DESIGN QUALITY IN THE REAL ESTATE MARKET: CLIENTS’ PREFERENCES VERSUS DEVELOPERS’ INTERESTS.

Eman El-Nachar

Abstract
Within an efficient real estate market, a gap between the level of design quality supplied by developers of residential projects, and the level of design quality demanded and perceived by clients leads to market failure. Accordingly, the question of high quality residential architecture inquired the relation between supplies and demands in residential real estate market. This paper deals with the question of how developers could meet demands of house buyers within the real estate context in Cairo. The study aimed at exploring clients’ preferences towards the residential architecture provided in the market. It followed a theoretical approach together with a field investigation to develop an integrative database that contributes to increasing the value of design quality in residential projects. An exploratory in-depth field study examined how house buyers perceive key design aspects jointly with architectural characteristics dominating the market. Analyses showed that both qualitative and quantitative responses revealed agreements and contradictions concerning demands and supplies of the design quality in a residential market. Consequently, the study outlined a data base matrix in which clients’ preferences could be incorporated in the design process of residential projects. It is therefore expected that the value of design quality when ensured could contribute to appropriate future strategies for a financially successful market.

Keywords
Design quality; client’s preferences; residential market; real estate.

Introduction
The Egyptian real estate is now witnessing a strong gap between supply and demand in the residential sector. Official figures indicate shortage of 3 million units with an additional demand of 150,000 per year (www.propertywire.com, 2010; www.ameinfo.com, 2011). As a result to unmet demand, Cairo is becoming a permanent real estate market for regional, local and international investors and developers for the next five years (www.propertywire.com, 2011; Lang, 2010). The main concern is to cover the shortage of residential units by investing $7.3 billion up to year 2015. Obviously, great steps are taken to establish a quantitative database to build upon plans for residential projects (www.ameinfo.com, 2011; www.propertywire.com, 2011). However, qualitative aspects related to design quality and architectural characteristics that meet users’ demands are left to the developers’ assumptions and / or the designers’ expectations.
Concerning the qualitative facets, design decisions are dominated by subjective attitudes and motivated by economic values (Knox, et al., 2000). In most cases, developers, investors, and designers of residential projects have conflicts of interests driven by the complex relation between costs and expected benefits for each party (Moorhouse, et al., 1994). Within this context, housing units are dealt with as products in a package that should be attractive enough to succeed financially. Meanwhile, house buyers have been “receivers” of the design product that is provided by the market (Michlewski, 2008). Apparently, the relation between what is perceived and preferred and what is provided seemed to be dismissed. However, in several literatures, a balanced relation is addressed between supply and demands in order to reach successful real estate market (Moorhouse, et al., 1994; Michlewski, 2008; Smyth, 1994; Kioussi, 2008).

From the previous discussion, two main issues could be avowed:

- The value of design quality is not noticeably counted to allocate the market value of the residential projects from the developers’ perspective in the current real estate market.
- Efficiency of the real estate market demands for investigating on how the design characteristics of residential architecture meet clients’ preferences and expectations.

Given the above, this study argues the design quality of residential architecture as the major aspect in allocating the market value. The study advocates that incorporating clients’ preferences in the design decision leads to bridged demands of house buyers by means of supplies endowed with developers in private residential projects. The study aims at exploring clients’ preferences towards the residential architecture provided in the market. In order to reach that, a theoretical review was carried out to lay hands on key issues along with methodological aspects concerning the study of design qualities in the residential market. Then, an exploratory in depth study was accomplished to examine clients’ attitudes towards several design aspects and architectural characteristics dominating the residential market. Qualitative and quantitative methods were employed to analyze responses to coded questions and to open-ended inquiries combined with multiple sorting procedures. From the obtained results, a database matrix has been developed in order to facilitate incorporating preferences of house buyers in the design decisions of residential projects. Findings allow for constructive insights to build upon design languages and ideologies that go beyond the orbits of the developers’ worlds, while increasing the market value of residential architecture.

