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Formation of Residential District
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We continue our policy of theme issues and open issues twice a year. This particular open issue contains manuscripts on Community Participation, Real Estate Development, Housing Poverty, Dual Usage Sociability, Formal and Spatial Contemporary Transformation, Experimentation with Hanoks in Korean Housing, Infill Renovation and Post Ecological Architecture. These are based in a range of different countries from Hong Kong, Shanghai, Jordan, Turkey, Korea, to Japan. The inquiries are deep and thorough, maintaining a firm grip on subject matter and focus.

Different lines from the two different abstracts give evidence to this. For example in the paper dealing with Ecological Architecture: Ecology shows us not on environmental problems; it shows that we need a new balance and harmony between individuals, beings, communities and all of Nature.

China comes in three times therefore it is worth looking what the author(s) have to say here: Over the last two decades, China has experienced drastic transformation of housing systems as well as rapid urbanization. It is of great policy interests to investigate how these socio-economic transformations have improved or aggravated the housing poverty conditions for those disadvantaged groups.

In both cases much can be learned how societies manages to manage themselves to bring about stable and thriving economies.

Looking towards the impact of the other manuscripts Infill Renovations by Kazunobo Minami in Japan shows how his approach has improved the condition of many apartments preventing them from serious deterioration. Very recently the Korean housing field has been awakened and successfully shown how to revive and reinterpret the traditional hanok. The hanok literally means the Korean-Style house. In Ankara modernization and changes in housing can be best seen in Kavaklidere-Ankara telling how a ‘modern’ lifestyle was brought about in the 50’s. To see the idea of how an ordinary business district exists in the day but turns into a very popular city night life spot at the end of the day offering a variety of leisure services mainly in the form of cafes and restaurants read Leila Bustami in the Emotional Sociability of the Abdoun Circle. Heritage Revitalisation Projects and Community Participation in Hong Kong are evaluated in the manuscript by Bingqing Zhai and Albert Chan.

We are trying to encourage Chinese authors to write for Open House International. Please suggest this to any Chinese architects/Planner or Urbanists you think might like to write an article. I can always follow this up. Complimentary copies can be sent. I hope that in the next year we will be able to publish a theme issue on China. Some suggestions from any of you for theme subjects would be helpful.

From here to the future of our journal I hope we can formulate good themes and manuscripts and progress towards a journal of even better and higher quality.

Nicholas Wilkinson RIBA
TOWARD 21ST-CENTURY KOREAN HANOKS.

Jieheerah Yun

Abstract
Very recently, the South Korean architectural field has seen a rising trend to reinterpret the traditional hanok, meaning Korean-style house. While this presents an interesting diversion from the housing market dominated by high-rise apartments, there is a lack of consensus in determining the scope and definition of hanoks. This is because of many experiments with the features of the hanok, such as inclusion of new material, construction techniques, and even radically new spatial organizations.

This article explores and analyzes the effectiveness of four different approaches of reinterpreting hanoks: apartment hanoks, urban hanoks, rural experimentations, and contemporary versions. At one end of the spectrum, there is the recent integration of a hanok’s features in high-rise apartments otherwise considered modern. Then I move on to discuss examples of urban hanoks built since the start of the industrialization era in the 1920s and afterwards. Urban hanoks are detached houses, most of which show a stylistic preference toward wooden hanoks of the elite literati. The third approach is rural experimentations that involve the development of an unconventional construction method by both architects and non-architects. Finally, this paper turns to reinterpretations of the hanok by architects trained in contemporary architecture. Although each approach differs in the degree of integrating historical hanok features, some commonalities, such as low floor area ratio and the organic integration of an open courtyard, can be detected among the successful cases.

Keywords: Hanok, Korea, Traditional, Architecture, Vernacular.
A Brief History of the Hanok

Just like many other ancient dwellings, hanoks first started as pit dwellings during prehistoric times and slowly emerged from underground. Pit dwellings such as Paju Gyohari Dwelling did not have ondol (heated floor system) since ancient Koreans lacked technical skills to build the underfloor heating system yet. According to Choi Yong Tek, the former president of the Society of Ondol, the first step in the evolution of pit dwellings' change into above-ground hanoks was putting a lid stone on the hearth (Choi, 2001). It was around the period of the Three States (which lasted from 1st century BCE to 7th century CE) that the first use of a bracket joint system seen in wooden hanoks has been discovered (Kang, 2002; 91). Features like the ondol (heated floor system) and daechung (wooden floors) appeared a bit earlier in the Iron Age, and by the period of the Three States, these features were fairly common. Gradually, the importance of daechung increased as it became associated with Confucian rituals such as ancestor worship. By the time of the Chosun Dynasty, elite literati houses with wooden brackets and several independent wings became the standard housing type that members of other classes stared at with awe and envy. Typical elite literati house consisted of at least three wings: sarang (male study), ahn (private residential quarters), and hengrang (servant quarters). Other types of houses, such as clay houses and log houses, were common as well, but they were considered less prestigious.

Although hanok generally refers to preindustrial houses because of the term's invention in the late 19th century, various hanoks have also been constructed in later periods (Jeon and Kwak, 2012). For instance, hanoks built during the Japanese colonial period in the 1930s and onwards differ from the earlier Korean houses by their simpler layout. The main difference between the older hanoks (dating from Chosun dynasty and earlier) and newer hanoks was the size and shape of the lot. Urban lots were much smaller and more regular in shape, compared to the plots of land on which older hanoks sat. As the result of smaller land lots, the majority of hanoks built in 1930s and after featured one courtyard and a single housing mass instead of several housing complexes interconnected with several courtyards (fig. 1). Many hanoks before the urbanization featured several quarters/wings. But hanoks built after the 1930s are significantly smaller, as urban space is scarce, and the division between the sarang and ahn compounds has become less pronounced. Hanoks that were built after the Chosun dynasty opened the door to foreign countries incorporated new materials previously not used, such as glass and cement. During the Japanese colonial era, some architects, such as Gilsryong Park, argued for a fundamental reconceptualization of the hanok floor plan (Park, 1934). Yet traditional spatial practices, such as taking off one’s shoes before entering houses and keeping an open storage area for fermented food, were considered an essential part of Korean lifestyle that could not be easily given up.

Although hanoks continued to change and adapt to new technologies and materials introduced to Korea, they became a less desirable form of residence in the latter half of the 20th century as apartment housing dominated the landscape. The modernization drive of the new Korean republic included aggressive promotion of western-style detached houses and apartment units. Policy makers continuously encouraged residence in high-rise apartment units by associating it with efficiency and modern lifestyles (Jeon, 2009). As part of the effort to popularize apartment houses, the Korea National Housing Corporation continued to introduce technological innovations that improved the comfort factor. It introduced a centralized heating system and a western-style standing kitchen (as opposed to the traditional low kitchen stove, which required crouching). Another factor that contributed to the decline of hanoks was that technological innovations introduced in hanoks could not keep up with those in apartment housing. Because of this, many Koreans moved out of hanoks.

Yet hanoks began to make a comeback in the early 2000s with successful city-led village remodeling projects such as the Bukchon Regeneration Project in Seoul (Yun, 2012). As consensus was reached between the city government and residents, new policy initiatives encouraged remodeling and new construction of hanoks that fit the contemporary lifestyle. The successful case of hanok remodeling in Bukchon has not only increased the number of tourists in the neighborhood but also those interested in moving into remodeled or newly con-
structed hanoks. Other Korean cities followed the case of Bukchon and started their own hanok village projects. In Jeon-nam Province, the Hengbok Villages Project, a plan to construct hanoks in twenty villages, has been launched. Similarly, construction of Eunpyeong Hanok Village in Seoul has been recently finished in August 2013.

Different Ways of Integrating Traditional Architecture

While more adventurous individuals have remodeled existing hanoks or built a new hanok from scratch (Mun, 2012), construction companies introduced interior attributes of a hanok in apartment units. With the Korea Land & Housing Corporation (LH, previously called Korea National Housing Corporation) being the first to introduce an apartment unit plan with hanok features, other companies such as Daelim have joined the trend (Jo, 2011). The apartment hanoks had floor plans not unlike other modern apartment units, with the family room in the center and individual rooms surrounding it. Yet some apartment hanoks have a separate sarang room, which can function as both a drawing room and guest quarters. These apartment units feature partitions that resemble paper screen walls of the wooden hanoks (fig. 2). Some go even farther, by applying a layer of earth on the interior walls. Yet the features of hanok are mostly limited to certain parts of the interior, since the verticality of an apartment building and the core concrete structural system restrict architects from making fundamental changes. Although the term apartment buildings in some countries refers to three- or four-story multifamily housing, the majority of Korean apartment buildings are taller, with some resembling high-rise office towers. Constructing walls only with earth or clay would completely endanger the structure whose height usually exceeds ten stories.

Most prospective residents who move into apartment hanoks are middle-aged South Koreans who like the idea of living in traditional space yet are not adventurous enough to lose the comfortable environ-
ment provided by apartment community. Another factor is an economic one, as the construction cost of a hanok is much higher than an apartment unit. Construction cost of hanok per pyong (an area equivalent to 35.5 square feet) is from 6400 USD to 9100 USD, whereas that of an apartment unit is 2700 USD (Bak, 2006). Despite concerted efforts of construction companies to borrow hanok forms and thereby bring "nature" closer to grey boxes of housing, most stop short at surface treatment, or putting a "cap" of traditional look on an otherwise modernist design. For instance, the bird’s-eye rendering of apartment hanoks by LH shows that the only thing that differentiates apartment hanoks from conventional apartment buildings is the use of a tiled gabled roof (fig. 3). Rather than being a significantly different structure, apartment hanoks look for the most part like other apartment buildings from the outside.

Urban hanoks (remodeled and new construction) are detached houses, and they represent another approach of adapting the historic to the modern residential environment. Urban hanoks are similar to pre-industrial hanoks in architectural style and sometimes in the construction methods used. While the newer models differ in style and construction to a certain degree, both remodeled and new construction units adopt the literati style with a wooden bracket system, since it is considered the most prestigious. Many urban hanoks, including those in Bukchon, have the tiled roof, wooden columns and beams, and paper screen walls as the common feature. Unlike apartment hanoks, most urban hanoks are single-story with open courtyards. In general, South Koreans who have moved into urban hanoks are more committed to the traditional and supposedly simpler lifestyle believed to be practiced by the Confucian literati. Many of them recall overcoming initial anxieties about leaving apartment houses as a major leap of faith.

Yet most urban hanoks differ from preindustrial and pre-Korean War hanoks in many respects. First, the lifestyle that can be enjoyed in today’s urban hanoks differs from that practiced by the early literati in many ways, despite the urban hanoks’ strong association with a simpler lifestyle. For one, most urban hanoks have indoor bathrooms, separated kitchen and heating systems (as opposed to ondol which combines the two), and improved insulation. Starting in the 1970s, the old ondol system was replaced with a boiler ondol, which circulates hot water instead of hot air. This has significantly reduced the danger of carbon monoxide poisoning. At the same time, this change has had the effect of raising the level of the kitchen floor, which used to be very low to allow for the passage of hot air underneath the floor. Some new hanoks are designed to cater to the personal taste or hobbies of the prospective residents. For instance, a hanok in Bukchon named Neung So Hyun features an underground music listening hall to accommodate the favorite activity of the prospective owner (Song, 2009: 25).

Secondly, urban hanoks might not use the same materials historic hanoks used. Many urban hanoks have more interior space that can accommodate furniture. In the preindustrial times, the width of interior space was limited since the bracket structure system relies on the fixed ratio of column/beam length to the floor width, and since most timbers produced in Korea had relatively small girth and length. However, designing wider and therefore larger interior space has become possible with the import of timbers from overseas. Currently, most newly constructed hanoks make use of Douglas fir imported from Canada and the

**Figure 5. In an hanok village located in Hwasun, Jeon-nam Province, workers used pre-cutting technology to reduce construction cost. Source: Author.**
Pacific Northwest (Park, 2012). In some new hanoks that strive to set the new standard for hanoks, interior space has been enlarged to the extent of becoming a ceremonial hall. For instance, the main hall at Phoenix Springs Country Clubhouse is an example of a new hanok large enough to contain a grand piano and even an elevator (fig. 4). While importing material has made construction of hanoks relatively easy, it has generated a social controversy, especially when such imported timber was used for nationally designated cultural heritages such as Seoul’s Southern Gate. Some argue that imported timbers should not be used for historic hanoks since it changes dimension of the interior space.

Sometimes, construction methods used in urban hanoks differ from those used in preindustrial hanoks. Much academic effort has been put into reducing hanoks’ high construction cost. For example, replacing the traditional labor on the roof bracket system with pre-cut wooden members is one way to make hanoks more affordable. The pre-cut method in hanok construction is similar to prefabrication except that certain parts, such as protruding eaves, need to be carved onsite by specialized labor (Oh, 2012). Whereas relying solely on manual labor is very costly, mechanizing some part of the construction, such as cutting larger timber by machine, saves a significant portion of the cost. As wooden hanoks are top-heavy, with most of the construction cost related to the roof structure, this is very effective.

In Hwasun Hanok Village (fig. 5) of Jeon-nam Province, pre-cutting was used in construction. The average construction cost of each hanok unit was reduced by 20 percent, compared to that of hanoks built with traditional method only (Oh, 2012). Although some traditionalists argue that the mechanized process does not match the quality of the traditional labor, the integration of such methods increases the possibility of popularizing hanoks further since the most prohibitive aspect of hanoks is its cost.

In addition to urban hanoks, new experiments are taking place in rural towns of South Korea. Although urban hanoks go through experiments as well, they are less radical, since land ordinance and city regulations set the boundary. Urban hanoks, such as those in Bukchon, tend to follow design guidelines set up by city planners and policy makers who have historical precedents in mind.

On the other hand, new rural houses have more room for experimentation and innovation. New rural houses built after the 1990s emphasize personal taste and quality of living, as many of those who live in new rural houses are retirees who seek alternative lifestyles. For instance, many hwangtojip (meaning “red clay house”) are made out of red clay, the traditional building material, but the forms vary, often without any reference to the historical canons (fig. 6). The fact that many clay houses do not follow well-documented historic forms or construction methods has induced architectural scholars to theoretically place hwangtojip into a category of its own, rather than calling it a kind of hanok (Mun, 2012).

Other new rural houses opt for a more unconventional appearance by using recycled or highly experimental materials. While some may argue that they are not hanok in the conventional sense, the new rural houses can be considered hanok if the term is loosely applied, meaning both “Korean-style houses” and “houses of the Koreans.”

New rural houses emphasize the experiential aspect of hanoks more than historical stylistic accuracy. In contrast to the stylistic nonchalance, many choose to reintroduce the traditional ondol to at least one or two rooms, if not to the entire structure. While boiler ondol that circulates hot water is safer and more convenient, it is experientially different from the traditional system. For instance, many older generations of Koreans recall the smell of burning branches with fond memories, and

![Figure 6. An example of a new rural clay house with triangular-shaped window shows unconventional aesthetics. (Mun 2012).](image)

![Figure 7. A new heating technique developed recently has improved the existing ondol system significantly. (Ahn 2011).](image)
recreating that experience has become very important. In addition to the availability of woods in rural areas, a new heating technology called the revolving gŭdŭl (fig. 7) has made such a dream closer to reality. The conventional gŭdŭl, or ondol, requires daily burning of wood as hot air exits the structure very soon. The revolving gŭdŭl (fig. 7) is designed to capture hot air as long as possible, to the extent that residents only need to burn fuel every three or four days (Ahn, 2011). This invention has significantly reduced the time and energy necessary for the upkeep of traditional ondol system.

Figure 8. Geumsan House (left), located in Chungnam Province, is an example of modern Korean architecture that indirectly reminds visitors of Korean traditional houses. On the right is Dosan Seodang, the historic residential structure that inspired the architects to design Geumsan House. Source: Author

For instance, a residential structure named Geumsan House, designed by Gaon architects, shows a vague reference to hanoks without any direct incorporation of historical forms (fig. 8). In spirit, architects were inspired by Dosan Seodang, a historical study/house built for Yi Hwang, a famous Confucian scholar during the middle of the Chosun dynasty (Yim and Noh, 2011). Although Yi Hwang was a high government official, he withdrew himself from the political scene and dedicated his life to teaching in his hometown. Dosan Seodang, where the great scholar resided, is composed of only three kahn (UICollectionView: spatial units divided by columns).

In the design of Geumsan House, architects strived to portray the simple and restrained lifestyle the great scholar and philosopher led. Although it follows the same spatial organization composed of three modules, the details and construction method are anything but contemporary. It also features an outdoor shower facility, which was unthinkable during the Chosun dynasty.

Figure 9. Wamoksok, the winner of the gold prize in the 2011 Hanok Competition Entry, was named after the materials used in the project. Although tile, wood, stones are all used in hanoks, the way they are used in this project is unprecedented. (Architecture & Urban Research Institute, 2011)

Such new interpretations are reviewed positively among those who want to broaden the concept of hanoks. Tellingly, in an open design competition held by National Hanok Center, a very radical design received the gold prize in 2011. Aptly titled Wamoksok (.jpa: meaning “tile, wood, stone”), it made clever use of tiles, one of the construction materials used in historical hanoks (fig. 9). Instead of using tiles for the roof, the project proposed to use it on the wall, making it a contemporary structure with reference to the past. Instead of replicating the architectural style associated with hanoks, these contemporary interpretations create their own, while the material or the organization of space may hint at the residential environments of the bygone era.

Not everyone agrees that such new interpretations should all be considered hanoks. As the case of Wamoksok shows, architectural aesthetics are radically different depending on the way materials are used. The fact that such buildings are vaguely reminiscent of old Korean houses alone does not make them traditional, which some scholars believe is the implied, if not literally specified, characteristic of hanoks. For instance, carpenters trained in traditional bracket construction do not consider hanoks with plastic roofs as “real” hanoks. On the other hand, architects trained in contemporary institutions tend to be more open to the idea of using new materials. Such different positions regarding hanoks can be also observed among users/inhabitants. Those who prefer apartment hanoks tend to be younger than those who prefer hanoks with gudul heating system. Since having real gudul means more maintenance work,
people in the retiring age with memories of gudul, are more willing to take on the task. Yet the boundary between hanok and Korean houses is an unclear one. As the previously discussed cases illustrate, there are many different approaches of designing hanoks, and cultural assumptions do change as time progresses. Historical evidence shows that the physical forms of hanoks went through changes even before the era of industrialization. After the 1980s, there is a greater inclination to broaden the definition of hanok.

Conclusion

The four approaches this paper examined so far do not make up an exhaustive list. Yet they are the most common directions that contemporary Koreans builders have chosen to reflect hanoks' characteristics in contemporary residences.

First, apartment hanoks, which represent the far end of the spectrum in the effort to bring back hanok, show limited adaptation of hanok features, as the change was mostly concentrated in the interior finishes. Second, urban hanoks exhibited closer affinity to preindustrial hanok forms as the occupants have a greater tendency to adhere to traditional construction methods. Yet urban hanoks differed from preindustrial hanoks with changes in construction materials such as imported timber from foreign countries. Although residents of urban hanoks preferred a simpler lifestyle, they did not give up modern conveniences such as indoor bathrooms and kitchens. In certain instances, urban hanoks were custom designed to accommodate hobbies such as listening to classical music. On the other hand, rural experimentations emphasized experiential aspects of hanoks such as using the traditional ondol despite the fact that the old method posed a more inconvenient lifestyle. Interestingly, rural hanoks show less concern for historically accurate architectural style. In both urban hanoks and rural experimental houses, significant efforts were put into lowering the construction costs, even to the extent of compromising traditional construction methods. Finally, contemporary houses designed by architects have shown a tendency to invoke hanoks by indirectly referring to hanoks' organization of spaces. Despite the presence of different attributes that distinguish the four approaches, these distinctions are far from clearly demarcated. Some overlaps or commonalities can be found between urban hanoks and rural experimental houses, as well as between rural experiments and contemporary reinterpretations.

The history of hanoks, filled with divergences and continuous expansions, suggests that the term has more of an anthropological orientation than an architectural one. Thus, a more fruitful approach may be developing a practical set of criteria under which a given residential structure can be evaluated. The definition of hanok should be inclusive enough to allow new experiments with materials and construction methods. Instead of limiting experiments to hanoks' surfaces and decorative elements, more substantial characteristics, such as open courtyards and a lower floor area ratio, should also be part of new design approaches. While wide variations in hanoks may render such a task formidable, it is not an impossible feat, especially if the inhabitants' views can be reflected along with the opinions of experts. Until then the problem of defining hanoks' scope remains unresolved.

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**Housing Poverty in Post-reform Shanghai: Profiles in 2010 and Decompositions**

Yina Zhang, Jie Chen

**Abstract**

Using the latest census data (2010), this paper investigates housing poverty conditions in Shanghai, the largest city in China. The data shows that a large fraction of Shanghai households are still living in excessively overcrowded housing. Meanwhile, the incidence ratio of housing poverty among migrants is more than five times than among natives. In particular, 45% of rural migrant households were living in housing poverty. Poverty decomposition analysis shows that approximately 70% of total housing poverty in Shanghai is attributable to rural migrants. Our finding is supported by estimating the multidimensional poverty index (MPI). The findings in this paper have significant implications to general housing policy making in urban China.

**Keywords:** Housing Poverty, Poverty Decomposition, Housing Policy, Shanghai.

**Introduction**

Over the last two decades, China has experienced drastic transformation of its housing system. Before 1998, housing in the urban area was considered welfare to be provided by the state (Wu 1996). After the radical reform in 1998, the welfare housing system was completely abolished and since then, nearly all Chinese urban households must solve their housing needs through the market (Wang and Murie 2011). Naturally, it is interesting to investigate whether the rapid growth in urban China of the neoliberal housing market - where housing is dominated by the market with little government intervention - has alleviated or aggravated housing poverty conditions.

Since 2000, China has been experiencing unprecedented rapid urbanization. Every year, more than 20 million people are moving from rural to urban areas, and the urbanization rate is growing more than 1% per year (World Bank and DRC 2012). Meanwhile, migrants are facing hardship in every aspect of life, and finding affordable housing is the major challenge for the so-called “new urban poor” (Chen et al. 2010). In particular, most rural and urban migrants are excluded from the formal housing market and are concentrated in “urban villages” (Zheng et al. 2009). In 2011, the National Population and Family Planning Commission of PR China (PFPC) estimated that only 37% of rural-urban migrants are accommodated by the private rental market, and the rest mainly live in the over-crowded dorms or shanty sheds at their work places (PFPC 2012).

A significant amount of literature investigates different dimensions of poverty in urban China (Wu 2004). However, only a limited number of that literature has investigated the housing dimension of Chinese urban poverty (Wang 2000; Sato 2006). In the literature, housing poverty can be seen as both a consequence and a source of poverty (Galster 1987). Furthermore, the literature focuses mainly on the reform period or early post-reform period, and nearly no studies offer recent situations of housing conditions in urban China. Meanwhile, the existing literature typically examines housing poverty among one or a few specific disadvantaged groups (Sato 2006; Zheng et al. 2009), but little is known about the distribution of housing poverty for the whole urban population. This paper aims to provide an updated assessment of housing poverty in Shanghai by utilizing the data from the sixth census (2010). The high quality of the census data helps to ensure the credibility of findings in this paper. The remaining sections of this paper are organized as follows: we first explain the methodology used in this paper; later, we provide a brief background introduction of the housing sector in Shanghai; then, we examine the general profile of housing distribution in Shanghai; we then analyze housing poverty with a series of FGT poverty indexes, followed with decomposition analysis by subgroups and multidimensional poverty indexes; and finally, we conclude this paper with a summary of key findings and major policy implications.

**Methodology: Measurements of Housing Poverty Poverty Index**

We apply a poverty index that provides sufficient information on the prevalence as well as the distribution of housing-poor families. Sen (1976) reported that desirable poverty measures should not violate some basic axioms, for example, the monotonicity axiom and the transfer axiom. The Foster, Greer and Thorbecke (FGT) class poverty index is a poverty measure that satisfies the axioms mentioned above; it is also decomposable (Foster et al. 1984). For a population with size N, and each individual is associated with interested values $y_i$ $(i=1$ to N) that are indexed in non-decreasing order $(y_1≤y_2≤⋯≤y_N)$, and z is the agreed upon poverty line, the Foster, Greer and Thorbecke (FGT) poverty index is defined as:

**Equation 1**

$$P_l(z, α) = \frac{1}{N} \sum_{i=1}^{N} \left(\frac{y_i}{z}\right)^{α}$$
Housing Poverty in Shanghai

The purpose of this paper is to quantify the extent of housing poverty among all residents in the whole area of Shanghai.

Defining Housing Poverty: Meaning and the Poverty Line

This paper uses housing space per person as the base to measure housing poverty. We use the standard of a “housing poor” family employed by Shanghai municipal government in the mid-1990s as a reference to define this housing poverty line (MOST 1995). Furthermore, to assess the robustness of our poverty measurement and to recognize the multidimensional nature of housing poverty, we combine room per person and housing space per person to compute a multidimensional indicator of housing poverty.

The General Profile of Sample Data

Our sample data consist of 20,000 households comprising 55,169 residents. The demographic structure and the distribution of housing variables of our sample data are shown in Table 1. One can check that the distribution profile of our sample data is very close to the aggregate profile of the whole population in Shanghai as reported by the sixth census office (SSO 2012).

In China, a household is defined as a migrant family if the head of the household does not have local Hukou (registration status) (Wu 2004; Sato 2006). Chinese households can also be divided into urban residents (with non-agriculture Hukou) and rural residents (with agriculture Hukou) (Zheng et al. 2009). Thus, the population is categorized into four distinctive groups: urban natives, rural natives, urban migrants and rural migrants.

Table 1 suggests that sizeable inequality of housing conditions exists among the resident populations in Shanghai. The coefficient of variation (C.V) of housing space per person, which is the ratio of standard deviation in relation to the mean level, is as high as 0.85. In particular, there is a large gap of housing conditions between natives and migrants. While the mean housing space per person among natives is as high as 29.44 sqm, it is only 14.68 sqm for migrants. However, the inequality of housing conditions is greater among...
migrants than among natives. While the mean housing space per person among rural migrants is only 12.15 sqm, it is 25.48 sqm for migrants with (home registered) urban Hukou. This level is just slightly lower than that of urban natives, which is 27.09 sqm. The local rural residents (rural natives) are associated with the best housing conditions, with mean housing space per person as high as 45.75 sqm.

Housing Poverty (Incidence, Intensity, and Inequality)

After having a general picture of housing conditions in Shanghai, we analyze housing poverty in the subsequent section through three dimensions of poverty: incidence, intensity, and inequality.

Housing Poverty Incidence

Crowding is universally regarded as the most important dimension of housing poverty (UNDP 2000). As early as the mid-1990s, families with housing space per person less than 8 sqm have been deemed as living in extreme housing poverty (MOST 1995). Today, native families with housing space per person less than 15 sqm may apply for housing assistance from the government, provided that their income and wealth also meet the threshold requirements (SHFG, 2009). According to the census sample data, if the housing poverty line is set at 15 sqm per person, 38.9% of Shanghai residents would be classified as living in housing poverty in the year 2010. However, this poverty incidence ratio may distract our attention to those most disadvantaged. If we alternatively define 8 sqm per person as the (extreme) housing poverty line, 18.4% of whole population (7.3% of native households and 39.25% of migrants) can be classified as (extreme) housing-poorest families (cf. Table 1). As a comparison, the national proportion of households experiencing housing poverty in the whole urban area of China is 8.4% in 2010.

