

## User-controlled Housing: Desirability and Feasibility

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**ABSTRACT** *User-controlled housing is defined as a process in which the residents—not only professionals and developers—make significant decisions regarding the design and the construction or renovation of their homes. This paper argues that it is relevant to and should be commonly used in formal systems of housing in the developed countries. It draws support for its arguments from empirical evidence, primarily from Israel and the Netherlands. Much of the evidence is related to housing upgrading by moderate-income and middle-income households, which was found to be highly desirable from individual and public points of view. The paper recommends to decision-makers and planners to facilitate user-controlled housing and to make it an ordinary part of developing new neighbourhoods and renovating old ones.*

### 1. Introduction

At the beginning of the history of the planning profession, housing issues took centre stage. The planning ideas and concepts that emerged in the early twentieth century were developed in response to the harsh housing conditions of millions of poor people in nineteenth-century cities. This is evident in the garden city of Ebenezer Howard (1898), as well as in the towers in the park of Le Corbusier (1929) and the ideas of Patrick Geddes (1915). These famous fathers of modern planning and their successors, mostly architects, sought to design residential buildings, neighbourhoods and cities that will improve the functioning of individuals and of societies.

The great disappointment with mass housing by the middle of the century was a major catalyst for a significant change in the planning profession. Part of this change has been the marginalization of housing issues, especially in the US—the largest centre of the planning profession (Kaufman & Simons, 1995; Garr, 1997). Indeed, in continental Europe and the UK, housing remains a somewhat important element of planning. Moreover, there is a number of planners in the US who focus on the provision of residences to the very poor, and a few others who deal with housing-related urban design. Yet, in many academic departments of urban and regional planning there are no experts in housing and there are no courses on the subjects of housing in the curriculum. Based on 25 years of experience in teaching, research and consulting on social aspects of urban planning, I believe

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that planning researchers and professionals should increase and intensify the research of housing and the development of policies, programmes and 'good practice' guidelines related to housing.<sup>1</sup>

This 'back to housing' call is justified first on the basis of listening to people and observing their behaviour, and second, as a response to the quest of planners for effective intervention. People everywhere see housing as a vital component in determining their quality of life. Having a residential unit that they can be proud of is very important to human beings of all races in every part of the world, as is evidenced in the large proportion of energy and financial resources that human beings invest in creating and maintaining a desirable home (Forrest & Murie, 1995). This is the case for people of all social classes, but frequently, it is especially true for residents of distressed neighbourhoods. Possibly because they lack access to other status symbols, such as a distinguished job title, having a desirable home is very important to below-average income populations. Findings supporting this assertion can be found in various countries. Studies of Community Development Corporations (CDCs) in the US (CDCs, local organizations in low-income neighbourhoods), found that even though the original mission of most of them was community development and empowerment, and the stated objective is frequently economic development, almost each of these hundreds of organizations devoted the largest share of its efforts to housing rehabilitation and construction (Vidal, 1992; Maxine Goodman Levin College of Urban Affairs, 2000). On the other side of the world, in a representative household survey of residents in 14 distressed neighbourhoods in Israel, the interviewees selected housing improvements as the most important goal of Project Renewal, a governmental programme for social and physical rehabilitation of neighbourhoods; interviewees ranked 'renovating and enlarging the apartments' as the most important out of 10 listed goals of the programme, that included educational improvements, reduction of unemployment, empowerment of residents and other social and economic goals (Hovav & Ben-Itzhak, 1988).

Focusing on tractable variables is another good reason to work on housing. Indeed, researchers are correct in their assertion that income is a more basic factor than housing, and that higher incomes can buy better housing. However, policy-makers and planners should be interested not only in discovering the basic factors that influence urban processes. They also have to recognize which is a tractable (malleable) factor, i.e. variables that they can have an impact on and can change for the better. Poverty is the main cause of many urban problems, but as in medicine so in the practice of urban planning, the treatment of tractable symptoms or second-degree causes (like housing) may be an effective, and sometimes, the only possible treatment. Planners often lack the knowledge and the political power that are necessary to help improve households' incomes and ensure a more equal distribution of income. There is greater expertise and experience among planners with matters related to housing, including the processes of planning, financing and construction of residential areas, tenure and management issues, housing renovation and urban renewal programmes, including their desirable and undesirable consequences. Decision-makers tend to listen to planners more attentively when they suggest housing solutions than when they try to intervene with economic development (considered the economists' domain). Hence, further enrichment and application of their housing knowledge may give planners a useful tool for responding to people's preferences as well as for directing urban processes.

Within the domain of housing, this paper focuses on one of the basic and less addressed issues: autonomous housing, which is also referred to as self-help or user-controlled housing. The purpose is to understand this neglected process of housing production and housing improvement and analyse its desirability and feasibility. The paper begins by describing the process and defining it. Then follows a discussion of the desirability of user-controlled housing. Several examples demonstrate the feasibility of user-controlled construction and renovation of

housing in the context of formal housing in developed countries. The paper concludes with recommendations for researchers and practitioners.

## 2. Self-help/User-controlled Housing

Throughout history, the most common way for people to acquire a home was to roll up their sleeves and build it themselves. This is still true in many areas of the developing countries (Ward, 1982; Cohen, 1983; Skinner & Rodell, 1983; Laquian, 1983; Perlman, 1987; Patton, 1988; Jiea, 2000). Researchers who described and evaluated self-help housing and settlement upgrading in Third World countries usually found them to be desirable and effective (Turner, 1968, 1977; Turner and Fichter, 1972; Tipple, 1996). Yet, several of these analyses pointed at varying outcomes in different countries. Generally speaking, in parts of South Asia and Africa these housing processes produced what has been described as fairly wretched slums. In contrast, in both Latin America and the Mediterranean basin—the more advanced societies among the less developed countries—the seemingly same processes produced shelters that were gradually upgraded by their residents until they became something similar to bourgeois suburbs (Hall, 1989). Tentative conclusions that can be drawn from this comparative analysis are that self-help housing is not limited to societies in their initial stages of development, and is actually more successful the further the country is on the development track.

