The dwelling “margin” and housing density: design considerations for sustainable multifamily housing sites

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Abstract

“The dwelling is a function of its surroundings and relationship to its surroundings. Its state of harmony depends entirely on its harmony with surroundings” (Chris Alexander).

Speaking of “margin” and “marginality of proximity” one can immediately come to the conclusion that the matter under discussion is of the least important issue, or remedial in nature that requires no point for consideration. I chose the term “margin,” not to advance an intellectual discourse in this paper, but from a professional and egalitarian concern for the way the perimeters of homes are designed. This paper is about the design and identity of unique site design properties that support very important tangential territories in multi family housing. It is customary that the designers for most part, deem the areas around the edge of the homes unimportant and thus focus always completely on the building as an object in its own right. This paper makes a careful analysis of “The Dwelling Margin,” and its role and power in shaping a truly responsive environment that satisfies the needs of its population in housing development. The defining qualities of these in-between spaces, and their character when spelled out correctly, can project a true extension of the inhabitant’s personification where the primary communal/neighboring contact can be initiated.

The principles presented in this paper are drawn from field studies in several urban housing sites, which provide a strong base for this study. Several conventional housing examples in Portland, Oregon and Vancouver, British Columbia, are included for discussion and comparison. A systematic analysis of these environments, carried out by the author, reveals that not only were the spaces between homes unique but that this uniqueness found expression in the personal satisfaction of those who occupies them.
1 Introduction

The pressure of population and increase lure and necessity of urban life transformed the cities of the 21st cc than ever before. To provide adequate space and needed amenities for the growing urban dwellers is a challenging task to be rendered by design professionals, as well as, city authorities. At the center of this surge is the provision and management of the urban land and its sound disposition, which holds a crucial measure for the wellbeing and sustainability of the urban environment. The new environment of the cities necessitates denser and compact neighborhoods, in order to supply better civic amenities and amicable socio-economic services that a contemporary society requires. Careful allocation of the physical land and its defining communal and civic properties play important role in the betterment and quality of life.

Newer design approaches such as the urban village, neo-traditional neighborhoods, sustainable communities, and liveable cities, are increasingly emerging as role models and as new paradigms, to be deciphered by design and planning professionals. The important design principles in such communities rest on the inspiration and approaches of traditional urban design and planning ways especially those that are compatible and appeal to the needs of contemporary lifestyles. The traditional cities accommodated much denser and compact fabric of buildings and open spaces where homes were closely connected to social and economic institutions. The necessary community facilities such as retail stores, schools, religious and job centers were located within convenient walking distances, which assured the continuity of human activities with eloquence and meaningful goals.

In a high-density housing development, when it becomes essential to interweave residential units closely together, in order to achieve greater efficiency in land use, and provide balance distribution of needed amenities, the occupants, in this case, are required to share their immediate home environment with other residents in the complex. The spaces that are needed to support the onsite domestic activities, in this situation, become crucial in their use and identity.

The emphasis of this paper is primarily on the interfacing private territories which are illustrated as important threshold properties in a housing site, referred to: “The Dwelling Margin”. The design and proprietary decorum in these places plays vital role in the success and failure of the multifamily housing.

“The Dwelling Margin,” should parallel the user’s unique identity, yet adhere to principles which encourage social participation. These spaces, which closely approximate the traditional extended family domain, existed intimately in vernacular societies, are often misrepresented by the designers, and planners, which resulted in marginalizing and defaming of urban living.

The compelling identity associated to these areas, however, is the function of their physical definition and the degree of control and autonomy that the inhabitants are able to exercise. Both factors of “physical definition” and “user control” need to be programmed and considered imperative factors in all stages of community planning and design. Careful organization and autonomy over
these areas can foster a sense of place and intimacy between the inhabitants and results in predictable and manageable environment in the community level. Studies indicate that there is a strong relationship between the quality of life in multi-family housing and the degree of control that residents can exercise in their surrounding environment. Throughout this paper it is attempted to identify the types of control and the mechanisms that can effectively enhance the sense place, community and neighborhood in these areas.