Rural natives are associated with a trivial incidence ratio of housing poverty (1.48%), but the rural migrant population is the group subject to the highest risk of housing poverty (incidence ratio is 45.27%). However, the difference in housing poverty incidence between urban natives and urban migrants is small: 8.13% vs. 13.50%, respectively.

We also find that the incidence ratio of housing poverty declines as the education of the household head increases, especially for migrants (cf. Table 1). The data also suggest that the industry in which the household head works does not have a marked impact, but the occupation of the household head significantly matters.

Finally, Figure 2 plots the spatial distribution of housing-poorest families in Shanghai and shows that residents in the downtown area are more likely to be subject to housing poverty than residents in the suburban area.

Table 1. Sample distribution and housing poverty measurement in Shanghai through FGIT class poverty index (2010).

<table>
<thead>
<tr>
<th>Housing poverty line = 8 sqm per person</th>
<th>Pop. share</th>
<th>Mean</th>
<th>std.dev</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>100.00%</td>
<td>24.30</td>
<td>20.76</td>
</tr>
<tr>
<td>Migrant</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>65.19%</td>
<td>29.44</td>
<td>21.16</td>
</tr>
<tr>
<td>1</td>
<td>34.81%</td>
<td>14.68</td>
<td>16.04</td>
</tr>
<tr>
<td>Hukou type</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0: Urban natives</td>
<td>56.99%</td>
<td>27.09</td>
<td>19.15</td>
</tr>
<tr>
<td>1: Rural natives</td>
<td>8.20%</td>
<td>45.75</td>
<td>26.56</td>
</tr>
<tr>
<td>2: Urban migrants</td>
<td>6.59%</td>
<td>25.48</td>
<td>21.63</td>
</tr>
<tr>
<td>3: Rural migrants</td>
<td>28.22%</td>
<td>12.15</td>
<td>13.13</td>
</tr>
</tbody>
</table>

| Education                             |            |      |         |
| Middle school and less                | 55.07%     | 22.06| 20.98   |
| High school                           | 22.09%     | 23.65| 19.96   |
| College                               | 9.69%      | 28.29| 19.78   |
| University                            | 10.65%     | 31.41| 21.10   |
| Graduate                              | 2.50%      | 33.70| 21.08   |

| Industry                              |            |      |         |
| Agriculture & Mining                  | 3.36%      | 39.36| 31.10   |
| Manufacturing & Construction          | 52.54%     | 21.65| 19.77   |
| Service, Business and Finance         | 35.12%     | 24.01| 21.01   |
| Education & Public Administration     | 8.99%      | 31.01| 19.98   |

| Occupation                            |            |      |         |
| Public Leaders and Business Managers  | 7.50%      | 35.19| 22.88   |
| Teachers, Professionals and Specialists| 13.51%    | 10.29| 19.27   |
| Public servants and Administration    | 14.51%     | 29.00| 20.77   |
| Business staff and self-employed      | 24.14%     | 21.20| 20.38   |
| Production-line Workers               | 40.34%     | 19.84| 20.38   |
The data report that the (extreme) poverty intensity index for the whole sample is 0.063 (cf. Table 1). This number could be interpreted accordingly: to eliminate (extreme) housing poverty, Shanghai needs an average increase of 0.5 sqm housing space per resident (0.063 times 8 sqm). This average increase corresponds to requiring an additional 11.6 million sqm of housing space in Shanghai (0.5 sqm times 23.02 million residents). If the housing poverty line is set at 15 sqm, the poverty intensity index is 0.1752. The implication of this calculation is that it requires 2.628 sqm per resident, or 60.49 million sqm of new housing space, to eliminate the housing poverty in Shanghai. This number is approximately three times the annual average of new housing in Shanghai, and it suggests that there is still a large opportunity for housing investment in Shanghai.

The housing poverty intensity index helps to gauge how many public resources are needed to eliminate or reduce the size of housing-poor families. For example, the housing poverty intensity index for natives less than 25 years old is 0.08; this is the highest poverty intensity index among all natives. However, the population size of this group is very small; it is only 2.39% of natives and less than 1.5% of the total population. Thus, among all native subgroups, the possibility of eliminating housing poverty is highest for natives less than 25 years old.

Decomposing Housing Poverty in Shanghai

The FGT class poverty index has the property of “decomposability,” which allows aggregate poverty to be expressed as a population-share weighted average of subgroup poverty levels; thus, “decomposability” makes it possible to assess each subgroup’s contribution to aggregate poverty (Foster et al. 1984). Therefore, we apply the decomposition analysis of poverty by subgroups following the standard poverty decomposition module described in the classic literature (Foster et al. 1984).

According to Table 1, the migrant subgroup contributes approximately 75% of total housing poverty. Meanwhile, approximately 70% of total housing poverty is attributable to rural migrants. Across the five education-defined subgroups, households where the household head achieves the lowest education contribute approximately three-quarters of the total housing poverty.

Additional Insights from the Multidimensional Housing Poverty Index

To explore further information of housing poverty in Shanghai, we construct a multidimensional housing poverty index (MPI) by accounting for both housing space per person and room number per person.
yina Zhang, Jie chenopen house international vol.40  no.1,  march 2015. Housing Poverty in Post-reform shanghai: Profiles in 2010 and decompositions.

tion and varies substantially across poverty incidence ratio is 27.5% for the whole popula-
one person is given half the weight of housing space per per-
she is deprived in all dimensions. the room number per

da person is said to be multidimensionally poor if he or

cal in determining the household’s chance of living in

dimensionality poverty index with

alkire & foster (2007). We apply the dual cutoff identifi-
current poverty incidence for rural migrants is as high as 30.1%.

this result are reasonable, as the prevalence of multidimensional housing poverty (H0) is 13.4% for the whole population, which is lower than all single-dimen-
sional housing poverty incidences (those defined on either hous-

cal poverty index found in Table 1. However, Table 1 also shows that rural migrants’ contribution on the multidimensional housing poverty index (63-64%) is slightly lower than their contribution on the single-dimen-
sional housing poverty index (69-72%). This difference is due to a considerable fraction of housing-poor rural migrants who are not deprived in the number of rooms, while housing-poor members in other subgroups are generally also poor in their number of rooms.

Table 2. The multidimensional housing poverty index
(housing poverty line=6 sqm per person, weight=1; room poverty line=0.2 sqm per person, weight=1)

| Group          | share  | H0   | M0   | M1   | M2   | EE     | Absolute | Relative (%) | M0 Absolute | Relative (%) | M1 Absolute | Relative (%) | M2 Absolute | Relative (%) |
|----------------|--------|------|------|------|------|--------|----------|-------------|------------|-------------|------------|-------------|------------|-------------|-------------|
| Urban natives  | 0.57%  | 0.074| 0.074| 0.032| 0.017| 0.042  | 31.47    | 0.042       | 31.47       | 0.042       | 31.47       | 0.009       | 30.92       |
| (std.)         | 0.04%  | 0.003| 0.003| 0.002| 0.001| 0.002  | 1.21     | 0.002       | 1.21        | 0.002       | 1.21        | 0.001       | 1.57        |
| Rural natives  | 0.82%  | 0.012| 0.012| 0.005| 0.002| 0.001  | 0.72     | 0.001       | 0.72        | 0.001       | 0.72        | 0.000       | 0.66        |
| (std.)         | 0.02%  | 0.003| 0.003| 0.001| 0.001| 0.000  | 0.00     | 0.000       | 0.00        | 0.000       | 0.00        | 0.000       | 0.20        |
| Urban migrants | 0.66%  | 0.090| 0.090| 0.036| 0.017| 0.006  | 4.44     | 0.006       | 4.44        | 0.006       | 4.44        | 0.001       | 5.65        |
| (std.)         | 0.02%  | 0.001| 0.001| 0.000| 0.000| 0.000  | 0.00     | 0.000       | 0.00        | 0.000       | 0.00        | 0.000       | 0.51        |
| Rural migrants | 0.28%  | 0.301| 0.301| 0.132| 0.070| 0.058  | 41.67    | 0.058       | 41.67       | 0.058       | 41.67       | 0.020       | 64.77       |
| (std.)         | 0.04%  | 0.007| 0.007| 0.004| 0.003| 0.002  | 1.24     | 0.002       | 1.24        | 0.002       | 1.24        | 0.001       | 1.60        |
| All            | 1.00%  | 0.134| 0.134| 0.058| 0.031| 0.124  | 100.00   | 0.124       | 100.00      | 0.124       | 100.00      | 0.031       | 100.00      |
| (std.)         | 0.06%  | 0.003| 0.003| 0.002| 0.001| 0.000  | 0.00     | 0.000       | 0.00        | 0.000       | 0.00        | 0.000       | 0.00        |

Source: the 20,000-household sample retracted from the sixth census database of Shanghai; the computation of indicators is weighted by household size.

Note: in this table, a person is defined multidimensionally poor if deprived in all dimensions.

We apply the MPI methodology developed by Alkire & Foster (2007). We apply the dual cutoff identifi-
cation of poverty with

45.27%, implying that most space-poor rural migrants

poverty is lower when the poverty criterion is stricter.

income and occupation of the household head are criti-

city China. The data show that, by 2010, the incidence

Hukou. We also observed that the education and occupation of the household head are critical in determining the household’s chance of living in adequate housing. We also examined the intensity and inequality of housing poverty in Shanghai. The analysis shows that the alleviation of significant housing poverty can be achieved by sound redistribution policy. The data also indicates that there is still a large opportunity for housing investment in Shanghai. The poverty decomposition analysis shows that approximately 70% of total housing poverty in Shanghai is attributable to rural migrants. By applying the multidimensional poverty index (MPI) where both housing space per person and room number per person are used in identifying the housing poverty threshold, we find that a significant fraction of housing-poor rural migrants are not heavily deprived in the number of rooms in their houses. This finding suggests that Chinese rural migrants seek to have considerable privacy even when their housing affordability is extremely low. The finding also indicates that Chinese

also room-poor people. A possible reason for this phenomenon is that natives normally live under the formal housing sector where it is difficult to find accommodations that are small (i.e., less expensive) and that have a sufficient number of rooms. A similar pattern is found with urban migrants, a group that also relies heavily on the formal housing sector to solve their housing needs.

The relative contributions of subgroups on the aggregate multidimensional housing poverty index are broadly consistent with the patterns of the single-dimen-
sional housing poverty index found in Table 1. However, Table 1 also shows that rural migrants’ contribution on the multidimensional housing poverty index (63-64%) is slightly lower than their contribution on the single-dimen-
sional housing poverty index (69-72%). This difference is due to a considerable fraction of housing-poor rural migrants who are not deprived in the number of rooms, while housing-poor members in other subgroups are generally also poor in their number of rooms.

Conclusions

Using the latest census data, this paper investigates housing poverty conditions in Shanghai, the largest city in China. The data show that, by 2010, the incidence ratio of housing poverty was still quite widespread in Shanghai. Furthermore, there was a large gap in the prevalence of housing poverty across households with different types of Hukou. We also observed that the education and occupation of the household head are critical in determining the household’s chance of living in adequate housing. We also examined the intensity and inequality of housing poverty in Shanghai. The analysis shows that the alleviation of significant housing poverty can be achieved by sound redistribution policy. The data also indicates that there is still a large opportunity for housing investment in Shanghai. The poverty decomposition analysis shows that approximately 70% of total housing poverty in Shanghai is attributable to rural migrants. By applying the multidimensional poverty index (MPI) where both housing space per person and room number per person are used in identifying the housing poverty threshold, we find that a significant fraction of housing-poor rural migrants are not heavily deprived in the number of rooms in their houses. This finding suggests that Chinese rural migrants seek to have considerable privacy even when their housing affordability is extremely low. The finding also indicates that Chinese
rural migrants have large flexibility to accommodate themselves in a mega city with plenty of informal housing options.

Based on these findings, we recommend several suggestions for housing policy making in urban China. First, the government should focus the most attention on migrants to eliminate housing poverty in urban areas. The urbanization process will continue to speed up in China in the next two decades (World Bank and DRC 2012); there is no way to prevent an increasing inflow of migrants into mega cities like Shanghai. However, changing the industry structure of the local economy would significantly affect the profile of incoming migrants. Second, the government should differentiate the housing needs between urban migrants and rural migrants. On average, urban migrants have a much higher economic capability to afford decent housing, and they also strongly desire a secured tenure in the formal housing sector. Third, the government should attempt to alleviate the expanding housing inequality across different occupations. For example, some forms of public housing assistance should be provided to key migrant workers who have low housing affordability but are critical for urban management and urban development. Fourth, the urban housing system should allow some room for the informal housing sector. Global experience and domestic evidence suggest that the informal housing sector is generally helpful in sheltering an expanding low-income urban population in an era of rapid urbanization.

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1. INTRODUCTION

In its rapid transformation toward modernity, Amman the capital of Jordan is experiencing a dramatic social change that has altered the population's preference and created new patterns of desirable experiences in specialized settings (cf., Saegert 1987: 100) such as entertainment hubs, shopping malls and leisure activity places. Whilst most of these settings are constructed intentionally, a few unexpectedly emerge in existing locations, which are capable of affording new functions without restructuring.

The current study focuses on those types of settings and has used the Abdoun Circle in Amman, which changes its identity from an ordinary business district in daytime to a most famous and popular leisure spot in the city at night, as its intrinsic case study. It is anticipated that the results will not only help to gain some understanding of this phenomenon in its complexity, but that they will also indicate how Ammanis have responded both psychologically and socially to such a change.

1.1 The Abdoun Circle: A Brief History.

The Abdoun Circle is a modern roundabout with no halt signs or traffic signals. It is located in the rich neighborhood of Abdoun at the interface of the privileged west and the deprived eastern sectors of Amman. The roundabout dates back to the late 1980's when there were no significant buildings around except the private "Orthodox Club". Later on, however, and over the past two decades, the roundabout has developed and acquired a new identity in the following stages:

a) The initial stage, which started in 1991 with the return of one million expatriate Jordanians from the Gulf area. Due to the resulting socio-economic change, a few business buildings were constructed around the circle to serve the newcomers as well as the more well off citizens of Amman. The new establishments, which demonstrated a mixture of commercialism and hedonism (e.g., retail shops, bank branches, and restaurants), attracted all Ammanis, not only the targeted groups.

b) The convergence stage, which extended beyond 2003; the year when thousands of wealthy Iraqi refugees settled down in West Amman and distinctly drove up the prices of the most essential commodities. Under this influence, commercial buildings of the Abdoun Circle tended to have more appealing images and more hedonic services. Accordingly, some facilities changed their businesses whilst others reorganized to fit the market or consumer needs of what was more desired and preferred.

c) The flourishing stage, which started in 2007 when the Abdoun Circle became directly connected to the elite part of the Jabal Amman district as a result of the construction of the new Abdoun Bridge which extends...
beneath the circle in the form of an underground tunnel in order to connect with the newly developed southern suburbs whilst leaving the circle intact. This planning decision demonstrated how important this space was to Amman's officialdom, and at the same time, added much to its importance in the eyes of its citizens.

d) The continued existence stage in which commercial buildings offering hedonic services both day and night surround the circle.

1.2 The Abdoun Circle: A General Description

The Abdoun Circle is located in the impressive neighborhood of Abdoun where many foreign embassies and diplomatic buildings are located alongside grand villas with neat gardens and ornamental architectural styles. The circle, whilst beautifully connecting the Northern and Southern parts of the city, also overlooks some of its poorer Eastern neighborhoods (i.e., Al-Akhdar, Al-Muhajereen, and Al-Thera) where people reside in cramped cement apartment blocks with inadequate services and very sub standard living conditions (Figure 1). Adjacent lots to the circle are either vacant or occupied by villas that appear empty from the outside. Even the nearby ‘Orthodox Club’ with its high fence and big gates feels more distant and separated than it is in reality.

The shape of the Abdoun circle layout is actually square but is perceived as a circle in comparison to the image of the old circles of the city, which remain fixed in its citizens’ memories. The side measurement of the square is 84 m, the street is 22 m wide, and the hard-landscaped core is 40 m in diameter. Sidewalks are 6 m wide on average but are used by many street cafes as an extension to their front terraces, which reduces the width, therefore, to 3 m or less at some points. The circle is not connected to the public transportation network. Off-street parking is allowed at certain times of the day, but no dropping-off or picking-up areas are provided.

The built edge of the circle is composed of 18 commercial buildings of modest size and mixed architectural styles. Services are divided into day and night businesses. Cafes, restaurants, snack stores, retail shops, and bank branches are located at street level, whilst private enterprises, beauty salons, and health clubs occupy the upper floors (Figure 2). Most shops have big advertisement signs on their roofs as well as decorated window displays, flower boxes at the front of the buildings, back entrances, and foreign names. The area is kept clean during the day, but becomes full of litter and trash at night.

1.3 The Abdoun Circle Phenomenon

During the daytime, the Abdoun Circle looks and feels like an ordinary business district with no particularly distinctive qualities. Customers also look and act as expected during their short and purposeful visits to the area. Only a few eating places are open to serve a few user groups (e.g., housewives, older people, and employees) who drop by for a cup of coffee or a light breakfast.

However, in the evenings, especially in summertime and at the weekends, the place changes dramatically and transforms itself into a crowded night-life spot. In the evenings, therefore, concentrated groups of excited people of all ages and from most social groups can be seen socializing on the terraces, relaxing outdoors, driving around in their cars, or just sitting watching the world go by. However, on special occasions like New Year’s Eve and Independence Day, groups of people might join together to celebrate en masse and this becomes the main event of the evening. Similar events take place in other urban spaces of Amman like Al-Rabia and Al-Suwetfa (all in the West part of the city), but none have acquired the reputation and the fame of the Abdoun Circle.

2. A TRANSACTIONAL WORLD VIEW FOR COMPREHENDING THE PHENOMENON

In order to comprehend the unique popularity and fame of the Abdoun Circle, it is necessary to consider it from all angles, but also as a complete entity in itself (i.e., the...
people who frequent it, their actions and their psychological processes, the physical setting, and the time of the day). Such a decision, therefore, suggests the usefulness of a transactional approach (Altman and Rogoff 1987: 24-32). According to the principles of this approach, people’s behaviour and the environmental feature elements of that place have mutual definitions, and the evidence to prove such unity of relationship is to be found in the opinions of different observers as well as in the influence of the setting’s shape (cf., Werner et al., 2002: 203-205).

3. GENERAL THINKING AROUND THIS PHENOMENON AND THE VIEWS OF DIFFERENT OBSERVERS

Ammanis see the Abdoun Circle as a unique modern space available for entertainment and leisure purposes. Their interpretations of its fame and popularity rest on the emotional appraisal of its hedonic services and its anti-traditional atmosphere. This reminds us of what Western key thinkers stated long ago on the subject of modernity in the metropolis: Charles Baudelaire’s appreciation of the crowds; Georg Simmel’s description of the mental life of the city dweller; and Walter Benjamin’s daydreaming flaneur observer (Forty 1995: 308-311). Late modernity in Amman has most of the characteristics of its subjective aspects described by Hynen (1999: 10) as an attitude toward life that is associated with new aesthetic experiences in the built environment. Ammanis nowadays find great pleasure in socializing with others in modernized places. However, this form of leisure and entertainment is found only in the Western parts of the city where people lead a modern life style and have the financial means to do so.

More information about the popularity of the Abdoun Circle was obtained by listening to the opinions of a variety of observers. Here are their views of the situation:

a) The social identity view, which focuses on the public’s desires to be part of that modern place in that elite physical context.

b) The collative properties view, which pays much attention to the distinct characteristics of the circle (i.e., novelty, complexity, intensity, congruity, and surprisingness) in comparison to those of other spaces in the city.

c) The responsive growth view, which places importance on the way the circle was developed (founders and designers did not force their ideas but worked in accordance with both the circular shape of the setting and the wishes of the inhabitants).

d) The freedom and dominance view, which appreciates the available invaluable opportunities to act freely in the setting and to observe the upper classes in action.

e) The metaphoric view, which perceives the setting as a circus or theatre of which both the actors and the audience impress each other whilst creating the social atmosphere of the place.

4 INFORMATION FROM THE LITERATURE REVIEW

Three classical theories can explain the leisure activities which take place in the Abdoun Circle. People may have a need to play or look for some excitement because they have more energy or vitality than is required for their everyday life (the surplus energy theory). Alternatively, they may participate in either high-energy and/or relaxing activities to release tension or anxiety (the catharsis theory), or to compensate for the non-achievement of goals, which are blocked for one reason or another (the compensation theory) as cited by Witt and Bishop (2009). Other motives for seeking leisure and entertainment activities may include the need for affiliation or to escape from routine.

Leisure places are expected to improve one’s mood because that is usually the main aim of any plan (Russell and Snodgrass 1987:255). However, different theorists have different claims in respect of what makes people prefer one location to another. One salient view (Russell and Snodgrass 1987:259-266) considers the emotional environmental variables of the location for that purpose. These variables are: a) the sensory experience, b) the collative properties, c) the meaning of the place, and d) the presence of other people.

Modern public spaces like squares, plazas, roundabouts, and even streets can function as leisure and entertainment places if they have the features of a social space that include a united structure of perfect size and shape, an enthusiastic amount of sensory information, good facilities, and the opportunity for social interaction activities. However, the desired sociability of any public place is measured by the amount of different social groups using the place (Rad and Bin Ngah 2013). Social spaces such as the Abdoun Circle might be perceived as a shopping and entertainment mall or
as a specialized setting of collective hedonistic services. Based on that premise, the antecedents of customer emotions would include crowd behaviour and the social atmospherics of the place (Ng 2005).

There is a vast body of study on how to activate public spaces and increase their sociability. Most of this research is focused on the amenities and the physical features of the studied spaces (Whyte 1980; Lynch 1992; Gifford 2000; Mehta 2007). Only a few have dealt with the effects of crowd identity or place identity, and even fewer have investigated the different forms of social interaction in those spaces. However, no studies on this subject currently being pursued in respect to Jordan.

5 SCOPE AND OBJECTIVES

Observers’ views and the literature reviews have supported the realization of the importance of two distinct domains of inquiry: the motivations of the users and the affective qualities of the environment.

Working from this premise, therefore, the present study has focused on the domains of the behavioural and environmental feature elements of the phenomenon as previously mentioned, and this has guided the researcher to choose the issue of ‘emotion and motives’ as the appropriate frame of reference for this study. Objectives were both exploratory and explanatory. We wanted to reveal and understand what made people choose the Abdoun Circle for their leisure activities and what triggered or motivated their behaviour whilst there. What creates the sociability of the space and what is the impact of place identity and users’ identity on that sociability. What are the learned lessons and whether or not it is possible to make a grand generalization of the phenomenon?

6. FRAME OF REFERENCE

“Emotion and motivation” was the primary frame of reference chosen for this study. Emotion links the organism to its environment in one way or another. The types of emotion appropriate to this study include that of mood, which refers to an inner subjective feeling (e.g., upset, happy, and neutral, etc.), and the affective appraisal or the judgment of something as having a certain quality that moves us (e.g., boring, interesting, and pleasant, etc.). These two issues of mood and affective appraisal can interact and affect each other and may include the dimensions of pleasure, arousal, and dominance (Russell and Snodgrass 1987: 247-251). Motivation reflects the psychological forces that cause an individual to react in certain ways in certain places under certain conditions (Oatley 1992:8). The types of motivation appropriate to this study include the hedonic like curiosity, the stimulus such as the need to explore and manipulate the environment (Malim and Birch 1998: 193), and the social which is connected to the desire for achievement, power, approval, and affiliation (Renee and Nicole 2012).

Based on the Russell and Snodgrass view (1987) on the subject of “Emotion and the Environment”, emotional bonds between people and places can develop as a result of the presence of one or more of the following variables:

a) The sensory experience (smells, sounds, lights, temperature, and motion) of the setting.

b) The collative properties (complexity, novelty, variety, congruity, and surprisingness) of and in the setting.

c) The meaning of the setting based on its tradition, associated users or events, or the values and/or beliefs it symbolizes.

d) The presence of other people in the setting.

Motivated persons in a good mood tend to behave more pro-socially and can evoke similar feelings in others and also influence their thoughts and behaviour (Rafaeli and Harel 2007). Therefore, emotion is considered an important source factor in respect of the issue of social interaction, which is the essence of all actions (Conklin 1984: 127). However, it should be noted that the tendency to interact is always influenced by the person’s physical and psychological environment (Bechtel 2000: 62), and that different perspectives of understanding social interaction may focus on the resultant behaviour of the participants or on the impressions they create for their audiences (Conklin 1984: 127).

7 METHODS AND PROCEDURES

The implementation of the study adopted the steps proposed by Werner et al. (2002: 210-217) for conducting a transactional research. Methods and procedures were as follows:

7.1 Direct Observation for Recording the
Aspects' Elements

The observers were 20 students chosen from an environmental psychology class at Petra University in Amman. They were divided into two groups (a morning group operating from 10:12 am, and night-time group operating from 8-10 pm). The groups acted as marginal participants on randomly selected days in the summer of 2012. Environmental feature elements in observation included the semi-fixed, which can change and shift emphasis such as the sensory experience and animate objects, and the non-fixed or the human elements such as the facial expressions and body gestures (classification by Rapoport 1990: 87-101). As for the behavioural elements in observation, they included the identity of the actors, actions, important others, and the socio-cultural rules of behaving (identification by Zeisel 1981:123-136). Two pre-coded checklists were used for recording these observations (Figures 4 and 5).

7.2 Arranging Data for Eliciting the Changes Which Take Place Between Day and Night

The data were summarized and arranged in a format of two columns (M and N) corresponding to the two periods specified (Table 1). The completed table demonstrated how the observed elements (both the environmental and the behavioural) differed at night.

7.3 Clustering “N” Information to Find the Mutual Definitions Between Aspects

Information in column "N" was re-arranged into two sets of clustered units of a higher level of abstraction (one stood for the environmental elements and one for the behavioural). Then, and by focusing on each aspect in turn and focusing on the pairing of the two aspects, it was possible to identify the different combinations that mutually defined the two aspects and created the sense of a natural fit between them. The identified definitions were pleasantness, crowdedness, complexity, variety, novelty, and dominance (Figure 6).

7.4 Drawing on Multiple Opinions to Infer the Benefits of the Found Mutual Definitions

Similar to a grounded theory approach, we drew on multiple perspectives and listened to different opinions in order to collect new information that could help identify the benefits of the found mutual definitions between aspects. A saturated sample of available respondents led to the following information:

7.4.1 The benefit of new aesthetics derived from the definitions of complexity, novelty, and crowdedness. People reported that they go to the Abdoun Circle to enjoy watching the continuously moving traffic and the concentrations of other diverse groups socializing on the terraces or hanging out in public, which is quite unusual in the Jordanian context and culture.

7.4.2 The benefit of modernity derived from the definitions of novelty, variety, and dominance. The collected information from the held interviews indicated that many people visit the Abdoun Circle because of its different
watch the other users in the other two rings
the direction of the users' attractions. Users in each ring
make the overall shape of the Abdoun Circle. Arrows show
Figure 6: Diagram showing the three concentric rings that
make the overall shape of the Abdoun Circle. Arrows show
the direction of the users' attractions. Users in each ring
watch the other users in the other two rings
atmosphere and the variety of services imported from the
West, which enables them to act confidently and domi-
nantly.

7.4.3 The benefit of freedom based on the definition of
dominance, which was clearly reflected in many of the
respondents' answers that focused on the enjoyment
derived from going against the conservative traditions
when acting in the setting (e.g., playing in public and
hanging out with one's girlfriend).