There is little documented evidence regarding self-help housing in the developed countries of the twentieth century, although we do know that, at least in the rural sectors, it continued to be widespread during the first decades of that century (Evenson, 1979; Hardy & Ward, 1984). In the professional literature of recent years, one can find several interesting reports of self-help housing construction and improvement in Western cities, from Italy (Guttenberg, 1988) to Atlantic Canada (Row, 1989), and from Great Britain, the Netherlands, Denmark, Germany and the US (Baily, 1973; Anning *et al.*, 1980; Katz & Mayer, 1985; Kolodny, 1986; Burns, 1986; Turpijn, 1989; Harloe & Martens, 1990). In general, however, these cases are isolated, relatively rare, and usually apply to poor populations.<sup>2</sup>

Self-help in renovation and upgrading of existing housing is somewhat more common than in new construction. Anne Vernez Moudon (1986) studied a residential area near the centre of San Francisco and analysed the many changes in the houses that were carried out during the twentieth century. Yet, San Francisco is a special case: from the one hand side—very high demand for additional housing; from the other hand side—active incumbent residents who raise their voice loudly against demolition of the old urban fabric and against construction of high rises in their areas. As a consequence, the local government was forced to facilitate many changes in the existing housing stock, including enlargements and subdivisions by local residents, in addition to infill new houses. Such processes have occurred in other central city areas. Yet, in the majority of the residential areas in most of the developed countries, local governments use their authority to strictly limit self-help/user-controlled changes, especially changes that influence the exterior of houses.

Two main factors played an important role in reducing dramatically the occurrence of self-help housing in the developed countries. The first is the dominance of the division of labour and the extensive specialization of workers in modern society. It causes people to deliver to experts many of the tasks their ancestors performed themselves. This includes housing construction, maintenance and renovation, which have been transferred to planners, architects, building contractors and other specialists. The second factor is the institutionalization of the construction industry. The institutionalization began prior to the twentieth century, then rapidly advanced during the first half of this century. Hall (1989) describes how this process progressed to maturity in Great Britain. He says that following World War II, the lobby of private homebuilders on the one hand and the social housing bureaucracy on the

other hand had strong vested interests in stopping autonomous construction. In Great Britain, as in other countries, these interest groups were supported by architects and planners, who believed that they could build a better world through top-down authoritative planning. Hence, rigid systems of planning regulations and building permits were institutionalized in every modern country. The specialists and the institutions they created deprived the majority of citizens from taking any part in the decision-making regarding the planning of their homes. The home was made into a ready-made product like a car and a refrigerator. The privilege of having an impact on the design and production of one's home became an option for wealthy people alone, usually for those who have both money and a private lot; they are the ones that frequently enjoy the freedom of user-controlled housing.

The processes of specialization in the labour market and the institutionalization of the construction industry have reached also many of the developing countries, but to a lesser extent. Tipple (1994), who studied the subject of autonomous housing in several developing countries, found that in most of his case studies self-help housing did not mean building with one's own hands; actually, it meant users' control of the decision-making, while the work itself was carried out by hired workers. He explained this by saying that a household which is vigorous enough to be involved in developing a house is usually fully committed to long hours of paid work. Another relevant example was found in Matero, Lusaka, where 92% of the households in the 'site and services' project used hired work (Laquian, 1983). Hence, even though the majority of the participants in 'self-help housing projects' in the developing countries are committed to their jobs in the labour market and have no time (probably also not the required knowledge) to build their homes with their own hands, they continue to control much of the related decision-making. The control covers some design aspects, such as number, kind and size of rooms, and usually also selection of skilled workers (including the professionals) and supervision of the construction work.

The majority of citizens in the developed countries do not enjoy this kind of control over the design and construction of their homes, although we know that such autonomy of decisions is highly valued in our societies. Families are frequently willing to pay a high price to achieve some autonomy in designing their house, for example by purchasing their own lot far away from where they work, shop and seek entertainment. A relevant example is the new villages in the Galilee region of northern Israel. It was a long-term national goal of the Israeli government to disperse the population that is concentrated along the narrow central coastal strip of the country. For decades, the government supported 'development towns' in the Galilee. These towns, however, could barely maintain their small population of average- and below-average income households, much less attract young educated families. By the 1980s, a solution was found: by providing opportunities to build user-controlled private houses and small communities, the planners of the Galilee succeeded to attract middle- and upper-middle class young families to a series of new villages in the region (Carmon, 1994).

A conclusion of this short review of cases is that the definition of self-help housing has changed, as a result of developments during the twentieth century. The actual work of building one's house stopped being a necessary part of this definition, not only in the developed but also in the developing countries. Instead, the term applies to control of a significant part of the housing-related decision-making.

The word 'housing' in the term 'user-controlled housing' is not a noun but rather a verb (see Turner, 1977), associated with the process of creating and/or changing one's home, a process that may never end. The word 'control' is related to decision-making regarding the design and production of a new home or to introduction of changes in an existing home, such as remodelling and renovation. Needless to say, the user's control cannot be superior to the laws of physics (stability of the construction, for example), nor to the State and local laws and regulations. But within this framework of constraints, being able to have a significant say

concerning one's own home, its internal layout and external appearance, or at least having the possibility to select the persons who would make such decisions (professionals, workers), warrants the title of a self-help/user-controlled housing process.

