

URBAN ENVIRONMENTS AND INDIVIDUALS' SOCIO-CULTURAL VALUES – ENHANCING THE RELATIONSHIP

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ABSTRACT

Studies highlighted relationships between individuals' socio-cultural values and collective behaviors on one hand, and between behaviors and attributes of related environments on the other. This formulates the research problem, as few studies tackled the impact of environments on values; mostly were theoretically oriented without empirical investigation. The present work proposes that urban environments can lead to change in values' tendencies (individualistic and collectivistic) by developing a relational model that combines theoretical findings and empirical assessment, to enable designers to trace the impact of design elements on values. Using the identity dynamics, the research investigates their different types, shaped by social groups and environments, resulting in different complexities that, in-turn generate different values. Middle-income gated communities were used as controlled limited scale urban environments to explore complexities of design elements; where two questionnaires were conducted; the designers', to start the model's formulation; followed by the residents', to complete the proposed framework/model, and enable reading and developing the relation. The model supported the work propositions that; the more complex the environment an individual lives in, the more complex his identity is, and the more individualistic values he is likely to hold and vice versa.

KEYWORDS: Urban environments, complexity, individualistic values, collectivistic values, place-identity, gated communities.

1. INTRODUCTION

Extensive studies were carried out to explore the relationship between urban environments and individuals' behaviors on one hand, and values and behaviors on the other. Environmental psychology binds positive and negative individual's behaviors to

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the location and features of urban areas [1, 2], while social psychology traces value-expressive behaviors, where certain behaviors are related to certain values [3, 4]. Although a good body of literature exists and empirical studies were carried out to study values of individuals, groups and cultures; little has been accomplished in the process of exploring physical environments' effect on values at work and living areas. The present work aims to delineate the structure of the relationship between socio-cultural values of a group and the elements of their urban environment and explore the contribution of urban settings in shaping, changing and directing values.

Values – although, at times, vague and abstract – were chosen to study urban environments' impact on individuals for: 1) Values contribute to the justification of behaviors; being at the core of cultural manifestations of groups and likely to reflect their conceptions. 2) Values are arguably among the most stable elements of a culture, as individuals acquire (and adhere to) specific values at early life stages [5]. Socio-cultural values are generally categorized into two tendencies; “Collectivistic” which refers to an individual's expression as a part of a group that gives identity by approval of actions, and “Individualistic” which refers to his independent expression of identity which is solely based on his actions and does not require group's approval [6].

To reach the research's objective of delineating the relation between the built environment and values, a set of 7 values was extracted using “Schwartz's Cultural Approach”, which studies socio-cultural values that an individual holds, as a result of his/her presence and living experience within a group and related setting [7]. The selected values were traced through three national and international studies, which were carried out to explore contemporary Egyptians' values, affected by recent and prevailing socio-economic, political and related cultural transformations. Those studies used two questionnaires, which covered some 1 500 Egyptians in one, and 15 000 in the second; of genders, age 13 years and more [8-10]. The selected values [7-10] included: “Conservatism” (which emphasizes an individual's commitment to actions that maintain the unity and identity of the group); versus “Intellectual Autonomy” (in which he/she expresses his/her conceptions/views), and “Affective Autonomy” (in which he/she turns his/her emotions and feelings into actions). “Justice and Equality”

(in which the individual calls for fair/just and equal/shared power towards the group's betterment/welfare), and "Pro-socialism" (in which he/she acts collectively/positively, for the group's benefit/welfare), versus "Power" (in which he/she accepts unequal distribution of power and to be directed by others of authority). "Tolerance" (where the individual learns to understand and accepts others), versus In-tolerance.

Analyses of the answers to the two extended questionnaires that these studies depended on, and traced the selected values from; allowed the present research to identify the extents of adoption by contemporary urbane, middle-income Egyptians of these values, and to organize in a descending order, according to their relative adoption, as outlined in Table 1.

Table 1. Contemporary Egyptians' selected values prioritization, [8-10].

| Socio-cultural Value | Justice and Equality | Conformity and Conservatism | Intellectual Autonomy | Pro-Socialism | Affective Autonomy | Power | Tolerance |
|-------------------------------|----------------------|-----------------------------|-----------------------|---------------|--------------------|-------|-----------|
| Given Symbol | ☑ | ● | ⊗ | ☆ | ⊙ | ↑ | ± |
| % of Egyptians Adopting Value | 81.5 – 92.4% | 88.4% | 63.7 – 71.4% | 48% | 7.4 – 13.1% | <10% | <10% |
| Collectivistic Value | Yes | Yes | No | Yes | No | No | Yes |
| Individualistic Value | No | No | Yes | No | Yes | Yes | No |

2. RESEARCH PROPOSITIONS AND METHODOLOGY

In pursuing the relation between values and the built environment, the research suggested, followed and validated two propositions, namely: 1) Urban environments play a role – together with cultural, economic, and political factors – in shaping values, and 2) There are correlations between (certain) elements in an individual's environment and his conviction with (certain) values. To explore the propositions' validity, the research used the social psychology's concept of "Identity" to link the design elements to the psychological dimensions of individuals represented in values. Identity was chosen as it is proven that "Identification" is a process that involves belonging to a group in an environment, where abiding to certain values occur [11].

In the course of presenting the theoretical bases and empirical work carried out in each stage, the paper reviews and highlights 3 theoretical topics, namely: 1) The selected urban pattern, where the impact on individuals' values could be followed; that is the residential "gated community" and its "design elements" that are likely to

influence residents' needs and psychological dimensions, 2) Place-identity, its "complexity" and relationship to the "design elements", and 3) The relationship between "complexities" and "values' tendencies".

