ENVIRONMENTAL AFFORDANCE:
A Theoretical Framework for Incorporating Some Behavioural Considerations in Residential Evaluation

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ABSTRACT

The aim of this paper is to develop a theoretical understanding of residential design evaluation. In doing so, it examines firstly the issues among the environmental design and then a analytical framework is conceptualised based on the concept of environmental affordance. A case study which evaluates two urban settlements in Nanjing city is presented to explore the possibilities of implementation. The discussion of the paper suggests that the evaluation of residential environment by concerning its associated control powers can provide a better understanding of the relationships between people and things in the environmental quality.

INTRODUCTION

There are two alternatively directional moves in environmental design: towards the building form to search for the criteria of building and evaluation of the built form to shape the criteria once being generated (Habraken, 1985). With the latter, it has been common in architectural research to evaluate the quantitative and qualitative characteristics of the built environment in general and of the residential settlement in particular. A large amount of theoretical research has been established to deal with how the built environment can be evaluated in relation to the people who use it. In view of the complexities of environmental issues which are too many to be encompassed by one kind of person or professional action along, the inadequate conceptual framework for building design, evaluation and analysis has been the weaknesses of most research when concerning people and their physical environments (Bechtel & Michelson, 1987).

One of the weaknesses in environmental evaluation is only to employ the behaviour needs, which are often referred to by the term of user needs in housing, as the criteria to define the behaviour requirements for the environment (Lawrence, 1991). Although there is less argument that research in user needs is applied well in large-scale environment, particularly in less tangible terms, such as concern the city planners while large-scale entities are the configurations for frequent, regular and important activities, but at the lower level of the scale when dealing with the quality of residential environment, it is not particularly well developed because the whole complex of living behaviour and life-styles of inhabitants can not be adequately expressed merely by the user needs in housing.

Secondly, there are less or restrictive conceptualisations to clarify the process of environmental design with the concern of actors involved in it. Since an ideal building process is achieved by making designer, client, user, and builder work in harmony to seek the building form, it is entirely impossible to study the built form without thinking about the control power behind it. Particularly in residential evaluation, the complex feature of interrelations between power and material - two basic aspects in the housing process (Cuperus, 1993) needs to be further emphasised because it deals with how the power is exercised by people - designer, user and builder to make decisions about construction and distribution of the material - housing resources.

In order to evaluate the built environment in general and the residential settlement in particular by certain people with a broad sense of human perspective, a conceptual framework should be developed to concern the complex building process, including the factors of material of things, power by people and a relationship between them.

ENVIRONMENTAL AFFORDANCE

Human environment is a complex entity which includes people and things, and the relationship between people and things. Due to such a complex reality, the conceptualisation of an appropriate environmental model would be crucial in understanding its context as well as the relationship between “man” and “environment” and “people” and “things”.

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Since the surroundings of human consist of the terrestrial, animate, social and cultural components (Lang, 1987), the environment can be regarded as a constitution of environmental affordances which afford different behaviour and aesthetic experiences for humans (Fig.1).

"Affordance" is not a word in any dictionary. It is coined by psychologist James J. Gibson (1979) to mean something that the environment offers human-beings, and "what it provides or furnishes, either for good or ill". Gibson's concern to the affordance is the physical properties of the configuration of an object or setting that allow it to be used for some overt activities. This concern has been extended by Lang (1987) to be an environmental design theory in which the affordances also afford meanings and aesthetic appreciation for human experiences.

The affordances which constitute any setting of the environment can be seen as natural of air, water and sunshine and man-made of walls, building and streets. Although Gibson indicates that the natural and artificial environment can not be separated into two environments for the reason that artificial environment is modified by man from natural (Gibson, 1979). Since environmental design concerns the activities of man's changing and modifying the substances of his environment to be more suitable to him, the affordances discussed in the built environment would mainly refer to the artefacts manufactured by man from the natural environment, or they could be better described as the "altered" affordances.

The set of altered affordances in the first place only constitute the potential environment. When these affordances are used and appreciated by people, then they become "effective" and form the effective environment (Gans, 1968). Not all potential components can be effective. The transitional process depends on the individual's social background and relationship who may perceive and use them (Fig.2). Any change in the built environment is likely to change the affordances of the world. These change have been made so that the terrestrial, animate and cultural environments could better serve an individual's or group's purpose (Lang, 1987).