Last but not least is the issue of financing: does user-controlled housing mean a user-financed housing process? Not necessarily. In middle- and above-middle-income populations, self-financing is the rule. In below-middle-income groups, financial assistance is frequently required for any new and rehabilitated housing project. 'Site and services' projects in developing countries are titled 'self-help' projects, even though they are heavily supported by public money. Similarly, a project in a developed country may be considered user-controlled even if it is supported by private and public funds, as long as the users of the project make many of the design and production decisions.

The question that this paper poses is whether user-controlled construction and renovation of housing, which appears to be greatly valued by those who are able to enjoy it, can become a widely accepted practice instead of being reserved for a few economically privileged citizens. In order to answer this question, the next sections investigate desirability and feasibility issues.

### 3. On the Desirability of User-controlled Housing

The British book *Community Architecture* (Wates & Kneivitt, 1987) is a song of praise to a phenomenon that is similar to what this paper refers to as user-controlled housing. The book presents it as the ultimate substitute to the "disaster story [of the currently prevailing architecture] characterized by ugliness, squalor, congestion, pollution, wasteland, vandalism, stress and destruction of communities" (Wates & Kneivitt, 1987, p. 17). These numerous ills are expected to be cured by community architecture, which works by "the natural laws of governing the relationships between human beings and the built environment" (Wates & Kneivitt, 1987, p. 112). Moreover, the book presents community architecture as if it has made great headway in replacing all other forms; "blueprints are available for most development situations, the theoretical framework is established, the professions are starting to change and there is increasing public understanding and support" (Wates & Kneivitt, 1987, p. 22).

I do agree with the basic message of *Community Architecture*, according to which "the community architecture movement represents an important element in the drive by people for more say in the decisions that shape their lives ... it offers the opportunity for democratic action" (Wates & Kneivitt, 1987, p. 12). Yet I harbour doubts over whether it is about to become the dominant process in the majority of the development situations, and even if some limited version does become widespread, whether it can heal all the maladies associated with poor urban areas. At the same time, I do believe that user-controlled housing should and can succeed in many instances, and that its consequences may contribute to promoting important societal goals as well as personal objectives of residents.

The benefits that researchers found as resulting from user-controlled housing may be organized under five headings.

1. *Increase of social capital*—Communal activities, which are often a necessary pre-condition for processes of user-controlled housing, were found to contribute to building social capital and communities (Turner, 1996; Keyes *et al.*, 1996; Gittel & Vidal, 1998). Social capital means shared social norms, mutual trust and mutual responsibility, which can highly improve the ability to achieve personal and communal objectives (Colman, 1988; Putnam, 1995). Social capital is the basis of livable communities (Putnam, 2000). There are research findings that point directly at the relationships between user-controlled housing and social capital, such as those collected by Arefi (1999) in eight neighbourhoods in Los Angeles. In addition, we have circumstantial evidence that comes from neighbourhoods in which both exist

simultaneously. An example is a study of culturally sustainable housing in the city of Gaza, where self-help/user-controlled housing is prevalent (Gabarin, 2002). The researcher found in the neighbourhoods of Gaza high degree of trust among residents and a feeling of safety in the neighbourhood, two of the characteristics of social capital.

2. *Compatibility with individual choice*—Respecting individual freedom and individual choices is a basic principle of a democratic society. Increasing the control of residents over their housing conditions expands the ability of individuals to select their preferred modes of life, and thus, contributes to democratization of the society.
3. *Economic considerations*—Self-help and user-controlled housing operations were found in several cases to be somewhat less expensive than comparable conventional activities (Wates & Knevitt, 1987; Row, 1989). In most cases, the former are easier to finance, because the costs are spread out over longer periods of time. User-controlled renovation of housing was found to increase considerably the usable life of residential buildings (Carmon, 1992), and this is its main economic contribution.
4. *Contribution to cultural and aesthetic values*—Rappoport (1988) analyses the ‘cultural landscape’ that is the combined result of various construction decisions of many individuals over extended periods of time. He argues that this process somehow creates ‘recognizable wholes’, which create preferred built environments not only in the eyes of those who produced them but frequently in the judgement of foreigners and tourists as well. Goldfinger (1993), in his book *Mediterranean Community Architecture*, with a forward by Louis Kahn, expresses similar ideas. Art and architecture critics of our day tend to praise all kinds of authentic environments, which were usually created by user-controlled construction.
5. *Prevention of neighbourhood deterioration*—Findings from various places in the world have demonstrated the power of user-controlled construction and renovation schemes to prevent neighbourhoods’ decline. A large-scale user-controlled housing renovation programme has been operating in Israeli distressed neighbourhoods for the last two decades. Researchers found that the programme succeeded in reducing significantly the tendency of better-off households to leave the older areas, and thus, stabilized them (references later). Interesting evidence from the US was cited by an OECD report. It tells the story of seven central cities’ deteriorated neighbourhoods and says that “one area, with an otherwise similar population profile, defies the general pattern of deprivation ... Mean housing values were more than \$10,000 higher than surrounding areas and median family income equaled the country average ... The only satisfactory explanation is the fact that in the 1960s the area was targeted in a ‘self-help’ first-time homeownership program, where families helped to build their own homes and were encouraged to establish community organizations” (OECD, 1998, p. 60).