Using the theoretical bases and key issues outlined earlier, and the "identity dynamics", the present work formulated a relational framework, evolving to a descriptive model that relates elements of the built environments to values. The model formulation sequence, followed a 4-stage methodology, where the 1st, 3rd and 4th of which deal with one or both sides of the studied relationship ("design elements" and "values"), while the 2nd uses the suggested "identity dynamic" to relate both sides. Each stage uses different methods to proceed to the next as presented in Fig. 1.

| Domain Stage | | Socio-cultural Values | Place-Identity (PI) Complexity | Elements of Built Environments |
|-----------------|--------|-----------------------|-------------------------------------|--------------------------------|
| Stage 1 | Step | | | Identifying elements |
| | Method | | | Literature review |
| Stage 2 | Step | | Identifying elements' PI complexity | |
| | Method | | Practitioners' questionnaires | |
| Stage 3 | Step | Choosing values | Relating values to PI complexity | Relating elements to values |
| | Method | Literature review | Researcher's analysis | Residents' questionnaires |
| Stage 4 | Step | Model completion | | Model completion |
| | Method | Researcher's analysis | | Researcher's analysis |

Fig. 1. Research and relational model's methodology.

3. URBAN ENVIRONMENTS AS CHANNELS OF SOCIO-CULTURAL VALUES TENDENCIES' CHANGE – MODEL FORMULATION STAGE 1

This stage of the model formulation explored the design elements of urban environments that are believed to impact values' tendencies, in order to be used in the next stages of the model. The controlled settings of residential Gated Communities (GC) of middle-income groups were deployed to extract these design elements.

3.1. Residential Gated Communities of Middle-income Groups

Residential gated communities are believed to have a role in dwellers' needs and values tendencies' change, by offering luxurious landscapes, exaggerated security

measures, and upscale housing units of Western styles that are of the basic needs. Research findings indicate that gated communities are not only favored by the elite and upper-middle income groups, as in many parts of the world, lower-middle groups' gated communities are also implemented in large numbers. The proliferation of gated communities in developing countries is clearly manifested in Egypt's New Communities. Figure 2, [12, 13], sums up the distribution of income groups' newly developed gated communities, in three new cities, in the Greater Cairo Region (GCR).

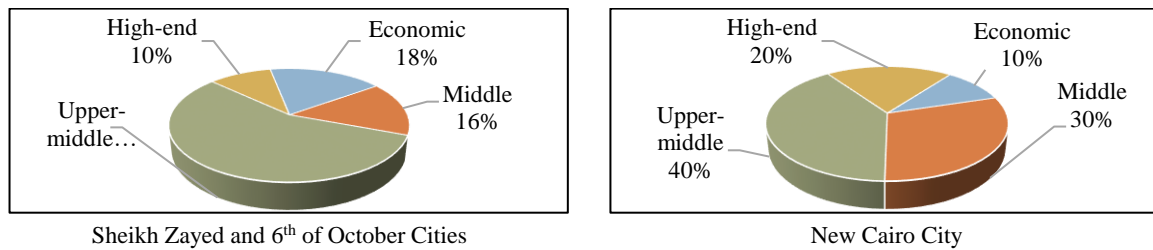


Fig. 2. Percentage of residential Gated Communities by number in Sheikh Zayed and 6th of October and New Cairo, New Cities (GCR), [12].

3.2. Design Elements of Middle-Income Residential Gated Communities

The psychological effect is one of the prominent impacts that environments leave on dwellers and that designers are aware of [14]. Accordingly, the research used studies that link design elements of residential gated communities in developing countries (e.g. Egypt and Malaysia) to the psychological attitudes, including: choice of dwelling, satisfaction with the living environment, and behaviors. Based on the analysis of studies that used questionnaires with residents, developers and designers, and content analysis of marketing material - the “design elements” of middle-income gated communities that are likely to have impacts on values, may be grouped into 6 main dimensions: 1) social, 2) lifestyle, 3) exclusivity and privacy, 4) security, 5) design, and 6) economic [15, 16]. These could be further elaborated into the 42 elements presented in Table 2 [14-18].

Table 2. Design elements of middle-income Gated Communities – Model formulation stage 1 [14-18].

| Design Dimensions of a Residential GC | Design Principles of a Residential GC | Design Elements of a Residential GC |
|---------------------------------------|---------------------------------------|---|
| Social Dimension | Class Identity | 1. Differentiation by facades, gates, overall image |
| | Homogeneity | 2. Mix of socio-economic groups |
| | Segregation | 3. Mix of socio-economic groups |
| | | 4. Gates, walls, fences |
| | | 5. Location outside city centre |

Table 2. Design elements of middle-income Gated Communities –
Model formulation stage 1 [14-18]. (Cont.)

| | | |
|---|--|---|
| Lifestyle Dimension | Sense of Community & Social Interaction | 6. Amenities and facilities |
| | Active & Vibrant Lifestyle | 7. Gathering spaces close to homes |
| | | 8. Outdoor spaces |
| | | 9. Walkways |
| | | 10. Recreational & leisure spaces, BBQ areas |
| | Peace/Relaxation & Convenience | 11. Provision of commercial services |
| | | 12. Provision of cultural services |
| | | 13. Provision of educational services |
| | | 14. Provision of healthcare services |
| | | 15. Provision of sports services |
| | | 16. Provision of social services |
| | | 17. Provision of spaces for self-expression |
| | Good Life & Place | 18. Luxurious exclusive place to live in |
| | | 19. Pollution-less, crowd-less environment |
| | Luxurious Amenities | 20. Golf courses, lakes, clubhouse, pools, Jacuzzis |
| Free Maintenance & Cleanliness | 21. Maintenance company/party | |
| | 22. Management company/party | |
| Avoidance of Outside Public Life | 23. Sufficient open spaces | |
| Exclusivity and Privacy Dimension | | 24. Sufficient independent services |
| | Privacy | 25. Gates, walls, fences (at all levels) |
| | | 26. Territories with gates, walls, fences (at all levels) |
| | Exclusivity | 27. Exclusive activities (club houses, golf courses,...) |
| Security Dimension | Defensible Design | 28. Street networks (cul-de-scas, short, curved roads) |
| | | 29. Gates, walls, fences |
| | Security Equipment | 30. 24-hour security patrols |
| | | |
| Design and Visual Preferences Dimension | Visual Preferences | 32. Richness of environment (buildings or landscape) |
| | | 33. Plain modern facades or ornament-full facades |
| | Uniqueness | 34. Renowned designers/architects/developers |
| | Contemporary Urbanization | 35. Environmental sustainability |
| | Territoriality | 36. Private entities turned inwards |
| | | 37. Advanced & high-quality construction |
| Economic Dimension | Financial Benefit/Payback | 38. Complete & good infrastructure |
| | | 39. Control of illegal urbanization |
| | | 40. Strong security systems |
| | | 41. Recreational facilities |
| | | 42. Luxurious landscape, prestige, lifestyle |
| | | |