Since the environment can be described as consisting of relationships between people, between people and things, and between things (Rapoport, 1977), these relationships have pattern and structure and serve as template for the organization of human behaviour. Housing as an entity structured by a variety of environmental components, is a form of these templates. The act of housing aims at altering and changing the natural affordances into an appropriate configuration in order to cater for developing and supporting human behaviour.

People build houses with natural material: a roof affords protection from rain and direct sunshine; walls afford protection from wind and prevent the escape of heat; windows afford fresh air and light. The houses are also decorated so that they fulfill the inhabitants' needs to identify themselves with others. When any housing provision is intended to achieve an effective environment through making a potential housing configuration, the affordances as basic components of things, between things and people, between people and people can provide a better understanding of the residential environment.

Configuration of Things and Things

Affordances as basic components of the residential environment are first a series of elements. These elements are material volumes and physical objects. When an elements is called "door", it is the actual object that swings in a frame and not the void through which one pass. There are countless elements - doors, windows, walls, columns, floor, roof and furniture. In most cases, the purpose of many elements is not only for their own existence, they are created to form other components. Space is the most observed one. There are rooms, corridors, courtyards, streets, squares and gardens.

Elements and spaces are complementary. When there are elements, there are spaces. The elements indicate the spaces -- rooms and courtyards are bounded by walls and streets and squares are bounded by buildings. The elements are the points of reference to see the space that the observer chooses to see. For example, a space can be "indicated" by elements rather than fully circumscribed because a space can be "under a tree" or "around a column". Therefore, elements and spaces are equally important physical

![Diagram of Configuration of Residential Environment by Affordances](image-url)

*Figure 1. The Configuration of Residential Environment by Affordances*
affordances in the residential environment.

A hierarchical structure of these affordances has to be understood. Many example of the relations of affordances can be found in the environmental configuration. They do not occur in a random manner but in certain patterns that are combined in certain ways. The first kind of relation to be distinguished is the vertical relation of the affordances (Habaken, 1993). The phenomenon of the environment suggests that a territory is always located in another larger territory. At the same time, the included territory can itself contain yet another, smaller territory. If each territory can be seen as a class of affordances at certain level, the hierarchy of these classes allows us to see the environment as something more than a mass interrelated configuration.

For example, a settlement can be distinguished into three broad classes at levels from high to low: urban tissue, dwelling profile and house infill. (Fig. 1). The different classes can be always ranked according to their dominance to another. In the order of such relations, the higher level configuration makes the low level configuration transform freely without disturbing the high level. However, when the high level transforms, the lower level will inevitably be disturbed. The hierarchical orders divide the building responsibilities among different parties. The exercised powers from the user, designer and builder can play different roles in control of this hierarchical structure between different levels.

Communication with People and People

People certainly have considerable control over their environment. The relationship of people to each other has formed an important structure to perform such a control. Thus in a residential settlement, the necessary social services and community facilities also can be seen as a set of social affordances. The social affordances are those of administration system and neighbourhood organisation which are important to support and maintain a relationship of people to each other. This relationship of people involves social interaction and communication (Lang, 1987).

Indirectly, people communicate with each other through artefacts they make from the natural environment, including the building, with which they surround themselves (Rapoport, 1982). By the use of a style, a fashion, a method, a technical convention, or a symbolic meaning of the artefact, people identify themselves as part of a social group. Directly, they interact through touch and sound, visually through facial expressions and body positions and through odours. The process of social interaction and communication is not random but orderly. Thus a social system is necessary to adjust and maintain this relationship.

The social system enables humans to survive better than other creatures. This system consists of a set of individuals who directly or indirectly interact on a regular basis for specific purposes. Within the system there is some common expectation about the roles and behaviours of its members. For example, the residents have to follow certain regulations when they move in a new settlement. In turn, they have impact to reshape these regulations. That is, the roles of the individuals reflect the norms of the social system.
When people agree about the way they see the world, and when there is a social space in which physical things acquire meaning, they can act with confidence and in harmony (Habraken, 1985). The social system also depends on the interaction and communication process. Any changes in individual behaviour, in turn, may result in changes in the social system. Therefore, the structures of human environment to support the social relationship between people, and a social system to contain them constitute the social affordances of the residential environment.