2 Types of control

2.1 Physical identity: boundary and dwelling precinct

In the quest for shelter, since antiquity, humankind required not only protection from the elements of the weather and the dangers they were faced by the wilderness, but moreover, they were constantly challenged by the desire for self expression and identity, in order to make their places and territories known to their fellow members and associates in the community and village. Territorial identity, whether for defense or security, self-identity or the procurement of domesticity, has undoubtedly been instrumental in the formation and evolution of human settlements, and will continue to play a vital role in the meaning of our lives and built places. Clarity in territorial identification is particularly central, when it comes to preserving the integrity of the primary home environment, where the lives of the occupants are impacted every day.

The simplest exercise of territorial identification in the physical environment is created by means of an enclosure around the places that belong to us. The sense of enclosure is best achieved by creating an interior courtyard; a worldwide urban form, that roots back to the ancient times. Because of its inherent quality of closure, in many cultures, its formal primacy and use for shelter achieved normative acceptance, and assured a lasting sense of security and intimacy for its inhabitants.

In the False Creek Housing Development, a housing site located in Vancouver B.C., Canada, variety of techniques and design schemes were exploited to increase the perception of territorial integrity through the properties of enclosure.

The housing units were laid out in residential blocks that were surrounding interior courtyards. This was to give families the chance to call the space their own while creating a space that encourages socialization and neighboring activities (Fig. 1). The entries to these semi-private courtyards are carefully defined by means of underpasses, and in some cases, the use of gateways combined with personalized quality of landscape, clearly convey a strong message of territorial integrity that discourages the encroachment of the public into the private domain of the families (Fig. 2).

The dominance and centrality of enclosure promises territorial definition, while user control and influence is needed to authenticate the true spirit and functioning of these places. The role of ‘user influence’ and participation is not only instrumental in the individual dwelling or a cluster of adjoining dwellings,
but also detrimental in proper functioning and formation of neighborhood and community. In this regard, Newman, in his research on Defensible Space, devises the mechanism of the ‘zone of influence,’ which is: “an area on the ground floor within the immediate vicinity of the building, that is perceived by the residents of the building as an extension of their own dwellings.” Various design elements to define this zone are used in False Creek Housing. For example; the public paths and roadways, approaching the building, and especially the ground areas in the vicinity of building, are located such that in any time of the day, people can monitor and see the coming and going of passers by around their dwellings. This practice assists the residents to exercise direct control and develop proprietary attitude around their environment. In this housing project, younger children play areas, and in some cases, parking spaces are deliberately brought within these personalized zones.

Figure 1: False Creek Housing, Vancouver, B.C. View showing inside of a residential cluster. Small human-scaled spaces are effective for children as well as adult socialization.

The architecture resolution of the surrounding buildings makes a cumulative stride to mitigate this cause in many scales. The sense of surveillance over public areas are increased naturally, with oversized, large attractive atrium and bay windows, located towards the public side of the buildings, that are features of most of the units. The units are fairly narrow, but ample room-size balconies
and skylights give the illusion of openness. The front façade possesses variety of textures and materiality, based on personalization that each unit undertakes through their front gardens provided for each unit. This relationship creates a dynamic and richer experience for the pedestrian stroll too (Fig. 3).

Figure 2: False Creek Housing, Vancouver, B.C. View showing an implied entrance to a semi-private cluster. Note the large balcony overlooking the entry space enhances the zone of influence.

Figure 3: False Creek Housing, Vancouver, B.C. View showing a street facade of housing cluster. Note the large windows and balconies overlooking the public street.

False Creek was once a run down site and which had fallen prey to dilapidation and decay of industrial slum era. It was in 1970s that False Creek
site was beginning to transform into a vibrant and thriving residential community. Different architects designed the housing complexes, and there are a variety of ownership types, which creates variation in the project. False Creek was built near the water, on a gentle slope toward the creek. There is a pedestrian walkway all along the edge of the development closest to the water, which provide great semi–public spaces in which the residents can interact.