4. PLACE-IDENTITY COMPLEXITY AS A LINK BETWEEN URBAN ENVIRONMENTS AND SOCIO-CULTURAL VALUES – MODEL FORMULATION STAGE 2

In formulating the model, the research deployed the concept of place-identity, which relates features and elements of a place to the socio-psychological dimension of individuals through the identity dynamic. In this respect, the difference between “Place Identity” and “Place Identification” (which scholars and the research denote as place-identity), should be emphasized. “Place Identity” refers to the special character of the

place and how people describe it, while “Place Identification” or “Place-Identity” refers to how people incorporate the place while describing themselves [19].

The present work adopted the concept of “Place-Identity”, and the related “Theory of Self” proposition that, an individual’s identity is constituted of what “he/she is”, as well as what is “his/hers”, which includes what he/she holds dear or sacred; the home and place they live in. Accordingly, “place” plays a crucial role in constituting an individual’s identity, which in turn determines the individual’s attitudes and values towards the place and other individuals [20, 21] as presented in Fig. 3.

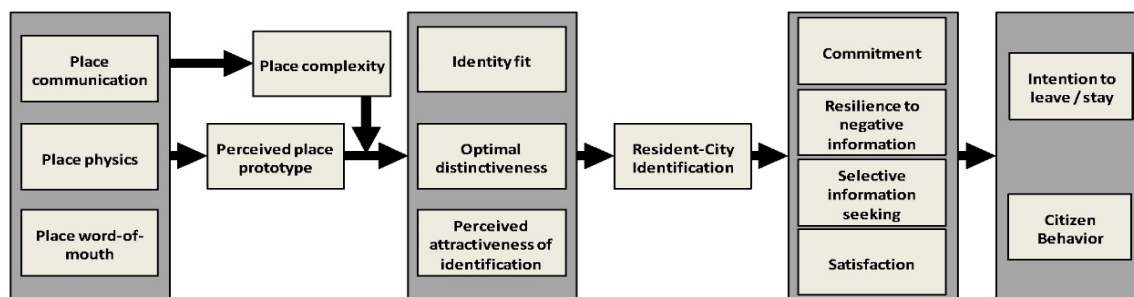


Fig. 3. The resident-city identification model (RCI), [22].

The conception of “place-identity” or “identity derived from place” suggests the presence of “levels” and related “types” of “complexity”. This complexity depends on how an individual perceives the place and how the place, according to this perception, impacts him. Individuals possess different identities that are given priorities and are evident in certain situations [22]. The term “place-identity complexity” is closely related to the generally accepted notion that, an individual can possess more than one identity according to the characteristics of each place and the individual’s perception of its elements. This term relates what researchers call “place complexity” to identity - to denote “complexity of an individual’s identity produced by a place”.

The second stage of the model formulation relates the different “design elements” of gated communities extracted in stage 1 to the “identities’ complexities” generated by these elements. Accordingly, it is important to identify the different types of “place-identity complexities” and how they may be empirically measured.

4.1. Complexity of Place-Identity

To understand the concept of place complexity and its impact on an individual's identity, researchers use a marketing approach that models the relationship between a "customer's identity" and the brands he chooses. This approach – depending on psychological analysis – argues that an individual identifies himself with a certain brand if he finds this brand attractive, capable of fulfilling his needs and helps in enriching his "social identity". Moreover, the approach argues that identification with a brand is strengthened and weakened by the degree by which the brand fulfills the individual's needs – based on personal experiences, perception and expectancy – where identification is strengthened when needs and expectations are fulfilled. This degree of needs and expectations' fulfillment is what represents the brand's complexity [23]. In other words, as the brand fulfills and exceeds an individual's needs and expectations, its complexity is said to increase and the individual's identification with it is also likely to be affected. The same concept may be extended and applied to a "place", and what it offers in relation to the generated individuals' identities.

Based on the previous concepts of identity complexity generated by brands or places, it is justifiable to suggest that individuals' identities generated by places or place-identity can take one of three forms or complexities that are used to explain the psychological effect of elements of urban environments on individuals. These three complexities are: 1) Fit place-identity, 2) Distinctiveness place-identity, and 3) Attractiveness place-identity [24-26], as briefly outlined and presented in Fig. 4.

4.1.1. Place-identity complexity by fit

The simplest place-identity complexity is generated from the identical match between an individual's needs and expectations with the place's affordances or what the place offers [25]. The fit is always related to the core and most basic aspects of both the individual and the place. In other words, the place has to be in its simplest condition and the individual in his/her simplest ideal self-image in order to reflect each other's identities and in order to the fit identity to occur [26]. No choices or decisions have to be made by an individual, when all members of the group are subjected to

simple elements that fulfill their needs, accordingly tendencies to “collectivism” and social welfare occur; leading to the strengthening of “collectivistic” values.

4.1.2. Place-identity complexity by distinctiveness

While identification is facilitated by identity fit, it is argued that a complete match between needs and environment’s affordances is not desirable. This is justified by the fact that besides people's need to belong, there is always the need to stay unique and recognizable as an individual [24]. Accordingly, when the environment or place; an individual lives in, offers him/her the basic needs, in addition to other elements that make him/her feel distinguished and differentiated from other residents, a more complex “place-identity” is formulated. The “distinctiveness” place-identity helps the individual to relate him/herself to the place where other residents can relate too. This identity is distinguished by elements that are exclusive to certain individuals.

4.1.3. Place-identity complexity by attractiveness

The most complex type of place-identity is the “attractiveness”, in which the place offers a large number of attractive elements that buffer against the influence of negative characteristics [25]. This identity depends on the spill-over effect which assumes that the more attractive elements that exist, the less obvious the negative aspects are. This identity is arguably the most complex, as it depends on the loose perception of positive and negative aspects of the place.