A conclusion drawn from the above evidences is that increasing the possibility of citizens to initiate and experience user-controlled housing is appropriate for various groups of people. User-controlled housing can serve residents who are ready to invest effort in making their home compatible with their preferences. It is often appropriate for people who are interested in reducing the cost of housing due to limited resources, for those who are searching for additional social capital (as a personal and societal asset) and those who want to prevent deterioration of urban neighbourhoods (for individual and public reasons). The reader should note that the discussed process is not presented here as a panacea, but rather as one of the contributors to achieving desirable goals. As such, it is worthwhile to investigate the extent to which use-controlled initiatives can work in our institutionalized developed societies.

Two examples of working schemes are analysed below. The first is related to both construction and renovation of dwelling units and residential buildings, and the second focuses solely on renovation.

#### 4. The Open Building Approach

Open building is an approach to the design, construction and long-term adaptation of buildings. It was developed by a group of Dutch architects (SAR—Stichting Architecten Research), headed by John Habraken (1972). The Open Building Approach is intended to create diversity within mass housing and to increase the role of the consumer in the design of his/her dwelling. It is based on modular design, with a clear distinction between the shell and the infill. This modular design invites and enables each occupant to design and redesign the infill of the apartment, according to his/her preferences and economic capabilities. Residents in multi-family multi-story buildings can (relatively easily) remove and add partition walls, change kitchen and bathroom fixtures etc., without imposing similar changes in other apartments in the same building and with minimum disturbance to neighbours.

A salient characteristic is that choices are made among alternatives that were prepared—frequently on a mass industrial scale—by professionals. Another attribute is the complete individualistic character of the user involvement; usually, no communal activity is considered a necessity.

Habraken's basic ideas were further developed by groups of architect-researchers at two main centres: the Department of Architecture of MIT (MA, USA) and the OBOM—Open Building Research Group at the Technological University of Delft. Experimental projects were established in various other countries, including the Adelaide Road Estate in Camden and the Greater London Council in Great Britain, and projects in Finland (Tiuri, 1995), China and especially Japan (Kendall and Sewada, 1987; Sewada, 1996). In the US, Kendall (1996; Dekker and Kendall, 1997) has been carrying the flag of the Open Building Approach over the last two decades and he has succeeded in attracting companies to implement the approach in both commercial and retail buildings. It was also applied in several cases of converting expensive condominiums.

A great advance was made with the introduction of Matura®, an industrial cost-effective product that is compatible with the Open Building Approach. Given a building shell, Matura® offers a fully prefabricated and adaptable infill system, including partitioning as well as all technical subsystems, kitchen and bathroom equipment. Furthermore, installation does not pose special demands on the base building or the façade, thereby making Matura® attractive both for new construction and renovation projects (Kendall, 1996). Matura® greatly increases the ability of each resident in a multi-family building to make changes within his/her spaces, without disturbance to other residents in the same building.

In the last decade, the OBOM Research Group in Delft has focused on the application of the of the Open Building Approach to housing renovation and rehabilitation. The deterioration of post-war housing estates is a highly visible and severe urban problem in the Netherlands (as well as all other European countries). The OBOM group considers the approach most appropriate for treating deteriorating estates. Its main practical merit is in the distinction it makes between three levels of decision-making: the 'tissue' level—neighbourhood fabric, the 'supports' level—building shell, and the 'infill' level—dwelling interior. Each level can be treated separately and by different decision-makers at various stages. Cuperus and Kaptaijns (1993) presented and evaluated the advantages of implementing this three level approach in the rehabilitation of a series of Dutch post-war estates.

Dekker (1994) analysed a success story of a five-story refurbishment of a multi-family building in Voorburg (see Figure 1). Prinses Beatrixlaan in Voorburg is a typical 1960s social housing estate consisting of three blocks of five story 'walk up' flats. The estate became unpopular with residents and potential tenants, because of deficiencies in the old buildings and their architectural environment. The housing association that owned the estate initiated in the

early 1990s a renovation project, and selected the Open Building Approach for its implementation. In 'the tissue level', the project included demolition of adjacent garages and replacement with new housing for sale. This sale was utilized to help off-set the cost of refurbishment 'in the (old) buildings level', including new stairways and new elevators positioned in old stairways, addition of new balconies, improved landscaping and commonways. As for 'the infill level', the Open Building Approach enabled tenants to pre-determine the layout in apartments they intend to rent, or to rearrange rooms and services within the apartments they occupied. Using the Matura® system, they could change the size and location of specific rooms, including kitchen and bathrooms, irrespective of conventional issues about where service risers are located. Moreover, in the reported stage, only 17 out of 120 tenants decided to change the interior of their apartments, but the work could be carried out without disrupting occupants in adjacent dwellings. Resident satisfaction was high and occupants were particularly keen on the menu approach that allowed variation at the occupant's cost. It was expected that following the successful examples, other tenants would decide to join the process (Gann, undated). The Voorburg project is a good example of moving some power away from landlords, architects and other housing professionals, placing an emphasis with residents. However, it was not only the tenants' needs and preferences that guided their actions, but also their ability to pay: Those who decided to remodel their dwellings had to pay an additional rent of about 15%. In sterling, the total cost was approximately 36,000 sterling per dwelling, including the external improvements. The housing association invested 19,000 sterling per dwelling and the balance is paid by tenants through the rent increase, calculated at 7% over 25 years.

The Open Building Approach is an architectural-technical system. It is of interest from the point of view of this paper because it points to an efficient method for constructing and/or renovating old buildings that comes together with a user-controlled process. Its three-level approach to renovation and its technologically advanced method to enable individual changes in multi-story buildings appear to be applicable to a variety of housing updating cases.