7.4.4 The benefit of the gathering opportunity supported
by the definitions of pleasantness, crowdedness, and
dominance. This benefit was inferred from quotations
that explain how the pleasant sensory experience of the
place alongside the concentrated presence of excited
users together make people feel closer to each other
and more capable of controlling things around them.

7.5 Interviewing to Discover Hidden Benefits or
Problems
Open-ended question type interviews were conducted
with two user groups of the Abdoun Circle (customers
and workers) in order to permit them to express any of
their thoughts that might help reveal any additional ben-
efits of such a setting.

The first interview group was a snowball sample
of 108 participants (males and females between the
ages of 16 and 36 and from different social classes) who
often visited the Abdoun Circle. We asked those partici-
pants what they liked most and least about the setting,
and for any suggestions, they might have. Their respons-
se revealed that:
a) What is most liked is the space's accessibility and con-
ectedness; its modernity and its prestigious status, as
well as its vitality as a result of the intense and continu-
ous traffic movement and the social interactions taking
place.
b) What is least liked is the presence of beggars, street
vendors, children under 10, users from lower social
classes, and teenagers who come alone and often
behave badly in the setting.
c) Suggestions referred to the need for initiating entry
tolls to the location, refusing entry to beggars and street
vendors, more control of traffic and bad behavior, and
the provision of adequate car parking facilities nearby.

The second interview group was comprised of
six persons who were employees at eating places in the
location. We asked them about the type of customers
they had and the main problems of the area from their
perspective. Their responses to these questions informed
us that:
a) Customers are mainly from the middle social class
who live out with of the Abdoun district. This is apparent-
ly evident from the way they behave, dress, and talk.
Upper-class people used to use the place but are less
evident there now. Their customers now include families,
friends, children, and some tourists. However, young
peer group friends comprise the majority of the cus-
tomers. Members of the nearby elite "Orthodox Club"
never come to the circle.
b) The main problem is the presence of beggars, street
vendors, and badly behaved teenagers.

The information collected from interviewing the two
groups pointed to a high level of sociability based on the
concentrated presence of members from the middle and
lower social classes but not from the upper classes,
which is a problematic issue to be solved.

7.6 Focus Group for Applying the Formal Cause
to Explain the Sociability of the Setting
Applying the formal cause to explain the sociability of the
Abdoun circle required examination of its spatial and
perceptual relationships. For this reason, six trained
observers gathered informally in a structured session
under the guidance of the researcher and concluded
that:

The Abdoun Circle consists of 3 concentric
rings: the built edge and the terraces (A), the street with
its sidewalks (B), and the core ground (C). Each of these
rings is connected to the other two rings, and each has
a social geometry of its own (see Unwin 1998: 113-
115). The setting's overall dimensions are similar to
those of the historical public squares, and the diagonal
distances allow people in one ring to see the other peo-
ple in the other two rings. This united structure of the
whole setting looks even more united and focused at
night as it fills up with people, cars, and sensory elements
(smells, sounds, and lights). Another reason for this visu-
al illusion is the strong contrast between the illuminated
silhouette of the built edge against the dark sky.

This state of visual connectedness and fusion
between the location's various structures increases peo-
ple's confidence in themselves, makes them feel as if they
have common interests, and encourages them to inter-
act with each other according to their desires and
motives. In this respect, families and friends socializing or
relaxing around the ring (A) seem to enjoy watching the
movement of young people in their cars round the ring
(B). Moreover, those in ring (B) try to impress the others
in both (A) and (C), whilst participants in (C) either act in
a way which will attract the attention of those in (A) and
or enjoy watching the activities in both (B) and (A) (see Figure 6).

8 RESULTS AND CONCLUDING REMARKS

This transactionally-oriented research indicated that seeing and experiencing the Abdoun Circle as a desirable leisure spot depended on the affective appraisal of its new aesthetics, modern reflections, socializing opportunities, free atmosphere, and the social and democratic benefits that have evolved from the mutual definitions between its environmental features and behavioural elements as well as from its unique morphology. Those benefits constitute one complete structure of inseparable parts. Without the new aesthetics of the setting's features, especially those of a stimulating nature, the participants will have nothing to excite them and consequently promote their actions and interactions. Without the sense of freedom and democracy, users will feel uncomfortable and at odds with each other, especially if some of the other users are from a different social class.

The results shown here embody what most Ammani value and desire to experience in their environment today. Members from the middle social class who make up the majority of the Abdoun Circle users, approach the setting to feel important whilst enjoying interaction with others or relaxing freely in the modern atmosphere. Those from the lower social class use the space to achieve a more positive social identity, learn new things, and feel equal to other users. However, and no matter what their motives are, those users in their relationships to the setting reflect two paradigms of behavior-environment transactions: The opportunity structure through which people seek options for pleasurable experiences, and the socio-cultural structure through which they create shared meanings in their environments (Saegert and Winkle 1990). Actions performed in order to fulfill these two goals (i.e., socializing, relaxing, looking around, and driving around in cars) enlivened the whole area as a result of the social events they created and the playful activities they initiated. This stands in opposition to Whyte's (1980) notion of using amenities for the purpose of increasing the sociability level in public spaces, but in agreement with Lennard's (1984) assertion that shared activities is what increases amenities for the purpose of increasing the sociability level in public spaces, but in agreement with Lennard's (1984) assertion that shared activities is what increases.

The Abdoun Circle look at and feel towards each other in location, shape, and size would not only increase their sociability, but also can help unite their users and sustain the human relationships between them.

Therefore, this paper concludes that the Abdoun Circle is an excellent role model for the development of other similar much needed public spaces throughout Amman, and that the development of these other similar models should be encouraged in order to enhance the overall societal transition towards modernity in Jordan.

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BREAKING BOUNDARIES AS THE CLUE FOR POST ECOLOGICAL ARCHITECTURE.

María Jesús González Díaz, Justo García Navarro

Abstract

Ecology shows us not only environmental problems; it shows that we need a new balance and harmony between individuals, beings, communities and all of Nature. We need a new contract with Nature (SERRES, 1991) and new Ethics (GUATTARI, 1990) for our lives. What is therefore new in Architecture? The environmental ethics have given us a universal and supra-generational vision of the management of our Nature and, as a consequence, a new way to construct our “second” nature. What is essential for this new architecture that the new ethics demand?

Exploring this subject, the paper firstly analyzes how the relationship between ethics and architecture has been described by other authors. Secondly, how the relationship between mainstream architecture and ecology is evolving, from technical matters to social and more complex issues, to work towards ethics. Finally, the convergence between them (Ethics, Architecture and Nature) could provide the clues to understand the ends and means of eco-architecture.

As a result of this analysis, we interpret that there are underlying keys in the post-eco-architecture. These summarize in new roles for the “locus” and the break of habitual limits of architecture, which have been replaced for new ones. There are no limits of scale: macro-structures such as mega-cities, as well as micro-organism are involved in the architectural process. The client of our construction is universal: we do not build only for our client, we must think about all beings, including animals since we know how our decisions may inflict damage to biodiversity. The site has no boundaries: we know how any local actions can have an effect in remote locations of the planet, since natural phenomena are interconnected. There is also no time limit: we must build now, but we must think about future generations.

Keywords: Ecology, Architecture, Ethics, Nature, Sustainability.

1. INTRODUCTION: ETHICS AND ARCHITECTURE

In this dissertation, the subject is not the architect or the professional practice, but architecture as a discipline or art. From this point of view, Ethics are an internal part of architecture (LAGUEUX, 2004), since architecture is thought, produces feelings and has a strong influence on people’s lives (COLLIER, 2006). Why, for whom, for what, where and how a building or space is built are ethical questions. Centuries ago, Hegel (HEGEL 2001) interpreted history and the evolution of architecture via the link between ends and means: the integrity, dependence and hierarchy of these two elements have determined how architecture has developed in each historical period. To name a few kinds of architecture, it could be commemorative, representative, theist, bourgeois, domestic and utilitarian. Others concentrate on pure form or style as representation and make this a moral problem, like Pugin believed (COLLINS, 1970). Viollet le Duc, Ruskin, Morris and the utopianists attributed moral properties to architecture. Ledoux’s architecture, for instance, was defined as revolutionary both because of its form and the ideals in which it was inspired. There is architecture that uses its power for false ends, either to benefit an authoritative power or as a weapon of oppression. There is social architecture that looks to offer the best understanding and available techniques in order to improve people’s lives.

In this way, we can judge the morality of each architectural position. Of course, the moral purposes depend of each historical age, since the morals change with each period. Making right choices involves tradeoffs between multiple values, among them the commitment to human justice, and the love for nature in many practices that combine dynamics of biological and cultural evolution, which implies the sense of the time. (KWIATKOWSKA, 2001). In this scenario, what type of architecture suits the time we are living now?

The relationship between ends and means in architecture produces strong controversy in several ways. What happens if the object is useful and beautiful, but made for an oppressive ideology? There is architecture in the margins; architecture on the edge of the right means and goals. How can we evaluate the architecture of refugee camps, jails, bunkers, buildings to resist an atomic blast, or a satrap’s house? (MONTEYNE, 2004) Can drawings of architecture be considered proper architecture?; that which is only used to represent ideas or forms, but not intended for use? On the other hand, we must distinguish the ethics of architecture from “ethicism”: this would mean interchanging the ethical valuation of the object, in this case architecture, for that of its actors (GAUT, 1998). In this way, we are not analyzing the behavior of the architects or the professional practice, but the architecture as art and discipline. And how to consider architecture that is made exclusively for the glory of the author, or for a purely commercial purpose?
Those are the limits where the relationship between ethics and architecture is unclear or controversial. But the main matters and concerns of architecture lay in the same society to which it serves. Is architecture that ignores society’s situation or concerns proper? What is the society that we architects must serve like? Why, for whom, for what, where and how make today architecture... How do we answer the questions today? To study this point we must first think about the concerns of our time. That is not a simple question, and every architect can ask themselves in their daily professional lives.

2. NATURE AND ARCHITECTURE: AN ETERNAL DISCUSSION

This is the scenario where our new concept of relationship with Nature breaks. A primitive idea is that human beings “defended themselves” from the adversities of Nature, creating shelter, from which architecture arises. From this primitive metaphor to nowadays, architecture has developed a long way. From another point of view, Nature has also been present in our initial architectural structures as a symbolic source of inspiration. Summerson (SUMMERSON 1963) argues that the beauty of classic orders was based on anthropomorphism (human nature). Vegetable elements were present in decoration and in organization, gardens or recreational spaces. At the same time that the knowledge of the human faculties grew, the architecture underwent major changes and so did references of Nature (for example, optics changed the sense of perspective, and thus the representation and the architecture itself).

Nature was not a matter to be discussed until the Enlightenment. The development and appearance of the sciences (Linnaeus, Darwin, Malthus) made us discover Nature from another point of view. A rupture occurred with the Industrial Revolution and its effects. The polarization between natural and artificial world broke and the contrast between city and country (Culture and Nature) as opposing elements were made evident. Since the Industrial Revolution, intellectuals, writers and philosophers started to take an interest in the Earth as an agent to be respected, as “Mother Earth” whose shelter is essential to us. Some expressed it directly, like Thoreau, Huxley, and Whitman, while others did so through a philosophy of non-violence, like Gandhi and Tolstoi. Movements and philosophies declared as ethical and based on human perception. Van der Laan hopes to measure and apply parameters to Nature from the perspective of the universality of the current thought.

According to Serres (SERRES 1990), non-violence must be practiced not only between human beings, but also with the environment. To violate the world in which we live would be a self-injuring behaviour of our species. Guattari (GUATTARI 1989) analyses that the change we need must be made in our relationship with nature, in our own dealings between human beings (social eco-sophy), and within ourselves (mental eco-sophy). Those are ethical concerns for citizens in normal life and for professional’s activities also. What is certain is that those eco-ethical concerns are one of the specific characteristics of our era. Slobodijuk (SLOTERDIJK 2005) adds others, such as the structures of globalization, information and communication media. In that way, those strong characteristics must deeply transform the architecture of the current times. Could architecture that denies or ignores environmental concerns be honest?

There have been architects who delved in the relationship with Nature, even though they were seldom referring to it explicitly: Wright, Le Corbusier, Rudolf Schindler, Neutra, the Saarinen, Gunnar Asplund, Alvar Aalto, Arne Jacobsen, as well as Gropius, Eileen Gray, van der Rohe, Tessenow or Utzon. Some aspects included in current environmental issues were already germinating much earlier. 20th century’s and the Modern Movement’s contributions are still to be evaluated from the perspective of the universality of the current thought.

Levine (LEVINE et al 2004) considers that many of the theories of the Modern Movement are essentially ethical. Architecture which looks harmony between man and the environment sometimes has been made by unknown ways. Samuel (SAMUEL 1999) points that Le Corbusier wanted to emphasize the links between his more spiritual ideas and the systems and patterns of nature, and how the philosophy of Teilhard de Chardin provided him an excellent inspiration.

We need a new interpretation of the Congrès international d’Architecture Moderne (CIAM), its relation with nature and its work towards a social kind of architecture; its interest on industrialized techniques to place the era’s “inventions” at everybody’s disposal; the relationship between buildings and green spaces; the availability of free space; the principles of sunlight and hygiene, interior functionality; the installation’s consideration and construction techniques. Universal concerns and topics like industrialization and prefabrication were already considered by architects and engineers such as Moshe Safdie, Chermayeff, John Morris Dixon, Buckminster Fuller, Strandlund and Neutra.

In this connection within us and Nature is important to point the thoughts of the architect Dom Hans van der Laan (VAN DER LAAN 2005) According to him, architecture complements nature. Architecture is a reconciling agent that facilitates man’s subsistence. The words ‘ecology’ or ‘environment’ never entered into his vocabulary, logically, because of the times he lived in (he was born in 1904 and died in 1991). The plastic number theory embraced by Van der Laan is based on a development of mathematical ratios between three dimensional spaces obtained from observing nature. Van der Laan hopes to measure and apply parameters to natural laws from an intellectual point of view, via the perception of our senses. (PADOVAN 1994) His approach to Nature is abstract, theoretical, intellectualized and based on human perception. Van der Laan is not just a theoretical referent; his work also provides a practical and architectonic reference. His work coincides with many of the postulates in ‘green’ architecture. (Fig. 1)

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Levine (LEVINE et al 2004) considers that many of the theories of the Modern Movement are essentially ethical. Architecture which looks harmony between man and the environment sometimes has been made by unknown ways. Samuel (SAMUEL 1999) points that Le Corbusier wanted to emphasize the links between his more spiritual ideas and the systems and patterns of nature, and how the philosophy of Teilhard de Chardin provided him an excellent inspiration.

We need a new interpretation of the Congrès International d’Architecture Moderne (CIAM), its relation with nature and its work towards a social kind of architecture; its interest on industrialized techniques to place the era’s “inventions” at everybody’s disposal; the relationship between buildings and green spaces; the availability of free space; the principles of sunlight and hygiene, interior functionality; the installation’s consideration and construction techniques. Universal concerns and topics like industrialization and prefabrication were already considered by architects and engineers such as Moshe Safdie, Chermayeff, John Morris Dixon, Buckminster Fuller, Strandlund and Neutra.

In this connection within us and Nature is important to point the thoughts of the architect Dom Hans van der Laan (VAN DER LAAN 2005) According to him, architecture complements nature. Architecture is a reconciling agent that facilitates man’s subsistence. The words ‘ecology’ or ‘environment’ never entered into his vocabulary, logically, because of the times he lived in (he was born in 1904 and died in 1991). The plastic number theory embraced by Van der Laan is based on a development of mathematical ratios between three dimensional spaces obtained from observing nature. Van der Laan hopes to measure and apply parameters to natural laws from an intellectual point of view, via the perception of our senses. (PADOVAN 1994) His approach to Nature is abstract, theoretical, intellectualized and based on human perception. Van der Laan is not just a theoretical referent; his work also provides a practical and architectonic reference. His work coincides with many of the postulates in ‘green’ architecture. (Fig. 1)
There were experiments about energy self-sufficiency and autonomy in the USA in the seventies by Bauer, Metz or the Vales. Peder Anker (ANKER, 2005) suggests that the space ecology has been of significant importance for emergence of much of the ecological designs of the 1970s and beyond, in terms of life within space cabins enabled the emergence of an ecological ethic for humans modeled on the scientifically manageable astronaut. But nowadays we cannot accept the social isolation as a solution. Social participation was a source of formal study and investigation in projects from the seventies in Europe, since the implication of its users was considered as a fundamental factor in projects by Team X, Allison y Peter Smithson, van Eyck, Ralph Erskine, Habraken, Lucien Kroll or Yona Friedman’s structures. The incorporation of universal concepts began here (ages, genders, particularities, disabilities, habits and religions). There is a path of discourse of diversity from then until now, and these concerns are very important in current sustainable architecture. Therefore what is new? What is different from other times?

We often look towards vernacular architecture as a model because of its universality, economy, utility and adaptability to the environment. The vernacular was architecture for every people and affordable for everyone with an efficient use of the strictly needed resources, which made it ethically accurate. But a current “vernacular” architecture requires a coherence amongst the ends and means, which includes current information, culture, globalization and technology. Otherwise it would not be that of an existing people, but of prior peoples and cultures. Latest technology, knowledge and art must be put on service of all people. Owen and Dovey (OWEN, DOVEY 2008) say that the expansive definition which includes social and cultural concerns within the environmental realm, more readily accommodates a definition of sustainability on architecture that breaches the art/science dichotomy.

After the dissemination of studies on climate change and especially the growing awareness of environmental protection, many initiatives have appeared with a wide array of names for all that eco-geo-bio. Names such as green, ecological bio-climatic, sustainable, bio-construction, etc., have been commonly applied (eco-neighboorhoods, eco-towns, bio-climatic cities, etc.). (Fig. 2). These are adopted by performances made with very different criteria in very different situations, even with an opposing social content, and with sometimes nonsensical formal criteria. Since the last twenty years we have had some different logics with “eco” as a reaction. There are movements and searches, technological investigations and a variety of attitudes. Guy and Farmer (GUY and FARMER 2001) classified six eco-tendencies in 2001 relative to the emphasis in specific aspects: technology, eco-centric, eco-aesthetic, eco-cultural, eco-medical, and eco-social. At that time, in 2001, the eco world was presented as a specific and isolated section from the rest of the world, as an alternative technological appendix, or even as a subsidiary element. Thirteen years after, some of this eco-logics have disappeared, and other have converged in common items of the eco language. Some items have become conventional, officialised and belong to the formal world. Issues such as health and well-being, energy efficiency, renewable energies, internal and external air quality, transport, water, waste, organic soil, pollution, and use of resources are included in the paradigm of environmentally sensible architecture and in the current one also. New tools, such as LEED, BREAM or VERDE (GONZÁLEZ DÍAZ, 2013) come to assess sustainability in parameters. Those items lay under the umbrella of “cultural, environmental, economical and social” parts of sustainability. But the underlying concepts and concerns are not new, their germinal seeds were planted decades (maybe centuries) ago. Nevertheless, changes and transformation are needed. In Habraken’s words (HABRAKEN, 2006), for the first time in human history, everyday’s environment was not to be taken for granted. It became a problem to be solved, and architects (and architecture as an art-expression) would provide the answer.

3. NEW KEYS FOR THE POST-ECOLOGICAL ARCHITECTURE

We live as a species via a physical support: the planet, which is largely modified by human activity. An ethical
and practical reason demands us to change this misuse of the Nature we live in, and the eco-ethic can address the answer to this challenge. The knowledge related to ecology show us to interpret our planet as a whole, and the Architecture has reacted to this new context. From the current scenario and from the normal evolution and convergence of these architectural eco-logics we can observe some common concerns, specially form the point of view of ends and means, which support the ethical concerns. As a result of this analysis, we interpret that there are underlying keys in the post-eco-architecture, whose main signs listed below.

3.1. THE “LOCUS” IN THE POST-ECOLOGICAL ARCHITECTURE

We can focus on the “locus” to analyze the kind of architecture we must produce. Until now, the place in which we placed our buildings was a proper place and had limits and dimensions. Since the ecological ethic, the “locus” in the architecture has a different significance. The “locus” nowadays presents different notions about the dimensions of site, scale, time. Also the new eco-ethics modify who the beneficiary of the work. We attempt to explain that.

The site, the physical and specific space where the building is, must be studied and prepared for new requisites. Reducing energy is a new imperative. We tend to demand the maximum possible amount of autonomy for a building. The objective is reducing demand and to be “zero energy building”: that refers to a high energy performance building of which annual primary energy consumption is covered to a very significant extent by energy from renewable sources, including energy from renewable sources produced on-site or nearby. (AELENEI et all, 2013). The building must obtain from the sun, the geothermal proprieties of soil, or underground water all the energy it needs. This way, there is a new physical requirement for the soil, added to the conventional ones of foundation or of the building. There is a new physical requirement for the surroundings and surrounding atmosphere as well.

On the other hand, the building must affect the place as little as possible. It must be (almost) harmless to the natural terrain and its biodiversi-
ty, and preserve the previous natural life of the site. In an optimal hypothetical vision, the building should have been erected, used and then dismantled without leaving a trace, like human beings, closing their cycle once deceased. That suggests a specific way to build the use of particular construction materials and facilitate the deconstruction and disassembly.

Those are physical concerns for the site, but there is yet another more subjective point. Mallinson (MALLINSON 2004) raises the level of the atmospheric experience of the architecture to an ethical level Architecture must have in mind the collective feeling of a lost paradise of Nature, integrating plants into our built environments, especially in the city. Initiatives such as green roofs, or blocks where users are able to gather fruits or vegetables from roof farms contribute to this idea. This implies that the boundaries between city and country must be changed: we must “naturalize” the built environment, making the city and human surroundings greener. That is a new and a very important challenge for the locus: to obtain the maximum possibilities with the minimum harm.

3.2. NO LIMITS ABOUT SCALE

Macro-structures such as mega-cities, as well as micro-organism are involved in the new ecological focus. Designing from an eco point of view implies thinking in all scales, and working simultaneously with all of them, in a permanent optical exercise of approximation and distancing. The matters of design responsibility are very wide. It is interested in the mega-scale (cities or big living organisms with their own metabolism) and the nano-scale (micro-organisms to produce new materials or systems). Only when cities are sustainable, can buildings, which are structural elements, become sustainable (MINAMI 2001), but those materials with which we construct also have to be sustainable. It is not possible to design in one scale uniquely and to ignore the others.

Anker (ANKER 2005) claims that living in harmony with the Earth’s ecosystem became for the majority of ecological designers a question of adopting space technologies, analytical tools, and ways of living. For them, the framings of landscapes and buildings environmental ethics became an issue of trying to live like astronauts by adapting technologies such as bio-lavatories, solar cells, recycling and energy-saving devices. But we know that designing in a way that cause less exploitation of natural resources is a matter of analytical knowledge. This includes respect for the life of micro organism and from there expands to the upper scale of the metabolism of mega structures as the big cities.

At the same time, for nowadays complex task, architectural projects also attend to all the possible places. For the first time in architecture’s existence, rehabilitation of normal and existing buildings (not only those of particularly historical or artistic interest) is a very important matter. Adaptation of the built environment which already exists, to complete needs, minimal programs, partial needs, residual, marginal, or vacant urban plots are in the architectural agenda and catch the interest of the architectural programs. Professional architectural firms, magazines, awards, competitions of
the conventional dissemination world of architecture take the attention for minimal necessities and everyday constrain and not only interest for large scale projects. Professional creativity is valued at any place where a human being needs accommodation.

### 3.3. WHO IS THE CLIENT?

The client of our construction is universal: We do not build only for our client, we must think in all beings, including animals, because we know how our decisions may inflict damage to biodiversity. The built environment plays a very important role in facilitating the everyday world we live in. But we need to know first what “we” is inside the world. We have ostensible obligation to our clients, but who are they? We must include our own biodiversity. Our buildings need to be safe and useful for everybody, and prepare architectural interventions from a more user-centered perspective. When Matteson (MATTESON 2002) asked himself “Just what are the moral obligations of the architect? To whom are they owed?” we answer that Our built environments must consider children, elderly people, people with physical disabilities and hidden disabilities (learning disabilities, attention disorders, psychological disorders, development disorders and others). Architects must change the conventional spectrum of what normal is, in order to establish the design for all context (MOSTAFA 2013) It is easy to conclude that building for people with disabilities includes the conventional “normal ones”, and not in reverse. In the same way, extending the “normal” concept needs to consider some habits of different cultures and religions that can be accessible from the design. A desirable, optimal and universal design must incorporate all the sensitivities covering all senses and lack thereof; new icons are continually increasing to represent new diversities, habits, and new ways of living and new energy systems. (Fig. 3). We are not homogeneous, and that means, according to Guy and Farmer (2006), that the future direction and success of green building strategies will inevitable rely on our abilities to engage process of negotiation, criticism and debate.

But there is yet another context, even wider. Adapting a space to inhabit it does not only affect the direct user. We know that any action has an effect on other remote places and on other human beings, due to a strongly globalised economy and the inexistent geographical limits for environmental problems. What has been done in one place has a direct relation to what occurs in another. This has an immediate practical application in how and when we must build (or demolish). In the study of architecture we include animal biodiversity amongst those affected by construction, both for large species and smaller ones. The environmental impacts analyzed in the environmental assessment tools are

![Figure 3. Geographical (left) versus Relational Proximity (right) of Advanced Producer Services Firms in the Lake Constance Region based on the intensity of network connectivity.](image-url)
the application of “think globally and act locally”; they are the connection between people that use a building and those that are going to be affected by it. They even warn of the effect that our constructive acts can affect on future generations.

3.4. THE WIDER LIMIT OF TIME

There is no time limit (we must build now, but we must be aware of the future generations). The mainstream boundaries of the architecture have been broken and have been replaced with new ones.

Cooper (COOPER 1995) identified four principles from sustainability to apply in architecture: the Participation principle (the public should participate in any process); the Equity (the finite resources on the planet should be shared); the Environment principle (we must measure the ability of the biosphere to absorb the consequences of human activity; and the Futurity principle, which reflects the quoted phrase of Bruntland Report definition about sustainability. Fuller et all (FULLER et al/ 2008) suggest that an architect (and the architecture as a discipline) can make a broad-brush assessment of whether a particular design is likely to be sustainable in those four principles using two indicators, namely ecological footprint and greenhouse gas emissions. Those last indicators imply a new point of view about the time factor.

The time factor is well incorporated into eco-architecture through two ways. One is when looking back, towards the past (the temporal load and replacement of used resources). Another is by keeping the future in mind (for when we are building and what repercussions it will have on our hypothetical descendants). The perspective suggests a line which links both. Until now, we have always built to be timeless, but there is a new concept that suggests a direct responsibility for the future from our actions. This new concept is: architecture is not eternal and the building process must end. It must close with its complete disappearance or it must foresee the continuity and complete recycling itself, but all in all it must keep in mind this new facet of time in architecture. Architecture has an expiry date; it must be foreseen and prepared for its term. All this implies that we must construct (and demolish) without leaving traces, or at least, to be reversible.

CONCLUSION

Current environmental ethical concerns are improving awareness of a new non-confrontational relationship to Nature. Only an architecture that attends to this new awareness and the knowledge that it generates is ethically proper. In order to change and adapting to the new demands of the architecture of our time, we need transform our process of design. Some of the basic items needed were already for a long time in the essence of architecture, others imply new points of view. There are symptoms and signs of this: some of the clues of this new architecture for our post-ecological architecture are emerging.

One of them is that a relevant and new role is given to the “locus”. The site, the physical and specific space where the building is, must be studied now from new requirements. A building must be built without modifying the previous situation and the original biodiversity of the site, to the extent possible. In an optimal hypotheti-cal vision, the building must be erected taken from the site all the energy and other resources that it needs, it must be used and eventually dismantled without leaving a trace, like animals do in nature, closing their cycle once deceased. This implies a new way to think the design process, breaking the conventional limits of scale, place and time in which architecture has framed it up to now, in order to establish new ones.