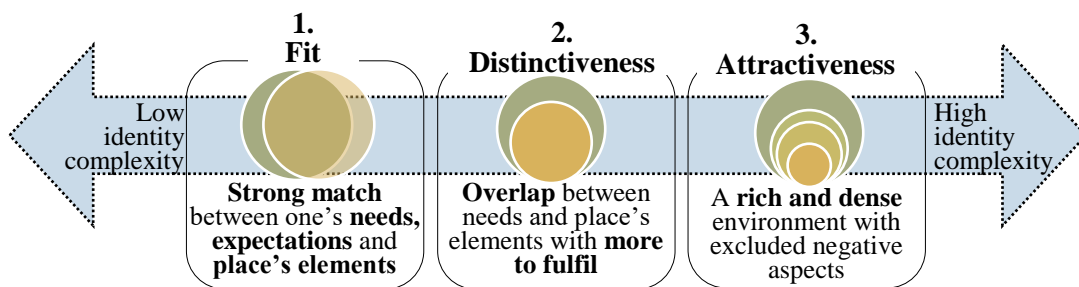


Fig. 4. Levels of place-identity complexity* [25].

*Orange circles represent an individual's needs and expectations in relation to the green circles that represent the environment's affordances

4.2. Complexity of Identity of the Model's Elements of Design

The research deployed the three extracted and presented complexities of place-identity previously discussed to formulate the second stage of the model. It related each of the extracted design elements of gated communities to its respective identity complexity to enable relating those identities to socio-cultural values tendencies. A questionnaire was undertaken with practitioners in the design of residential communities. In order to have reliable answers to the questions of the levels of complexity of elements in the urban environment, respondents should combine knowledge and theoretical background in the addressed aspects and issues. Accordingly, the research depended in collecting the answers on “academic” practitioners. The questionnaire was distributed among practitioners and faculty members, with a variety of specializations in practice and research as shown in Table 3. Answers were obtained from 21 respondents whose mean of experience in practicing design of gated and non-gated residential communities extended over 17 years, to ensure reliable response.

Table 3. Practitioners and academics questionnaire's respondents.

| Field of Teaching and/or Practice | Position/Title | Experience in Years | Respondents' # |
|--|------------------|---------------------|----------------|
| Urban Design and Community Development | Prof. | 36 | 12 |
| | Prof. | 34 | |
| | Prof. | 30 | |
| | Prof. | 22 | |
| | Prof. | 30 | |
| | Assoc. Prof. | 15 | |
| | Assoc. Prof. | 30 | |
| | Instructor | 12 | |
| | Instructor | 10 | |
| | Instructor | 12 | |
| | Senior Architect | 8 | |
| | Project Manager | 9 | |
| Urban Planning | Prof. | 18 | 3 |
| | Prof. | 19 | |
| | Senior Architect | 6 | |
| Architecture | Instructor | 12 | 3 |
| | Senior Architect | 5 | |
| | Senior Architect | 4 | |
| Environmental Design | Prof. | 22 | 3 |
| | Prof. | 15 | |
| | Project Manager | 6 | |

In the questionnaire, the respondents were first asked to rank the 3 place-identity complexities (fit, distinctiveness and attractiveness), which were rephrased

into simple sentences, according to their contribution to the residential gated community's "richness", where "richness" was used to represent "complexity". They were asked to grade the 3 complexities from the least to the most contribution, where 1 is the least contribution to "richness". This part aimed at ensuring that designers' understanding of "complexity" agreed with the theoretical propositions that the research based its model on. In its second part, the questionnaire asked respondents to grade the contribution of each of the 42 elements in its respective dimension's complexity. The grades ranged from -1 to 3, where -1 means that the element hinders "richness" or "complexity", 0 means that an element doesn't contribute to "richness" or "complexity", 1: it contributes the least in complexity (fit), 2: it moderately contributes to complexity (distinctiveness), while 3 means that it contributes the most (attractiveness). Elements which were given -1 or 0 by most respondents were excluded from the following stages of the model formulation, as they did not appear to contribute to "complexity" or "richness"; hence leading to the 3 grade scale and symbols shown in Table 4.

Table 4. The 3-grade scale of practitioners' answers.

| Element of Design of Gated Community | Degree of Contribution in Complexity (Richness) Chosen by Respondents | | |
|---|---|-------------------|-------------|
| | Least Chosen | Moderately Chosen | Most Chosen |
| | ○ | ⊖ | ● |

The questionnaire's results revealed that the economic dimension can be excluded as it scored an insignificant mean of 1.25, compared to other dimensions that scored 2.75 to 4.5. Moreover, elements that most respondents gave 0 or -1 were also excluded (elements 5, 8, 9-14, 16, 17, 19-21, 23-25, 31-37, 40-42 in Table 2); leaving 16 elements with scores between 1 and 3. Two other elements were also excluded, as they scored inconsistent results. For "the provision of exclusive activities" (element 27 in Table 2), 50% of the respondents chose that "it contributes the least" to the complexity, while the other 50% chose that "it contributes the highest". As for the "control of illegal urbanization" (element 39 in Table 2), the respondents equally chose the 3 grades of contribution, 33% each, as shown in Fig. 5. This resulted in 14 elements which were reasonably agreed upon to "contribute to the complexity" of a

gated community. These results concluded stage 2 of the model formulation; presented in Table 5.