### **5. User-controlled Housing Upgrading and Enlargement in Israel**

Israel's housing industry is highly institutionalized. Housing projects are designed by professional architects, in accordance with very detailed local plans and regulations, and they are constructed by construction companies, frequently large ones. Usually, the end user of the house cannot influence the product he/she purchases or rents. In contrast, in cases of housing renovation of older dwellings, some unique processes of user-controlled upgrading have emerged in Israel over the years.

The reader may be puzzled: why is it that a new country has a large stock of houses that await considerable renovation? Indeed, 90% of the housing stock of Israel is relatively new; it was built after the State was established in 1948. However, in the first and second decades following independence, Israel was basically a developing country, fighting for physical and economic survival. Simultaneously, the country absorbed a very large wave of immigrants. The majority of these immigrants were penniless refugees, either from Europe after World War II or from Middle Eastern countries that expelled them following the establishment of a Jewish State. The newly established State considered as its duty to supply the arriving immigrants with shelter, and consequently, cheap blocks that housed hundreds of thousands of households were hastily constructed throughout the country.

Hence, Israel has a large stock of post-World War II housing estates, like all the European countries and like many cities in other parts of the world (Hall, 1988, chapter 7). Moreover, a majority of these estates were designed according to the standardization and minimization rules of modern architecture. In the 1950s, standard tiny apartments were arranged in small



Before



After



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**Figure 1.** Renovation by open building system in Voorburg, the Netherlands. Source: Process Architecture (1993).

buildings of 1–2 stories, and in the 1960s and early 1970s, the apartments were somewhat larger and the common buildings were 3–4 stories, each with several entrances. No one bothered to ask the immigrants–residents if this is what fit their needs and preferences. This was what the architects thought to be good for them and for society (Carmon & Czamanski, 1990).

Israel enjoyed a very rapid economic development. Today it is among the highly developed countries, with an annual income per capita between Great Britain and Spain. The poor immigrants, who constituted in the early 1950s about half of the country's citizens, participated in and benefited from the economic growth. Households gradually purchased the apartments they lived in from the public housing companies. Some of those who acquired their houses initiated a user-controlled improvement and enlargement process, which gradually developed into a three-stage story.

### *5.1 First Stage: Spontaneous User-controlled Upgrading in Ex-public Low-rise Housing Projects*

The first empirical studies of the spontaneous upgrading of housing were conducted in the early 1980s (Carmon & Oxman, 1981, 1986; Carmon & Gavrieli, 1982, 1987; Oxman & Carmon, 1989). Initial information was collected from 44 low-rise housing estates, all of which started as public housing. In a third of them, it was found that 50% or more of the buildings included considerable enlargements of at least part of the apartments, and in another third of the estates this was found in 20–40% of the buildings (Carmon & Oxman, 1981, Appendix 1). In order to study the enlargement and improvement process, the researchers selected one neighbourhood, which was considered typical—Givat Olga.

Givat Olga was constructed as a public housing project for immigrants in the periphery of the mid-size town of Hadera. The neighbourhood included two physically different sections: 2000 dwellings in 1–2 story buildings of the 1950s, each with 2–12 families, and 700 dwellings in 3–4 story buildings of the 1960s and 1970s, each with 12–36 families. In addition to physical form, two characteristics differentiated the low-rise from the middle-rise housing areas: the rate of private ownership and the salience of housing improvements. Public housing authorities in Israel did not wait to the age of privatization in the 1980s to encourage tenants to purchase their apartments; purchasing procedures existed almost from the beginning of the construction of public housing in the 1950s. The results in the neighbourhood of Givat Olga were that in 1979, close to 80% of the dwellers in the low-rise area were owner-occupiers, while only 10% in the middle-rise area purchased their apartments from Amidar, the public housing company. There was not one enlargement in the higher buildings, as compared with 87% of the smaller buildings in which at least one family enlarged and significantly upgraded its apartment. A sample of residents who enlarged their apartment was interviewed.

All the upgraders were residents who purchased their dwellings from the public housing company. All were family heads with children at home. The average income in the neighbourhood was two-thirds of the average for a salaried employee in Israel at the time. In spite of the generally low income, 40% of the enlargers managed to finance their project from their own savings; the others used loans from various sources (banks, relatives, places of work); only 25% used publicly subsidized loans. Self-financing was one important component of this user-controlled process. Evidence of the others: 47% of the enlargers designed the enlargement themselves, 41% in collaboration with a professional and 12% selected an architect or an engineer and delivered the design decisions to him/her; 21% took a major role in the construction work, additional 17% played some role, and the others hired the workers and supervised their work (*ibid.*).

The empirical studies did find a few negative outcomes of this unplanned process of introducing major changes to apartments and buildings that were not planned for change.

The salient negative outcome was 'visual noise', often created where households enlarged their dwellings while their neighbours did not, or where people 'personalized' the exterior of their home. Obtaining a construction permit was a well-known formal procedure that most of the enlargers followed; but the enforcement procedures were frequently weak and enabled wild plants to flourish. Yet the positive results were more numerous and significant. The most important improvement was the enlargement of the tiny apartments, which housed large families. The average size of an original apartment was 44 square metres and, after the enlargement, it became 91 square metres. The enlargers added 1–2 rooms, bathrooms and balconies, enlarged kitchens and other spaces, and created private entrances. Many of them invested in the exterior of the house and its yard.