### Relationship between People and Things

As an affordance points both ways to the environment and to the observer, "the central question for the theory of affordance is not whether they exist and are real but whether information is available ... for perceiving them" (Gibson, 1979), the importance of the affordance concept provides a richer description in understanding the man-environmental relationship. When the affordances are the basic components of the environment to support behaviour of the potential user, they are also important objects for the perception of the individual and group in the environment. Thus they must possess certain attributes to perform such purposes to be a base to support people’s living activity and to be a bridge to interact with people. The basic attributes of affordance at least should achieve the following purposes: 1) a value to be existent and support human needs; 2) a meaning to be perceived in order to be used.

The value of affordance is likely to mean the capacity of a component to offer certain services (Habraken, 1985). It contains a set of functions since environmental components which include buildings have to function, they have to be designed to suit a particular purpose (Oliver, 1990). When "function" is used in connection with the affordances, it could have two basic senses: it simply means the way in which the environmental configuration satisfies a set of programmatically determined uses; it means a certain architectural language which represents a certain relation held to exist between human society and the mechanical and material basic of its culture (Cologhoun, 1981). Therefore, the function of affordance contains a set of purposes in supporting human needs and activities (Fig.3).

Human behaviour is full of variety for the reason that human behaviour in relation to physical setting reveals diversity over space at any given moment and continues variability in any given space overtime (Proshansky, et al, 1970). In order to be valid to match this diversity, the affordances should possess an essential feature - a various form to contact with...
and attract attention of the user, as the form of the object in all its appearances is the medium for communication between people (Bax, 1990). Therefore, the form of affordance is created for perception and use of people. It invites performance and behaviour of people (Habraken, 1985).

The diverse attributes of the form can be seen ranging from movement, contour, size, shape, surface, colour and location (Fig.3). It is impossible to identify all environmental forms at a time. The only way that can be done is to establish implicitly an order of the forms. The diverse feature of the affordance form is explicitly related to the control powers behind it from diverse groups of people, including user, designer and builder although many conventional building activities have left the form only controlled by the designer.

In summary, the environment consists a set of affordances — man-made and natural. In the residential environment, man-made or man-altered affordances are the most outstanding components. The purpose of what an affordance offers is to support human behaviour and activity. And perception and use of an affordance are the basic function of the individual's needs and competencies. Thus the affordance must possess certain attributes — a function in order to be supportive and a form in order to be perceivable and usable. The function and form of affordances may not be in a monodirectional or cause-and-effect relationship such as "architectural forms symbolised the structure functions of the building material (Schneider in Beton & Sharp, 1975). An affordance to serve the same function can have different forms (Fig.4).

The purpose of differentiation between the function and form of affordances is not only to explain what can be function and form but rather to identify the power involved in the process of creation and transformation of the affordances. In residential development, the different powers from user, designer and builder can play different roles in control of an affordance by different aspects of function and form or a class of affordances at different levels in a hierarchical configuration. Obviously, the different constitution of control power in dominance over a housing provision may result in the different environmental conditions.

A CASE STUDY

The usefulness of affordance concept is that it provides a framework to evaluate the environment by revealing the structure of residential setting in association with the variant control powers. The appropriate balance of control power between user, designer and builder in generating a settlement is important for a potential configuration to become an effective environment later. In order to gain the insights of this issue within the context of urban residential development, a case study, which evaluates two urban settlements namely Beiluzhou Settlement and Dabanxiang Neighbourhood in Nanjing city, is presented following as an examination of the conditions of urban housing development in China.

Beiluzhou Settlement is an urban redevelopment scheme by the state in 1986 (Fig.5). The settlement is built within a "total-providing" process in which the state has controlled all the housing process to supply a whole set of housing components according to the requirement of user needs. Dabanxiang

![Figure 5. View of Beiluzhou Settlement](image)

![Figure 6. View of Dabanxiang Neighbourhood](image)

Neighbourhood in the same district is an old traditionally built settlement with a large amount of transformed dwellings (Fig.6). The process of building transformation with insufficient state's inputs to supply the building material and less state regulations to control the building activity is carried out by the users. Therefore, these two settlements provide a interesting case to compare the resultant housing conditions by the different control powers2 (Table 1.).