The Value of Design Quality in the Residential Market

Few researches examined the impact of design quality and architectural characteristics on the market value of residential projects (Smyth, 1994; Ta Son, 2005; Kioussi, et al., 2010). Two main reasons could be traced for that. First, it is claimed that design quality had low impacts on the market value, as it accounts only from 5% up to 15% of rents or sales prices (Smyth, 1994). Second, the difficulty in defining “design quality”, as it usually relies on subjective perception, while counting not only on direct
be involved to impact the market value, such as political climate and the culture aspects to add sophistication for inquiring design aspects in relation to the market value of residential projects.

Hence, the available literature reveals that the problem is significantly approached by addressing the relation between the values of design quality and the buyers’ willingness to pay more (Knox, 2000; Michlewski, 2008; Ta Son, 2005). Field investigations are devoted to prove residents’ willingness to pay more for a view depending on the quality of that view, even if it is a building’s façade, (Moorhouse, et al., 1994; Bourassa, et al., 2004; Bookout, 1994). Although external architecture is not mentioned, the aesthetical aspects of the façades are illustrated as multidimensional and can have substantial impact on the market value of a residential property.

In more comprehensive studies, people’s willingness to pay more is extended from aesthetic aspects to include functionality, such as better pedestrian life and proximity to transportation routes (Ta Son, 2005). On the same line, Morehouse and Smiler, have examined the market for residential architecture in row houses neighborhoods (Moorhouse, et al., 1994). Results indicate that external features are highly valued when one row houses is differentiated from its surroundings. Thus, the value of unique architecture to augment the market value is notably tackled. (Moorhouse, et al., 1994; Ta Son, 2005).

Obviously, the link between the value of design quality and the market value of residential properties is ascertained. Even though the building appearance is highlighted together with some urban aspects to stress the value of design quality, specific architecture characteristics and related design issues reflecting social aspects have not been examined. In addition, previous studies point out that addressing the needs of house buyers, facilitates a balanced relation between demands and supplies in the market. In relevance, such relation is subject to local impacts including political events, economic actions, and cultural aspects.

Private Residential Real Estate Market: The Case of Cairo

In different parts of the world, developers’ roles went beyond deciding the nature and the form of the residential project, including the subdivision of land into smaller plots, installing the particular infrastructure, and selling the plots to builders (Knox, et al., 2000; Michlewski, 2008). However, within Cairo’s real estate context, this role is extended to include financing, design, construction, and marketing activities.

Concerning the design aspects, developers inscribe their interpretation of the typical household driven by two main concerns: to design what is easiest to produce; and to design what is the safest bet in terms of effective demand, the middle of the market. Thus, design aspects and architectural characteristics of residential projects are dictated by developers who fixed on building multifamily projects or more expensive homes for the “move-up” market. At the very top end of the residential market are speculative homes differentiated by the most lavish “designer” features (www.propertywire.com, 2010; Lang, 2010).

As a result, large privately planned gated communities became trendy in suburban
Cairo to reflect an extreme form of product differentiation and carefully targeted niche marketing. By exploiting new and more flexible zoning regulations, developers and designers plan projects that are attractive to a very profitable sector of the residential market while maintaining scope for flexibility in the composition and timing of the development. Residents of such communities are supplied with an extensive package of amenities that typically include swimming pools, play areas, jogging courses, exercise rooms, a shopping center and a security system symbolized by imposing gateways. The entire ensemble is typically framed in a carefully landscaped setting that might contain an artificial wetlands environment. Such developer/designer neighborhoods are the carriers of society’s concern with social distinction. Yet, design should be so much more than packaging. It involves languages and ideologies that go well beyond the orbits of the developers’ worlds (Knox, et al., 2000; Kioussi, 2008).

For a closer look at design aspects of the private residential projects in the local market, a preliminary inspection reveals that a group of brand names real estate companies dominate the market. Synopses to companies’ brochures jointly with the interviewing’s outcome of the decision makers articulate the following essentials:

- Within the local market, in most of the private residential projects, housing units are dealt with as products in packages that should be attractive enough to succeed financially. While house buyers are the receptors who perceive home environments according to their values, preferences and needs.