The researchers' conclusion was unequivocal: the process was beneficial to the residents, their neighbourhoods and the general housing stock of the country. They recommended encouraging and promoting the process, with some adjustments, in other residential areas around the country.

### *5.2 Second Stage: User-controlled Upgrading in Ex-public Middle-rise Housing Projects, within the Institutionalized Framework of Project Renewal*

Israel's Project Renewal is a national programme for comprehensive rehabilitation of distressed neighbourhoods, which started in 1979 and is still running in 2001. Roughly half of its significant budget has been devoted to social programmes, while the other half has been allocated for physical improvements, mainly housing. Project Renewal has been extensively studied and evaluated (Carmon & Hill, 1988; Alterman, 1988; Churchman, 1990; Spiro, 1991; Carmon & Baron, 1994; Carmon, 1989, 1996, 1999).

Joint pressure by the researchers of Givat Olga and several local directors of Project Renewal's neighbourhoods successfully worked to create one of the few instances in which research findings directly impacted on governmental decision-making in Israel. Project Renewal policy-makers were convinced in 1982 to include a significant programme for enlargement of small apartments as part of the national project (Lerman *et al.*, 1984; Spiro & Laor, 1988; Carmon, 1992). The new programme included apartments rented by public housing companies, but they constituted just 10% of the total number of those reached by the programme. All the tenants in the enlarged rented dwellings were 'welfare cases', and they exercised just a limited version of the user-controlled process. The following discussion will focus on the 90% of the participants who were owner-occupiers.

The majority of Project Renewal's neighbourhoods were originally public housing projects, but 45% of the households had taken advantage of the possibility to purchase their dwellings prior to the implementation of Project Renewal. The Project encouraged renters to purchase their apartments, using the right to enlarge as a main incentive to the potential buyers. This incentive helped raise the rate of homeownership in the Project's neighbourhoods to 67% of the households (1995), as compared to 73% in Israel as a whole (MC&H, 1999).

The housing enlargement programme made every local household of owner-occupiers in all Project Renewal neighbourhoods (not depending on income test) eligible to a subsidized long-term loan, which could reach 40–80% of the enlargement and improvement cost. In addition to financial support, the programme provided technical assistance in preparing the design plans, sometimes by distributing lists of architects and civil engineers, and more frequently by preparing alternative enlargement and upgrading schemes for buildings in the neighbourhood. Where the local urban plans did not allow additions of residential areas to the existing buildings, local project's directors worked to introduce changes into the urban plans and regulations, an activity that met with many obstacles and could span over a period of several years.

In spite of all this organized assistance, the programme does warrant the title of a user-controlled process, because in the majority of cases, the main decisions as whether to join the programme, what and when to construct and/or remodel, and who will be hired to do the work, were made by each individual household and/or an elected building committee. The process advanced building by building, because it depended on the self-organization of residents in each building. In a few cases only, a cluster of buildings cooperated.

A recent study analysed data from upgraders in the framework of Project Renewal in neighbourhoods across the country (Meretz, 2001). In two thirds of the cases, the residents were the ones who initiated the process and approached the authorities, while in the remaining third the local Project director was the first to raise the idea. In all the cases, an architect or engineer was the chief planner. In half of the cases, the residents (usually through their elected building committee) participated in the design of the exterior of the building, and in each and every case they had a major role in designing the interior layout (in 40% without any professional assistance). In two thirds of the cases, the residents (with or without a professional) took care of the building permit, a process that took from 3 months to 3 years. The implementation process lasted from 3 months to over 2 years; in 71% of the cases the residents continued living in their apartment throughout this period and supervised the work of the contractor/s and various workers on a daily basis (only 3% moved out for the whole period of changes in their apartment).

In these Project Renewal neighbourhoods virtually all the households have either low or moderate income. Still, only 44% of them said that the publicly subsidized loans were their main source of funding; the others mentioned banks, private savings and relatives as their main sources (*ibid.*). According to statistics of the Ministry of Construction and Housing (MC&H, 1999), the average cost of an enlargement was \$23,000, and an average subsidized loan was 60% of this sum (the value of the public subsidy for each enlargement was \$4000 (Shwartz, 1999). These data means that each household in Project Renewal neighbourhoods that participated in the enlargement and upgrading programme invested from its own sources a large sum of money. The only plausible explanation for this high investment by families with limited means is that housing conditions were of very high importance to these people. When they recognized an opportunity to significantly improve their home (not just a minor 'face-lift'), in a manner that was compatible with their needs and preferences (a user-controlled upgrading), they invested much more than they would have otherwise invested in their present homes.

More than 35,000 dwelling units were enlarged and upgraded in the framework of Project Renewal user-controlled housing enlargement programme (1982–1998) (MC&H, 1999). Beside the volume of this operation, a main achievement was to produce thousands of examples for the technical and organizational possibilities to considerably enlarge apartments not only in low-rise buildings (as in stage one above) but also in buildings of 3–4 and 5–12 story that were not pre-planned for enlargement. This is a living proof that the technical issues are solvable, and that many owner-occupiers are willing and able to organize themselves to carry out such a mission.

The average addition to the enlarged apartments in the studied cases was 30 square metres, additional 40% to the original size (a third added more than 50%, and a few, more than a 100%); the average size of the enlarged units was 91 square metres (Meretz, 2001). Half of the enlargers added one bedroom plus other improvements and 40% added two bedrooms and more; 40% added a second bathroom and 30%—a balcony; 60% enlarged the living room and 20%—the kitchen. In over 60%, the whole internal layout was changed. In 75% of the cases the improvements included also upgrading of the common yard and its garden.