2.2 Proprietorship: pride of ownership

Ownership is at the root of our psychophysical and territorial identity and probably the primary and essential mechanism in regulating the environment around us. Due to the complexity and provision of urban amenities and services, the specific use and physical configuration of any urban space or building, whether private or public, is regulated by many laws and ordinances. In today’s urban environment, the virtues of private ownership therefore, do’s not constitute indefinite and unconditional control and use of the places we own and live. It is only natural, that in the interest and wellbeing of the communities that we live and work, to compromise, the loss of some of the privileges that are inherent to private ownership. As our notion of collective civic life expands further and becomes essential to the survival of our social and economic institutions, the traditional concept of ownership needs to be re-examined. This reality becomes particularly crucial when many users need to share both scarce resources and the spaces that are necessary to support the domestic activities, as well as, allow for the flow of public life. Different mechanisms are needed to increase the proprietary claim of individuals or groups of users in the environment that they share, and ensure the perception of ownership and control in these areas, where individuals cannot have the prerogative of complete ownership. In other words, the legal ownership, which we considered to be an important indicator of control, is not alone a sufficient tool to address the identity of domestic spaces in a multi-family housing development situation. A sense of true place in the living environment can be established, when the user’s participation is evidently increased in the environment, in addition to the privilege of ownership. User participation in an environment can be addressed through use and personalization, which is explained in the next section of this paper in detail.

The three indicators of control that are: ‘ownership,’ ‘use’ and ‘personalization,’ and the relationship between them establishes the critical parameters of housing and its measure of success. An ideal housing development will have into play all the three indicators of control spontaneously. In the book, “Crises in the Built Environment,” Jamil Akber [2], formulates these conditions into several models and their impact on the physical environment. The three models most important for our purpose are discussed here. The criteria of ownership, use and personalization and their impact on the residential areas can be examined in the following interactive relationships: First: the environment is used, but not owned or personalized, so there is a lack of permanency and active user participation, resulting in the: ‘permissive environment.’ Second: the environment is owned and used, but a lack of
personalization and participation by the users create a possessive condition [3]. Third: the environment is owned and used, but also personalized by the inhabitants, resulting in a unified environment.

2.2.1 The permissive condition
It is common that in many housing developments, ownership is not the prerogative of real user who lives and uses the dwelling. In this scenario, the inhabitants lack the proprietary identity with the environment in which they live. The real users of the environment cannot develop a permanent sense of belonging with the community with which they belong. The temporary condition of their stay and use discourages the families from developing a sense of territorial identity and participate effectively in their environment. This model of housing, adopted since 1950s in the United States, in most of the public housing projects, did not gain popularity with users, and in many cases failed to provide successful housing for low income populations. However, this model can be fairly successful if the propriety attitudes of the users are improved through certain design mechanisms. Paul Newman’s findings and his proposed design strategies for defensible space are helpful to improve this model of housing. The design strategies are meant to maximize the perception of ownership and encourage participation. According to Newman’s research of defensible space, “the residential environment in multi-family housing should be designed so that residents see the areas they live in as within their direct sphere of control and become key agents in ensuring a secure and safe environment through their participation” [1]. The environment that encourages user participation and control permits vitality and amicable relationship in the life of the community as well as the individual. People can enjoy the presence of neighbors and passers-by without having the fear of being intruded.

2.2.2 The possessive condition
It is an environment that may be ‘owned’ and ‘used’ by a resident, but could still lack participation and personalization. The vital necessity of community life comprises the interaction of its inhabitants, and their active participation in all matters of community life. The physical environment should become an agent to encourage and enrich social contacts and interpersonal relationships. It’s important to see the presence of users in every level of daily life of community and activities. The possessive condition is clearly illustrated in the River Place housing project in Portland, Oregon. In this housing development, it is observed that most of the residents were retirees and or absentee owners for whom the River Place is a second home (Fig. 4).

Despite of its successful physical design and the availability of sound community facilities, this area lacks the dynamics that are necessary for an interactive urban community. One can soon find that user participation and presence is lacking (Fig. 5). Since the user’s control is not directly present, the courtyards and communal spaces are secured by means of locked doors and are always in need of security personal to supervise the complex. Sheer ownership, therefore is not sufficient cause to create a functioning community.
Portland, Oregon, is considered one of the forerunners of livable sustainable cities in the United States, and in the last decade or so, it has taken measurable and aggressive stride to achieve these goals. The city of Portland provides quality and affordable housing with solid base community and civic facilities for its residents. The city initiated a superior built environment in revitalizing its town center, by attracting people and businesses to the center, joined together by a public transit network and vibrant pedestrian mixed-use environment.