- The provided residential units are commonly labeled by using specific key terms reflecting design aspects. These are privacy, luxury, safety and modernity. Only one company recently introduced the term eco-friendly home as a pioneering trend in the market.

- Architecture characteristics of the residential units could be categorized under three main groups, based on the adopted design trends that mirrored in the course of architectural forms. First are the classical trends, adopting aspects either from ancient styles such as Roman, Greek and Islamic (model A), or from regional architecture such as Spanish and Mexican architecture (model B). Second are ultra modern trends implementing simple pure lines with use of minimal materials, screened glass windows and large cantilever terraces (model D). Third is the eclectic trend inspired by classical orders, amalgamated with modern features, and adopted through the majority of residential projects (models C, E, F). A group of six models, illustrated in fig.1, are selected to signify the three widespread trends of architecture characteristics supplied by the market.

Given the above, the preceding terms are used to reflect how design aspects collectively with the architectural characteristics of residential units have fluctuating meanings influenced by socio-cultural aspects and individual differences. Thus, examining the way residential architecture is perceived and understood, paves the way to establish a design language beyond the orbit of designers/developers worlds and bridges the gap between supplies and demands in the residential real estate market. Given below is the procedure of field investigations aimed at exploring clients’ attitudes towards the terms
privacy, luxury, safety and modernity, and eco-friendly, together with the common architecture trends supplied in the local market.

The Field Study
In order to discover clients’ ideas about the architecture of residential units in the market, the key target group was the visitors of ‘Next Move’ exhibition, held in Cairo every year. The event is considered the largest investment and financial event in Egypt, which accommodates about 40 developers in real estate, featuring projects collectively valued to about 20 billion US dollars. Visitors, exceeding 25,000 person per year, seek out investing in property purchases (www.Nextmove-eg.com,2010). A random sample within visitors of the year 2010 exhibition represents a group of 276 participants in the current study.

Research Tool
A questionnaire is planned to investigate visitors’ attitudes towards the common design aspects stated previously. Both qualitative and quantitative responses are allowed by employing pre-coding and open ordered questions together with multiple sorting techniques. The tool constitutes four main parts: The first part is devoted to investigating demographic information about participants and other social related background information. The second part inquires the degree of importance concerning key factors used to affect choices of house buyers such as prices, proximity to workplace, the interior and exterior design, the social aspects and services provided to the community. The third part consists of a set of open-ended questions to investigate participants’ perspectives concerning the meaning of design terms; privacy, safety, modernity, luxury, and eco-friendly, which are dominating the market. The fourth part adopts a multiple sorting technique to examine the six images presenting the most common features provided by the market fig. 1. Two main tasks have been undertaken; participants identified their preferences by

Figure 1: Models representing common architectural trends in the residential market. (Source:Author)
sorting the six images according to (1 - 6) scale, then, participants sorted the six images according to their reflections of the terms: privacy, safety, modernity, luxury, and eco-friendly.

Data Analysis
The univariate (not sure of previous word) description statistic analysis as exploratory and explanatory methods is employed. Frequency diagrams and cross-tabulation are used to explore common characteristics among responses. In addition, non-parametric correlation analysis is employed to examine the interrelationships between design aspects and the other key factors affecting choices of residential units. For the qualitative data, a content analysis is used to capture common patterns through participants’ expressions to meanings of the examined design aspects.

Results
Investigations outcomes are classified in the following groups:

Participants
Concerning the age group, more than 32 percent of the respondents are in the forties, 28 percent are in the thirties, 23 percent are under the age of thirty and 17 percent are above fifty. More than 70 percent of the participants are married, while 60 percent of them have children. The family size exceeds 5 persons among only 10 percent of the participants and the rest are families of (3-5) persons. Almost 30 percent are engineers (non architects), 20 percent are bankers, 11 percent doctors, 10 percent working in the marketing field, 9 percent businessmen, 5 percent housewives and the rest have other several professions. Results indicated that about 40 percent of the participants are residents from the east side of Cairo – in which the exhibition area is located. While the rest are from several parts inside and outside Cairo. About 53 percent of the participants never lived outside Egypt, while the rest lived in Arab countries, USA and Europe. About 61 percent of the participants visit the exhibition to buy houses, 29 percent of them like to have knowledge about the real estate market and 10 percent come for work.