Why, for whom, for where and how a building or space is built are ethical questions that architecture, as a discipline, faces. We need to try to find the right answers to these questions nowadays, in the ecological era, according the environmentalist moral of our times. The architecture that we need must erase the limits of conventional borders since all aspects affecting human (and no human) beings, whatever the scale, have interest and impact in our and their lives. This requires meet simultaneously macro and micro scales. The place where the architect develops any work has no physical boundaries: we know how any local action, like our construction, can be registered in remote places of the planet since the use of natural resources and energy are interconnected and related with global environmental impacts. The habitual limits of time are also being modified, according to the principle of futurity that defines our environmental ethics. Our client, in a wide scope, is not only the immediate user; our client is also all the people, because we must to think also in all beings that inhabit the Earth, even those who do not do so yet.

As final conclusion, pressed by this environmental ethics, the development of an architecture more conscious with our relationship with Nature becomes a new utopia, since its ends and means are describing new imaginary limits of time, space, scale and place.

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Abstract
This paper aims to examine the formation of Kavaklıdere as a ‘modern’ residential district during the 1950s. Contemporary urbanization brought about changes in various regions of Ankara, among which Kavaklıdere emerged as an important location with features that defined a new stage in the development of the identity of the capital city. The construction of houses in this district from the early 1950s onwards was in accordance with new functional requirements resulting from the needs of the contemporary socio-economic context, and exemplified the relationship between architectural approaches and social developments. In line with the rapid urbanization of Ankara throughout the 1950s, daily life in Kavaklıdere was transformed, as experienced in the apartment blocks that were the newly constructed sites of modernization. The contemporary transformation of Kavaklıdere was apparently formal and spatial, with the modernist architectural approach of the period, i.e. the so-called International Style, beginning to dominate in the shaping of its changing character. Nonetheless, the transformation was not only architectural but also social: the characteristics of this part of the city were then defined by structures like these apartment blocks, which brought modernist design features, together with modern ways of living, into wider public use and appreciation. The paper discusses how the identity of Kavaklıdere as a residential district was formed in the context of the mid-twentieth century, when these new residences emerged as pioneering modernist architectural housing, the product of social change, which housed and hence facilitated the ‘modern’ lifestyle of that time.

Keywords: Modernization, Urbanization, Transformation, Housing, 1950s.

Introduction
Kavaklıdere, one of the most prestigious housing and financial districts of contemporary Ankara, used to be an open land of vineyards, and was transformed into a residential district only from the mid-twentieth century onwards. This paper aims to examine this (trans)formation, through which houses were built in ‘empty’ rural areas to turn them into valuable urban sites of modernization. The Kavaklıdere district began to acquire its residential status during the 1950s. An analysis of this process requires an initial understanding of architectural and planning developments experienced worldwide after the end of the Second World War. Modernization spread as the defining process of the post-war context, followed by population increase in urban centres where social change accompanied urbanization. The case of Turkey is exemplary of this type of transformation, and studying the capital city of Ankara will provide a ground of discussion for further evaluations of contemporary developments in a larger comparative frame.

After 1950, accelerated urbanization brought about changes in various regions of Ankara, among which Kavaklıdere emerged as an important location with features that defined a new stage in the modernization of the city. The construction of houses from the early 1950s onwards was in accordance with new functional requirements resulting from contemporary socio-economic needs, exemplifying the association between architectural approaches and social developments.

Hence, in order to evaluate the relationship between the spatial/architectural and social developments through people’s ordinary day-to-day experiences, the study undertook oral surveys1 to support and structure the framework formed by the cartographic documents (i.e. development plans/decisions and land use) and written sources (i.e. newspapers, bulletins of associations) with reference to such a general data. Semi-structured and face-to-face in-depth interviews2 were made with residents or workers in the district, chosen according to age group, gender, and educational backgrounds randomly.3 As a result, referring to the residences as well as to the open areas that the inhabitants remember to represent the changes in urban identity, the paper discusses how the rural vineyards were transformed, and how Kavaklıdere became a ‘modern’ residential district in the mid-twentieth century context of Turkey as exemplary of the post-war developments in social, urban and architectural terms.

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The Urbanization of Ankara as a ‘Modern’ City

Among various economic, demographical and social criteria to define the characteristics of urbanization, the process is generally understood with reference to cultural change as a result of population flow from rural to urban areas.4 In the case of Turkey, the process of urbanization is very significant to the understanding of transformation of the socio-spatial characteristics of the country, in which migration to cities played a major role (Keleş 1972: 8-33). Following the initial stages of ‘modernization’ from the late Ottoman to the early Republican periods in the late nineteenth and the early twentieth century, the period from the end of the Second World War until the 1980s saw a process of rapid economic, political, social and cultural change in Turkey (Tekeli 1998: 1-25). The Marshall Aid that Turkey accepted from the late 1940s onwards, its participation in the Korean War in 1951 and its becoming a member of NATO in 1953 resulted in the country’s further integration into the international economic system. The change generated crucial modifications and new discourses in terms of the formation of space in Turkey, and urbanization gained momentum in this context, defined by the processes of the transition to a multi-party system, the materialization of the liberal economy, and the shift to world markets, combined with populist policies (Ahmad 1993).

The rapid urbanization process of the post-war period also affected Ankara, which had been declared as the capital city of the Turkish Republic founded in 1923.5 Urban planning and architectural processes instantly followed to shape the city in the early Republican decades. The initial move in this direction was the establishment of the Ankara Municipality (Şehremaneti) in 1924, with the help of the previous municipal practice in the Ottoman İstanbul. Following the first development plan of Ankara, prepared by the German architect Carl Christoph Lörcher in 1924-25,6 which could not be fully implemented, a new and more comprehensive plan was prepared by another German architect, Hergann Jansen, after a competition held in 1927 (Fig. 1).7 Jansen’s plan, which was the first master plan of Ankara, defined a central axis, to be named Atatürk Boulevard. The city then began to grow around Ulus Square near the old town, with buildings being constructed along the boulevard from north to south, mainly to house the administration and other functions of the new state, and the growing population of the new capital.

As with other big cities in Turkey, migration from rural areas to Ankara became a significant problem only from the 1950s onwards.8 The city became attractive to migrants because of its better living conditions, with...
increased economic and social opportunities as well as a wider range of goods and services such as health and education. Unfortunately, Ankara was not well prepared to handle this exceptional rate of urbanization, and problems such as a housing shortage, scarcity of industrial jobs, insufficient infrastructure, squatter settlements etc. followed (Keleş 1972: 20-55). Although urbanization encouraged new models of employment, family structure, professions etc., Jansen’s plan of the 1920s became insufficient to realize these models while coping with the increasing population. Hence the attempt to control and reshape the growth of Ankara continued with the Uybadin-Yücel plan of the 1950s (Fig. 2). 9

In those years, in contrast with contemporary American cities, the rich still preferred to live in the city centre of Ankara, while the poor settled in outer zones. Hence, when the city grew, the centre could also grow horizontally and vertically to adapt to changing needs. In the early 1950s, besides Ulus, which had been formed in the earlier decades, a new city centre developed around Kızılay Square, as suggested in Jansen’s plan, “to the south along the city’s axis of prestige near the ministries and exclusively serving the more affluent groups of the population.” (Akçura 1971: 156) As a result, the city centre extended from Ulus in the north to Kızılay in the south, where commercial activities developed alongside administrative functions, especially after the construction of a new parliamentary complex here near the ministry district (Akçura 1971: 122-123). In the process of the city’s expansion towards the south, the Kavaklıdere district, located south of Kızılay, developed as a new urban sub-centre, exemplifying the changing characteristics of the period in both social and spatial terms.

From a Rural Area of Vineyards to a Residential District

The name Kavaklıdere, literally ‘the creek with poplar trees’, clearly tells of the rural characteristic of the district prior to the mid-twentieth century. The area had consisted of vineyards, and its residences had mainly been composed of vineyard houses, with a few single-family homes with gardens starting to appear in the early 1950s (Fig. 3). As the city began to grow towards Kızılay and further south at that time, the Kavaklıdere district gradually became a new urban settlement around the main axis of Özdemir Street, which would become Tunali Hilmi Avenue in the following decades.

Kavaklıdere is located to the east of Atatürk Boulevard, the main axis of the city as defined in the Jansen Plan (Fig. 4). A street can affect the formation of other streets, not only because of the functions it has but also because it “brings people together, helps build community and causes people to act and interact… Streets encourage socialization and participation of people in community. They serve locations of public expression.” (Jacobs 1961: 389) From the early years of the Republic onwards, most of the public activities of the city centre had been carried out on Atatürk Boulevard, and as the city grew towards the south in the mid-twentieth century, these activities were transferred via the boulevard to the Kavaklıdere district, especially to Tunali Hilmi Avenue with its central location and proximity to the boulevard. In this sense, the boulevard had a significant effect on the physical and social formation of Tunali Hilmi Avenue as an important central axis that would affect the changes in the characteristics of the Kavaklıdere district.

In the early 1950s, there were a few important buildings and sites in the area (Fig. 5), one of which was the Kavaklıdere Wine Factory located at the southern end of Tunali Hilmi Avenue (Fig. 6). The factory dates back to the early Republican years: the wine company, the most established and the first private producer of...
wine in Turkey, was founded in 1929 in Ankara by Cenap And, and was developed continuously over the years.10 Sevda and Cenap And developed the wine factory in later decades, producing quality wines with equipment and materials initially brought in from Europe.11 The Kavaklıdere Wine Factory, as the district’s largest and the most imposing structure of the period, not only produced wines but also left a strong impression on the memories of local residents. The fact that the area was located close to the president’s palace added to its value in the early years of the Republic. A resident of the area emphasizes that:

The Kavaklıdere Wine Factory was an important building… not just because of its being a wine factory, but at the same time, it was a special place that [the President] Atatürk used to pay a visit to in the evenings, after having a walk in Çankaya, and have a glass of wine there. Atatürk had a private room in the factory grounds.12

The residents of the area in those early decades of the Republic in the first half of the twentieth century remember the factory as an important site from their childhood, one that defined the character of the area as a rural place slowly turning into a residential area.13 Particularly in the 1950s, the factory was perhaps the most important factor in forming the character of the area, creating a genuine atmosphere both in its spatial quality, with vineyards and gardens, and by affecting the social life in Kavaklıdere. This is evident in the fact that the residents remember and describe the factory and the vineyards with great affection.14 The owners of the wine company had identified themselves with the Kavaklıdere area since the beginning, and they settled in the district, building their villas here and contributing to the transformation of the vineyards into a residential area. The home of the company’s owner, the Cenap And House, is especially significant as one of the important and pioneering examples of new housing in this region during the period (Fig. 7).

The Cenap And House was designed by the famous Turkish architect Emin Onat.15 Although constructed in 1952, the house has the features of the so-called ‘national’ architectural style of the 1940s. It is a two-storey building constructed with local materials and using masonry construction techniques, referencing Anatolian local dwellings in its use of a pitched roof, traditional window proportions and fringes.

The Cenap And House is symbolic of the Kavaklıdere district not only in its architectural details but also because of its harmony with its environment. Located between Atatürk Boulevard and Tunali Hilmi Avenue, the two most significant streets in the area, the house facilitates an understanding of how the story of the area’s transformation began. The Cenap And House stands as a symbol of the area, and marks the newly emerging urban residential character of the district in the 1950s, in contrast to the rural features of local vineyards.16

Although the Kavaklıdere district was still a calm place in the first half of the 1950s, with only a few private houses, as it was adjacent to Atatürk Boulevard, the main axis of the city, and the southern part of the city had...
now been identified as a potential site for new housing, the district developed rapidly throughout the decade. The proximity of the President’s Palace and the existence of embassies along the neighbouring boulevard, all constructed in the 1930s, affected the changing characteristics of the area.

From the late 1940s onwards, the general profile of Kavaklıdere inhabitants was formed of middle and upper-income groups who chose to live in this newly developing part of the city, away from the populated city centres of Ulus and Kızılay. As exemplified by the Cenap And House, which stood as a single yet attractive element on the transforming southern part of the boulevard, most contemporary residences were single or multiple family homes with gardens, with traditional architectural features to a certain extent. In addition to the Cenap And House, a new residential development, May 14 Houses, was constructed in the south-eastern part of the district, affecting the pace of transformation in the area (Belli and Boyacıoğlu 2007, Candon 2010).

The construction of the May 14 Houses was realized by a cooperative initiative19 founded in 1951 by a group of high-ranking bureaucrats, most of whom were parliamentarians who had recently moved to Ankara from other cities, having been elected in 1950 (Fig. 8).20 Muhittin Güreli designed and controlled the construction of the development. The complex consisted of about 160 houses, and the construction was undertaken in two stages, the first of which was completed in 1953 and the second in the late 1950s. As a whole, the houses turned the vineyard area into a housing district, creating an urban context of avenues and streets that over time have become main roads.

The first stage of the May 14 Houses has references to traditional plans and façades (Fig. 9-10). Although all of the rooms of these houses have specifically defined functions as is typical of a modernist residential arrangement, their plans incorporate a sofa, a central hall, around which other rooms are located, as

![Figure 9. May 14 Houses, first stage, plan. Source: (Belli and Boyacıoğlu 2007: 722).](image)

in traditional houses. In addition, the houses also have traditional features such as pitched roofs, and traditional window proportions and projections on facades; hence they have the historicist features of the so-called ‘national’ architectural style of the 1940s. All constructed as single family houses with gardens, the first stage of the May 14 Houses, like the Cenap And House, exemplify the initial phase of the transformation of the Kavaklıdere district in the early 1950s from a rural vineyard area to a residential district that still held the features of a suburban settlement to a certain extent.

The Formation of a ‘Modern’ Residential District

“Until the early 1960s cooperative housing settlements were built according to the pre-war garden city model, which had been introduced to Turkey by Hermann Jansen’s master plan” (Bozdoğan and Akcan 2012: 149). These one- or two-storey detached single-family houses, with pitched roofs and plans arranged around a central hall, began to be replaced towards the end of the 1950s, and the second stage of the May 14 Houses, completed in 1958 and 1959, is composed of two-storey apartments for multiple families, signifying the initial steps of a new approach to housing in Turkey. The plans of these houses no longer used traditional patterns, but corridors were now introduced as central circulation elements to bring the different functions of other rooms together. The façades of these houses also changed, presenting a simple and modernist design (Fig. 11-12).

The change could be explained with reference to the rapid increase of the population of Ankara from the early 1950s onwards, whereby some parts of the city began to develop as areas of real estate investment, gaining value as residential sites that were symbols of status.21 The Uybadin-Yücel Plan of 1957 played an important role in this process, which offered not only a homogenous pattern but also a high-density development (Yücel 1992).22 As a result, Ankara’s form continued to be compact until the 1970s and the construction of high-density apartment houses in the planned quarters of the inner city, and life in apartment blocks began to answer the need for the creation of a new and ‘mod-
The Kavaklıdere district was one of those inner-city quarters of Ankara that had the potential to develop into a higher-density investment area. The construction of multi-storey apartment blocks from the 1950s onwards was a natural outcome of the increasing population in the area, and new homes on Tunalı Hilmi Avenue and its close environs emerged as famous and luxurious high-rise residential buildings that were considered exemplary in other parts of Ankara.

Hence Kavaklıdere became a district where higher income groups settled in the 1950s, exemplifying the political and social changes that resulted in changes to the built environment. As a result of this process, new spatial formations, such as new apartment buildings, were constructed for residential purposes, and the Kavaklıdere district, especially Tunalı Hilmi Avenue, became an important residential area of Ankara in the following decades.

The construction of new apartment houses in Kavaklıdere created a new type of residential profile in the district. The new residents were mostly from the middle and upper classes, consisting of high-ranking bureaucrats and professionals such as parliamentary and university staff. The change also influenced an increase in the number of foreigners, especially Americans, living here, with the increase in the type of new apartment blocks that they preferred. They affected the very formation of the main axis of the district, i.e. Tunalı Hilmi Avenue itself, as the site of new daily experiences.23

The first important building constructed on the avenue was the University Apartments. Consisting of two blocks, these were built by a cooperative formed in 1957 by the academic staff of Ankara University. One of these blocks was built on Özdemir Street (later Tunalı Hilmi Avenue), and the other on Bestekar Street (Fig. 13).

Within a year and a half, the allocated funds had been used, but the construction of the buildings could not be completed. In accordance with bilateral agreements signed with the USA in those days, American soldiers began to come to Turkey with their families, and they needed appropriate housing. Hence, when the Americans heard that the buildings were incomplete, they proposed to complete the construction in exchange for rent-free occupation for five years. This offer was considered and accepted by the cooperative members. The Americans had the construction completed by making small changes to the structure, and they began to use the building to house unmarried soldiers. They continued to use these apartment blocks for four years (Anon. 1997, 2006).

After the completion of the building, parts such as taps, sinks and some kitchen equipment were brought from the USA. The Americans who rented the apartments

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23 In an interview by Ç. Resuloğlu (2007) (for “Nejat Ersin’s Apartment Blocks: The Role of Housing and Build and Sell Realities in Modern Architecture,” a paper prepared for the course “AH 544 Architectural History Research Studio Ankara, 1950-1980”), Nejat Ersin (1924-2010), a famous architect of the modern movement in Turkey, stated that one of the main reasons for considering Kavaklıdere as an investment district was the density of embassies located near the district. People therefore chose to buy houses here in order to rent them to embassy members who could pay higher rents.

24 The reason behind this could be the 1960 military intervention in Turkey.

25 Interview with a female resident (30.05.2010) and Isa Çapanoğlu, the head of the Kavaklıdere Association who also owns a shop on the Tunalı Hilmi Avenue (10.04.2010).

Plan.

Interview with a male resident of Kavaklıdere who lived in the University Apartment Blocks (02.05.2010).

Figure 14. Kuşulu Park, 1960s. Source: (Ankara Collectioners’ Association).

Figure 15. Hayat Apartment Block. Source: (Candan 2010).

Figure 16. Hayat Apartment Block, plan. Source: (Ankara Municipality of Çankaya Archive).

also added a water tank, a water purification unit and a hot water supply for the whole building. In 1961, a year before the termination of the contract, the Americans moved out,24 and the owners of the apartments moved in towards the end of 1961. Since all the owners of the apartments were academic staff of Ankara University, they named the block the University Apartments.

The inhabitants of the Kavaklıdere district clearly remember that during this period, there were a lot of American soldiers living in Ankara, and especially that young American soldiers used to live here.25 Staying here during the second half of the 1950s, the Americans introduced their daily activities of shopping and leisure, and provided facilities for these such as shops in the nearby Balgat area and baseball and football pitches on Özdemir Street.26 Thus, the social and urban identity of the district began to be formed.

At this time, all of the buildings in the neighbourhood were of two storeys. The University Apartment Blocks, five storeys high, were the first high-rise buildings on the avenue. A resident of the blocks describes their interiors as very large, successfully answering housing needs of the 1960s and the 1970s.

Then, my office was in the University Apartment Blocks. Only academics and members of parliament lived there. The apartments are quite large. Then, my office was in the front part of the building, and I used the back as my home. I used the lounge, two bedrooms and one part of the kitchen in the back as my living area. I divided the lounge in the front into two, and used one part of it as the waiting room.27

The University Apartment Blocks were not alone in providing changes to the Kavaklıdere district of Ankara, one of the first places where this new type of housing appeared in post-war Turkey. The new housing changed the daily experiences of the district formally as well as spatially and functionally. Daily routines were enhanced by the provision of new social and recreational facilities, among which Kavaklıdere (later Kuşulu) Park played a very significant role. The park was located on one of the main green sites proposed by the Jansen Plan (Fig. 14). The Kavaklıdere Stream slowed and formed a pond here. In 1958, a public garden was arranged around this little pond by the Municipality of Ankara (Mestçi 2007: 29). The park became part of the pedestrian landscape of Tunalı Hilmi Avenue, giving a new public characteristic to the district.28 Kuşulu Park began to function as a meeting place for the people of Ankara and, providing a public space at one edge of the Avenue, it influenced the socio-spatial configuration of the Kavaklıdere district.

The initial example of the new type of housing from the early 1950s, the Cenap And House, was strategically located at the corner of the park. The development of the part of the district further south of Tunalı Hilmi Avenue was also enhanced by the creation of a green public space here. Then followed the new types of multi-storey houses, constructed close to the park, such as the Hayat Apartment Block, which is located at the southern end of Tunalı Hilmi Avenue and across Kuşulu Park (Fig. 15). It was constructed by the Hayat Building Cooperative and designed by Emin H. Onat, one of the leading figures of twentieth century architecture in Turkey.

In the formative stages of the cooperative, there were many doctors among its members, making the name Hayat (‘life’) appropriate. The fact that the apartment block was featured on the cover of Hayat, the most popular magazine of the time, also suggests the new lifestyle embraced by its members as high-level professionals in bureaucratic positions. Another commonality among cooperative members was that they were all alumni of Ankara High School. They were also all associated with the governing Democratic Party.

Emin H. Onat planned the apartment block with two basements and nine upper floors; however, because of financial restraints, only seven floors could be built (Fig. 16). A cinema hall, a club located on the terrace, a school, a bakery, and a play area had also been proposed. Thus, the social and urban identity of the district began to be formed.
planned but could not be built for the same reason. After the death of Emin Onat in 1961, renovation plans for the building were prepared by Nejat Ersin. The two elevators that had been planned for each block were reduced to one, and the kitchen balconies were closed to enable the small original kitchens to be enlarged (Candan 2010).

The Hayat Apartment Block helped radically transform the rural scene into one that would meet the social and cultural needs of an urbanized way of life. For example, in those years, the building was famous, with the popular Med Club (Med Kulüp) located on its ground floor. The upper-class people frequented it as a club while the young people used it as a disco.30 As one inhabitant recounts:

It was a privilege to live there. It is among the first high-rise buildings in Kavaklıdere. Our neighbours were very nice people. We used to visit each other. I loved summer months the most; we had a canopy in the garden, the children used to play there.31

The İlbank Apartment Blocks provide another example. This is a similar and even larger complex located across from the Hayat Apartment Blocks, on a site very close to the southern end of Tunali Hilmi Avenue and Kavaklıdere Park. These blocks were important buildings for Ankara in general, and for the district in particular, in trying to understand the dynamics of the period and its reflections on the avenue (Fig. 17).

As remembered by the inhabitants of the district:

Today’s Iran Street [on which the blocks are located] used to be a muddy path. The Kavakl Creek was flowing beside it... There was a small wooden structure where the İlbank Blocks are located now, and the creek flowed through this structure. Moreover, there was a water wheel that could be a small mill. The area was full of greenery and trees. One day while the Prime Minister, Adnan Menderes, was passing by this place, he saw this area and liked it. He got out of his car and sat there and talked to people. At the request of the people there, Menderes ordered the authorities to design this area and make it more useful for the people. Despite the opposition of residents of this area, the İlbank Blocks were the most comfortable and the highest structure of their time.32

Designed by Fatin Uran in a contemporary modernist style, the three blocks of the complex were built in 1957 and were the highest buildings in Ankara at the time. There are six flats on each floor, symmetrically arranged, and each block has two entrances. The blocks are eight and nine storeys high. The ground floors are reserved for common use and left open, despite the objections of the residents, in order not to prevent the district’s wind and water streams. The ground floors are elevated and they are twice as high as standard floors, providing spacious entrances to the blocks (Fig. 18).33

In the words of an inhabitant of the Kavaklıdere district, the construction of such high-rise houses as the İlbank Apartment Blocks, the Hayat Apartment Block and the University Apartment Blocks was related to the increase in the number of people living in the district. Massive migration from rural areas in the mid-twentieth century intensified the urbanization process and necessitated a new city plan in Ankara to facilitate the growth of the city to the south along the Atatürk Boulevard towards Kavaklıdere:

When the number of people increased, [the area] became luxurious... [At the time] the people in Ulus [the earlier centre] moved to Kızılay [the newly emerging centre], and people like us moved to Kavaklıdere... In my opinion, this shifted the centre as well as increasing the value of Kavaklıdere.34

Conclusion

The construction of this type of multi-storey apartment blocks appears to have initiated a new phase in the identity of the Kavaklıdere district from the 1950s onwards. The transformation was formal and spatial: the mod-
ernist architecture of the period, “abstracted from specificities, [made] possible a truly ‘international style’” (Ockman 1993: 18). Exemplifying how it penetrated all corners of the world, the approach began to dominate also in the shaping of the changing environment of the district in Ankara as seen in the cases examined in this study. Nonetheless, the transformation was not only architectural but also social: in the post-war period, as modernism spread worldwide, and “the American slogan of ‘better living through technology’ was [now] a manifest destiny” (Doordan 2002: 16), the newly constructed housing blocks introduced in the district a new image and a new spatial quality together with a new middle- and upper-class lifestyle, providing features such as living rooms with fireplaces and maids’ rooms next to kitchens. Hence they exemplified the modernist approach of the period in architecture as well as in social life in general, which accepted that, “given sufficient investment in building services and maintenance, the high-rise building type can be a descent and desirable place to live.” (Doordan 2002: 160) The characteristics of this part of the city were then defined by structures like these apartment blocks, which brought into wider public use and appreciation modernist design features together with ‘modern’ ways of living.

In line with the new functional requirements of the rapidly urbanizing Ankara, daily life in Kavaklıdere was transformed through the 1950s, as exemplified by apartment blocks that were newly constructed urban sites of modernization. The identity of Kavaklıdere as a new residential district in urbanizing Ankara was formed within the context of the mid-twentieth century, when these new houses emerged as examples of pioneering modernist architecture of the post-war period, which was the product of social change, and which simultaneously housed and hence facilitated the ‘modern’ lifestyle of the time.

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The Formation of a Residential District During The 1950s

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Kazunobu Minami

Abstract

Apartment houses in Japan now face many serious problems. Japanese society is aging, resulting in 1 or 2 elderly people now living in houses built for larger households consisting of 3 or more people. This has distorted the structure of the population residing in apartments, so they do not function as district communities. To ensure the future effective utilization of our housing stock, we must tackle one fundamental challenge, namely developing methods of flexibly upgrading the existing housing stock to respond to change of the makeup of the population of regional societies and to changing life styles. Housing production and supply systems that enable residents to personally plan and decide specifications must be introduced to establish infill upgrading as an effectively functioning part of the future housing market.

Keywords: Infill Renovation, Occupancy, Sustainability, Urban Housing.

1. Introduction Present State of the Apartment House Stock

About 40% of Japan’s housing stock is apartments, and condominium apartments, which account for a large share of these, are deteriorating. It is predicted that the number of old apartments will continue to rise, and if they are not appropriately maintained, renovated or upgraded, they will be just like abandoned housing. Condominium apartments where management fees are not paid and units stand empty have already appeared. Even in condominium apartments which appear to be in sound condition from the outside, a rising number of their inhabitants are aged or live alone, gradually destroying human relationships between their residents.

Many apartment houses were constructed in the high speed economic growth period. The future of this typical form of Japanese housing is at risk. Society is aging and 1 or 2 elderly people are living in houses built for households. The structure of population residing in apartments is distorted so they do not function as district communities. If the present housing stock continues in this state, in the future, apartments will inevitably become

![Figure 1. Total Number of Dwellings and Number of Apartments](Source: Housing and Land Statistical Survey. Excerpted from the materials of Ministry of Land, Infrastructure, Transport and Tourism: Committee for the Study.)