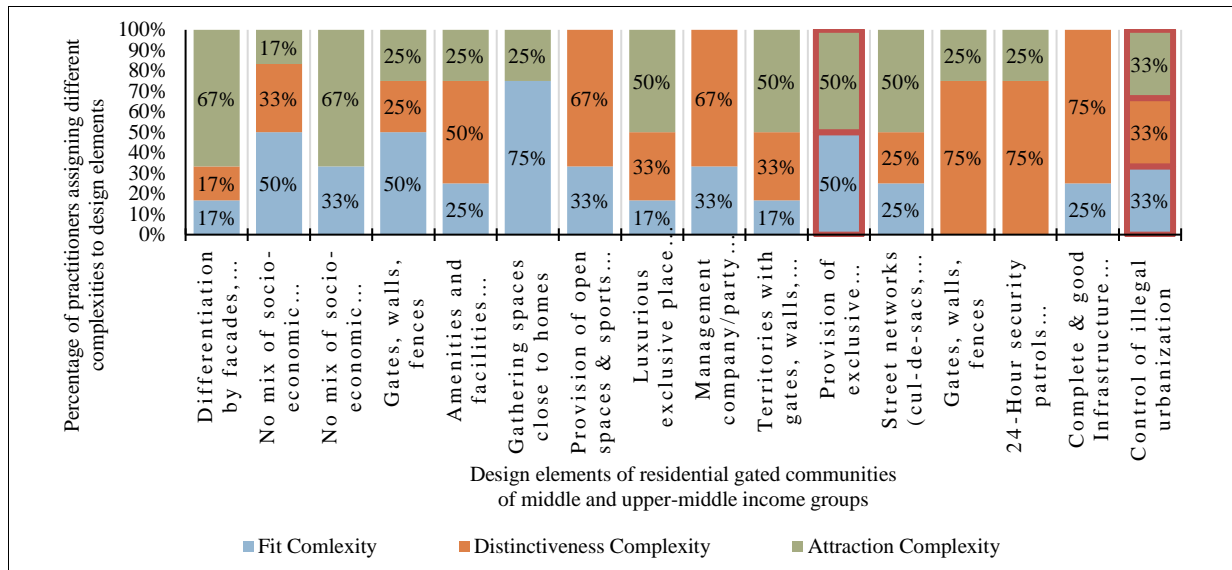


Fig. 5. Practitioners' response on; the contribution levels of the "design elements" of gated communities to its "complexity".

Table 5. Model formulation stage 2 - Levels of contribution of "design elements" to "complexity"; in middle-income residential gated communities.

| ○ Least likely to contribute | | | ⊖ Moderately likely to contribute | ● Most likely to contribute |
|------------------------------|-----------------|----------------|---|---|
| Comp. Level | | | Design Principles of a Residential GC | Design Elements of a Residential GC |
| Fit | Distinctiveness | Attractiveness | | |
| ○ | ● | ⊖ | Class Identity | Differentiation by facades, gates, overall image |
| ● | ○ | ⊖ | Homogeneity | Mix of socio-economic groups |
| ⊖ | ● | ○ | Segregation | Mix of socio-economic groups |
| ● | ○ | ⊖ | | Gates, walls, fences |
| ⊖ | ○ | ● | | Amenities and facilities |
| ● | ⊖ | ○ | Sense of Community & Social Interaction | Gathering spaces close to homes |
| ⊖ | ○ | ● | Peace/Relaxation & Convenience | Provision of open spaces and sports facilities |
| ○ | ● | ⊖ | Good Life & Place | Luxurious exclusive place to live in |
| ⊖ | ○ | ● | Free Maintenance & Cleanliness | Management company/party |
| ○ | ● | ⊖ | Privacy | Territories with gates, walls, fences (at all levels) |
| ○ | ● | ⊖ | Defensible Design | Street networks (cul-de-sacs, short, curved roads) |
| ○ | ⊖ | ● | Security Equipment | Gates, walls, fences |
| ○ | ⊖ | ● | | 24-hour security patrols |
| ⊖ | ○ | ● | Technology & Management | Complete & good infrastructure |

5. RELATIONSHIP BETWEEN PLACE-IDENTITY COMPLEXITY AND SOCIO-CULTURAL VALUES-MODEL FORMULATION STAGES 3 AND 4

The 3rd and pre-final stage of the model formulation aimed at relating the different design elements to the values' tendencies (collectivistic and individualistic) and to the selected 7 values, prevailing in contemporary Egypt. This stage used the "complexities" that practitioners related to the different "design elements" to achieve this link. This stage adopted the "Optimal Distinctiveness" Theory's key proposition that; the simplicity of an identity results in boosting collective values, an individual believes in and adopts and vice versa. The theory defends this postulation on the grounds that individuals seek inclusion in groups and places where they feel the realization of needs and belongingness and that these feelings are related to the small size of groups or number of environment's elements that match their needs and goals. On the contrary, when the group's or environment's elements are overwhelming in number, characteristics and affordances, individuals' need for inclusion decreases and they tend to search for differentiation by resorting to individualistic values [27].

5.1. Residents' Questionnaire's Formulation

In stage 3, the research deployed the "complexities" selected by the practitioners to suggest values that can be related to those complexities ("fit" and "distinctiveness" complexities are related to "collectivistic" values, "attractiveness" complexity is related to "individualistic" values) and accordingly, to the design elements that generated such complexities. This methodology was used to build up a questionnaire that asked residents of gated compounds about their conviction with each of the 7 values and the design elements that helped or hindered their conviction. Each question was formulated by matching the "complexity" respective to each "value" with possible elements of the urban environment that the practitioners assigned to the same complexity.

The questionnaire used 7 broad elements that were mixed, and rephrased in each question to be easily answered and completed, namely: 1) Socio-economic homogeneity, 2) Open Spaces, 3) Definition, walls and gates, 4) Residence type,

façades, landscape, 5) Privacy, Exclusivity and Territoriality, 6) Luxurious place to live in, and 7) Management. Each question was structured in two parts; the first introduced a certain situation and the expected behaviour, which is directly related to a value. The question then asked the resident how likely he is to carry out this behavior, using a 5-point Likert scale. The second part asked about which elements of the place encouraged to choose this behavior, or which should exist to help undertake it.

5.2. Design Elements and Socio-cultural Values; Preliminary Matching

The residents' questionnaire was conducted in 16 middle-income group, residential gated communities in 5 New Cities in the GCR as shown in Fig. 6. It turned 91 responses from residents with a mean age of 37 years, complying with the age range in the studies used to extract values [8-10]. The mean of living period in the gated community was around 6 years, which indicates; full awareness of the environments residents are living in, as well as the environments' full impact on them.