**Things of Potential Environment**

The built environment consists of adoptions to the natural environment. People have changed and continue to change the natural environment to alter the set of affordances to suit their behaviour and activity. These changes and adaptations in the first place constitute the potential environment. When the affordances in the potential environment bring attention to people and further have been perceived and used, they become effective and form an effective environment. The evaluation of

<table>
<thead>
<tr>
<th>Category</th>
<th>Setting</th>
<th>Beiluzhou</th>
<th>Dabanxiang</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PEOPLE</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Population</td>
<td>7,878 person</td>
<td>2,846 person</td>
<td></td>
</tr>
<tr>
<td>Education Level</td>
<td>Moderate (second school/college)</td>
<td>Median (second school)</td>
<td></td>
</tr>
<tr>
<td>Income Level</td>
<td>Median (200-400W)</td>
<td>Median (300W-500W)</td>
<td></td>
</tr>
<tr>
<td>Location</td>
<td>Inner city area</td>
<td>Inner city area</td>
<td></td>
</tr>
<tr>
<td>Land Use</td>
<td>9.78 hectares</td>
<td>5.42 hectares</td>
<td></td>
</tr>
<tr>
<td>Building Density</td>
<td>12,420M²/Hectare</td>
<td>8.970M²/Hectare</td>
<td></td>
</tr>
<tr>
<td>Who Decides</td>
<td>State</td>
<td>State/Enterprise</td>
<td></td>
</tr>
<tr>
<td>Who Builds</td>
<td>State</td>
<td>User/Enterprise</td>
<td></td>
</tr>
<tr>
<td>Who Inhabits</td>
<td>User</td>
<td>User</td>
<td></td>
</tr>
<tr>
<td><strong>ENVIRONMENT</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>POWER</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>MATERIAL</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Building Type</td>
<td>Multi-floor Block</td>
<td>Courtyard House</td>
<td></td>
</tr>
<tr>
<td>Building Material</td>
<td>Concrete</td>
<td>Brick &amp; Timber</td>
<td></td>
</tr>
<tr>
<td>Infrastructure</td>
<td>Pre-constructed</td>
<td>Later-constructed</td>
<td></td>
</tr>
</tbody>
</table>

**Table 1. The Background of the Evaluated Settlements**
residential environment can firstly look at the potential environment to examine whether or not the settlement has supplied the sufficient affordances to fulfill the residents’ living activity. These potential affordances can be identified as a hierarchy structure in a settlement at the different levels. The preliminary list of the conditions of affordances provided by the evaluated settlements suggests the different quality of potential environment that exists (Table 2. & 3.).

The construction and distribution of material into a potential environment depends upon who decides and controls the process. The capability of people who have control power must be concerned in association of their social-economic status in the societal structure because the houses in a society are almost given their character by the system of production (Alexander, 1985). Beiluzhou Settlement is built by the state. While the state controls the distribution system of housing resources, the state housing settlement is always constructed with a complete set of environmental affordances. These affordances are made through rational planning according to the generality of user needs and by thoughtful providing with sufficient material supply. The building process in Dabanxiang Neighbourhood is controlled and carried out by the users. While the state controls the supply of building materials and facilities, it is difficult for individuals to procure such materials to effect the essential building activity by themselves. Moreover, when there is lack of the state’s investments and professional advice in the building transformation process, the new dwellings and the extensions to old buildings are constructed by the users themselves in Dabanxiang Neighbourhood. The Residents’ Committee plays a positive role to support building transformation, especially to act as a mediator to reconcile and intervene in disputes of territory control between the households.

Commercial facilities as important social components build up a spatial resource base in assuring an adequate supply of living necessities. They also provide the places and opportunities for social interaction between the residents as shopping is the most frequently daily routing. The system of commerce is also different between the evaluated settlements. The shopping complex of Beiluzhou Settlement stands out distinctly in the centre of the settlement by its remarkable size and height (Fig.7) whereas the small grocery stories of Dabanxiang Neighbourhood are composed in a chain pattern along the streets (Fig.8). The centralised distribution of commercial facilities in Beiluzhou Settlement is for an easy management by the state where it is large enough for service of the whole population in the