(Notes) 1. Indicates number of occupied dwellings.
2. Figures in parenthesis show percentage of all housing
3. In 1973, includes 1 and 2 story houses.
4. In 1968, includes 1 and 2 story houses but not SRC structures.
a so-called genkai-manshon (critical mansion: real-estate term for a deteriorated condominium with a high vacancy rate and non-functioning management association) inhabited by single elderly people.

Japan faces an urgent need to upgrade the infill of this housing stock, which structurally has adequate durability and seismic resistance, in order to end the mismatch between dwellers and dwellings and restore sound apartment buildings. Studies are required not only to decide technically what kinds of upgrading to execute, but also how to create pleasant regional societies by upgrading housing. In order to renovate and recycle apartment buildings as sustainable residences where the elderly continue to live as young households take up residence, we must carry out comprehensive studies from both the soft and hard perspectives.

If we are to achieve sustainability and effective use of resources, it is impossible to continue the money-wasting custom of scrap and build of housing in short periods of time as in the past. The funds which the younger generation can use to finance housing are now limited. In order to let them obtain truly abundant living environments at reasonable cost in the centers of cities, we have to effectively use the existing housing stock. Passing on the existing housing stock to the next generation can use to finance housing are now limited. In order to let them obtain truly abundant living environments at reasonable cost in the centers of cities, we have to effectively use the existing housing stock. Passing on the existing housing stock to the next generation in appropriate form is a challenge facing our society.

2. Renovation of Existing Apartments.

In 2012, the Ministry of Land, Infrastructure, Transport and Tourism formed the Committee for the Study of Renovation of the Existing Apartment Stock in a Sustainable Society, which has gathered and announced technologies for the renovation and upgrading of condominium apartments. This committee studied five performance fields: “durability and service life”, “environmental and energy saving performance”, “seismic safety”, “disaster safety”, and “concern for the elderly”. The Study Committee also studied deterioration diagnosis, and large-scale renovation work etc., mainly for common areas of condominium apartments, including exterior walls, structural parts, and roofs.

In order to renovate apartment houses, in addition to the above, it is necessary to perform more advanced studies of the upgrading of private areas. Renovations which condominium owners carry out in their own units often include “replacing dwelling equipment”, “replacing interior finishing”, and “improving storage space” in order to satisfy their tastes, deal with deterioration, and prepare for aging (HOUSING RENOVATION PROMOTING COUNCIL 2010). The author has performed a fact-finding survey of the history of long-term occupancy of apartment houses and of infill upgrading in order to study how to upgrade existing apartments in the future and how to provide a housing stock suitable for the aged society (MINAMI, K. et al. 2007, MINAMI, K. et al. 2010). Housing developments surveyed in the past found many homes which a family consisting of a husband and wife or husband and wife and children occupied immediately after the building was first opened, but since the children grew up, have been occupied only by the elderly couple, but in addition to these, families with a variety of structures were also seen. A large quantity of Japan’s apartment house stock is defined by the nLDK units, and it is difficult for them to be adapted to present-day diverse families and individuals. The author observed cases where, regardless of restrictions of management regulations in UR (Urban Renaissance Agency) rental housing, infill upgrading was done, so residents could maximize the comfort and convenience of their apartments. Among housing built both for sale and as rental housing, almost all homes which have been in use for a long time are occupied by households whose members want this home to be their final home, and in the future, how to upgrade homes so that they can be occupied by elderly people using wheelchairs or requiring at-home nursing care will be a big challenge.

Second large-scale upgrading work has been executed at many condominium apartment houses between 25 and 30 years after they have been completed. In this period, comprehensive upgrading work involving not only exterior wall and roof waterproofing, but exterior furnishings and insulation specifications were carried out. In response to demanded specifications and required standards which have improved and changed over decades, upgrading work intended to improve functions such as finishing entranceway halls or common rooms etc. are executed as required in each period. Upgrading private areas at the same time as large-scale upgrading works is economical and rational, because it can be done with scaffolds and other temporary work. Also during the work period, residents are sometimes forced to move to temporary dwellings for a specified period because the water supply is shut off, use of stairs is restricted, and the work is noisy, and they want to have their private areas upgraded at this time. Comprehensive linked upgrading of common areas and private areas is an effective way to improve the value of an apartment house, but it cannot be stated that adequate research and development has been done concerning simultaneous execution of renovation and upgrading of common areas and private areas. Research should be carried on the best way to link large-scale renovation and upgrading work of common areas and infill upgrading work inside the dwelling units and specific upgrading methods should be established.

Examples of projects to renovate existing apartment houses and provide shared housing and other new forms of housing are the Urban Renaissance Projects of Urban Renaissance Agency, such as the Tamadaira Estate (Tamadaira no Mori), RIBIITA, and Hitsuji Real Estate. In the future, even in condominium apartment houses, it will be increasingly necessary to introduce diverse functions such as facilities to support child-raising, to support the daily lives of elderly people, and medical treatment and nursing care facilities, just the way UR has introduced a variety of housing forms. Empty apartments whose owners have vanished and cannot be contacted, empty apartments without heirs to occupy them, and so on, are steadily appearing, and management associations are struggling to deal with this problem. According to conditions, local governments will probably rent the empty apartment units to introduce new facilities. If flexible ways of use unlike past methods of use are not introduced to apartment houses built for sale by the private sector, it will be difficult for elderly residents to continue occupying them. We must study new ways of occupying apartment houses in the future aged society to, as necessary, update the present building construction related laws.

3. Upgrading Infill Led by Residents

Half a century ago, in 1961, N. John Habraken’s work,
“Supports, an Alternative to Mass Housing” was published, advocating the concept of and methods for housing production led by residents. This concept is best applied to the upgrading of apartment house infill. Whether in condominium apartment houses or rental apartment houses and so on, it is their residents who best understand upgrading needs. Forming housing production and supply systems that enable residents to personally plan and decide specifications is necessary to establish infill upgrading in sound form in the market.

It is estimated there are 5.7 million apartment units in Japan. As years pass, upgrading their infill has become a large market. It is now possible to develop systems which enable residents who can use the internet to personally design and place orders for upgrading. Specific specifications and colors for interior finishing materials are decided by checking the actual goods, so after completing a basic study on the internet, residents have to find a place where they can actually see housing equipment or building materials with their own eyes.

There is a strong need to use wood, which is a natural material, as interior finishing material, but it is rare for ordinary residents to take part in the process of selecting wood. In the past, companies distributing and processing wood materials put priority on large lot transactions between companies (B to B), but as the market shrinks, in the future, it will be possible to expand the market by digging up potential demand by establishing direct contact points with customers (B to C) through the internet. Large makers of housing equipment and building materials establish exhibition sites to show their own products, but if a facility which simultaneously displays a wide range of housing components and housing building materials which are supplied to the market by all companies was established, residents who are not experts would use them to set their own infill specifications. I think that a market for infill upgrading would be nurtured by building a system which supports residents’ decision making by integrating the internet with building material exhibition sites.

Many companies that design and construct apartment houses have related companies continue to manage the apartment houses they have constructed. These companies are, based on the trust of residents established over many years, counted on to grow as comprehensive daily life service enterprises. Some such companies have already developed technology to monitor the heartbeat or respiration of residents. Through links with medical treatment, welfare, and nursing care experts, homes are now basic centers for the management of the health of residents, and advancing these to link them to emergency life-saving systems will also be provided as services in the near future. For homes occupied by elderly people and others requiring nursing care, providing daily life support services in conjunction with infill upgrading will probably become a new business.

Figure 4 Infill Development by Stephen Kendall, a Professor at Ball State University in the U.S. (Intellectual property is owned by Infill Systems B.V., Delft, NL.)
For corporations which have had a grasp of the actual state of residents of each home, the comprehensive daily life service business, which includes crime prevention or security services adapted to the characteristics of each household, methods for checking on its members’ safety during a disaster, support for rescue and restoration, distribution of daily use food products and meals, and so on, is a growing field for which there is a strong public need.

4. Highly Sustainable Urban Housing

When you visit Großsiedlung Britz (completed 1925) in Berlin, which was designed by Bruno Taut, you will find it is still bustling with life and its exterior walls are brightly painted. Regardless of problems such as seismic performance, I feel a great gap between these and buildings which Dojunkai constructed in Japan at about the same time, but which no longer exist. What are the conditions necessary for housing to maintain and boost its value for long periods, so people can continue occupying it with satisfaction? It is necessary to comprehensively clarify [1] requirements which the initial design must ensure, [2] requirements for maintenance, and [3] requirement that modifications be approved with the intervention of residents. It can be observed that buildings and homes around the world which have survived for a long time have changed in various ways to adapt to the transformation of social needs and lifestyles over a period of many years. It can be hypothesized that one of the reasons for the short service lifetimes of housing in Japan is the lack of acceptance of upgrading.

In Japan, the Act for Promotion of Long-Life Quality Housing was enacted in June 2009, starting off full scale efforts to prolong the service life of housing. This is a product of the success of KEP (Kodan Experimental Project), CHS (Century Housing System) and other long-term technology development linking the private and public sectors. Figure 3 shows environment friendly housing especially for elderly people which was constructed in Pelgrumhof in Holland in 2001. Elderly prospective residents of this building planned the interior of its apartments. When the author visited this site, an elderly woman occupying it told me that the best thing about it was that she, who knows her own needs best of all, planned it. In Japan, considering maintenance and restoration of pipes, installing common use vertical pipes facing common areas is recommended, but in the design by Frans van der Werf, the pipe-shaft for the common use vertical pipes is placed in the center of an apartment, perhaps to increase the degree of freedom of design of the rooms supplied with water (Fig. 4). When considering extending service lifetimes, an essential condition is to change the floor plan when replacing the equipment. I think that research including overseas efforts should be done to establish a variety of design methods.

Finding out how to flexibly upgrade the existing housing stock in response to change of the makeup of the population of regional society and to changing lifestyles is the fundamental challenge facing utilization of the housing stock. Solids are highly durable and sustainable buildings constructed in Amsterdam. Builders of Solids can select residents through internet auctions and combine diverse uses including residential, office, stores, etc. (MINAMI, K. 2011). It plans urban development while including the perspective of change of the constitution of its residents. The relaxation of regulations of the City of Amsterdam is the background to its realization. Both construction of new buildings and upgrading of existing buildings may require revision of regulations and social systems in order to simplify adding non-residential uses to apartment houses.

In order for a building to be used continuously for a long period of time, it is important to accumulate and hand down accurate information concerning the state of the building when completed and the history of its maintenance and renovations. It is now possible to use a high performance three-dimensional scanner at relatively low cost, so in the future, accurately measuring and diagramming the body dimensions of newly constructed buildings will probably be of use in planning future upgrading work.

Historical cities around the world have been formed by gathering urban housing. Apartment houses now constructed in Japan are individually, splendid buildings, but it is not clear if they are gathered to form
beautiful neighborhoods. An essential requirement for this to happen is that urban housing buildings that are highly sustainable in the true meaning of the term link similar buildings to form attractive urban areas (urban tissue). I wish to establish methods of developing and maturing cities by promoting the development of urban areas through the renovation and restoration of individual buildings Note 2.

Notes
(1) According to a document from the MLIT Committee for the Study of Renovation of the Existing Apartment Stock in a Sustainable Society, based on a statistical survey of housing and land (2008), of the total of 49.6 million homes in Japan (2008), about 40% are in apartment houses, most of these are reinforced concrete, and reinforced concrete apartment houses of 3 or more stories account for about 30% of all homes.

(2) This report is based on the Ministry of Education, Culture, Sports, Science and Technology, Private University Strategic Research Infrastructure Formation Support Project, “Promotion of Regional Industry by Developing and Establishing Markets for Housing Use Interior Finishing and Equipment made of Wood” (from 2012) and “Research on Continuous Customization of Adaptable Housing and the Evaluation of Performance of Upgrading Work Based on Industrialized Infill”, JSPS (Japan Society for the Promotion of Science), Grants-in-Aid for Scientific Research (C), 2006 to 2007.

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CREATING NEIGHBOURHOOD NETWORKS: WHY THE ALVALADE LANDSCAPE MATTERS TO HOUSING.

Romana Xerez

Abstract
How does social capital matter to the creation of neighbourhood networks in cities? Social housing in Portugal is some times viewed as a single architectural and building environment development failure. This article discusses a relevant Portuguese urban planning landscape and aims to contribute to the discussion of one of its main purpose – the social housing experiment. The author discusses the case of this landscape as urban policy-making and evaluates its implementation and relevance. She hypothesizes that “neighbourhood units” have become a relevant case in the context of neighbourhood planning and housing social-mix in Lisbon. Firstly, she uses theoretical arguments and findings to discuss an urban experiment - Alvalade Landscape. Secondly, the paper analyses relevant data that demonstrates its links to the housing policies thus enriching the urban design. The article offers evidence from the Alvalade Landscape case study in Lisbon of theoretical and empirical community ties in the 1940s. Thirdly, the paper identifies some elements such as community units, social mix, sidewalks, and that have an impact on neighbourhood design as well as people’s lives. The findings show that supportive neighbour ties provide important network resources (social capital) concerning daily life, illness, support or financial aid. Finally, the paper suggests the relevance that social neighbourhood community has in housing programs and policies.

Keywords: Alvalade bairro, Housing Policy; Social Capital; Building and Urban Design

INTRODUCTION

During the 1930s and 1940s the city of Lisbon experienced one of the most vibrant processes of social housing and built environment development. The population growth, the lack of affordable houses and the introduction in Portugal of the modern urban ideas were determinant causes to the creation of the Alvalade Landscape. The Plan was design according to the maintenance of social networks and community – “neighbourhood units” - in order to recreate the social relations between neighbours, which, in the theoretical and practical perspectives, tended to disappear in the contemporary cities. To do this, the number of inhabitants and the extent of each neighbourhood unit had to be controlled; reconstructing social planning was determined by the combination of various social strata, thus avoiding segregation (Costa 2002).

This article aims to discuss the significance of social capital towards housing and building environment. How does social capital matter to the creation of neighbourhood networks in cities? The author uses theoretical arguments and findings to discuss an urban experiment - Alvalade Landscape. The paper examines the main literature and debates about the relevance of neighbourhood networks in cities. It discusses the construction and development of one of the main important bairro in Lisbon – Alvalade neighbourhood – and presents findings in order to explain its importance and evaluation of a social housing project sixty years later. Designed in response to a massive affordable housing program; located in a land of quintas (farms) of upper upper classe and suburban industrial working class, living in villas and patios; the bairro was built according to the conservative values of the Portuguese dictatorship of Salazar, and at the same time, the introduction of the modern urban planning as “garden city” and Le Corbusier urbanism. A young team of architects was responsible for introducing one of the most innovative works, which became a reference to Portuguese modern architecture. The design and construction of Alvalade are associated with important names in the Portuguese architecture. Alvalade became a magnet for the less affluent people in the mid-twentieth century, at the same time, the white collar and cultural elite. This diversity and planning design neighbourhood community are responsible for one of the most relevant contemporary Lisbon urban areas: the Alvalade bairro.

The author suggests that the perspective of social capital matters to this analysis and the interpretation of why the Alvalade neighbourhood has a systematic importance to housing, urban planning, as well social city life. In addition, the paper offers some data about the implications of contemporary social capital score in cities and the theoretical and practical relevance that different perspectives of community play in cities.

Resources shared from social networks - social capital - between neighbours proved decisive in urban design, and function as an important source of emotional and financial support in many everyday activities. Interest in social capital has increased significantly since the 1980s and more recently this field has played an important role in housing.

The United Kingdom Office of National Statistics published the results for the national population in the area of social capital and neighbourhood
consequent destruction of neighbourhood communities. Only from the 1950s onwards did his vision of new real estate projects, tunnels, highways and civic works, such as bridges, roads, public swimming pools, retaining an unquestionable power in the US government. This perspective influenced relevant urban planners’ discussion such as that of Robert Moses versus Jane Jacobs. Since the pioneering work of Ferdinand Tönnies ([1887] 1955) researchers have reported relevant data on the importance of diverse types of residents (of various ages and social conditions) to the vitality of neighbourhoods. Initially, the idea of loss of community was seen as almost inevitable. This perspective influenced relevant urban planners’ discussion such as that of Robert Moses versus Jane Jacobs.

For 30 years, until the 1950s, Robert Moses was the face of political development in American cities, retaining an unquestionable power in the US government and major city’s councils. Moses was all for major works, such as bridges, roads, public swimming pools, new real estate projects, tunnels, highways and civic centres. Only from the 1950s onwards did his vision of planning begin to be criticized for its high costs and the consequent destruction of neighbourhood communities. Besides this, Moses ideas became a relevant influence on the cities, neighbourhoods and housing development.

Jane Jacobs was an activist against Moses’ major projects, who managed to show that this type of intervention was highly negative for neighbourhood’s social capital. In the early 1960s, Jacobs’ work brought a new perspective to the territory to replace issues that had apparently been lost, but that several investigations had proven to be relevant. Her own experience and long observation of the city of New York (Jacobs 1961) led the author to write about the life of cities and condemn the errors that in her opinion were being made with the construction of large infrastructures and new residential areas. Advocating another form of planning, Jacobs defended the preservation of old buildings and the importance of diverse types of residents (of various ages and social conditions) to the vitality of neighbourhoods and cities. She advocated constructing buildings in villages, with wide sidewalks and gaps between buildings that would encourage people to move. Jacobs’ interventions in historic neighbourhoods like Greenwich Village in New York are a symbol of keeping community alive in cities. Jacobs (1961) considered the importance of neighbourhood networks to be an irreplaceable social capital in cities.

Jacobs’ (1961) fieldwork observations of the relevance of community in cities were reinforced by sociological findings. Herbert Gans (1962, 1967) was one of the authors who contributed most to the analysis of the consequences of changes in the community territory. His emblematic book The Urban Villagers immortalized one of the most marking experiences of urban planning in the United States of America - the Boston expansion plan. It led to the demolition of all the existing buildings in the West End neighbourhood, which was considered to be dangerous and rundown. Gans decided to study the territory and the organization of its community. The conclusions were surprising, as they revealed the existence of community in a city slum. They also showed that many planners were following the wrong strategy. Despite the problems, it could not be considered a slum since it had a strong working class subculture. Gans (1967) also focused on post-war suburban America - emblematic Levittown. It was more than just one of the new towns in suburban Pennsylvania; it became the symbol of urban America and an important sociological question. By studying the effect of the rapid growth of American cities on the basis of a new form of urban experience, Gans showed that living in a community also occurred in suburban America. This finding - the existence of community in the slums of large cities and suburbs - was an important scientific revelation and its consequences influenced other areas such as planning and urban design. The importance of networks in the community has been investigated (Wellman 1979; Fischer et al. 1979; Fischer 1982).

Social capital is defined as the resources embedded in the social networks of each resource that can be provided or raised through the links (ties) based in networks (Lin 2008). Social capital is a resource for people and community and promotes cooperation between individuals (Putnam 1995, Fukuyama 2001, Portes 2000; Briggs 2003). Where trust and social networks flourish, individuals, businesses, neighbourhoods and even nations prosper (Putnam 2000).

THE ALVALADE LANDSCAPE: PLANNING FOR COMMUNITY

In the 1930s and 1940s, Lisbon underwent one of its most vibrant urban planning processes. The increase in population, the lack of affordable houses and the introduction of modern urban ideas in Portugal led to the development of the first urban plan for the city. Despite, the urbanism being at that time a quite recent subject in Portugal (Costa 2009), the planning team had international experience, and they developed the landscape according to the theoretical and practical innovative ideas of the time.

Included in this Lisbon expansion process was the Alvalade landscape - a result of architect Faria da Costa’s ‘Alvalade Landscape’ in 1948 (Figure 1). The Alvalade Landscape has been considered an example of Portuguese urbanism (Portas 1970; Janarra 1994; Pereira 1997; Alegre et al. 1999; Baptista 1999; Costa...
2002; Coelho and Coelho 2009). The landscape was designed as an experiment to neighbourhood units, social networks and the idea of community. The territory covered by the Landscape was outside the city limits suburb in the 1940s. The Plan included a number of villas and patios - places of residence for the working classes in the early twentieth century- they were integrated in order to maintain neighbourhood diversity.

The design and construction of Alvalade are linked to important names in Portuguese architecture, such as Formosinho Sanches and Ruy Athougia, who were responsible for Bairro das Estacas (Valmor Prize and the architecture prize in the São Paulo Biennale in 1954). The task of designing the gardens was given to the landscape architect Gonçalo Ribeiro Telles. The San Miguel neighbourhood primary school (1955) and Padre Antonio Vieira secondary school (1959 to 1961), symbols of Portuguese modernism, were designed by Ruy d’Athouguia. They were also marked by the action of young modernists. During this period, the state had fostered a vast housing policy involving the construction of new neighbourhoods, of which Alvalade was an example. The outcome of this endeavour marked a whole new perspective in social policy, sociology and urban planning. The architects Nuno Teotónio Pereira and Costa Martins played also an important role on the development of Alvalade neighbourhood.

Alvalade simultaneously became a magnet for less affluent people, the white collar workers and the cultural elite in the mid-twentieth century. This diversity has maintained its social cohesion and high social capital score.

Neighbourhood units
The landscape comprises eight cells (see Figure 1) where the primary school is the core of each unit, around which the households are distributed. The average size of each cell was not to exceed the distance from the dwellings to the school, 500 metres. The average population of each cell was about 5,000 inhabitants. The communal areas, i.e. wide open spaces, markets, shopping areas and public facilities, were designed to be of easy access to the inhabitants of each cell. This concept had in view the constant concern for housing, urban related equipment necessary for daily living, in a context where neighbourly relations should be promote (Barroco 2011).

The back gardens were meant to re-create the rural environment that people were used to. The concept of neighbourhood units was intended to promote social interaction among neighbours, which had tended to disappear with new developments and the contemporary cities. To prevent this from occurring here, the number of inhabitants and the size of each residential unit needed to be controlled. Furthermore, it was necessary to reconstruct social planning (by combining different strata and avoiding segregation) and set up a school system (Costa 2002).

Affordable housing
The plan included an area of 230 hectares where about 12,000 houses were built for a population of 45,000 inhabitants. The first unit was opened in 1948. In the mid 1940s there were several public housing programmes, including one for poor families living in slums, and another for the lower middle class (Pereira and Martins 1948, Silva 1994; Baptista 1999). The latter included three plans: (1) low-rent homes, (2) homes for people with limited incomes (a public-private partnership whereby builders committed to charging low rents) and (3) buildings and their income handed over to the private sector (in some cases, letting dwellings was a source of income when the building was owned by one family). These programmes were designed mostly for Lisbon.

This large-scale construction plan for Alvalade had two objectives: (1) to foster the coexistence of different social groups in the Lisbon tradition and (2) to include different categories of housing to ensure the via-

Figure 1. Alvalade Landscape Source: Câmara Municipal de Lisboa 1948
bility of the project (Câmara Municipal de Lisboa 1948). The study of low-rent housing by the architect Miguel Jacobetty Rosa, exemplified by Avenida da Igreja (Coelho and Coelho 2009), proposed nine different types of dwelling grouped into three sets of three. Each corresponded to different social classes and the number of people they were intended for, and some types included an office space, one bedroom and a bathroom. The houses ranged from type I (6 rooms) for couples without children and an average income of 180 escudos to type IX (14 rooms) for an income of 420 escudos (Moreira 1950).

The state played an important role in housing policy 30 years ago by legislating on rural and urban improvements. This resulted in a social housing programme that was actually a synthesis of earlier ones. The state and municipalities were responsible for providing funds and land for urban development. The model for the housing programme was based on the example of the British garden city (Silva 1994). Housing have been a relevant subject and different aspects of this programme must be discuss such as urban design (Kashef 2007), as well as housing stock in Europe (Sunikka 2006).

### RESEARCH DESIGN AND LANDSCAPE EVALUATION

The survey applied in the parish of Alvalade was a sample stratified of 402 residents, over fifteen years. According to data from the 2001 Census, 9 620 people lived in the parish of Alvalade. The sample was constructed according to the plan of cluster sampling and a confidence level of 0.95, which resulted in an optimal size of 402 people, distributed by class and gender. The addresses are chosen using standard random route procedures, the investigation is developed in the parish of Alvalade. The survey is composed of eight themes: (1) residence, (2) opinion about the neighbourhood, (3) trust in neighbours, (4) degree of happiness, (5) social network (number of people living in the same house, knows the neighbours, how many know the names of the families and the people they most associate with, how many people discuss personal matters, ask for help or advice, how often contact with relatives, neighbours, friends and colleagues, (6) capital (the neighbours are concerned with each other, in the last six months have made or received any favour from a neighbour, that people turn to in case of illness, lack of money, personal crisis, what support and activities conducted in collaboration with neighbours, (7) and civic participation.

According to the main survey results,’ (Tables 1 and 2) for 70% of respondents, Alvalade is a place where neighbours care about each other, 89% mentioned the past six months have stopped to chat with a neighbour outside his home, 61% have made or received a favour from a neighbour in past six months, 36.9% between 1 and 3 neighbours that can turn to for help or support; neighbouring provide support in situations of personal crisis (4.1%) and in some cases of disease (3.3%). About four in ten respondents (39.1%) reported that last year offered to look for neighbour’s house while they were away, and 22.2% had accompanied a neighbour or was accompanied to the doctor; approximately a third of respondents (34.6%) developed some leisure activity in collaboration with neighbours. In general (95.5%), at least know the name of a neighbour, some (18.2%) know the name of more than twenty neighbours. These results corroborate the main findings about social capital in cities, provided by the United Kingdom Office of National Statistics, published in 2002 and discussed in the introduction of this paper.

The residents’ satisfaction was high, as 28% were very pleased to live in Alvalade and 66% were very satisfied (Tables 1 and 2).
The spatial dimension of social networks in Alvalade came up as a factor of great importance, in that over 30% of relatives, friends and close co-workers lived in the same area or nearby (at most 20-minute walking distance).

Social networks are an important element in the community neighbourhood in Alvalade. Family, friends, colleagues and neighbours are components of personal networks. Network density - the number of members and frequency of contacts - is high. This network plays an important role in providing residents with financial and emotional support, as well as assistance with neighbourhood problems.

According to the Table 2 the respondents indicated that, if necessary, they sought out relatives to discuss personal matters and ask for advice or help (11% did not mention anyone). Sixty-one percent mentioned one to three people, 24% four to six people, 4% seven to 10 and 2% 11 or more people. In the case of neighbours, 53% did not mention anyone, 37% one to three, 8% four to six, 1% seven to 10 and 1% 11 or more neighbours.

Social networks in the Alvalade neighbourhood are an important aspect of social capital, as 70% of the respondents said the neighbourhood was a place where neighbours cared about each other, 89% mentioned having stopped to chat to a neighbour and 61% had done a favour for or received one from a neighbour in the last six months. Neighbours greeted each other often. Last year 48% had invited or been invited by neighbours to a party, dinner or small event at least once, 65% had given or received a gift or returned a favour. Forty-four percent had done a leisure activity with neighbours, 42% had done a favour or received one from a neighbour, and 8% four to six people, 17% farmers, labourers and unskilled workers. These findings indicate that the maintenance of social mix, one of the main characteristics addressed in this social housing experiment conducted in the 1940s really has preserved the neighbourhood.

The research shows the importance of living in a community. Knowing one’s neighbours, support in everyday activities, direct contact with people at the shops, church, café or on the street have become an important feature of the city. The Alvalade neighbourhood is considered a paradigm for housing and analysis of Portuguese experience. It reveals an interesting harmony between the urban design, the social diversity of its residents and the quality of the public spaces.