Important Aspects Affecting Clients’ Choices of Residential Units
The results, illustrated in fig. 2, prove the importance of units’ areas (including its spatial organization and number of rooms) by 96.3 percent of participants, then residents’ social standard in the area is the second important aspect, whilst the third is shared between the exterior design of the house and the availability of large green areas. Services provided and the price of the house share the fourth importance, then proximity to work and to central Cairo has fifth importance. The least is payment terms, which was indicated by 52 percent.

Importance of Design Aspects
The results shown in fig. 3 indicate that more than 70 percent of the participants stressed safety aspects as first priority in the design of a residential unit. While 65 percent expressed the importance of privacy, 35 percent chose the eco-friendly as important design aspect. The importance of modernity in design was indicated by 24 percent and only 21 percent stressed the importance of luxury aspects.
**Meanings of Design Aspects**

Based upon the content analysis of the open-ended questions and the simple frequency diagrams, the following patterns are traced:

**Privacy** is understood as the separation and/or enclosure between indoor and outdoor spaces by 40 percent of the respondents. Windows, doors, high fences and private parking are affirmed as major elements that allow privacy in living environments. Villas or detached houses are perceived by 26 percent to provide more privacy, while 15 percent preferred to live in gated communities or buildings with an exclusive number of neighbors for more privacy. Considering urban aspects, 12 percent of the respondents stressed that privacy in living environments is determined by distances between buildings. Some physical features such as plants and high trees are mentioned as major elements to allow more privacy in outdoor spaces. From a social perspective, privacy means the segregation between men and women. Consistency among the social groups living in the same community is also stressed to achieve privacy. Meanwhile, from a moral perspective, privacy is conceived as the residents' attitudes to control visual invasions from others, rather than a matter of design characteristics.

**Safety** is perceived in a residential environment as the quality of security services provided. More than 50 percent of respondents stressed that safety depends mainly on having security men everywhere (along the borders, in the intersection, and beside gates). For more than 15 percent of respondents, safety means controlling accessibility by high fences and gates either for one building or for the entire compound. Meanwhile, good lighting system is also mentioned as vital for safety. About 10 percent of respondents perceived safety as living in a calm and quiet area. While 8 percent perceived safety as having wife, children and good neighbors. Safety is also identified by 8
percent as living in the city or, at least, within an area surrounded by residential communities. Meanwhile, social consistency among residences of the same area are pinpointing to safety for only 5 percent of participants.

**Modernity** is not understood by 40 percent of respondents, while 60 percent show considerable ambiguity by using the terms modern, contemporary and new, vice-versa to express their views. However, some common patterns could be traced, as the modern living environment is described as “new” by 55 percent of the responses. It is also distinguished by employing new materials such as glass and metal in the external architecture of houses. Respondents affirmed that the modern house is unexpected and unusual by its façade, form, and interior design. The modern house was also identified by 20 percent of respondents as simple and easy to be maintained. Meanwhile, 15 percent stressed that practicality, comfort, and fulfilling user’s needs were major aspects of the modern house, with color harmony and consistency in façades design. Only few respondents stressed that a modern living environment has better services including parking areas, outdoor greenery and well-finished spaces.

**Luxury** is perceived by 23 percent of respondents as the use of high quality finishing materials in residential units. The large area of the house is the second aspect related to luxury in the living environment, as indicated by 20 percent of respondents. For about 15 percent, more than 2 bathrooms, and/or a bathroom for each bedroom, are indicatives of a luxury house. Services such as gardens, recreational facilities, malls, transportation and large greenery space were highlighted by 13 percent as basic aspects of luxury. Swimming pools, either in private or in public gardens, have been emphasized by 12 percent as an important sign of luxury.