<table>
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<th>Index</th>
<th>Setting</th>
<th>Beiluzhou</th>
<th>Dabanxiang</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Space</td>
<td>Greenvy Land</td>
<td>0.91M²/Person</td>
<td>0.72M²/Person</td>
</tr>
<tr>
<td>Transport &amp; Access</td>
<td>Street (Width)</td>
<td>&gt; 6 M</td>
<td>≤ 4 M</td>
</tr>
<tr>
<td>System</td>
<td>Condition</td>
<td>in order</td>
<td>disorder</td>
</tr>
<tr>
<td>Education Facility</td>
<td>Primary School</td>
<td>one</td>
<td>none</td>
</tr>
<tr>
<td>Utilities</td>
<td>Tap Water</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 2. The Conditions of the Neighbourhood Tissue

<table>
<thead>
<tr>
<th>Index</th>
<th>Setting</th>
<th>Beiluzhou</th>
<th>Dabanxiang</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Dwelling Floor Space per Household</td>
<td></td>
<td>43.21 M²</td>
<td>36.3 M²</td>
</tr>
<tr>
<td>Average Size of Largest Bedroom</td>
<td>13 - 14 M²</td>
<td>12 - 13 M²</td>
<td></td>
</tr>
<tr>
<td>Average Size of Smallest Bedroom</td>
<td>8 - 9 M²</td>
<td>6.0 - 6.5 M²</td>
<td></td>
</tr>
<tr>
<td>Kitchen</td>
<td>State Built</td>
<td>100%</td>
<td>9.1%</td>
</tr>
<tr>
<td>Status</td>
<td>Self Built</td>
<td>0.0%</td>
<td>64.4%</td>
</tr>
<tr>
<td>Bathroom</td>
<td>Self Used</td>
<td>100%</td>
<td>30.1%</td>
</tr>
<tr>
<td>Status</td>
<td>Shared</td>
<td>0.0%</td>
<td>69.9%</td>
</tr>
</tbody>
</table>

Table 3. The Conditions of the Building Profile

houses are often constructed within poor conditions and without appropriate infrastructure and facilities.

People and Animate Environment

People can adapt the natural surroundings which enable people to survive better than others. This survival is achieved through the mutual support from one to another. The components of the animate environment are thus created in establishing an appropriate social relationship for such a mutual support. This process through social communication and interaction of people are orderly and have pattern (Rapport, 1977). Hence, a social system exists to generate the roles according the common expectation of the individuals. Beiluzhou Settlement is provided and controlled by the state. Correspondingly, the role of the social components tends to the state purpose rather than to the users.

For example, the Residents’ Committee is a non governmental organization in local community to supervise the daily affairs and social activity of the residents. In Beiluzhou Settlement, it does not play a supportive role when dealing with the building activity by limiting the building modification of the households in shaping the flat layout to suit their individual living purpose. On the contrary, when the building process is controlled by the users themselves in Dabanxiang Neighbourhood, the Residents’ Committee plays a positive role to support building transformation, especially to act as a mediator to reconcile and intervene in disputes of territory control between the households.

![Figure 7. The Commercial Facilities in Beiluzhou](image)

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settlement but not ideal for social communication of the neighbours. On the contrary, the small shops at the corner position in Dabanxiang Neighbourhood provide a convenient source of the daily livelihood for the residents, and at the same time they have a cozy atmosphere to attract the neighbours' social activity.

People and Things in Effective Environment

The effective environment can be defined as the version of the potential environment that is manifestly or latently adopted by users (Gans, 1968). The process to achieve a perfect effective environment can be influenced by the following elements. First, it must depend on appropriate potential environment which possesses a complete set of affordances for human purposes because when the affordances are not there, the behaviour could not take place (Lang, 1987); second, the form of affordance in the potential environment should be congruent to the users' perception because the aspects of the potential environment may remain hidden and can not become a part of the effective environment. Especially, when the conventional residential settlements are planned and created by the designers, the form of the built environment may not be appreciated by the users.

Beiluzhou Settlement is built within an environmental deterministic approach. The housing process, through the strategic policy making by the government and rational planning by the professionals, has expressed a clear idea that the state takes most responsibilities to provide the individuals with a consummate residential environment. The dwellings are planned by the designers according to the regulations gained from the "group perception". The generality of such a group perception is set by the state through interpreting the programme and organising the available information based on the user needs. Although the potential environment, as analysed, shows a better condition, the elements and spaces in the settlement have not achieved the corresponding conditions in the effective environment (Fig.9).