The salient benefit is considerably improved housing conditions for about 20% of the households in Project Renewal neighbourhoods, an improvement at little cost to the

public treasury. The majority of the enlargers in Project Renewal neighbourhoods, according to Meretz (2001) study, were satisfied with the results of the enlargement (only 9% were not satisfied); 60% said that the enlargement positively influenced the relationships in their family. Two thirds said that economically, they made a good decision; only 5% regretted the decision to enlarge because of economic considerations.

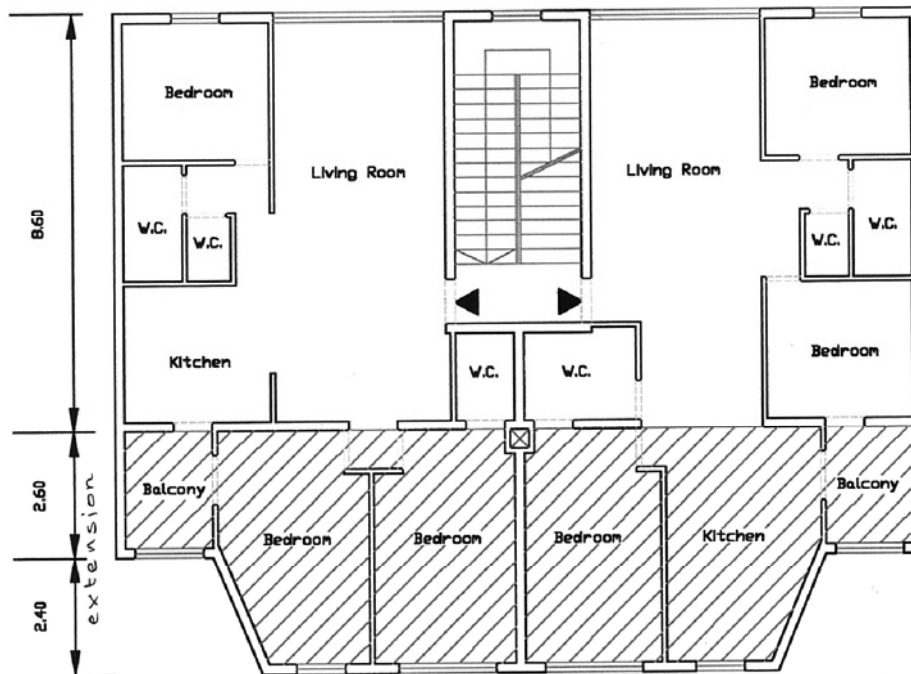
Hence, this user-controlled housing improvement process is good for the majority of the participants and beneficial from the point of view of those responsible for the stock of urban/national housing. As for the neighbourhood point of view, the main benefit is halting a main part of the exodus of the 'stronger' families (those who are motivated and can afford housing improvements) from these relatively poor neighbourhoods. The user-controlled enlargement and upgrading programme caused such families to invest in-place rather than moving out of it in search of better housing conditions. Two thirds said that they decided to stay in the neighbourhood after investing in their homes (*ibid.*) and the result was a halt of social deterioration in many neighbourhoods. Needless to say, halting deterioration does not mean regeneration. For that, housing improvements are important but not sufficient.

### *5.3 Third Stage: User-controlled Updating of Housing in Middle-class Neighbourhoods*

When we first studied the housing enlargement phenomenon in Israel, we found that the process was 'infectious'. It tended to move by imitation from one building to its neighbour and from one street to the next one. Yet we did not expect it to move from the low-income areas, where it started spontaneously in the 1960s and flourished in the 1980s under Project Renewal, to middle-income neighbourhoods. This trend, which began in the 1980s (Lamdoon, 1988), has become widespread in the 1990s. As the first stage, the third stage has occurred spontaneously, without any central direction. It occurs most frequently in 3–8 story buildings (each with 6–48 housing units) constructed during the 1960s and 1970s in the larger cities of Israel. In almost every case it includes not only enlargements but also many other improvements in the interior and exterior of the house, which make its design more similar to new residential construction. Therefore, this process is named 'housing updating'.

Meretz (2001) compared the process in Project Renewal neighbourhoods with the one in middle-class areas. She found it to be similar in many respects, advancing (in most cases) building by building, but without the partial financial and technical assistance that was provided by the Project. Usually, the process starts by one or two persons in a building being obsessed by the enlargement and upgrading opportunity. These persons, who frequently try to work with an elected committee of their building, face two great challenges: to convince all the neighbours to join the project (a new regulation enables working with the consent of 75% only) and to receive a building permit from the municipality. Overcoming these two obstacles may take several years. If the active residents do not give up during this long organizational stage, they usually succeed in significantly improve their living conditions and considerably raise the value of their property.

Meretz (2001) found that in the middle-income neighbourhoods 60% of the updaters were 30–50 years old and most of the others above this age, 80% were families with children with a typical household size of 4–5 persons, and 70% had above-high school education. The main reason to update was housing density or a wish to have more space even though the household was small. They did not move to a different dwelling either because they could not afford it (45%) or because they loved their environment (45%). All the updaters took active part—together with a professional—in designing the internal changes and 70% in the exterior design. Half of them funded the work from their savings, 35% used bank loans, and the others mentioned relatives, friends and other sources. Three-quarters remained in the apartment while the work was carried out, and most of the others supervised the process even without living there. The average size of an apartment was changed from 75 to 98 square metres (in



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**Figure 2.** Enlargements in a moderate-income neighbourhood in Tel Aviv, Israel. Floor plan of two apartments: each was enlarged from approximately 70 to 100 square metres.