CONCLUSIONS AND POLICY IMPLICATIONS

This paper assembles and analyses the historical information and empirical data, it suggests that the Alvalade Landscape results reveal the importance of neighbourhood networks in people’s lives. Although family and friends are the ones mostly responsible for support in the event of illness or a personal or financial crisis, support from neighbours is also important, according to this study. These findings suggest that the initial ideas of this social housing and landscape experiment have been sustained in the neighbourhood for more than sixty years. The landscape implementation of social networks, as well as community became a promotion of the bairro sustainability.

The social networks in the Alvalade neighbour-}

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COMMUNITY PARTICIPATION AND COMMUNITY EVALUATION OF HERITAGE REVITALISATION PROJECTS IN HONG KONG

Binqing Zhai, Albert P.C. Chan

Abstract
This paper aims to investigate the relationship between community participation and community evaluation of heritage revitalisation projects in the context of Hong Kong. In 2007, the Hong Kong Special Administrative Region government introduced a Revitalisation Scheme to conserve and revitalise government-owned historic buildings. Nevertheless, since the announcement of the Revitalisation Scheme, whether the concerned revitalisation projects could benefit the local community, as publicized in the multiple objectives of the scheme by the government, has become a very contentious issue. This issue seriously affects the communities’ attitudes and opinions on the Revitalisation Scheme. This paper will address this issue from the perspective of community participation in heritage revitalisation projects. Based on a recently completed revitalisation project under the Revitalisation Scheme, this paper asserts that there is a positive correlation between community participation and community evaluation of the project’s social impact.

Keywords: Community participation; Heritage revitalisation; Revitalisation scheme; Hong Kong.

1. Introduction

With Hong Kong’s booming economic development, heritage has been criticised as being largely neglected. In October 2007, the Hong Kong Special Administrative Region (HKSAR) government proactively responded to the criticism by introducing the Revitalising Historic Buildings Through Partnership Scheme (hereafter referred to as the ‘Revitalisation Scheme’) to conserve and revitalise local historic buildings (Development Bureau 2009a). Under this scheme, the government pays all initial costs related to these building renovations for subsequent leasing to service providers of social enterprises without expecting them to shoulder these costs. In return, the service providers will operate the social enterprises with their own funds (Development Bureau 2009b). The announcement of the application results of the revitalisation projects in 2009 resulted in numerous debates over the effect of these projects on Hong Kong society. Many people contend that the proposed Revitalisation Scheme turns out not to benefit the local community at all, which was against the initially stated policies on the Revitalisation Scheme (The Standard 2009a, 2009b). This paper claims that the contentions relate to the issue of community evaluation of the revitalisation project’s social impact, which is to be explored from the perspective of community involvement in the concerned project.

Community participation/involvement plays a critical role in facilitating sustainable heritage revitalisation practices. Studies assert that by involving the local community, the local indigenous knowledge is integrated to create a vibrant living or business environment (Chohan and Pang 2005). Notably, available literature focuses much on the strategies of community participation or engagement in local revitalisation projects (Campbell and Marshall 2000) or on the policies on how to enhance community satisfaction in community development (Savasdisara 1988; Doratli 2007). Comparatively, very few empirical studies have examined the relationship between community participation and community evaluation of the outcomes of revitalisation projects (Zhai and Ng 2013). This paper attempts to fill this gap and hypothesises that community participation and community evaluation of heritage revitalisation projects are positively correlated.

2. Methodology

This research adopts a case study to provide an in-depth examination of the relationship between community participation and community evaluation of the social impact of the revitalisation of historic buildings. The former North Kowloon Magistracy (NKM) building in Hong Kong, which was the initial undertaking as well as the first project completed under the Revitalisation Scheme in Hong Kong, was selected as the focus of this study. Up to writing this paper, the building is one of the only two projects that have been put into operation after revitalisation. The research adopted various methods to collect necessary data, including field observation, face-to-face interview, questionnaire survey, and focus group discussion. These will be further elaborated in the case study section.

Both qualitative and quantitative methods were used to analyze the collected data. The data collected from the questionnaire surveys were analyzed by applying the mean score (MS) method (Li et al. 2012), which is used to establish the relative importance of the examined social perspectives. To validate the statistical difference of the mean scores of the project’s social impact as expressed by different respondents, the research performed a one-sample t-test analysis and compared each two sample means afterwards. More detailed information about questionnaire survey and data analysis will be elaborated in later case study.
3. Heritage Revitalisation, Community Participation, and Community Evaluation

Heritage revitalisation and community participation have been widely discussed in current literature (Lichfield 1988; Pearce 1994; Tiesdell 1995; Tiesdell et al. 1996). With the socio-economic development at the local level, building functions or facilities that can no longer satisfy the present needs and become obsolescent become a common occurrence. Such obsolescence may result from physical deterioration, changing functional qualities, or changes in other dimensions of the building (Roberts 2000). Revitalisation is needed to address the mismatch between the services that a building can provide and the needs of contemporary life (Lichfield 1988:25). Possible revitalisation strategies include demolition and redevelopment, refurbishment for current uses, and conservation and adaptive reuse for new uses (Tiesdell et al. 1996; Zhu and Zhai 2015). Two essential strategies in the revitalisation of historic buildings have been emphasized in literature, conservation and adaptive reuse.

Conservation is an essential strategy to preserve and revitalise obsolescent historic buildings. Studies (Pearce 1994; Steinberg 1996) support that conservation of historic buildings significantly contributes to local economic, social, and cultural development. In the revitalisation of historic buildings, the strategy of conservation often accompanied adaptive reuse (Steinberg 1996; Tiesdell et al. 1996). Historic buildings with no further utilization are often associated with the deteriorated economic situation of the building; consequently, the building tends to decay more rapidly. Therefore, maintaining the property’s economic viability is equally important as the conservation of a historic building’s character. As Tiesdell eloquently states, “viable economic condition can provide the sustained investment to refurbish and maintain the building” (Tiesdell 1995:232). Hence, the adaptive reuse or conversion of an obsolescent historic building from its original function to other uses is considered an effective way to renovate and maintain the character of a building (Steinberg 1996; Tiesdell et al. 1996).

In a commonly cited reference on community participation, Arnstein defines participation as a channel for “the redistribution of power that enables the have-not citizens … to be deliberately included in the future” (Arnstein 1969:216). A closer look reveals that all definitions of community participation focus on the redistribution of power to and empowerment of particular community members. For purposes of this research, community participation in the revitalisation of historic buildings is defined as the active process by which the identified community members or stakeholders of the project influence its direction and implementation to improve their well-being in terms of job opportunity, community identity, or other cherished values. In this study, the understanding of community members or stakeholders in the revitalisation projects follows the definition by Li et al., which refers to “those who can influence the project process and/or final results, whose living environments are positively or negatively affected by the project, and who receive associated direct and indirect benefits and/or losses” (Li et al. 2012:334). In the study of Hong Kong, they include project contractor workers, project end-users, local residents, and the general public/the concerned group. The roles of these community members will be elucidated in later case study.

The benefits of development projects are believed to reach the concerned community by effective participation (Thornley 1977; Campbell and Marshall 2000; Reid 2000). Reid (2000) asserts that a community that is involved in local urban development are more likely to control the local governing board. This empowerment approach is often associated with the provision of necessary resources to achieve the local community’s expectations and aims. Through participation, the community would be able to express and pursue self-interests as well as the rights and duties of their collective well-being (Campbell and Marshall 2000). Therefore, community participation can provide more satisfaction to the local community. This study supports that community participation strengthens the association between community members and the revitalisation project, which benefits the community directly or indirectly. Therefore, community participation may influence the community’s attitude or evaluation of the revitalisation project.

4. Agenda of Heritage Conservation and Revitalisation in Hong Kong

Hong Kong has undergone a rapid transformation from a small fishing village to one of Asia’s top commercial cities. With the booming economic development that it has undergone, heritage has been criticized as largely neglected (Civic Exchange 2002; Chu and Uebegang 2002; Zhai and Karakiewicz 2006). Some academics contend that the main reasons were attributable to the limitation of usable land, the ever-growing population, and the pro-economic development policy in Hong Kong (Lu 2009; Chu and Uebegang 2002). When the government strived to develop Hong Kong as a commercial and financial centre in Asia, many heritage sites had been redeveloped to make way for skyscrapers or other uses.

Generally speaking, Hong Kong is characterized by top-down and executive-led government jurisdiction in local urban planning and development projects. Historically, the power of the Hong Kong government as a British colony was greatly centralized, and the general public could hardly influence decision-making in government-led projects. In this regard, heritage conservation could hardly become a daily concern for Hong Kong residents. With the call for democratization and decentralization in the 1990s, more opportunities for public participation have sprung. The handover of Hong Kong’s sovereignty to the People’s Republic of China in 1997 led to increasing public interest in heritage conservation. Many local residents, social workers, and well-educated individuals have been involved in discussions and appeals for heritage conservation movements in Hong Kong (Lu 2009).

Despite the increasing awareness of local heritage conservation, however, no sufficient official channels are accessible for public participation in heritage conservation projects according to current urban planning and heritage conservation legislations. Following Hong Kong Town Planning Ordinance (TPO), public participation in urban development in Hong Kong is officially limited to public inspection. As stated in Section 5 of the TPO, the draft plan will be exhibited for public inspection for two months once deemed suitable for publication. Moreover, no official mechanism exists for the public to draft or initiate conservation or revitalisation plans for local historic buildings. The identification of heritage buildings or historic buildings that possess great value or cultural significance and deserve protection are
entirely the government’s responsibility. As stated in Section 3 of the Antiquities and Monuments Ordinance, “the Authority may, after consultation with the Board and with the approval of the Chief Executive, by notice in the Gazette, declare any place, building, site or structure, which the Authority considers to be of public interest by reason of its historical, archaeological or paleontological significance, to be a monument, historical building or archaeological or paleontological site or structure”. Therefore, the declaration and implementation of the heritage conservation projects rely heavily on the identification of the elite class and very few “spaces” are provided for the public to participate during decision-making stages. Academics argue that the level of public participation in heritage conservation projects in Hong Kong can only be classified as “consultation” and “informing” of tokenism stage (Yung and Chan 2011:459), which is against Arnstein’s eight rungs of citizen participation (Arnstein 1969).

Revitalising Historic Buildings through Partnership Scheme

In view of the increasing public awareness of conserving built heritages in Hong Kong, the current Chief Executive further proposed several initiatives on heritage conservation in his 2007–2008 Policy Address, which promoted the approaches of both the conservation and adaptive re-use of historic buildings in Hong Kong. Achieving a balance between these two approaches was proposed during the revitalisation of historic buildings to maximize the economic and socio-cultural benefits of the buildings (Development Bureau 2007b). Abiding by these principles, the Development Bureau of the HKSAR government put forth the Revitalising Historic Buildings Through Partnership Scheme (Revitalisation Scheme) in October 2007 to facilitate the conservation and adaptive re-use of government-owned historic buildings in Hong Kong. During the implementation of the Revitalisation Scheme, the Development Bureau proposed to collaborate with the non-profit-making non-governmental organizations (NPOs) in the form of social enterprises. The selected social enterprises need to be financially viable. However, considering their features as non-profit-making organizations, the Hong Kong government will pay all initial costs related to the renovation of the buildings for subsequent renting to service providers of social enterprises, and will not expect the service providers to shoulder these costs (Development Bureau 2008). Nevertheless, such financial assistance would only last for the initial two years, and the service providers would need to operate their own social enterprises using their own funds in future (Development Bureau 2007a). According to the scheme, the NPOs that have acquired certain standards would be invited to submit proposals on the revitalisation of the currently vacant government-owned historic buildings.

Since the announcement of the application result in February 2009 (Development Bureau 2009a), the Hong Kong government has received much criticism over the appropriateness of the selected service providers, particularly in the case of the former NKM building. In the bid for the use of this historic building, the two biggest bidders are the Chinese Artists Association, which is a local institution for Cantonese opera, and the Savannah College of Art and Design (SCAD), which is an American art college. Some critics have asserted that if the former NKM building could serve as the new theatre for local Cantonese opera, it would contribute to the protection of local opera culture and promote the participation of the local community in opera activities. Many people suggest that the Hong Kong government should give more priority to the local organization, because providing more job opportunities to Hong Kong community is also one of the objectives of the revitalisation scheme. Nevertheless, the Development Bureau eventually selected SCAD as the service provider. According to the chairman of the Advisory Committee on Revitalization of Historic Buildings (ACRHB), the proposal by the Chinese Artists Association was not convincing enough, in terms of its capability to run the social enterprise smoothly in the future.

5. Case Study: The Former North Kowloon Magistracy (NKM) Building

Located in Sham Shui Po district, Kowloon, the seven-storey NKM building was constructed in 1960. The site area is approximately 4,875 sq. metres, with a total gross floor area of about 7,345 sq. metres. In Hong Kong’s history, NKM was built to handle offences within the Kowloon district. The NKM is a representative example of civic buildings of the period. The NKM was closed in 2005 due to the consolidation of magistracies from...
nine to six in Hong Kong (Development Bureau 2009c:3–5). In 2007, NKM was selected as one of the historic buildings under Batch I of the Revitalisation Scheme to undertake the revitalisation practices. In February 2009, the Secretary for the Development Bureau announced that NKM was to be converted into the campus of SCAD Hong Kong. The renovation work on the building commenced in December 2009, and was successfully completed in August 2010 (Development Bureau 2011). Almost immediately after, SCAD started its operation in September 2010 as an institute to nurture art and design-related students (Development Bureau 2011). The west facade of the main building and the interior of the preserved Courtroom No. 4 within the building are shown in Figures 1-2, respectively.

Data Collection

The key stakeholders identified in this study include the project contractor workers, project end-users (SCAD Hong Kong), local residents, and the general public/the concerned group. The contractors in this project can directly influence the project process and its result. The project end-users or SCAD Hong Kong could benefit directly from the revitalisation of the historic building. At the same time, SCAD Hong Kong is concerned with the history of Hong Kong, which is embedded in the historic building. For local residents in the same district, the revitalisation and adaptive reuse of this structure as an art college will certainly affect their lifestyle. Many staff members and students are expected to visit local restaurants and stay in rental houses, among others. Finally, the adaptive reuse of the historic building as an art college shares the function of an educational institution with a local surrounding university. As an art college, SCAD Hong Kong offers courses similar to those of the design school of the local university. The staff members and students from art- and design-related faculties in the university might be affected by the outcome of the revitalisation project. Therefore, all aforementioned subjects are key stakeholders in the case study.

Based on literature studies (Tiesdell 1995; Steinberg 1996; Vanclay 2003; Development Bureau 2007b; Mason 2008) and face-to-face interviews with several representatives of the key stakeholders, the current research identified several key indicators mainly covering the linkage between local community and conservation project, community participation, community identity, and collective memory. Starting from these identified indicators, the study developed a questionnaire to assess the social impact of the revitalisation project on the local community. The derived key indicators and developed main questions are listed in Table 1.

From May to September 2011, the study successfully conducted the questionnaire surveys on 135 persons from the identified key stakeholders. The total number of respondents from different organizations is shown in Table 2. In May and June 2011, the study organized two tourist groups to visit the NKM project. About 80 randomly chosen staff and students from the Design School of the local university participated in the group visit activities. After the site visits, two focus group discussions were organized to solicit the participants’ views on the evaluation of the NKM project, and various opinions on how to improve the public’s evaluation were obtained. The participants’ views and suggestions, to some extent, represent a cross-section validation of the research findings.

Table 1. The Derived Key Indicators And Questions.

<table>
<thead>
<tr>
<th>Key Indicators</th>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>Linkage between local community and conservation project</td>
<td>Q1: How strongly do you participate in the revitalisation project? (If applicable, you may have more than one choice)</td>
</tr>
<tr>
<td>Community participation</td>
<td>Q2: How often do you participate in community projects? (If applicable, you may have more than one choice)</td>
</tr>
<tr>
<td>Community identity</td>
<td>Q3: If the project influences your life, how strongly do you participate?</td>
</tr>
<tr>
<td>Collective memory</td>
<td>Q4: How strongly do you evaluate the cultural and historical environment after the completion of the project?</td>
</tr>
</tbody>
</table>

Table 2. Number of Respondents from Different Organizations.

<table>
<thead>
<tr>
<th>Respondents</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>University staff and students</td>
<td>65</td>
</tr>
<tr>
<td>Local residents</td>
<td>35</td>
</tr>
<tr>
<td>SCAD staff</td>
<td>20</td>
</tr>
<tr>
<td>Contractor workers</td>
<td>15</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>135</strong></td>
</tr>
</tbody>
</table>
Community Participation and Community Evaluation of Heritage revitalisation Projects

The comparison of the mean scores given by the respondents from different organizations is shown in Table 3. The relationships between the level of participation and the mean impact scores of the project presented by the respondents from different organizations are shown in Table 4.

Using the previous formula (1) of calculating the mean score or mean impact score, the study finds that, in the five-point Likert scale, the overall mean score of the social impact of the NKM project by all 135 respondents is 3.2. This result indicates that the respondents generally expressed a rather positive evaluation of the project’s impact. The result also implies that the respondents positively acknowledged the Hong Kong government’s efforts to revitalise the NKM.

With regard to community participation in the project, this study defines that the respondent with a participation score > 3 represents a higher level of participation in the project, whereas a participation score < 3 represents a lower level of participation. In the end, there were 46 respondents in the group of a higher level of participation, while 77 people were of a lower level of participation⁷. The study compares the mean impact scores given by those with a higher level of participation and those with a lower level of participation. The t-test result, 6.854 > 1.960, in Table 3 confirms that a significant difference at the 0.05 level of significance exists between the respondents with different levels of participation. In other words, the study confirms a positive correlation between the level of participation and the respondents’ evaluation of the NKM project’s social impact. By applying the same method to test the relationship of other attributes, this study found that there is no significant difference between the mean impact scores in terms of education level, income, gender, or age. In these ways, all the computed t-test values < the tα value (α = .05) on the t-table. Thus, these attributes do not significantly influence the respondents’ evaluation of the project.

Table 4 indicates that the respondents tended to evaluate the NKM project more favourably when they have higher levels of participation in the project, and vice versa. For instance, contractor workers who had been heavily involved with the project, and the staff of SCAD Hong Kong, who are the end users of the building, both rated the project’s social impact very favourably. The mean impact score by contractor workers is 4.1, and that by SCAD staff is 4.0. In stark contrast, the respondents with lower levels of participation expressed less favourable evaluations. For instance, many local Sham Shui Po residents have very limited connections to the NKM either before or after the revitalisation project; they also expressed relatively less favourable evaluations of the project’s social impact, with the mean impact score of 2.9.

An interesting phenomenon is that despite having an identical education level (i.e., university or above), the respondents among the SCAD staff and university staff have a significantly different (4.161 > 2.000; α = .05) evaluation of the project’s impact, as shown in Table 5. This result indicates that, when the respondents have the same education level, those with a higher level of participation in the project (such as SCAD staff) would report higher scores or express a more favourable evaluation of the project’s impact. At the same time, although university staff and local residents both expressed a relatively less favourable evaluation of the project’s impact than contractor workers and SCAD staff, the overall mean score of the university staff is still significantly higher than that of local residents.

Findings and Discussions

The comparison of the mean scores given by the respon-
The respondents from different organizations.

Table 5. Comparison of mean impact scores presented by the respondents from different organizations.

<table>
<thead>
<tr>
<th></th>
<th>Mean Impact Score</th>
<th>t-test (or t)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCAD staff (n=20)</td>
<td>4.0</td>
<td>t=4.161 &gt;</td>
</tr>
<tr>
<td>University staff (n=54)</td>
<td>3.3</td>
<td>t=6.173 &gt;</td>
</tr>
<tr>
<td>SCAD staff (n=28)</td>
<td>4.0</td>
<td>t=3.168 &gt;</td>
</tr>
<tr>
<td>Local residents (n=35)</td>
<td>2.9</td>
<td></td>
</tr>
<tr>
<td>University staff (n=54)</td>
<td>3.3</td>
<td></td>
</tr>
<tr>
<td>Local residents (n=35)</td>
<td>2.9</td>
<td></td>
</tr>
</tbody>
</table>

To facilitate more interaction between the local community and service providers of the revitalisation projects, the Development Bureau of the Hong Kong SAR government can play a significant role. Considering the management and control functions played by the local government, this paper suggests that the Development Bureau may consider specifying certain “after sales activities”, which should be mandatorily implemented by the service providers in future revitalisation projects. In addition, the first term for current service providers to use the revitalisation projects under the Revitalisation Scheme will last for only five years. Given this condition, the paper suggests that the Development Bureau may consider revising the conditions on the renewal contracts with the specified service providers in the future. Nowadays, Hong Kong people express increasing interest and enthusiasm in heritage conservation and revitalisation; hence, the paper asserts that policies on engaging the local community in the revitalisation of historic buildings in Hong Kong will improve public opinion on the social impact of local urban development policy. As thus engaging the local community will also help achieve the multi-objectives of local urban development.

6. Conclusion and Suggestions

This paper examines the relationship between community participation and community evaluation of the social impact of the revitalisation of historic buildings in Hong Kong. Based on the case study of the recently completed NKM project, this research reveals a positive correlation between the two issues. In the NKM case, the degree of participation is a significant factor in influencing a respondent’s assessment. Generally, when the respondents have higher levels of participation in the project, they tended to evaluate the project more favourably. On the other hand, when the respondents’ participation in the project is lower, their evaluations appear less favourable. This finding applies no matter how physically close the respondents might be to the project. For instance, the local residents in the Sham Shui Po district live very close to the NKM building. However, most of them have neither visited the building nor have had any other connection to the building, either before or after the revitalisation project. Consequently, these respondents gave very low scores to the project’s social impact on the community.

Based on above findings, as well as the opinions solicited from two focus group discussions, the paper suggests that strategies for improving the local community’s evaluation of the revitalisation project should focus on how to enhance the community’s participation in the project. The study also demonstrates that such participation would be significant throughout the overall revitalisation process, from the beginning to the completion of the project. For instance, contractor workers had been involved during the renovation work, whereas SCAD staff served as the end users of the finished project. Both parties gave very high evaluation scores to the project’s impact. Inspired by this finding, the paper recommends that more functions/activities should be organized to engage the local Sham Shui Po community in this project. In the interview surveys, some local residents suggested that they could know more about the revitalisation project if SCAD Hong Kong would provide some special services to the local community, such as organizing guided tours to the NKM project throughout the week, including weekends, organizing free art exhibitions within the building, and offering short-term art and design courses at concessionary fees. These activities would enhance the connection between local residents and the NKM project, which would thus contribute to the community’s positive evaluation of the project.

Acknowledgements

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Notes:

1. In this paper, terms such as community participation and involvement are used interchangeably.

2. The mean scores of the project’s social impact are also referred to as mean impact scores in the paper.

3. The Hong Kong government promised HK$100 million to renovate the building, and the Chinese Artists Association estimated the operating cost for three years at HK$15 million, which the Association would struggle to raise. In stark contrast, SCAD pledged HK$150 million from its own funds to do the renovation work (Sing Tao Daily 2009).

4. Photos were taken by the authors on 16 Nov. 2010.

5. As indicated in Footnote 5, Q2 and Q4 are two open-ended questions. Accordingly, they won’t be rated by Likert scale method.

6. 12 respondents presented the neutral score 3 during the questionnaire survey.
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Introduction

It was observed that, many real estate developers face a major problem, which is budget overrun. Accordingly, the developers lose money, and the success of their developments and business are threatened. This problem appears usually at the tender phase or even during the construction. If such a situation arises, developers apply cost saving and/or value engineering exercise to meet the budget again. The main difference between cost saving and the value engineering is that, value engineering maintains the same planned quality parameters that have been set at the beginning.

The problem

Many researchers had developed studies to track budget overruns. One of these had examined more than twenty infrastructure and major infrastructures projects in USA and it proved that “over 40% of all infrastructures and over 80% of major infrastructure exceed their budget or schedule, which is clearly shown in figure # (1). (HDR, 2009). In this chart there are three horizontal lines dividing three areas; between Zero % line up to 100% line means mentioned projects exceeded the budget by a certain percentage less that 100%, between 100% line up to 200% line means mentioned projects exceeded the 100% of the budget and above 200% line means the project cost grew badly.

Main Reasons Causing the Problem

There are many factors that are causing budget overruns. These factors should be considered by developers in order to mitigate them as practically as possible. Some of these main factors are:

* Initial planning and design programming are inadequate.
* Estimators have obtained requirements in a piecemeal fashion.
* Many requirements are lump-sum. Requirements need to be better defined.
* Developers’ policies force budgets to match a predetermined figure rather than reflect actual requirements.
* The designer is not monitored as should be.
* End users’ changes and requests are not fully controlled.
* Project cost is not properly evaluated during reviews. (Alphonse D.I., 1997).

Different Approaches Could Control the Problem
Many approaches could be applied to control or reduce the budget overruns in any development or project. These approaches are well known and applied in several fields, especially in the real estate developments field. The most important approaches are, (PMI, 2008); (see Table 1).

**Why Use Value Management at Early Stages?**

Value Management VM is a methodology that is well-known, accepted and has an impressive history of improving value through customizing quality and optimizing Life Cycle Cost LCC. VM is an organizing process that has been effectively used by a wide range of companies and establishments to achieve their continuous goals. The success of the VM process is due to its ability to identify opportunities to remove unnecessary costs while assuring quality, reliability, performance, and other critical factors that meet or exceed customers’ expectations.

The improvements are the result of recommendations made by multi-discipline teams from all concerned parties. VM can also improve the decision-making process, which leads to optimal expenditure of owner funds while meeting required function and quality level. VM is a methodology that is comprised of many useful tools and techniques that create change on purpose rather than letting change happens accidentally, (SAVE, 2007).

Since the development processes of the project’s life cycle in general are sequential activities and each phase is based on the previous one; accordingly, savings potential at early stage is higher than the following stages as shown in figure # (2), (Mc. Clintock, 2008). That will lead to the importance of developing a proactive tool to be used by the developer or the developer’s representative.

**Real Estate Development RED**

Real estate is a legal term that encompasses land along with improvements such as buildings, fences, wells and other site improvements that are fixed in location or immovable (Etter, W. E., 1995). Real estate can be defined generally as space delineated by man, relative to a fixed geography, intended to contain an activity for a specific period of time. In addition to the three dimensions of space (X, Y and Z), real estate has a fourth dimension, which is the time for possession and benefit.

---

**Table 1.**

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Risk Management.</td>
<td>Portfolio Optimization</td>
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</tbody>
</table>
Thus, it is a complex and collective process that is not only accommodating an activity within the parcel, but also adapting to the context of a specific surrounding environment involving different personalities and interest groups as well as limited resources (Graaskamp J. A., 1990).

The basic requisites for real estate development are “to be able to predetermine the needs of a community” and “to have a project available when and where needed” (Saft S. M., 1990).

Key Drivers Affecting Real Estate Developments and Feasibility.

There are three main key drivers that are affecting the real estate development feasibility; physical, financial and social as shown in figure # (3). A feasible real estate development project is not only financially sound, but also physically creative, and socially feasible. A balance between physical, financial, & social dimensions is very important in order to enhance the possibility of the project’s feasibility and success, (Leelarasamee Y., 2005).

Factors for each dimension have to be harmonized, synthesized, and balanced during the whole development process especially in the pre-development stage. Many decisions have to be made in a right way to ensure the feasibility. Good understanding of this integration leads to successfully creating the developments.

Main Procurement Strategies for the Real Estate Development projects

Procurement method is the comprehensive process of assigning the contractual responsibilities for designing and constructing a project. A delivery method identifies the primary parties taking contractual responsibility for the performance of the work which affect on the RED processes & activities, (AGC, 2008).