**Eco-friendly** home environment was mainly perceived as a green environment by more than 80 percent of respondents. Elements such as green outdoor spaces, children’s gardens with trees are used to express ideas of the eco-friendly home. Well-ventilated houses with large windows are mentioned by 10 percent. In addition, distances from factories and highways, as sources of pollution, were allocated to provide eco-friendly for about 8 percent of respondents.

**Preferences of Architectural Characteristics in Relation to Design Aspects**

The analysis in fig. 4 illustrates that the architectural characteristics of model “C” were the most preferable for participants to buy. Model “B” scored the second preference, while model “A” came in the third preference, then model “E” in the fourth. Model “F” presented the fifth and model “D” was the least preferred by the participants. Analyses of sorting models according to their reflections on design aspect in fig. 5 indicate model “A” as the first priority reflecting the meaning of privacy. Meanwhile, model “C” is in the second priority and “F” is the least priority. For both aspects of luxury and eco-friendly, model “C” is sorted as first priority and model “A” as second priority, while model “F” is the least priority reflecting aspects of luxury and/or eco-friendly. In consideration of safety aspects, model “A” is in first priority, “B” in second priority and “E” in least priority.
Correlation Analysis
By employing the descriptive statistics analysis, the cross-tabulation run in SPSS yields three types of positive correlations that have 55.2 percent up to 94.4 percent of significance:

- Factors affecting house buyers: External architecture correlates positively with green outdoor spaces, residents’ social standard, and residence area.

- Design aspects of residential units: Luxury correlates with aspects of privacy, safety and modernity.

- Design aspects and factors affecting house buyers: Safety aspects correlates with area of units and services provided in the residential area. Modernity aspects in design correlate positively with external features of houses. Meanwhile luxury aspects correlate with social standard, green outdoor spaces, external features and areas of houses together with spatial organization of interior spaces.

Discussion
Previous results tackle the relationship between the value of design quality and the market value of residential units in private real estate context. Several design aspects proved as major attributes affecting choices of house buyers in the local market. The outcomes suspected previous studies that demarcate the value of design up to 15% of the prices in residential markets (Ta Son, 2005). While results tend to maintain the approach that verified users’ and clients’ willingness to pay more for quality design in private residential projects (Moorhouse, et al., 1994; Bourassa, et al., 2004; Bookout, 1994; Kioussi, 2008). Evidently, unit prices are rated fourth in importance to affect clients’ choices when buying a new house. Meanwhile, unit areas and spatial organization are the most important aspect, whilst the external design is in third in importance.

External architecture of residential units is demonstrated as a key feature affecting house buyers more than their values and actual needs.
Results come up to tackle façade design as multidimensional and can have extensive impact on the market value of residential units (Moorhouse, et al., 1994; Ta Son, 2005; Kioussi, et al., 2010). However, the house area together with its spatial organization was more influential to house buyers than its external architecture. Considering that almost half of the participants were engineers and bankers, areas and numbers could be of significant interest to them more than façades design. Unexpectedly, the community’s social standard is attested as more prominent than the price of the residential unit to show tendencies for social discern.

Significantly, the investigation outcomes reveal facets and inconsistencies pertaining to meanings of the terms privacy, luxury, modernity and safety, and their relations with architectural features and factors affecting house buyers. The analysis reveals a number of important results as outlined below:

- Although luxury corresponds with privacy and modernity, it is the least influential aspect affecting house buyers. Considering that almost half of them are in the age of thirties and forties, having young families, thus they had practical attitudes towards housing units. Luxury is perceived more as services provided in the community. In addition, external architecture is not incorporated in designating luxury, while finishing materials are major attributes to identify the term. In parallel, participants chose model “C” as the most preferable luxurious house. However, it is one of the least employing finishing materials to feature the façades. Thus, it could be concluded that, from the participants’ perspective, finishing materials in interior spaces only, contributes to perceptions of luxury.