30% over a 100 square metres) (Figure 2). Almost all the updaters were satisfied with their project (3% were unsatisfied), and 80% said that the rise in the value of the updated residence was at least twice(!) as big as their investment in it (ibid.).

In a few cases, the residents managed to finance the improvement project by selling to a contractor their rights for additional built area on the roof. Where there are extensive rights

to add new dwelling units to an existing building (or where such rights can be 'created'), interesting opportunities of cooperation between residents and construction developers are opened (Rosenfeld & Finkelshtein, 1996).

During the early 1980s, all the large Israeli municipalities were very much opposed to processes of user-controlled housing enlargements. Many of these municipalities have since changed their attitude. While the process of obtaining a permit generally remains a long and exhausting experience, several municipalities are trying to ease it by preparing new local plans for built areas with greater flexibility. The city engineer of Tel Aviv (the economic heart of Israel) said that facilitating processes of user-controlled enlargement and updating in multi-unit residential buildings is the great hope of the city; it is a useful tool to prevent deterioration and attract young mobile families to establish their life in the city, instead of moving to its suburbs (Yoskowits, 1997).

## **6. Summary and Conclusions**

We live in a world of change, of changes in technology and economics as well as changes in societal structures and political settings. In contrast to these dynamic surroundings, the systems of urban planning and housing construction have not undergone adequate change in the recent decades and have frequently become more rigid and less apt to change. Production processes and products that are not updated become obsolete and are eventually abandoned. This seems to be happening to authoritative planning processes and their housing products.

The paper suggests making the planning process in general, and the planning of housing in particular, compatible with societal trends of the post-industrial era. It suggests making it more democratic—the masses of users are given a chance to be actively involved in making decisions that directly influence their lives; making it more flexible—instead of management by strict regulations, management by a flexible policy; and making it custom-made—instead of mass production, adaptable products which respond to the changing needs and preferences of the consumers. All these current trends are promoted by strategies of self-help/user-controlled housing.

Self-help housing is the older term. There have been two misconceptions regarding this term: first, that self-help means construction with one's own hands; second, that self-help housing is either as a primitive way of housing supply, typical of undeveloped regions of the world, or a last resort of poor people in the developed countries. Now we know: first, that building with one's own hands is not a necessary component of self-help; even in the developing countries—not to speak of the developed ones—residents are responsible for the construction of their homes in projects that carry the title of self-help, but most (if not all) the actual work is carried out by hired skilled and unskilled workers. Therefore, this paper use the term user-controlled housing, which is defined as a process in which the residents—not only developers and professionals—make significant decisions regarding the design and the construction or renovation of their homes. Second, there is hard evidence that user-controlled housing is an effective tool for housing construction and for housing renovation and upgrading by various classes of people in the developed countries.

The Open Building Approach, which was developed in the Netherlands, is one of the practical methods to increase the control of residents over the shape of their homes. It has been implemented in several countries, both in new housing construction and in renovation projects. It is compatible with industrialized construction, yet, it takes a large step towards considering individual preferences.

The Israeli experience with user-controlled renovation and updating of housing is more than 20 years old and includes tens of thousands of cases. The success of the Israeli strategy rests on the opportunity it opens to non-affluent residents to improve their housing conditions

significantly, in accordance with their wishes and resources, without leaving their communities. This system deserves planners' attention because of its applicability to various conditions and circumstances; it worked well in middle-income and moderate-income neighbourhoods, in low-rise (1–2 stories) and higher-rise (5–12) buildings. In order to encourage applications, the Phoenix Strategy for updating the housing stock is being developed and will be presented elsewhere (Carmon, forthcoming in Autumn 2002).

Each country usually adds 2–3% to its housing inventory every year, and the majority of houses are expected to endure at least a 100 years. During this time, many changes in technology and life style will likely require housing modifications. The paper shows that user-controlled housing modifications and upgrading are possible in a variety of neighbourhoods, including areas with multi-family buildings that were not pre-planned for change. It seems to be especially appropriate for post-World War II housing projects, which are common in all the European countries and in some parts of in North American cities. The communal benefits are a physically improved inventory of housing, for low cost to the public treasury, and stabilization of the population in older neighbourhoods; the stabilization is achieved by means of improving the housing condition in-place, instead of improving by moving out. Such stabilization can prevent deterioration of neighbourhoods, contribute significantly to halting deterioration where it started and support regeneration processes.

Hence, a main conclusion of this paper is that processes of user-controlled housing are highly desirable. The desirability stems from their compatibility with democratic principles, their contribution to social capital, the resultant improved housing, and the utility to the participating individuals and the public at large. The main practical conclusion of the paper is that processes of user-controlled housing can be part of the formal systems of housing in the developed countries. These two conclusions lead to a recommendation, directed to central and local governments as well as planners and designers, to facilitate processes of user-controlled housing and to make them an ordinary part of developing new neighbourhoods and renovating old ones. In particular, such strategies are worthwhile considering for post-World War II housing projects, where the housing units are far behind the current standards and the residents are strong enough to help themselves, if the surrounding conditions encourage them to do that.

## Notes

1. Several examples of housing research relevant to policy-makers can be found in Carmon, 1976, 1985, 1997, 2001; Carmon & Mannheim, 1979; and other publications by Carmon mentioned in this article. 2. These days (September 2001), a workshop in the Lincoln Institute of Land Policy, organized by Peter M. Ward, is devoted to self-help housing in the US, which is presented as “the only accessible means to homeownership for urban households earning up to \$20,000 a year” (Lincoln Institute, 2001).

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