciplines in housing sector of Turkey. The uniformity in the current plans of housing units may point out a strict architectural-template and a social consensus. There is also uniformity by means of the expectations/preferences of inhabitants in the current housing-design and production. It may be difficult for inhabitants, now, to imagine the alternative ways of housing design; thus, regulations, plot boundaries, and guaranteed-selling restrict trials for alternative designs. Housing projects by urban transformation also

serve for the production of architectural-uniformity within a repeating plan-template not providing social integration. Inhabitants live in introverted habitat allowing individualization more than socialization. These findings support the work of Güney and Wineman (2008), who revealed that the individual and the family is becoming more privatized within the society via the segregated spatial organization of houses.

For further studies, we suggest to explore the identified issues related with the relationships between streets and plots, problems introduced by the setbacks, ethics of the building-production mechanisms. Instead of demolishing, we should consider the possibilities of the renovation of architecturally remarkable buildings. Additionally, we need to discuss the approaches of architects in housing-design, inhabitants' perspectives about the housing units and built environment. The changes in unit-plan strategies formed by the urban and climatic character (such as the changes seen in design-codes of balconies in Mediterranean cities) may also be examined within the framework of the regulations and design-tendencies set by the urban transformation process. Under the light of the outcomes of these studies, new urban and residential consensuses can be achieved by producing alternative plan-types for a better space quality of the environment and the city.

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