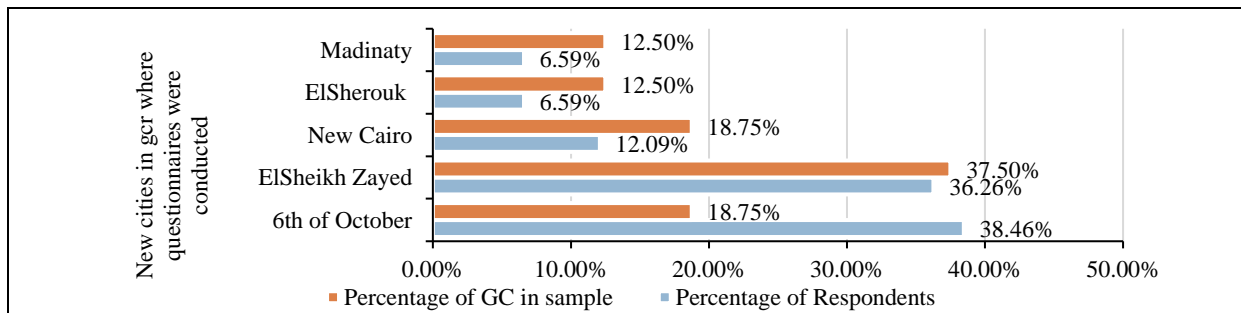


Fig. 6. Residents' questionnaire - respondents classification.

The answers highlighted the values' prioritization of gated communities' residents. These values' tendencies were compared to those in the national and international studies, delineated earlier and used as a benchmark in formulating the model, Fig. 7 and Table 6. In spite of some agreement between the macro level (nation-wide) and the micro level, gated residents' tendencies, a difference in values' prioritization pattern is evident. The overall order and the shift in the adopted values tendencies and prioritization as shown in Fig. 7 and Table 6, supports the research's first proposition, namely; the built environment, the defined urban setting and related design elements, have a role in shaping and affecting residents' values.

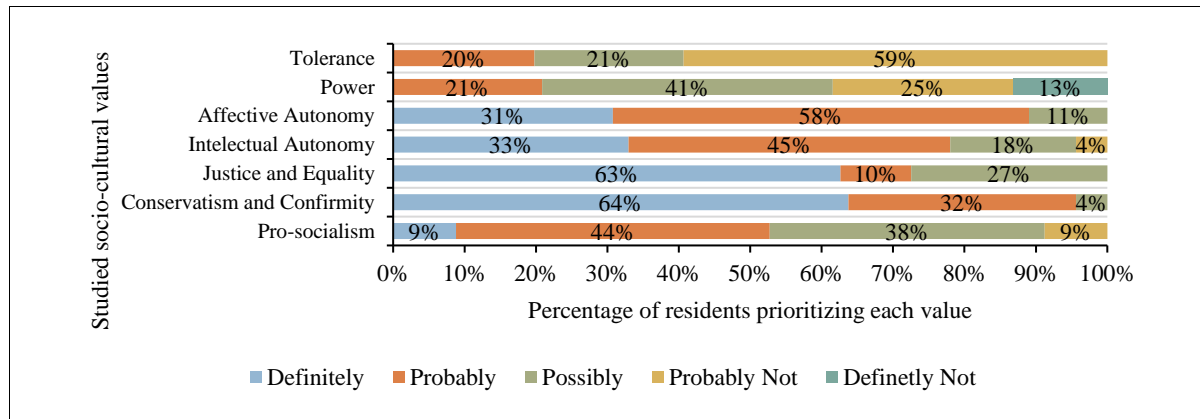


Fig. 7. Prioritization of values according to the residents.

Table 6. Contemporary Egyptians' values prioritization – nation-wide studies and gated communities' residents' questionnaire.

| Socio-cultural Value | Justice and Equality | Conformity and Conservatism | Intellectual Autonomy | Pro-Socialism | Affective Autonomy | Power | Tolerance |
|-------------------------------|----------------------|-----------------------------|-----------------------|---------------|--------------------|-------|-----------|
| Given Symbol | ☑ | ● | ⊗ | ☆ | ⊙ | ↑ | ± |
| % of Egyptians Adopting Value | 81.5 – 92.4% | 88.4% | 63.7 – 71.4% | 48% | 7.4 – 13.1% | <10% | <10% |
| % of Residents | 64% | 96% | 78% | 82% | 91% | 21% | 59% |

The questionnaire answers were further used to complete and develop the proposed model. The 3rd stage delineated a matrix to identify combinations of design elements, which separately and collectively affect identity and values. In the proposed matrix the residents' answers were marked, at the “intersections” between “interacting pairs of design elements” – where the presence of each two elements encourages the adoption of a certain value, as shown in Table 7. The presented residents' answers verify the research's second hypothesis; for the elements pointed-out by the practitioners as the most complex, were recognized by the residents to impact their “individualistic” values tendencies. The same process was used to complete the final stage of the model formulation, presented in Table 8, where the shaded cells are those concluded by the researcher; hence highlighting the usability/practicality of the proposed matrix, which may be used by the designer to trace the likely impact of his design decisions on the values' tendencies (and the related behavior) of the prospective community and individuals.

Table 7. Urban environments-values model stage 3 – based on residents’ answers.

| | | | | | | | | Fit | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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Table 8. Urban environments-values model stage 4 – A framework for reading and enhancing the relation.