Dabanxiang Neighbourhood is transformed based on the traditionally built settlement. The transformation process is mainly carried out by the users. While the urban form and city structure change rapidly in the aspects such as population density and infrastructure system, people can not cope with such a rapid course of urban development without the state's and professional support. Therefore, the settlement has an incomplete configuration of affordances. The evaluation of the potential environment shows a poor image of the neighbourhood. However, the existing potential affordances after the transformation by the residents are fully used and well appreciated. Particularly, the spatial components like home spaces which mainly support the residents' social relationship and private life are found more satisfactory when the users are fully in control of the form transformation of these components (Fig.10).

Consequently, the investigation of users' attitudes to their settlements has shown the different responses to the variant affordances between these two settlements. At the neighbourhood level, the better conditions of potential environment in Beiluzhou Settlement do not always result in satisfaction from the residents (Fig.9). The components which belong to the substantial affordances like building material or the objects with simple and regular form such as facilities and infrastructure system have a positive impact on the residents' evaluation of neighbourhood quality. However, those spatial components which concerning the spatial layout with complex form are not found satisfactory. At the building level, there is a similar picture (Fig.10). The affordances related to building material such as room daylighting and heat preservation have shown a satisfaction in Beiluzhou Settlement, whereas the spatial affordances which deal with the housing layout are found more supportive for the residents' living activity in Dabanxiang Neighbourhood.

CONCLUSIONS

The concept of environmental affordance as an analytical framework displays a clear structure of the residential configuration. Its usefulness in residential evaluation is not only to identify which components need to be appraised but also to reveal the association of the control powers in developing and transforming them. The correct control power or constitution of various powers is especially important in generating an
appropriate housing provision.

Housing provisions under control by the state and the users have resulted in the different environmental conditions to afford and support the residents' living behaviour. While housing is totally provided by the state in Beiluzhou Settlement, it captures a complete set of residential affordances to form a potential environment. On the contrary, the potential environment of Dabanxiang Neighbourhood is in poor condition. Some components have resulted in dissatisfaction as a consequence of the insufficient state's inputs to supply the necessary building material and building facilities.

The different control powers between the state and the user also result in the different social systems to maintain the social life in the settlement. The administration system in Beiluzhou Settlement is more restrictive rather than supportive. For example, the duty of Residents' Committee in the settlement is to limit the households' modification of their buildings whereas in Dabanxiang Neighbourhood the Residents' Committee help and organise the residents to adjust and improve their houses. Moreover, public services such as commercial and recreational facilities in Beiluzhou are located more for display purpose than for convenience of the residents like the corner shops in Dabanxiang.

The different housing processes have influence to determine to which extent a potential configuration can become an effective environment. The state settlement is designed and built by the state and its form is still new to the user and contrasts with traditional settlement. The residents have to adapt the provided components according to their own purposes to fit their living activity. These activities are essential and helpful for the residents to understand the built form in order to use the pre-designed components appropriately. While housing provision is totally controlled by the state, there is less flexibility to enable such opportunities for the residents. Therefore, the evidence in Beiluzhou Settlement show many components are not perceived or used appropriately and have not become "effective". The residents in Dabanxiang Neighbourhood have freedom to transform the housing layout according to their individual needs, they understand the provided potential environment by learning through the transformation process. Consequently, the housing configurations are found more "effective".

In this paper the necessity of an appropriate theoretical framework for residential evaluation has been discussed. The conceptualised framework which should concern the factors range of the economic, ecological, and human costs and benefits is also emphasised. The lesson drawing from the case study is a need for a correct and appropriate balance of control power from designer, user and builder in the housing process to generate residential settlement. The alternative approach by involving not only the state's roles but also the users' initiatives will form a learning process: through it, designers get to know what the human behaviour needs supporting in order to make an appropriate potential environment; users get the assistance from the professionals to understand the form of provided environment and modify it according to their own purposes.

NOTES

1 Function and Form as basic attributes of affordance can be replaced by other concepts like Utilites and Venustas by Vitruvius and Commodity and Delight by Wotton, etc. The purpose of function is to fulfill and support the human needs.

The form of affordance is created for the existence. When the intensity scale of form increases, the perceivable degree also increases whereas the flexibility to suit other purposes decreases.


REFERENCES