Figure 4: River place Housing, Portland, Oregon. View showing the interior of a well-defined cluster.

Figure 5: River place Housing, Portland, Oregon. The river boardwalk and many rich community facilities make the River place an attractive place for living.
2.2.3 The unified environment
For an ideal sense of place and a liveable environment, all modes of territorial integrity and control, namely: use, ownership and personalization, must be present and operative simultaneously. In such a place, it is possible, that people develop a sense of belonging, associate positively with their environment, and participate in the life of their community as a whole. There are, of course, other important social considerations such as: age, income, cultural backgrounds, and the unique lifestyles of some of the groups that also play critical roles in the success of housing. These are beyond the scope of this paper to be discussed.

The unified model is proofed to be the most realistic and practical model for multifamily housing, because the basic human needs for territorial identity and a sense of control can apply across the cultural and social characteristics. While the unified model of control represents the ideal situation in terms of use, ownership and personalization, it is important to keep the size of the housing groups into a manageable scale. When more people are grouped in a housing site, the sense of anonymity prevails. Privacy and sense of control diminishes relative to the size of the group and people feel overcrowded. Relative to the size of the group of dwellings in a residential cluster, a prescribed procedure does not exist to suggest a number, since this factor depends on many unique circumstances such as: the social and economic background, the needs of different groups, family status, and etc. A realistic practice would be to minimize the number of users in a residential cluster and keep the nature of activities at the domestic scale.

2.3 Participation: the user in charge
A socially stimulating environment requires dynamic interaction between its neighbors and individuals, in order to foster greater satisfaction in the life of a community at large. The vehicle of physical environment can facilitate and provide a setting for a social activity, but can not guarantee its social behavior. In reality, it is the job of individuals and neighbors to charge their communities with personal flair of individuality and character. In multi family housing, there are at least three ways that user participation can be encouraged.

In the first place, it should be the job of the physical properties of design to offer the families with the possibility to participate and develop an intimate association with their surrounding environment. Careful articulation and design of the adjacent outdoor gardens and common areas, that portend clarity of public to private territories, allows the residences to expand their sphere of influence and interact vividly with the environment in their daily activities. These activities may include working in the yard, gardening, leisure, or simply visiting neighbors and watching your children. In the traditional dwelling life style, people were connected intimately with their surrounding spaces. A family’s daily activities included growing vegetable in their garden, working in the house yard and visiting frequent friends and family members. Social gathering was taking place in the dwelling porch when the weather permitted. The porch facilitated and became an instrument of bond between the private realm of the house and the public domain of street. It mediated and provided opportunities...
for interaction with the outside world and enriched interpersonal relationships between neighbors. The porch is a welcoming transitional space for visitors to the house, and provided additional living space for its inhabitants.

When housing is designed to encourage social participation, the needs of all groups, both children and adults, should be taken into consideration.

The second mode of participation can be achieved when the users themselves can participate in the personalization of their home environment and its materiality. Users who occupy an environment, often want to display, their uniqueness and personalities for the sake of personal expression, but more importantly, show their ‘presence,’ and temporality in the community and neighborhood that they are living. Personalization in housing can be achieved through variety of ways. The designer of the housing should recognize this important issue in the design stages and should program for personalization. Choices should be left for the families to express their uniqueness after when they occupy their homes. But to achieve this mode of personalization, the designers should move away from designing buildings with inert architectural uniformly and repetitive massing of units, devoid of any uniqueness or character. Design projects, that are not capable and do not leave choice for individual expression within the user’s realm of possibility are most likely to result in failure.

The quality of architecture and its materiality plays important role in the individual and personal expression. Housing design should represent rich variety of accents, character and spatial relationships, while still preserve the overall unity at the neighborhood and community level. No designers can match the variegated taste of individual user. The framework of design that offers choices for the users can become a powerful instrument of self-expression and vitality.