| Complexity Level | | | | Fit | | | | | | | | | | | | | | | Distinctiveness | | | | | | | | | | | | | | | Attractiveness | | | | | | | | | | | | | | | | | | | | | |
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| | | | | Fit | | | | | | | | | | | | | | | Distinctiveness | | | | | | | | | | | | | | | Attractiveness | | | | | | | | | | | | | | | | | | | | | |
| | | | | Fit | | | | | | | | | | | | | | | Distinctiveness | | | | | | | | | | | | | | | Attractiveness | | | | | | | | | | | | | | | | | | | | | |
| | | | | Fit | | | | | | | | | | | | | | | Distinctiveness | | | | | | | | | | | | | | | Attractiveness | | | | | | | | | | | | | | | | | | | | | |
| Design Dimensions of a Residential GC | | | | Design Principles of a Residential GC | | | | Design Elements of a Residential GC | | | | Class Identity | | | | Homogeneity | | | | Segregation | | | | Sense of Community & Social Int. | | | | Peace & Convenience | | | | Good Life & Place | | | | Maintenance & Clean.. | | | | Privacy | | | | Defensible Design | | | | Security Equipment | | | | Technology & Manage.. | | | |
| | | | | | | | | | | | | Differentiation by facades, ... | | | | Mix of socio-economic groups | | | | Mix of socio-economic groups | | | | Gates, walls, fences | | | | Amenities and facilities | | | | Gathering spaces close to homes | | | | Provision of open spaces ... | | | | Luxurious exclusive place to live | | | | Management company/party | | | | Territories with gates, walls, ... | | | | Street networks (cul-de-sacs, ... | | | |
| Fit | Distinctiveness | Attractiveness | Social Dimension | | | | Class Identity | | Homogeneity | | Segregation | | Sense of Community & Social Int. | | Peace & Convenience | | Good Life & Place | | Maintenance & Clean.. | | Privacy | | Defensible Design | | Security Equipment | | Technology & Manage.. | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ○ | ● | ⊕ | | | | | + | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | | | | | | | | | | | | | | | | | | | | | | | | | |
| ● | ○ | ⊕ | | | | | ± | | ⊗ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | | | | | | | | | | | | | | | | | | | | | | | | | |
| ⊕ | ● | ○ | | | | | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | | | | | | | | | | | | | | | | | | | | | | | | | |
| ● | ○ | ⊕ | | | | | ⊗ | ● | ☆ | ⊗ | ☆ | ⊗ | ☆ | ⊗ | ☆ | ⊗ | ☆ | ⊗ | ☆ | ⊗ | ☆ | ⊗ | ☆ | ⊗ | ☆ | ⊗ | ☆ | ⊗ | ☆ | ⊗ | | | | | | | | | | | | | | | | | | | | | | | | | |
| ⊕ | ○ | ● | | | | | ⊗ | ☆ | ⊗ | ☆ | ⊗ | ☆ | ⊗ | ☆ | ⊗ | ☆ | ⊗ | ☆ | ⊗ | ☆ | ⊗ | ☆ | ⊗ | ☆ | ⊗ | ☆ | ⊗ | ☆ | ⊗ | ☆ | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lifestyle Dimension | | | | Peace & Convenience | | Provision of open spaces and sports facilities | | ⊗ | ☆ | ⊗ | ⊗ | ⊗ | ☆ | | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | Good Life & Place | | Luxurious exclusive place to live in | | ⊕ | ± | ± | ⊕ | ⊗ | ⊗ | ⊗ | | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | Maintenance & Cleanliness | | Management company/party | | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | Exclusivity & Privacy | | Privacy | | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | Defensible Design | | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | Security Equipment | | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | | | | | | | | | | | | | | | | | | | | | | | | | |
| Design Preferences | | | | Technology & Management | | Complete & good infrastructure | | ⊗ | ☆ | ☆ | ⊗ | ⊗ | ☆ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

6. CONCLUSIONS

The four stages sequence of formulating the relational model, to delineate the relations between: the design elements and values tendencies - supported and validated

the research's two interrelated propositions, regarding; urban environment's role in shaping values, and the relation between its design elements and individual's values.

The model's 3rd stage proved that built environments have a distinct role in values' prioritization, Table 7. This was evident in the change in values' tendencies, when explored in limited scale, defined and controlled gated communities' environments, among a small and relatively homogeneous sample of contemporary Egyptians. The model's 4th stage, Table 8, concluded the delineation of the complex relationship of design elements, values and identity – which the research proposed, followed and defined its structure. The two final and interrelated stages pointed out that the simple, clearly defined environments of limited scale and lower complexity (as perceived by residents) lead to the realization of “collectivistic” values.

The proposed model enabled exploring and monitoring “built environments-values” likely patterns, combining: design elements, relative complexities, and individual's adopted values. It provides a design and development tool to harness the complex relation between the built environment and the adopted values, hence the behavior of related residents and community, which in turn may help in marketing and sustaining a project's quality and merits. The tool is rather simple and open-ended; a correlation matrix, relating, design principles and elements to “values”, which could result from the overlapping and intersection of two (or more) design elements.

The proposed model allows the modification of its design principles and elements; and could be elaborated to cover other values and related behavior. Further development of the model is recommended to include other urban patterns and settings, socio income groups, existing and new communities. The suggested relations and patterns delineated by the proposed model methodology – clearly support and point out the potentials of the developed relational – matrix, in monitoring the relations between socio-cultural values and urban environments, as well as providing a design tool in sites planning and organization of residential and mixed development areas.

DECLARATION OF CONFLICT OF INTERESTS

The authors have declared no conflict of interests.