- Safety, the most influential factor for participants, is identified mostly as the level of security services, provided by people, rather than by physical characteristics. Social consistency among residents, and living near residential communities also contribute to safety to reassure the social perspective to the term. However, high fences and narrow windows, services provided and land uses are mentioned through responses. Consistency of responses is witnessed by choices of models “A” and “B”, with their classic narrow openings, in first and second priorities. Unexpectedly, model “C” with its large screen windows was rated in the third priority, while other models with narrow windows are rated afterward. Meanwhile, since aspects of calm and quietness were mentioned to identify safety, thus several design aspects should be carefully considered at both architecture and urban levels in residential communities.

- Privacy is indicated as the second major design aspect correlated with safety to affect house buyers. Responses illustrated that physical characteristics of home environments played a major role in achieving privacy. However, conflicts are revealed by addressing separation between indoor and outdoor spaces together with using narrow windows and high fences as indicatives of privacy. On the contrary, participants chose model C, with its wide glass windows as their second choice for achieving privacy, to indicate that exterior architecture is attractive to participants even though it contradicts with their actual needs. Privacy is also perceived in terms of housing types rather than of the physical characteristics of the residential unit. Thus, living in villas generally is perceived as more private than living in apartments. However, the role of outdoor
## Safety

<table>
<thead>
<tr>
<th>Perceived meaning</th>
<th>Preferences of architecture characteristics</th>
<th>Design consideration</th>
</tr>
</thead>
<tbody>
<tr>
<td>The quality of security services provided</td>
<td>First Priority</td>
<td><strong>Administrative aspects:</strong> Manage to provide high quality security systems.</td>
</tr>
<tr>
<td>Not being accessible by strangers</td>
<td></td>
<td><strong>Social aspects:</strong> Manage to control social groups among house buyers to provide social consistency.</td>
</tr>
<tr>
<td>High fences, protected gates, good lighting system.</td>
<td><strong>Second Priority</strong></td>
<td><strong>Architectural design aspects:</strong> design fences and gates to provide inaccessible living environments.</td>
</tr>
<tr>
<td>Calm and quiet community</td>
<td></td>
<td>Design lighting system to provide clear visibility in all parts of the community.</td>
</tr>
<tr>
<td>Having wife, children and good neighbors</td>
<td><strong>Least Priority</strong></td>
<td>Consider that features of classical architecture, express meaning of safety.</td>
</tr>
<tr>
<td>Social consistency among residents</td>
<td></td>
<td><strong>Urban and planning aspects:</strong> Plan to provide, communities for residential uses easily to be reached from main roads and close to main services.</td>
</tr>
<tr>
<td>Living within residential communities</td>
<td></td>
<td>Provide well designed circulation areas to avoid accidents.</td>
</tr>
<tr>
<td>Low ratios of accidents and crimes.</td>
<td></td>
<td>Provide pedestrian life as major design spaces in the residential community.</td>
</tr>
<tr>
<td>Correlates Positively with Privacy, Luxury, House’ area, Services provided</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 6: Example of a section in the established data base matrix that links participants’ preferences with design aspects in private residential projects. (Source: Author).
spaces to achieve privacy between buildings is slightly mentioned.

- Although the term modernity is commonly used in the market, it is not clear for more than 40 percent of the participants. Terms such as “new” are commonly combined with modernity. However, considering that almost half of participants have exposure to modern architecture outside Egypt, choices of models indicated great awareness of common features of modern architecture reflected in model C and D as first and second choices. As the external architecture of houses and luxury correspond with modernity, aesthetic aspects such as color harmony, contrast, unexpected spaces and material express the meaning of modern home environment. Identifying aspects of comfort, ease of maintenance, green outdoor spaces and better services also link among luxury, modernity and eco-friendly.

- Although the term eco-friendly is not familiar to participants, due to its limited use in the market, responses indicate a sort of awareness towards environmental issues. Aspects of green outdoor spaces and good ventilations are indicative of eco-friendly environments; however, architectural characteristics are not included to identify eco-friendly. Findings point out the need for more investigations to the meaning of eco-friendly and its reflection on the design of residential units for future plans.