Design – Bid – Build DDB: In this approach developer should develop a complete design package to be tendered for construction.

Design and Build D&B: In this approach, developer should develop the design up to the end of the schematic design stage and then tender the project for the construction. The contractor should finalize the detailed design while proceeding in the construction activities.

Development Team and Stakeholders of the Real Estate Development

Developer is a leader and usually has a particular vision could help people to satisfy their needs. Developer almost never works in isolation and is responsible to design, finance, build, lease, sell, and manage their dream. Developers engage the services of many other experts, professionals and contractors (public and private). It is worth mentioning that probably only one percent or less of the people in RED are developers while...
the other 99 percent are professionals and support staff as shown in figure # (4) (Mike E. et al., 2007). Developers vary in the technical expertise they bring to the team as they might have been architects, lawyers, contractors, brokers, land planners, or leaders. More developers are now getting advanced degrees in RED finance.

**Real Estate Development Process REDP**

There are many different approaches illustrate the REDP and it is very important to select the most suitable one because it will define who should do what and when. The approaches of RED projects are theoretically different from one to another. The most crucial part of the REDP is the pre-design phase. Reliable and accurate information is hard to be found which makes decisions at the pre-design rather risky. Many models had been developed to overcome this challenge by proposing synchronization between the financial and physical aspects at the pre-design phase, as shown in figure # (5), (Yousaporn, 2005).

**Approach by Royal Institute of British Architects (RIBA)**

RIBA organized the process of managing, designing of developments and administering building contracts as number of key work stages as shown in figure # (6). RIBA highlighted that, the sequence or contents of work stages may vary or overlap to suit the proposed project’s procurement method which could be different from one development to another. This work plan shows strategically what should be done at each stage while each stage is given a code A, B, C etc., (RIBA, 2007).

**The Eight-Stage by Urban Land Institute (ULI)**

ULI propose a sequence of steps to be followed by the developers from the moment they first conceiv a project to the time they complete the physical construction of the project and then to asset management or sell finished product. Various participants of the development process may delineate the sequence slightly differently. These Eight sequence are shown below. (Mike E. / ULI, 2007 5:18). (see Table 2)

<table>
<thead>
<tr>
<th>Stages</th>
<th>Preparation</th>
<th>Design</th>
<th>Pre-Construction</th>
<th>Construction</th>
<th>Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Code of Stage</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>Sub-Stages</td>
<td>Appraisal</td>
<td>Design Brief</td>
<td>Concept</td>
<td>Design Development</td>
<td>Technical Design</td>
</tr>
</tbody>
</table>

Table 2.

Figure 5. Multidisciplinary planning Model, Yossporn, 2005.

Figure 6. Outline Plan of Work, RIBA, 2007, drafted by the Researcher.
Proposed Real Estate Development Process (REDP) And Main Stakeholders

Based on many valuable academic references and professional work in Real Estate Development field, a proposed REDP was developed. In this proposal, the whole process is divided into four main phases; each phase is divided into sub-phases and then each sub-phase divided into stages, as shown in figure # (7). Each stage should contain activities and sub-activities, which shall be shown hereinafter and illustrated in the Heuristic Model for the real estate development as inputs. Phases, sub-phases and stages will be arranged in a sequence from above to below and hence the VM tools and techniques will be arranged from the left to the right.

Many organizations are playing roles in the REDP as stakeholders as mentioned previously. The developers should list them carefully and decide either to engage them in the project by contracts to provide professional services or to assign in house team to handle all needed activities. This decision depends on many factors such as size of the project, procurement time, market influences, funding of the project etc. as shown in figure # (8) a proposed list of professionals is shown on each phase.

value Management VM

The traditional approach to the design process begins with the architect’s knowledge and experience, core competencies and desire to create a product that ideally matches the developers’ priorities. The new value concept decision making approach takes the opposite view by defining the clients’ priorities, and then acquiring or improving the skill sets, talent and knowledge needed to create products that meet the client’s needs. This more formalized decision making approach allows a more holistic clear understanding of the project by all stakeholders (Al-Yousefi A. 2008).

There are several terminologies that could express and illustrate the value approaches’ concept like; value engineering, value analysis, value methodology and value management. Historically the value engineering is the most well known terminology since it is the first terminology that was conceived by Mr. Lawrence D. Miles during the 1940s, (SAVE, 2007). However, it is worth mentioning that, all of them direct to the same result, which is focusing and treating with the value and its components.
Value Management’s Components and Definitions.

VM concentrate on the effectiveness through stating functions, goals, objectives, needs and desires and then defining the quality features that make the product more acceptable. Generating the VM proposal that meets the requirements at the least possible cost and Life Cycle Cost (LCC) is a must. VM is a balance between three main components, which are: function, quality and cost/LCC as shown in figure # (9). Function remains the fundamental concept underplaying the value management, (Al-Yousefi A., 2004).

Function; The specific work that project, item, stakeholder etc. must do.

Quality; is a mix of customer’s requirements, desires, expectations, something fit for use and added-value benefits.

LCC; is the initial cost plus all the associated cost of running the facility. The running cost covers energy, maintenance, staffing etc.

Over all Expenses; is the Real Cost plus Waste (RC+W) while the waste is any process that does not add value to the projects or the development.

As the VM is a system wherein an attempt is made to solve problems relating to the value of a product or service. For this purpose, the value has to be measured, and a product or service with low value needs to be identified. The formula for measuring value in VM is:

\[
\text{Value} = \frac{\text{Worth}}{\text{Cost}} = \frac{\text{Function}}{\text{Cost}} = \frac{\text{Benefits}}{\text{Cost}}
\]

Therefore, for any solutions relating to problems with value measurement and analysis of function F and cost C are necessary, (SJE, 1981). In the figure # (10) the left part shows the traditional cost saving and way to increase the profit in position (1) or Position (2) which is shown as a dashed line and the right part shows how the developer could increase his/her profit and reduce expenses by using VM way of thinking. The potential area shown at the right which could be controlled then the value of the product will be increased and the profit will be increased accordingly.

Value Management Typical Work Plan & Applicability

According to Society of American Value Engineers (SAVE) the VM work plan includes seven stages shown in figure # (11), the critical part of this plan is the function analysis as mentioned earlier since at this stage all unnecessary functions could be eliminated which eliminate all unnecessary costs accordingly. There are several techniques that could be used to analyze the function. Two-word is a simple technique could be applied (measurable noun /active verb) as shown in figure # (12) and Function Analysis System Technique FAST which is more...
Value Management Tools & Techniques

There are many tools and techniques which are being used in different ways and different fields. These tools or techniques could be re-utilized to serve the main objective of the VM by focusing on the function and eliminating unnecessary functions accordingly eliminating unnecessary costs which lead to increase the value of any product or any process including the RED. Many organizations like SAVE, PMI, ULI etc. provided number of tools and/or techniques could be used to serve the above mentioned purpose. One of the good reference that listed many of these tools and techniques is Institute Value Management IVM as shown in figure # (14), (IVM, 2013).

Selected Value Management Tools & Techniques

Descriptive Analytical methodology was used to collect VM tools & techniques to guarantee the success of the Heuristic Model HM and classify them in categories according to the value components; function, quality, cost and other supporting techniques. Refer to figure # (15). This selection was based on the following:

1. Tested and validated tools & techniques that are already being used.
2. Reliable academic references & professional organizations such as SAVE, PMI, IVM, SJVE, etc.

The Heuristic Model HM

The Heuristic Model is a pro-active tool developed as a result of the integration and synergy efforts between the proposed REDP and the selected VM techniques.

Mind Map of the Heuristic Model

Diagram showing the Heuristic Model's mind map, including various functional components and their relationships.
The mind map created to put a strategic frame work of the heuristic model as shown in figure # (16). It is composed from the following:

**Inputs:** Activities had been assembled from more than five important Academic references like RIBA, real-estate-development-principles-and-process, Land Development handbook and also other professional references project management firms, consultants and multinational real estate companies.

**Outputs:** The expected outputs from this model could be considered as targets since the model is supposed to eliminate unnecessary functions and unnecessary costs accordingly based on using validated value management tools and techniques.

**Tools & Techniques:** These tools have been assembled from different important references like (SAVE, CSV, PMP Guide book, IVM, SJVE etc.).
**Task Master:** Task master is indicated in the model as numbers. The cell could show more than participants in the process activity however only one will be considered as a task master who will be responsible to coordinate and deliver the output or targets.

**Heuristic Model Hypothesis**

The Heuristic Model will eliminate unnecessary functions and costs for the development process.

**Heuristic Model Application**

The Heuristic Model could be tailored and be applied on any new development process like the real estate or urban development.

**Key Design Criteria of the HM**

The key design criteria of the Heuristic Model is to be flexible which could be tailored to fit each developer’s needs and his development’s procedures according to the development / project itself and to the country’s circumstances where the project is being developed.

**Heuristic Model Description and Explanation**

The HM proposed processes for the real estate development are located at the left column of the model. These processes are almost sequential activities hence the selected value management tools and techniques are located at the top row of the model as shown in figure # (17). The integration and synergy between the development activity and selected tool is shown at the intersection cell between the activities row and the tool column. The developer will write in this cell a number or a code, which will indicate the person who will be responsible for applying this selected tool during that activity while being preceded. The Heuristic Model considers this person the “Task Master” who should be a part of the developer team or a free licenser providing technical or financial services to the developer. As any model works as inputs / processes / outputs, the activity of the real estate development is considered as the input hence the output should be the optimized activity after eliminating unnecessary functions as much as possible according to the available information. Between each main phase, there are two important milestones; one is related to value engineering exercise as per SAVE and the other one is related to important decisions that should be taken by the developer either to cancel the development or to proceed forward according to the result came from the run of the business model as shown in figure # (17) & (18).

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Figure 17a. The Heuristic Model for RED based on selected VM techniques, Overall Model, Researcher, © 2010.
Heuristic Model Main Objective

Control and minimize the budget overruns. Set clear targets to each and every activity. Enhance the real estate development process as practical as possible. Assist developers to spend their capital wisely. Increase the development efficiency by eliminating unnecessary functions.

Set a clear vision to the developer at the beginning of each development. Practical tool that could be used as a check list in real development. Provide a model which could be developed and detailed for future studies. Increase the level of awareness of developers for the value management approach in the real estate development process.

Enable developers to maximize their benefits.

Value management’s techniques could be synchronized within the whole development process since these techniques focus on eliminating unnecessary functions either from the construction items or from the processes’ activities. Savings potential at early stages is higher than at the following stages. That means; it is important to create a proactive heuristic model used as a systematic development approach and eliminates unnecessary functions and costs accordingly.

The Heuristic Model is designed to be flexible and could be tailored by developers according to their visions and surrounded circumstances. The model will enhance products, optimize the process, mitigate risks and reduce budget overruns.

Conclusions

Budget overruns in real estate and urban development is a major challenge and real risks facing developers.
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AFFORDANCE BASED HOUSING PREFERENCES.

Henny Coolen

Abstract
In several countries the period after World War II is characterized by building dwellings in mass production in order to bring the supply in line with the increasing housing demand. As a result little attention was paid to societal trends and actual user wants. Several trends and developments with respect to housing have been identified since then, which seem to make a more individualized approach to the development, design and building of dwellings and residential environments desirable. In such an approach a thorough understanding of the objectives and activities of inhabitants seems to be required. But how can we explore these objectives and activities? We lack a structured set of instruments that can be used by policy makers, architects, developers and builders to map out a detailed record of user wants. Although there are many methods for the elicitation of housing preferences these methods are not satisfactory for this purpose, because, among others, they focus on what people want and not on why they want it. In this paper I shall first describe the main characteristics of methods for measuring stated housing preferences. Subsequently, I will present an outline of a more user-oriented approach to the measurement of housing preferences. This approach is based on Gibson’s theory of affordances.

Keywords: Housing Preference, Affordance, User-Orientation, Stated Preference

Introduction
Housing is a complex process that is related to many facets of life. For many people a house forms the primary anchor in the environment, which provides such basic functions as shelter and concealment. A house also fulfils several other objectives such as being an enjoyable living environment, providing privacy and territory, accommodating social contact, and being a symbol of who we are and who we would like to be. A house is also for many people by far the most expensive item of consumption, and the decision to select a particular dwelling belongs for many households to the most crucial budget allocation decisions that they make in their life. Several reasons have been mentioned in the literature (Coolen and Jansen 2012) why measuring housing preferences could be of interest. First, to improve the match between housing demand and housing supply. Although in many countries the quantitative shortage of dwellings has diminished or disappeared, a discrepancy may still exist with regard to the qualitative match between supply and demand, which may lead to dissatisfied inhabitants. A qualitative mismatch between demand and supply may also lead to unoccupied dwellings, both in the existing stock as well as newly built housing, which may have financial and economical consequences for individual sellers, housing corporations, builders, and developers. Second, measuring housing preferences may be interesting for more idealistic reasons. From the point of view of both consumer sovereignty as well as consumer emancipation, it is quite natural to take consumer preferences into account. Furthermore, it has become clear that in current discourses about housing and living certain groups are systematically overlooked. Karsten (2009), for instance, argues that in urban discourses the creative city, the attractive city and the city as an emancipatory machine are discourses that are communicated top-down via reports, debates and media attention, but do not address families as urban citizens. She showed, by way of a bottom-up analysis, that there is also a family-oriented discourse that she called the balanced city which is a city that integrates the different domains of life, and that many family-oriented aspects of this discourse do not occur in the top-down discourses. Research on housing preferences may bring such groups and their wants out (cf. Coolen and Meesters 2009; Dol and Boumeester 2012).

In this paper I will start with describing several important aspects of current approaches to measuring housing preferences. Subsequently, I will reflect on the usefulness of these methods given several developments and trends with respect to the housing market, which seem to make a more individualized approach necessary. Finally, I will set out to develop a more user-oriented approach to measuring housing preferences, which is based on the theory of affordances.

Main Characteristics of Current Methods for Measuring Housing Preferences
Housing preference has been studied from different theoretical perspectives and with a great variety of methodological approaches. It is an area of interest to researchers in fields such as economics, social geography, housing studies, and environment-behavior studies (Timmermans et al. 1994; Jansen et al. 2011). Apparently, what dwelling people prefer can be measured in many different ways.
Although the approaches to measuring housing preferences are different, they also have certain aspects in common. First, they all assume that houses can be described and evaluated in terms of a bundle of attributes, each of which has a limited number of levels, often two or three. Second, they all assume that people derive some satisfaction from each of the attribute levels, and in some approaches this satisfaction is expressed in terms of a part-worth utility. Third, all the approaches assume, albeit somewhat implicitly, that people combine the satisfactions for the different attribute levels into an overall preference for a dwelling, but they may differ in the specification of the combination rule. Furthermore, preliminary to every approach is the determination of the salient housing attributes and the relevant levels of these attributes.

There are also several dimensions on which the different approaches differ from each other. With regard to the measurement of housing preferences, the main distinction is between stated and revealed preferences. Stated preferences are expressions of people’s evaluations of houses, when a choice still has to be made, and may concern real or hypothetical houses. In contrast, revealed preferences are based on actual housing choices, that is, actual behavior, in real housing markets, and the preferences are inferred from the actual choice. Since in choosing a house, the choice will always reflect the joint influences of preference, market conditions, regulations, and availability, one may wonder whether a choice really reflects one’s preferences. This paper only deals with stated preference.

Another important distinction is the one between compositional and de-compositional approaches. In compositional approaches people provide an evaluation or indicate their preferred level for each housing attribute separately, while they may also provide an indication of the importance of the various attributes. The weighted evaluations or preferences can be aggregated into an overall evaluation of the dwelling.

De-compositional approaches, on the other hand, are based on the measurement of people’s evaluations of housing profiles. Each profile consists of a combination of housing attribute levels, one for each housing attribute. People indicate their preference for each profile, and statistical models may be used to derive evaluations for the separate attribute levels. The affordance-based approach presented in this paper is of the compositional type.

The most important methods for measuring housing preferences are the descriptive method, the meaning structure method, the decision plan nets approach, the multi-attribute utility method, and the conjoint approach. These methods have been described extensively in the housing literature and the interested reader is referred to the book by Jansen et al. (2011).

Some Reflections on Stated Housing Preference Methods

In several countries the period after World War II is characterized by building dwellings in mass production in order to bring the supply in line with the increasing housing demand. As a result, little attention was paid to societal trends and actual user wants. Since then several trends and developments with respect to housing can be identified. First, it has been noticed that households have become smaller, the variation in household types has increased and society has become multi-cultural leading to a broader variety of housing preferences (Clapham 2005). Second, there is an increasing demand for more quality in the dwelling and residential environment (Heins 2002; Downs 2008). Third, due to current land policies a switch is expected from large scale greenfield new housing projects to small scale inner city housing projects (Tiesdell and Adams 2004). And fourth, due to the current financial and economic crisis it seems that in countries such as The Netherlands and the UK there is a tendency towards less moving up in one’s housing career, which implies that inhabitants remain longer in the same dwelling. These trends seem to make a more individualized approach to the development, design and building of dwellings necessary. In such an approach a thorough understanding of the objectives and activities of inhabitants is required.

But how can we explore these objectives and activities? We lack a structured set of instruments that can be used by policy makers, architects, developers and builders to map out a detailed record of user wants. Although there are many methods for the elicitation of housing preferences, as was indicated above, these methods are not satisfactory for this purpose. Most methods are product and supply oriented and elicit information that is too general or insufficient from a planning and design point of view. Many methods also do not allow for freedom of attribute choice by the respondents. This means that most of the methods only inquire about dwelling characteristics that are imposed by the researcher. Thus, important aspects might be missed. The determination of user-oriented preferences asks for methods that allow residents freedom of choice with regard to choosing aspects of the dwelling that are important to them. Moreover, many methods focus only on a limited set of attributes of a house without taking the house as a whole into account. Furthermore, most prevailing methods for determining housing preferences only focus on what people want while ignoring why they want it. This is understandable since most of these methods were developed in a supply oriented market and in such a market the focus is on the good and its main features. As a result, information on the use of the good is only needed in general terms so that the good provides certain basic functions to all. But in a user-oriented approach the emphasis shifts, in first instance at least, from the good and its features to the use the inhabitants make of it. Instead of the house as a physical entity that provides elementary functions the focus is now on the dwelling process, on the objectives and activities that motivate people to prefer a certain dwelling. In such an approach the house is not an end in itself, as it is in a product-oriented approach, but it is a means to an end.

Starting point for the elicitation of housing preferences are now the inhabitants’ objectives and activities with respect to the dwelling, and the final design consists of a dwelling that affords the users’ objectives and activities associated with the dwelling process as much as possible. This requires a fundamentally different research approach to the measurement of housing preferences. Before giving an outline of such an approach, which will be based on the concept of affordances, Gibson’s theory of affordances will be introduced.

Affordances

One of the central tenets in environment behavior research (EBR) is the reciprocity of people and their environment (Gifford 2001; Rapoport 2005). Human beings
use and change the environment, and their experiences and behavior are influenced by the environment. A theory that has been put forward to grasp the mutuality of people and environments is Gibson’s theory of affordances. According to Gibson (all emphases are his): “The affordances of the environment are what it offers the animal, what it provides or furnishes, either for good or ill. The verb to afford is found in the dictionary, but the noun affordance is not. I have made it up. I mean by it something that refers to both the environment and the animal in a way that no existing term does. It implies the complementarity of the animal and the environment.” (Gibson 1979:127). Some examples of affordances are: a terrestrial surface affords support, air affords breathing, unimpeded locomotion, and visual perception; solids afford various kinds of manufacture (Gibson 1979).

Affordances are characterized by several properties. According to Gibson, affordances imply the complementarity of the animal and the environment. This property defines the relational character of affordances. Affordances are relationships between certain animals and certain things in the environment. Moreover, affordances are relative to specific users. Environmental features can afford different behaviors to different users. The polarity of affordances was also indicated by Gibson. Positive affordances are potentially beneficial to the user, while negative affordances are potentially harmful. Any part of the environment may also possess a multiplicity of affordances. For instance, water affords drinking, pouring, washing, and bathing. According to Maier and Fadel (2009a) even if an environmental feature possesses an affordance, there is still room to describe how well this feature affords a specific use in terms of quality. Some seats afford sitting on better than others. Finally, Maier and Fadel indicate that affordances are form dependent. By definition, it is the form, i.e. structure, of environmental features that determines what they afford to specific users. This is an important difference with the concept of function, since functions and functional decomposition are form independent (Maier and Fadel 2009a).

Gibson’s theory is a general one in which the environment refers to the surroundings of all organisms that perceive and behave, and in which affordances always express a complementary relationship between the environment and such an animal. In the context of housing research, we can view the environment as the built environment and consider the typical animals in them to be human beings. Moreover, our focus here will be on the dwelling. With respect to dwellings, some simple examples of affordances are: dwellings afford shelter, concealment, storage, comfort, privacy; a kitchen affords cooking; a bathroom affords personal hygiene; a private garden affords casual leisure outside.

Outline of Affordance-Based Housing Preferences

Most prevailing methods for determining stated housing preferences focus on the dwelling and not on the dweller, and consequently only elicit what people want while ignoring why they want it. However, in a user-oriented approach the emphasis shifts, in first instance at least, from the good and its features to the users’ objectives and activities. Instead of the house as a physical entity that provides elementary functions, the focus is now on the dwelling process, on the objectives and activities that motivate people to prefer a certain dwelling. Starting point for the determination of housing preferences is now the use people intend to make of the dwelling and the objectives they try to achieve through it.

This idea of focusing, at least in first instance, on people’s objectives and activities is very much in line with the affordances-based relational model for design called the DAU-system (Maier and Fadel 2009a). This model elaborates the reciprocal relationships between the threesome Designer - Artifact - User (DAU). Fundamental in the DAU-model is the property of affordances that they express the complementarity of the artifact and the user. Artifacts are used by users, but it is the affordances of the artifacts that determine how the artifacts can be used, this is the A-U relationship in the DAU-model. Designers create the artifacts and thus the affordances that they possess, which is indicated by the D-A relation. Finally, there is the D-U relationship which signifies that designers must ascertain from users which affordances an artifact must possess in the first place. So, the DAU-model, by using the concept of affordance, entangles the relationships between designers, artifacts and users. Moreover, the model makes clear that effective design of an artifact is not very well possible without designers referring to users’ target set of affordances that the artifact must possess.

Combining certain aspects of the relational DAU-model with the measurement of housing preferences leads to an affordance-based procedure for determining housing preferences. This procedure proceeds in several stages:

1. Motivation for (re)developing housing
2. Determine relevant target group(s) of inhabitants
3. Interview participants to determine positive and negative affordances
4. Prioritize positive and negative affordances
5. Create Affordance Feature Matrix

The affordance-based determination of housing preferences begins with the motivation for (re)developing housing, for instance the inner-city development of a small housing project for families might be such a motivation.

The next step involves the determination of the relevant target group(s) for which the housing project will be developed. The potential inhabitants might be recruited through advertisements in all kinds of media. Although this might be an open procedure, one has to realize that certain constraints, such as income conditions, may apply.

Given the motivation and the target groups the third step is to determine the affordances that the dwellings must have and not have by interviewing potential inhabitants. Although it has been argued (Maier and Fadel 2009b) that this should not be too difficult from a psychological point of view, since according to ecological psychology people perceive their environment in terms of affordances, one may wonder whether this is also the case for more complex artifacts such as houses. Dwellings have a great multiplicity of affordances (Tweed 2001) and one may have to support participants by providing them with lists of possible affordances which are validated on the basis of previous research. These may be free-format lists, but one can also imagine categorizing the affordances in terms of, for instance, domains of life such as shelter, personal care, domestic activities, accommodating external activities, accommodating social contacts, and so on. An useful tool in this stage may be the Generic Dwelling Affordance Template (cf. Maier and Fadel 2009b), see figure 1. The purpose of
this tool is twofold. First, to guide researchers and inhabitants as to what affordances in general the artifact is supposed to provide. And second, to detect and include affordances that might otherwise be missed. In this context one can think of affordances with respect to aesthetics, building, maintenance, and so on. In the case of a dwelling one might think of more or less ‘obvious’ affordances as concealment, security, lighting, heating, ventilation, plumbing and the like.

Because of the polarity of affordances both positive (what the dwelling should afford) and negative affordances (what the dwelling should not afford) must be identified. Furthermore, because of the complementarity of affordances different potential inhabitants must be identified and interviewed in order to get a good overview of the variation in desired affordances. The outcome of this stage is an unordered list of positive affordances as well as an unordered list of negative affordances. Both lists are annotated in such a way that they document for each affordance who suggested it and for whom it was suggested. A short list of examples of positive and negative affordances for the dwelling is presented in table 1.

The fourth stage involves the prioritizing of the affordances. This prioritizing should reflect the inhabitant’s preferences but may be adapted by information from the researcher. This may be done by prioritizing the long list of individual affordances or by classifying the affordances into categories on the basis of their relative pertinence, as was also suggested above for stage 3.

The final stage of the affordance-based determination of housing preferences involves relating the affordances to the physical structure of the dwelling at the conceptual stage. This is done by means of an Affordance Feature Matrix (AFM) (cf. Maier et al. 2007). The rows of the AFM contain the different types of positive and negative affordances, and the columns represent the components of the physical structure which in case of a dwelling are its features. An example of an affordance feature matrix is shown in figure 2. An ‘x’ in a cell of the matrix indicates a relationship between the corresponding affordance (row) and dwelling feature (column), i.e. the specific dwelling feature provides the indicated affordance. The column totals of the AFM represent for each housing feature the number of affordances it affords, and the row totals indicate for each affordance by how many features it is afforded. So, the row and column totals direct attention to important affordances and important features of the physical structure.

<table>
<thead>
<tr>
<th>Positive affordances:</th>
<th>Negative affordances:</th>
</tr>
</thead>
<tbody>
<tr>
<td>(The dwelling must afford …)</td>
<td>(The dwelling must not afford …)</td>
</tr>
<tr>
<td>Sleeping</td>
<td>Injuring inhabitants</td>
</tr>
<tr>
<td>Cooking</td>
<td>Injuring guests</td>
</tr>
<tr>
<td>Eating</td>
<td>Bad maintainability</td>
</tr>
<tr>
<td>Family life</td>
<td>Degradation of (parts of) the dwelling</td>
</tr>
<tr>
<td>Entertaining guests</td>
<td>Health risks</td>
</tr>
<tr>
<td>Relaxing</td>
<td></td>
</tr>
<tr>
<td>Working at home</td>
<td></td>
</tr>
<tr>
<td>Personal care</td>
<td></td>
</tr>
<tr>
<td>Recreation</td>
<td></td>
</tr>
<tr>
<td>Maintenance of the dwelling</td>
<td></td>
</tr>
<tr>
<td>Being outside</td>
<td></td>
</tr>
</tbody>
</table>

Table 1. Examples of affordances for a dwelling (annotations omitted).
The result of this stage is a set of housing features and their relationships with the affordances. This set of housing features represents the affordance-based housing preferences, since the housing features are inferred from the affordances. In contrast with the traditional approaches for measuring housing preferences in which only housing features are measured, the affordance-based approach focuses in first instance on the user’s objectives and activities and subsequently relates this requirement type of information to aspects of the physical structure of the dwelling. The requirement type of information that the affordance-based approach yields goes beyond the requirement information of the traditional approaches to housing preferences. For instance, in the latter affordances such as cooking, eating, sleeping and personal caring are only implied by such functional features as the kitchen, living room, bedroom and bath room. But affordances such as privacy, nicely looking, feeling secure, durable living and experiencing nature will seldom be implied by the functional requirement information of the traditional approaches, not even implicitly. Since the affordance-based approach brings out the affordances first and subsequently relates these to the physical aspects of the dwelling it embodies the complementarity of the dwelling and the individual, because it relates the objectives and activities of the individual to the relevant features of the dwelling. A good example is the kitchen. Almost every house has a kitchen. In traditional housing preference research it is often assumed that people want a kitchen and they are not even asked for it. If it is asked they may sometimes choose between an open and a closed kitchen and it is assumed that the kitchen will be used for cooking, eating, cleaning dishes and cooking utensils, and that it has enough space for a refrigerator, dish washer and kitchen cabinets, even in the case of houses that still have to be built. From inspecting the AFM in figure 2 we learn that in addition to traditional affordances such as cooking and eating this person also wants the kitchen to afford entertaining guests, family life, relaxing and working at home (cf. Busch 1999). It seems to me plausible that taking these affordances also into account may lead to a different design of the kitchen than in the case where these affordances are not reckoned with. So the AFM makes explicit how people prefer to interact with their dwelling, it shows the richness of the people-dwelling relations instead of assuming a limited standard set of behaviours and features as is the case in the traditional approaches to measuring housing preferences. One might expect that taking all, and not only the more functionally oriented, affordances into account in developing and designing dwellings leads to a higher housing satisfaction, because in the end more objectives of dwellers will be fulfilled.