For example, balconies overlooking the public street could be made sufficiently large to provide outdoor spaces with the possibility of planting and personalization. Entry porches can be made in shapes and sizes that can accommodate variety of personal items, such as potted plants, sculptures and items of memorabilia. Fenestration and the use of materials combined with rich architectural details can be employed to the facades of the buildings in such a way to avoid standardization and sameness. Such structuring is even more important in creating diverse perspectives for the transitional spaces between the public and private domains.

Adequate spatial organization of the overall urban landscape is one of the prerequisites for personalized territory. A sequence of clustered enclaves, the use of fences, planting and gateways, can give coherent and legible form to the home environment.

Defining the role of the users and encouraging their participation in maintenance and care taking, is the third factor. In a housing site, it is vital that the identity of common open spaces and facilities should be made known in terms of care taking responsibility. This is especially crucial in low-income housing projects where management and maintenance of the site falls on the shoulder of public sector. In such cases, it is prudent to pass on some of these responsibilities to the inhabitants themselves and encourage the inhabitants to
participate actively in the maintenance and care taking of the areas within their immediate dwelling precinct. It is possible to design the site, in such a manner that residents can increase their sense of privatization in the environment. The spaces that fall within the immediate vicinity of the building should be assigned to the residents living adjacent to it. This reduces the burden on management staff, while providing an opportunity for the residents to reflect their individuality in the quality of the landscaping and call it their own front yard. Reducing the responsibility of maintenance by minimizing shared open spaces and unnecessary common areas should be a central issue in the design of housing sites. Small, well-defined, human-scaled open spaces are very functional and are easier to maintain and personalize, in comparison to large and anonymous fields of wasteland. Paving materials and landscape quality that require little maintenance can also help reduce the maintenance cost and burden of up keeping.

3 Conclusion

The design and identity of the “Dwelling Margin,” is a complex issue in multi-family housing sites. Recognizing their important denominators in housing can result in a positively functioning environment and a sense of place that the inhabitants can enjoy for years to come. The three principles of “control,” presented in this paper can enhance the quality of life in housing developments and play a key factor in creating the sense of community. The first principal of “physical control,” that can be achieved through well-defined and articulated boundaries, can foster group and neighborhood integrity. Users can adopt definite means of territorial identity within their immediate surroundings. The quality of enclosure is an effective tool for defining the necessary domestic spaces. Emphasizing the zone of personal influence and extending its effectiveness over the surrounding public areas in a housing site, enhances the user’s perception of control in positive ways.

Creating the perception and the actuality of ownership can be at the core of residential planning and design; a second important mechanism of control. Increased proprietary claim of individuals or group of users in their environment is crucial in achieving a true sense of place. An ideal situation further demands that an environment should be continually employed through actual habitation and participation. The “unified model,” embraces the qualities of all three modes of control; use, own, and personalization, is essentially a holistic solution.

The third element of control is achieved through the active participation and interaction of users. This is accomplished through careful articulation of public to private spaces and the personalization of territorial boundaries. Personalization is a powerful instrument of control that makes the presence of users known in a community, and their true representation in the environment.

Participatory management and care-taking policies that put the users in charge, doe’s not result in material saving alone, but it also provide opportunities for richer interactive environment in social level. Increasing the sense of privatization in the open spaces that are within the immediate domain of the
inhabitants is a positive strategy in realm of control. The minimization of large shared areas that reduces the burden of responsibility on the residences also plays a key role in the management policies.

The three mechanisms of control are the integral components and proven principles to be considered in the design of multifamily urban housing. The essence of all these principles must be present simultaneously in order to achieve a unified, liveable environment. Making these ideals a reality will create an environment with dignity and sense of place that the inhabitants truly call their dwellings “home” and be proud of the community that they live in.

References


[2] Akbar Jamil. *Crisis in the Built Environment: The Case of Muslim City*, A Mimar Book, Concept Media Pte Ltd., Singapore, 1988. In this book several models of ownership and control are presented and analyzed, the three models discussed in this paper are applicable in most housing situations in the context that they are presented.

[3] Ibid. Possessive environment, in Jamil’s analysis is defined where the environment is not owned but used and personalized, which result in equally successful model most appropriate in public housing projects.