Model C, as one of the selected models to represent the eclectic trends in the exterior architecture of residential units, is the first rated model for the majority of participants. Meanwhile, it is chosen as first priority to reflect meanings of luxury, modernity and eco-friendly, and as second priority to reflect privacy, while it is sorted in the third priority for safety. Since the five examined terms are expected to reflect different design characteristics, the results raise several questions about why specific architecture features of residential units were more attractive than others, to what extent, and for whom?

**Conclusion**

Within Cairo’s real estate market, developers together with designers dictate the design aspects and architectural characteristics in most of the private residential projects. On one side, residential units are perceived as products in packages that should be attractive enough to succeed financially. On the other hand, clients are the receptors; they perceive the design products according to their values, attitudes, and lifestyle. Such situation points to improbable attitudes towards the value of design quality within the local market.

Accordingly, this study is devoted to facilitate a more balanced relation between the supply and demand of design quality in the local real estate market. It aims at exploring preferences of house buyers towards the residential architecture provided in the market. Findings of the study address the role of research base practice to bridge the witnessed gap between supplies and demands of design quality in residential projects. Hence, research procedures should be planned to involve house buyers, users, and the whole society in the process of design decisions by tackling their values and preferences towards characteristics of the residential environments. In this respect, adopting a research base practice addresses
two main considerations:
- Within the private residential projects, integrative research skilled teams are major components in the structures of real estate companies. Through this context, strategies should be taken to employ integrative research tools and techniques to uncover house buyers’ preferences. Based upon that, consistency and agreements are established among developers, designers, and clients, which in turn lead to more reasonable relations between the supply and demand in the market.

- In order to balance between the market logic and clients’ preferences, the question of value of design quality in residential projects should be studied in an economic context. Obviously, such value continues to be a priority as long as costs to the developers are less than the value to the user. Related to that is the costs to the developer is incurred in the short term, while the value to the user and the whole society is mostly achieved in long term.

For Future Research

The exploratory study together with the literature review allowed to build upon directions for future research as follows.

- The study revealed that, in the local market, specific characteristics of the residential architecture are more attractive to clients. Further investigations are required to explore how specific groups perceive and understand specific architecture characteristics of residential environments.

- Considering that choices of house buyers may not reflect their actual needs and values in home environment, integrative research techniques that allow covering multi-variant design data is required.

- Meanings related to the terms of modernity and eco-friendly, used by the market and their associates with architecture and urban features seemed to reflect considerable interests for house buyers. Thus, more in depth studies are required to provide a database for design purposes.

For Design Purposes

Relevant to the previous issues, following a research based approach, practice is intended for generating design knowledge base. The database matrix concluded in fig. 6 correlates aspects reflecting clients’ preferences towards architectural characteristics of houses units with the most common design terms used to market residential projects. For each of the examined five terms (safety, privacy, eco-friendly, modernity, luxury), the matrix introduces integrative design considerations to guide decision makers in private residential projects. The assigned social, physical, administrative and economic aspects, allow multi dimensional perspectives to design responses.

Ultimately, challenging with developers views to deal with housing units as products in a package that should be attractive enough to succeed financially, the value of quality design is affirmed as a major priority in the market value of residential projects. The outcomes adhered to design languages that are beyond developers’ views.
References


Eman El-Nachar

Eman El Nachar is associate professor, Department of Architecture, Faculty of Fine Arts, Cairo. Her teaching experience aims at incorporating social and environmental issues in courses such as, humanities, research methods and design studio. She participated in several research Projects concerning the development of residential communities, and educational facilities. Her experience focused on integrating theories and methods of environmental psychology in conducting field surveys, experimental and analytical studies in the built environment. She worked with Community Development Group, School of Design, North Carolina State University, where she participated in research concerning behavioral aspects in children and elderly settings. Eman practices design through her office. Recent work focuses on applying several techniques of participation in designing residential communities around Cairo. The main purpose is to involve clients in design decisions to integrate their needs and style of life in designing living environments for middle class families in Cairo.