The measurement of affordance-based housing preferences may be considered as the first step in an affordance-based design process (Maier and Fadel 2009b). Given the affordance feature matrix this process would subsequently involve the development, design and building of the affordance-based dwellings. During this process it may turn out that the dwelling project under consideration cannot provide all the affordances elicited from the target group. In that case, focusing on the people’s objectives and activities and subsequently associating adequate dwelling features, and the layout of the dwelling, with these objectives and activities, makes it possible to develop alternative designs with similar affordances, consider the consequences of these designs, also in terms of costs, and presents a much clearer picture of the trade-offs to be made than in a tra-
ditional product-oriented approach. The affordance feature matrix plays an important role in this context.

Conclusion
In this paper I have presented an outline of an approach for determining affordance-based housing preferences. In this approach the focus is, in first instance, on the objectives and activities—affordances—that people want to realize through their dwelling. Subsequently, these affordances are related to the housing features that afford them. In other words the emphasis is initially more on dwelling (verb) and less on the dwelling (noun). This is in contrast with most current approaches to measuring housing preferences, which only focus on housing attributes. The approach described here is still an outline and needs further elaboration. For instance, validated lists of housing affordances, based on empirical research, may be compiled to assist inhabitants and researchers in the elicitation of affordances (cf. Heft 1988; Clark and Uzzell 2002).

Further, a dwelling is a complex artifact and one may wonder if for such a complex artifact a more hierarchical approach might be necessary. Since a dwelling can be described as a system of settings in which certain systems of activities take place (Rapoport 2005), the focus in determining housing preferences could initially be on the relationships between affordances and separate settings, instead of on the dwelling holistically. Subsequently, the focus could shift to the dwelling as whole based on each of the subsystems. This second phase is itself also an interactive and reciprocal process involving inhabitants, because it is not self-evident that the aggregation of the subsystems leads to a conceptually unequivocal dwelling. Further research is needed to clarify this aspect.

The involvement of inhabitants in the affordance-based approach also raises some other issues. According to Clapham (2005) housing is consumed by households, where a household may consist of one or more persons, so the basic unit of analysis for housing is the household, despite the problems inherent in using the concept of a household. This immediately raises the question of who is to be interviewed when eliciting affordances. Should this be the individual members of the household followed by some form of aggregation of the individual affordances, the household as a group leading to a household list of affordances, or a combination of both perspectives. Another issue with respect to user involvement concerns their level of commitment. Are the selected users only potential inhabitants who intend to live in the dwellings once they are built, or may this group be broader and also consist of interested people who want to think along about the housing project?

As indicated in the previous section the affordance feature matrix may be considered as the make-up for an affordance-based development and design process. In this follow-up process there is a role for different types of professionals such as developers, architects and builders, and also for inhabitants. These different types of stakeholders have to be incorporated in some way in the affordance-based design process. The design process sketched by Maier and Fadel (2009b) focuses to a large extent on one motivating actor, but design processes in the built environment are characterized by a multitude of actors and stakeholders. The affordance-based design process must be elaborated and extended in order to facilitate the involvement of different stakeholders and professionals.

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Abstract
A large portion of first-time homebuyers lack adequate means to meet their needs of housing owing to home price inflation in Malaysian cities. One way to address the housing needs of urban household is to provide affordable quality homes. Drawing upon a case study of Greater Kuala Lumpur, Malaysia, this study attempts to discuss the cloud of issues related to different homeownership schemes available for first-time homebuyers. Results suggest that affordable housing should be made available at the price and locations that can be accepted by first-time homeowners. In line with the principle of sustainability, homeownership schemes for first-time homebuyers should be economically viable, socially acceptable and technically feasible.

Keywords: Homeownership, Affordable Housing, First-Time Homebuyers, Greater Kuala Lumpur.

INTRODUCTION
Most Malaysian cities have not started out with clearly defined master plans. Instead, they have sprung up according to the people's needs and economic activities (Moser, 2010). The growing population and rural-to-urban migration are some of the contributory factors that are straining Greater Kuala Lumpur (Bunnell et al., 2002). The Greater KL covers an area of 2,793.27 sq km and is administrated by 10 municipalities surrounding Kuala Lumpur, the capital of Malaysia.

Owning a home is essential to every Malaysian, but this sought-after goal is still hard to obtain for some families (Tan, 2008). In recent times, it has been a challenge for the average Malaysian to purchase a house. Prices of property in the popular areas of Greater KL rose by about 35% in 2010 (Ministry of Finance’s Valuation & Property Service Department, 2011). Hence, the majority of first-time homebuyers could not afford to purchase quality houses in the open market. The rise in house prices is one of three areas of concerns pointed out by Malaysians who recently responded to the Prime Minister's interactive blog “I want your views” (www.1malaysia.com.my). The current frustration expressed by Malaysian house buyers are mainly those in the middle income group rather than in the lower income bracket as there is an overhang of property in the lower price range (Tharmalingam, 2012).

Sustainable and quality affordable housing should be provided in order to meet today's changing times, which is very important to ensure socio-economic stability (Lim, 1987). Affordable housing has become an important issue with the greatest need being in urban centres. Currently, an increase in urban population growth is higher than the supply of affordable housing, and this has resulted in a severe shortage of affordable housing as house builders are unable to construct houses at prices which are low enough for urban households. Affordability is expected to continue to be a concerning issue until affordable housing gets off the ground in a big way. As a result, the government faces the great challenge of on how to provide adequate affordable housing, particularly for the middle income group in Greater KL.

The objective of this paper is to examine the issues of different homeownership schemes available for first-time homebuyers in Malaysia. In terms of structure, this paper first will discuss the housing problem in Greater KL, and then followed by an overview of homeownership schemes, such as My First Home Scheme (MFH) and 1 Malaysia People’s Housing Scheme (PR1MA), and their requirements. Next, using discussions from the in-depth interviews, the paper will highlight current issues and possible recommendations of homeownership schemes with regard to the concept of sustainability in the affordable housing development. The last section of this paper presents conclusions.

HOUSING PROBLEMS IN GREATER KUALA LUMPUR
Depending on the location, affordable housing in Malaysia is priced between RM 80,000 (US 26,667) and RM 300,000 (US 100,000). House prices particularly in urban areas are generally expensive because there is high cost of compliance with various policies and regulations in the value chain of housing production (Thean, 2012). Furthermore, the scarcity of residential land for housing development and the increase in land cost are some of challenges in providing adequate housing for urban households. As a consequence, it is really a challenge for house builders to construct affordable houses priced lower than RM 300,000 in Greater KL.

In Malaysia, the public sector has an important social responsibility in fulfilling the housing needs for those in the lower income group (Malaysia, 2006). The provision of houses for other Malaysians has been left to the private sector, but with prices of homes and land skyrocketing, the private sector has, in the recent years, built only high-end homes. Even though there is a requirement for private housing developers to include afford-
TABLE 1. Comparison of My First Home (MFH) and PR1MA Housing Schemes.

<table>
<thead>
<tr>
<th>Metric</th>
<th>MFH</th>
<th>PR1MA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price Range</td>
<td>Maximum of RM 400,000 (US $133,333)</td>
<td>RM 220,000 (US $73,333) – RM 300,000 (US $100,000)</td>
</tr>
<tr>
<td>Income Requirement</td>
<td>Household income (husband &amp; wife) of less than RM 7,000 (US $2,333)</td>
<td>Household income of less than RM 6,100 (US $2,000)</td>
</tr>
<tr>
<td>Age Limit</td>
<td>18 – 35</td>
<td>No age bracket</td>
</tr>
<tr>
<td>Eligibility</td>
<td>Homebuyers from the private sector</td>
<td>Homebuyers then both the public and private sector</td>
</tr>
<tr>
<td>Loan Financing</td>
<td>A loan of up to 100% subject to the bank's policies</td>
<td>A 100% stamp duty exemption on loan instruments. Installment would only commence after the house is completed</td>
</tr>
</tbody>
</table>

Both housing schemes are specially consummated for the benefits of first-time homebuyers based around Greater KL and regions nearby. However, the My First Home scheme differs a little from PR1MA, in which applicants for My First Home scheme can purchase a house from any locations, and whichever types of home of their choice. A summary of the basic characteristics of both housing schemes is summarized in Table 1.

The research question of this paper is to assess how successful the recently introduced homeownership schemes (PR1MA and MFH) have been in meeting the housing need of first-time homebuyers. If not, what are key issues to achieve sustainable affordable housing provision in the country? In order to answer this question, 20 in-depth interviews in this study were conducted individually and face-to-face to gain an understanding of the perception of respondents about the affordable housing schemes which are available to them. Some of respondents have been involved in applying for PR1MA housing allocation. The main objective of the discussion is to gather a more detailed understanding of issues raised through the analysis of responses to the interview. From these interviews, issues of securing a home under these affordable housing schemes were discussed. The motivation behind the discussions on sustainable homeownership schemes is to reconcile economic, environmental and social justice consideration. To ensure the eligibility of respondents, the selection criteria were that:

1. The respondent is a young and working Malaysian in Greater KL;
2. The respondent is a first-time homebuyer and currently looking for a house; and
3. The respondent earns less than RM 7,000 (US $2,333) a month.

RESULTS AND DISCUSSION

General Perception of Homeownership Schemes

Despite efforts by the government to promote the homeownership, there are quite a small number of respondents who have yet to hear about PR1MA and MFH. A respondent who recently graduated from the university says: “I am not even aware of these schemes. I can imagine the number of first-time homebuyers who have no idea that such a scheme has been initiated by the government.” Although most respondents are aware of these schemes, few respondents said that they “don’t even know the difference between PR1MA and MFH.”
Judging from the mixed responses to these homeownership schemes, it seems that much has to be done with regard to increasing the public profile of these initiatives. Both schemes would have a better place in the public eye if marketing and publicity strategies are put in place as they are a breath of fresh air for urban first-time homebuyers who are unable to involve themselves in any home purchase due to pricing concerns.

**Issue 1: First Home Dilemma**

There have been discussions over the initial price cap under My First Home Scheme. This viewpoint is supported by content analysis from the in-depth interview with few respondents in describing the price cap. The initial price cap of RM 220,000 (US 73,333) excludes desirable locations that housing developers can build on because of high land prices in the urban area. At this price range, most of the housing projects will either be outside or on the boarders of Greater KL. As reported by Ministry of Finance’s Valuation & Property Service Department (2011), the estimated average prices for all houses in Kuala Lumpur and Selangor states were RM 422,112 (US 140,704) and RM 290,440 (96,813), respectively as of the year of 2010. In view of the high prices, the government has proposed to increase the limit of house prices under the My First Home Scheme from a maximum of RM 400,000 (US 133,333) starting from January 2012. The expansion of the scheme addresses the concerns of young households who seek to own their first home, and the increased price ceiling should make it possible for them to own a home in Greater KL. Even though the price cap of RM 220,000 has increased, there still have been debates on the improved scheme. The original objective of the scheme is to help young urban households with a monthly income of less than RM 3,000 (US 1,000). However, house prices at RM 400,000 (US 133,333) are beyond the means of first-time buyers who earn less than RM 6,000 (US 2,000) because they may not qualify for loans to buy such property. One respondent in the interview describes: “I am not eligible for a loan of RM 400,000 owing to my current income level”. Echoing these sentiments another respondent says: “It’s a good scheme but its practicality needs some work.”

He adds further: “Coupled with rising in cost of living such as food and petrol prices, I am not sure if first-time homebuyers would be able to stretch their money enough.”

The recently introduced homeownership schemes have received tremendous backlash for its inability to reflect on earning ability of first-time homebuyers, particularly the young urban households. Based on the rule of thumb, a single loan repayment cannot exceed 1/3 of the household gross income. With the current lending rate with an average of 5%, first-time homebuyers with household income of RM 6,000 (US 2,000) a month would not be able to afford the month-

<table>
<thead>
<tr>
<th>Loan Tenure</th>
<th>Monthly Repayment (RM)</th>
<th>Min Salary Requirement (RM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>30-year</td>
<td>2,659</td>
<td>7,947</td>
</tr>
<tr>
<td>25-year</td>
<td>2,338</td>
<td>7,104</td>
</tr>
<tr>
<td>30-year</td>
<td>2,147</td>
<td>6,641</td>
</tr>
</tbody>
</table>

Table 2. Monthly repayment for Housing Loan of RM 400,000 with interest rate of 5%.

*Figure 1. Low cost housing (poor living condition) Source: http://www.nst.com.my/streets/central/urban-poverty-root-cause-of-social-ills-1.57998"
ly repayment of a RM 400,000 housing loan based on a 30-year repayment period (Table 2). This figure does not include other hidden costs such as stamp duties, insurance, legal fees and other expenditures. But raising the eligibility income level to match the higher priced houses may defeat the original objective of the scheme, which is to give first-time buyers the opportunity to own a house at the best possible arrangement.

Another flip side of this scheme is that the increase in borrowing just to buy a house will translate directly into higher debt-to-income ratio. This will place a lot of young urban households in uncertain financial situations. Furthermore, the increase in the monthly repayment of housing loans will directly decrease the balance remaining for the other daily requirements. Interviews with respondents have suggested that affordable housing schemes should be economically viable and technically feasible.

**Issue 2: Delivery of Affordable Houses**

In view of the oversubscription of these affordable houses, the distribution system of these houses is an open balloting system which could result in a limited number of homebuyers getting the units. As one respondent point out: “Hearing about the schemes, I am interested to find out more. Of course, I do have concerns like if there will be quota system.” For the homeownership scheme to be meaningful and successful, the allocation of the housing units should be fair through the open balloting system. It should be totally transparent in its allocating process and

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*Figure 2. Picture 2: Low cost housing (poor maintenance) Source: [http://vincentloy.wordpress.com/2011/08/](http://vincentloy.wordpress.com/2011/08/)*

*Figure 3. Low cost housing (poor maintenance) Source: [http://malaysiansmustknowthetruth.blogspot.com/2011/12/taman-nelly-low-cost-flat-neglected.html](http://malaysiansmustknowthetruth.blogspot.com/2011/12/taman-nelly-low-cost-flat-neglected.html)*
not be subject to abuse. Several respondents mention their concerns with the balloting system and describe: “This is a good program but our reservation is on the administration and enforcement of this program.” Few respondents who failed to secure a unit in the recent ballot exercise in describing the balloting say: “It is unfair because it all depends on your luck.”

For the homeownership scheme to achieve its objectives, the government should increase the building of more affordable houses within the price range of RM 220,000 to RM 300,000 as this lies within the affordability of the middle income group. In order to prevent affordable houses ending up in the hands of speculators who want to make profits from the property, the government should pass strict laws and regulations to ensure that this type of housing would only benefit households with genuine need for help with their basic housing needs. Households that are not eligible for My First Home and PR1MA housing schemes should not be made eligible to access this type of housing. In addition, home buyers under the schemes should not be allowed to sell their homes in the market for profit within the first ten years from the date of purchase. An exit system is required for households to return their subsidized housing to the government if they want to dispose off their first homes so that other homebuyers in need can benefit from this scheme. These homes can only be repurchased by the government at a relatively low price.

Generally, both My First Home and PR1MA schemes have increased the scope of homebuyers who can afford these units by selling below the market price. However, it does not actually address the problem of supply. As mentioned earlier, house developers have not been giving priority to the affordable housing programme owing to a low level of profitability. As a result, affordable housing within the financial reach of young urban households remains in short supply and far from satisfying their housing needs. The significant decline in the supply of affordable housing has contributed to low homeownership among first-time homebuyers in urban areas. Given the critical housing shortage, housing policies should focus on facilitating the supply of housing. There is a need to set up a public-private dialogue between private developers, state housing agencies and housing buyers associations for sustainable solutions. The dialogue should lead to a shared solution, which could ensure future supply of affordable houses in Greater KL. Through a consultative approach, the federal government and the state government could work together with private housing developers to build homes for this purpose. The responsibility to build affordable houses should not lie on the governments alone; it should be a joint initiative between the government and private housing developers. Land matters in Malaysia fall under the jurisdiction of the state governments; it is advisable that the governments furnish and allocate enough parcels of good government land for the projects while the developers provide their expertise (Tan, 2011b).

**Issue 3: Well-Planned and Holistic Approach in Affordable Housing Development**

Nowadays, sustainable affordable housing development should cater for the housing needs of not only the present generation but also of those to come. Also, the housing inequality of this generation as well as the inter-generation should also be addressed. As pointed by Hui et al (2006), this type of sustainable housing development allows homeowners to live comfortably. In this context, housing developers in Malaysia should actively...
make changes to become more sustainable and promote affordable housing development that is line with the principle of sustainability (Tan, 2011c; Muazu and Oktay, 2011).

Affordable housing should not be viewed in isolation but instead of what constituted the well-being of homebuyers. In order to achieve sustainability of housing provision, there should be well thought out and clearly well-planned housing projects with adequate amenities and facilities (Susilawati and Armitage, 2010). There is a need for the government to build affordable housing in the targeted areas that will add value to the living environment and quality of life. Respondents approached for this study have mentioned that affordable housing should be built and equipped with proper amenities as homebuyers find it more cost-effective to live in a well-connected community, with easy access to daily facilities. Majority of respondents mention that they are not interested to buy a home in a remote area with no adequate amenities and facilities.

There are lessons to be learnt from public housing schemes in the past as many public affordable housing developments do not provide decent environment for families to thrive in. It is only sensible that communal living should provide for an improved quality of life to their inhabitants. Following the experience of the Housing Development Board (HDB) in Singapore, housing areas should be developed with the concept of sustainable communities. Most housing areas in these communities have a town centre for shopping, a community hall as well as public amenities. The rationale behind this would be to build a close and sustainable community where house buyers can find a place within the area to work, shop and school (Tan, 2012; Howley, 2010). For the lower income group in particular, the ability to get around for work, school and other daily necessities at a lower price is essential.

In promoting homeownership among first-time buyers, it is not just a question of building contemporary master planned communities, but of equal importance is exploring the synergy of planning the housing and public transport projects in tandem with one another. Affordable housing should be built around public transport stations. As highlighted by few respondents, it does not make sense for them to buy affordable houses in a locality that is not served adequately by cheap public transportation to enable them to go around the city. There are various modes of public transportation in Greater KL, such as to enable them to go around the city. There are various modes of public transportation in Greater KL, such as to enable them to go around the city. There are various modes of public transportation in Greater KL, such as to enable them to go around the city. There are various modes of public transportation in Greater KL, such as to enable them to go around the city. There are various modes of public transportation in Greater KL, such as to enable them to go around the city. There are various modes of public transportation in Greater KL, such as to enable them to go around the city. There are various modes of public transportation in Greater KL, such as to enable them to go around the city. There are various modes of public transportation in Greater KL, such as to enable them to go around the city. There are various modes of public transportation in Greater KL, such as to enable them to go around the city. There are various modes of public transportation in Greater KL, such as to enable them to go around the city. There are various modes of public transportation in Greater KL, such as to enable them to go around the city. There are various modes of public transportation in Greater KL, such as to enable them to go around the city. There are various modes of public transportation in Greater KL, such as to enable them to go around the city. There are various modes of public transportation in Greater KL, such as to enable them to go around the city. There are various modes of public transportation in Greater KL, such as to enable them to go around the city. There are various modes of public transportation in Greater KL, such as to enable them to go around the city. There are various modes of public transportation in Greater KL, such as to enable them to go around the city. There are various modes of public transportation in Greater KL, such as to enable them to go around the city. There are various modes of public transportation in Greater KL, such as to enable them to go around the city. There are various modes of public transportation in Greater KL, such as to enable them to go around the city. There are various modes of public transportation in Greater KL, such as to enable them to go around the city. There are various modes of public transportation in Greater KL, such as to enable them to go around the city. There are various modes of public transportation in Greater KL, such as to enable them to go around the city. There are various modes of public transportation in Greater KL, such as to enable them to go around the city. There are various modes of public transportation in Greater KL, such as to enable them to go around the city. There are various modes of public transportation in Greater KL, such as to enable them to go around the city. There are various modes of public transportation in GreaterKL spans 141 kilometres with three major lines serving residents from a radius of 20 kilometres of the city centre. Traffic management has been a challenging problem. It cannot be addressed only by constructing more roads, bridges and underpasses. The MRT is not the only solution that will prevent Greater KL from choking up. What is very important is a reliable public transport network that enables all urban dwellers in Greater KL to move around from one end to another comfortably on public transport regardless of bus or MRT. In order to achieve sustainable affordable housing development, the government and private housing developers should build affordable houses in the vicinity of MRT and other public transport system which allow lower-income groups to achieve the full extent of quality living at an affordable price.

**Issue 4: Property Maintenance**

Sustainable affordable houses do not only need to be well located in relation to amenities and services, but they also require proper maintenance. There has been a stigma associated with public low-cost housing as most are found in deplorable conditions. Residents of the low-cost flat housing are faced with problems associated to hygiene and sanitation due to poor maintenance. These problems range from filthy garbage chutes, disrepair lifts, clogged drains, rotten pipes and strewn litter. Furthermore, the building requires physical overhauls from paint jobs to tile replacements, and wiring changes. Interviews with respondents have suggested that there is a need to form an agency to perform maintenance services for the building and to ensure high level of cooperation from the residents to pay the maintenance and service charges promptly. For example, with public housing under the purview of the Housing and Development Board in Singapore, low-cost houses are characterized with a high degree of cleanliness, effective community programs, regular planting and pruning of trees and thorough infrastructure planning (Ibrahim and Lim, 2005). The issue is not just being able to buy a property, but being able to maintain that property without causing too much suffering on the owners.

**Issue 5: Environmentally Sustainable Houses**

Sustainable housing provision should not be just about ensuring a roof overhead for homebuyers, but also ensuring housing to be more eco-efficient and sustainable in design and construction (Cradduck and Wharton, 2011). Based on the interviews, respondents generally agree that sustainable affordable housing development must be planned to be sensitive to the natural environment. It is important to incorporate green energy saving design elements for better building efficiency and minimal maintenance costs to the residents. Nowadays, homeowners are not only willing to pay for houses with quality finishes, but also they are willing to pay for eco-friendly houses (Yau, 2012; Tan, 2011d). The construction of eco-friendly homes is one of the focus areas of sustainable housing development to improve quality of living. Eco-friendly houses should be considered because they aim for zero carbon emissions by maximizing passive design principles, minimizing energy consumption, utilizing renewable energy technologies and maximizing the use of water neutral through the reduction of main water consumption, rainwater harvesting and greywater recycling. Although there are many programmes to promote greater green aware-
ness and practices locally, there is still a need for more practical solutions to be adopted among housing developers. The government should look into promoting green practices by providing guidelines, frameworks and clear policies. Additionally, certain green building requirements to be incorporated into the buildings should be made mandatory by law and other building legislations.

Additionally, sustainability can be achieved if a house is located within and around a neighbourhood with good environmental qualities such as open space provision, and proximity to parks (Bond, 2010; Howley, 2010). It is important to retain a healthy balance between the built and un-built by retaining some parts of the natural environment as green lungs and parks. Open space is important for residents to take a breather from the hustle and bustle of city life and to promote a happier and healthier populace. Furthermore, open space and gardens play an important role in supporting sustainability objective as these places serve as a meeting place for homeowners to socialize in the neighbourhood (Tan, 2011a). Social ties with neighbours living nearby may be seen as the first step towards participation of the public in decisions that affect them. There is a high level of involvement in community affairs in the socially sustainable neighbourhood.

CONCLUSION

In less than a decade, housing prices have increased to a level that are becoming out of the reach for the lower income group. During such time, more affirmative policies should be undertaken by the government to help first-time buyers tide over the challenging times. The government should look into sustainable ways to provide affordable housing to cater to the needs of first-time buyers. To ensure this noble measure gets off on the right footing, homeownership schemes for first-time buyers should be planned based on a long-term and holistic approach. Furthermore, it should not take too long to serve the needy. The homeownership schemes could turn out to be among the best efforts to improve the quality of life and to encourage homeownership among young households provided that they are well planned and executed. As such, My First Home and PR1MA Schemes could hopefully produce the desired results to allow for more housing opportunities for the needy. In this regard, more appropriate policy guidelines of homeownership schemes should be drawn up to facilitate the implementation of the sale of affordable housing to first-time homebuyers.

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Overview

Comparatively no longer a radical alternative to many approaches emerging to analyze and organize the design and construction processes which shape the built environment, THE FUTURE OF OPEN BUILDING conference asks participants to critically consider what the notion of ‘open building’ continues to offer within broader international contexts. The aim of this provocation is to encourage participants to challenge how collaborative synergies amongst the design professions and those impacted by design choices, are often made, unmade and transformed within every scale of the built environment. What forms and directions should ‘open building’ take in the twenty-first century?

Structure

Designed to be relevant and accessible to both academics and practicing design professionals, the conference is organized around keynote speakers and panelists in the morning sessions and case study oriented paper sessions in the afternoon.

Special Guest of Honor

N. John Habraken

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Prof. Alfredo Brillemborg / Urban Think Tank / ETH Zürich
Prof. Yung Ho Chang / Atelier Feichang Jianzhu / MIT - Massachusetts Institute of Technology
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Prof. Dietmar Eberle / Baumschlager Eberle / Director, ETH Wohnforum - ETH CASE / ETH Zürich
Prof Dr. Bernardo Gómez-Pimiento / BGP Architects / Director, Architecture School at the Anahuac University

Martin Henn / Design Director, HENN Architects
Prof. Kerstin Höger / Kerstin Höger Architects / NTNU - Norwegian University of Science & Technology
Hiromi Hosoya / Partner, Hosoya Schaefer Architects
Prof. Hubert Klumpner / Urban Think Tank / ETH Zürich
Giorgio Macchi / Canton of Bern, Former Chief Architect
Prof. Dr. Amira Osman / University of Johannesburg
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Ute Schneider / Director, KCAP Architects & Planners
Roland Stulz / Founder, INTEP / Director, 2ooo Watt Society

Additional details coming soon...

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March 2, 2015 - Authors Informed & Payment Options Open
May 1, 2015 - Full Papers & Posters Due for Review
June 1, 2015 - Review Comments Distributed
July 1, 2015 - Final Submissions Due & Regular Registration Closes
August 1, 2015 - Late Registration Closes
September 9-11, 2015 - Conference at ETH Zürich
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