REFERENCES

1. Al-Barmalgy, M., Amin, A., and Shaban, R. M., "Methodology for Monitoring the Qualitative and Quantitative Features of Vandalism in Open Spaces Using GIS," *Journal of Sustainable Development Studies*, Vol. 6, pp. 96-114, 2014.
2. Stedman, R. C., "Toward a Social Psychology of Place: Predicting Behavior From Place-Based Cognitions, Attitude, and Identity," *Environment and Behavior*, Vol. 34, pp. 561-581, 2002.
3. Bardi, A., and Schwartz, S. H., "Values and Behavior: Strength and Structure of Relations," *Personality and Social Psychology*, Vol. 29, pp. 1207-1220, 2003.
4. Ajzen, I., "The Theory of Planned Behavior," *Organizational Behavior and Human Decision Processes*, Vol. 50, pp. 179-211, 1991.
5. Hofstede, G. H., Hofstede, G. J., and Minkov, M., "Cultures and Organizations: Software of the Mind - Intercultural Co-operation and its Importance for Survival," p. 561, 2010.
6. Schwartz, S. H., "A Theory of Cultural Values and Some Implications for Work," *Applied Psychology: An International Review*, Vol. 48, pp. 23-47, 1999.
7. Schwartz, S. H., "Value Orientations: Measurement, Antecedents and Consequences Across Nations," in *Measuring Attitudes Cross-Nationally: Lessons from the European Social Survey*, Roger Jowell, C.R., Rory Fitzgerald, Gillian Eva, Ed., London, UK, SAGE Publications, 2007, pp. 161-174.
8. Roushdy, R., and Sieverding, M., "Panel Survey of Young People in Egypt 2014: Generating Evidence For Policy, Programs, and Research," *Population Council, West Asia and North Africa Office*, Cairo, Egypt, 2015.
9. Inglehart, R., Haerpfer, C., Moreno, A., Welzel, C., Kizilova, K., Diez-Medrano, J., Lagos, M., Norris, P., Ponarin, E., and Puranen, B., "World Values Survey: Round Six - Country-Pooled Datafile Version," *JD Systems Institute*, Madrid, Spain, 2014.
10. Mansour, M. I., "Towards a Positive Value System Supporting the Vision of Egypt 2030," *The Egyptian Cabinet - Information and Decision Support Center (IDSC)*, Cairo, Egypt, 2008.
11. Twigger-Ross, C. L., and Uzzell, D. L., "Place and Identity Processes," *Journal of Environmental Psychology*, Vol. 16, pp. 205-220, 1996.
12. Barrada, A., "Greater Cairo Extensions: What's Next?," *American University in Egypt*, Cairo, 2015.
13. Ghonimi, I., Elzammly, H., Khairy, M., and Soliman, M., "Identification of Gated Communities in Egypt," presented at the *The Future of Gated Communities: Towards Sustainable Urban Development*, Cairo, Egypt, 2013.
14. Atkinson, R., and Blandy, S., "International Perspectives on the New Enclavism and The Rise of Gated Communities," *Housing Studies*, Vol. 20, pp. 177-186, 2005.
15. Almatarnah, R. T., "Choices and Changes in the Housing Market and Community Preferences: Reasons for the Emergence of Gated Communities in Egypt," *Ain Shams Engineering Journal*, Vol. 3, pp. 563-583, 2013.
16. Tan, T. H., "Residential Satisfaction in Gated Communities: Case Study of Desa Park City, Kuala Lumpur," *Property Management*, Vol. 34, pp. 84-99, 2016.

17. Cséfalvay, Z., and Webster, C., "Gates or No Gates? A Cross-European Enquiry into the Driving Forces Behind Gated Communities," *Regional Studies*, Vol. 46, pp. 293-308, 2012.
18. Kuppinger, P., "Exclusive Greenery: New Gated Communities in Cairo," *City & Society*, Vol. 16, pp. 35-61, 2004.
19. Zenker, S., and Petersen, S., "An Integrative Theoretical Model for Improving Resident-city Identification," *Environment and Planning A*, Vol. 46, pp. 715-729, 2014.
20. Twigger-Ross, C., Bonaiuto, M., and Breakwell, G., "Identity Theories and Environmental Psychology," in *Psychological Theories for Environmental Issues*, Bonnes, M., Lee, T., and Bonaiuto, M., Eds., New York, Routledge, pp. 203-233, 2003.
21. Abdelhalim, E., and Amer, N., "Cultural and Behavioral Factors in Upgrading Deteriorated Urban Space – Case Study: Old Cairo," *Journal of Engineering and Applied Science*, Vol. 63, pp. 311-333, 2016.
22. Zenker, S., and Petersen, S., "Resident-City Identification: Translating the Customer Relationship Management Approach into Place Marketing Theory," in *50th Congress of the European Regional Science Association*, Jönköping, Sweden, 2010.
23. Ahearne, M., Bhattacharya, C. B., and Gruen, T., "Antecedents and Consequences of Customer-Company Identification: Expanding the Role of Relationship Marketing," *The Journal of Applied Psychology*, Vol. 90, pp. 574-585, 2005.
24. Roccas, S., and Brewer, M. B., "Social Identity Complexity," *Personality and Social Psychology Review*, Vol. 6, pp. 88-106, 2002.
25. Zenker, S., Braun, E., and Petersen, S., "Branding the Destination Versus the Place: The Effects of Brand Complexity and Identification for Residents and Visitors," *Tourism Management*, Vol. 58, pp. 15-27, 2017.
26. Phillips, D. R., Cheng, K. H., Yeh, A. G., and Siu, O. L., "Person-Environment (PE) Fit Models and Psychological Well-Being among Older Persons in Hong Kong," *Environment and Behavior*, Vol. 42, pp. 221-242, 2010.
27. Brewer, M. B., and Roccas, S., "Individual Values, Social Identity, and Optimal Distinctiveness," in *Individual Self, Relational Self, Collective Self*, Sedikides, C. and Brewer, M.B., Eds., New York, Psychology Press, pp. 219-237, 2001.

البيئات العمرانية والقيم الاجتماعية والثقافية – مدخل لقراءة ودعم العلاقة

يتناول البحث العلاقة بين القيم الاجتماعية الثقافية الفردية والجماعية وعناصر البيئة العمرانية، وتأكيد الطرح المزدوج، أن البيئة العمرانية وعناصرها التصميمية، يمكن أن تؤثر في اتجاهات القيم الاجتماعية والثقافية، الفردية والجماعية من خلال تطوير وتطبيق نموذج وصفى، يُمكن المصممين من تتبع تأثير بعض "العناصر التصميمية" في البيئات العمرانية على بعض تلك القيم ويوظف البحث "ديناميكية الهوية" في صياغة النموذج، من خلال دراسة "الهويات" المختلفة التي تُشكلها البيئات العمرانية، ملامحها ودرجات تركيبها وتم استخدام المجتمعات السكنية المُسوّرة لفئات الدخول المتوسطة، باعتبارها بيئات حضرية محدودة المقياس واضحة الحدود، لإجراء استبيانات للمصممين الأكاديميين، وبدء بناء النموذج، الذي يُستكمل باستبيانات سكان المجتمعات المُسوّرة، للربط بين "الهويات" وعناصر التصميم، والقيم المجتمعية ويوضح النموذج ومنهجية بنائه، العلاقات بين البيئة العمرانية، وعناصرها، وقيم وهويات أفرادها، ويدعمها طرحي البحث، في علاقة وتأثير البيئة العمرانية الأكثر تركيباً على تشكيل هويات أكثر تعقيداً، وبالتالي دعم تبني وتمسك الأفراد بالقيم الفردية.