

# Impact of Human Behaviour and Culture on Housing Needs

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## Abstract

The research studies the relationship of the behaviour and culture of the individual and its impact on the housing needs, as it includes definitions of behaviour and patterns, that affected in turn by awareness of the culture surrounding the individual's environment. This results in different needs and different individual behaviours that differ from one community to another, which necessitates respecting those specific needs of each community through the interior design of the house and meeting the needs of the user in order to achieve the function, economy and beauty.

**Keywords:** Human behaviour, culture, housing needs.

## 1.INTRODUCTION

The critical approach of the research through studying the users behaviour and culture.

Hence, housing is focusing on human needs to maintain the life, home is the centre of showing aspects of (social, cultural and psychological ...) relating to activities that occurs causing comfort and satisfaction at the implementation of those activities and doing it. Not only the appearance of those changes on all interfaces and even extends to reach the interior spaces, which in turn have an effective impact on human behaviours and performance of various activities.

So it is important to know the degree we able to create and change our physical environment, to suit our needs and our culture. Individuals strive to create environments that support and enhance their perception of themselves. They may buy homes in certain neighbourhoods to join special social groups, or because they may have unique designs. Housing also affects the way individuals perceive themselves through architectural solutions.

Knowledge about an individual's housing needs, linked to the consumer culture, should be of importance at both the community and the individual level. The majority of users learn through radio programs that interior decoration emphasizes their personality and affects their well-being. For many years, housing research has focused on how and the quality of housing as well as the arrangement of the function with it leads to improve individual health and everyday life.

Studies and theories in the field of psychology have confirmed the importance of the environment surrounding humans in acquiring and learning behaviour. Accordingly, this research deals with the relationship of the (the residential space) with human behaviour in connection with the aim of the study. Relationships between spaces and individuals needs according to the culture.

## I.I. The Research problem

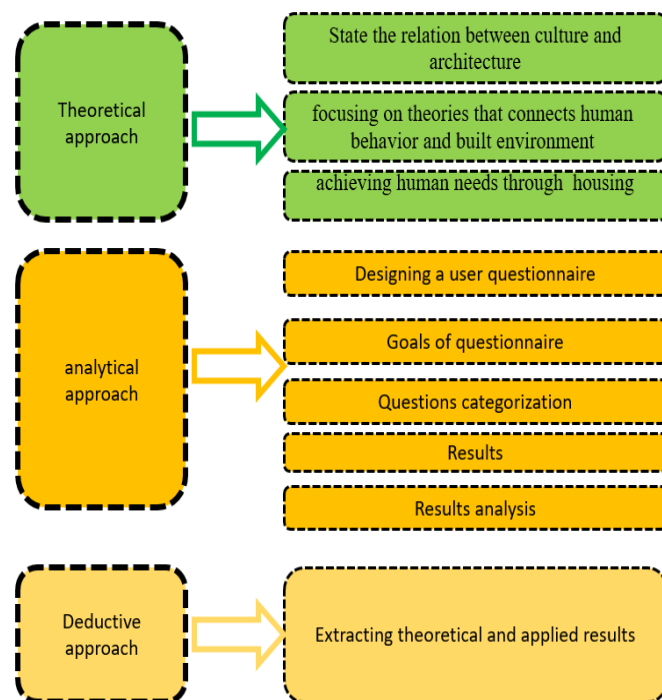
The lack of a clear vision of the indicators that will configure a common base, even to a minimum level that helps architects achieving the contemporary consumer needs. This needs representing the user behaviour and culture achieved in the house spaces.

## I.II. The research objectives

The research aims at identifying the different needs of individuals and the optimal choice of space requirements through the effect of individual culture and behaviour on the residential space use. That is through studying the impact of human behaviour on achievement function in the housing through the desired needs represented by activities.

## I.III. Material and methods

The research relied on the theoretical approach and the analytical approach to the possibility of identifying the various dimensions affecting the individual's behaviour and culture the housing and the effect of each on the other, which in turn depends on the succession of the following stages :



**Fig. 1:** Research methodology (the researcher)

## II. HUMAN BEHAVIOUR

is the potential and expressed capacity (mentally, physically, and socially) of human individuals or groups to respond to internal and external stimuli throughout their life. While specific traits of one's personality, temperament, and genetics may be more consistent, other behaviours will change as one moves along different stages of their life, i.e. from birth through adolescence, adulthood, and, for example, parenthood and retirement.<sup>1</sup>

### II.I. Types of motivation [2]

**1. Innate physiological motivations:** Like the motivations that a person is born with and supplied with, the individual does not need to learn it such as the motives for hunger, thirst, maternity, sex.

**2. Acquired motivations :** These are the motives that a person acquires from the environment through the interaction of an environment and his environment in which he lives, such as the motive of belonging, achievement, achievement, research and authorship, control, curiosity.

**3. Social motivations:** they are usually directed towards satisfying human behaviour through formation of social bonds, creating social relationships, and the formation of social roles and are all based on contact with others and achieving interaction with them<sup>3</sup>.

### II.II. General influences on human behaviours

The psychological and personal formation primarily affects the individual's behaviour. The surrounding environment then comes to have its role in influencing within a framework of the cultural background of individuals, so we find that it influences behaviour and values inherited from a cultural background on this environment. As well as the environment affects a person and dictates specific behaviours to him to explore it. So the meanings and perceived values reflected by the properties and characteristics of the environment.<sup>[4]</sup>

#### II.II.I. Influences on human behaviour

- (i) Special effects on the surrounding environment: There is complementarity between a user and environment, where he must meet his needs that reflected on the individual with positive behaviours.
- (ii) effects related to human training, which include:
- (iii) physiological influences (age - gender - ...)
- (iv) cultural influences: (values - customs - traditions - beliefs)
- (v) social influences: the way groups relate according to culture.
- (vi) personal effects: (the personality of the individual - his attitudes - his scientific and cultural level)

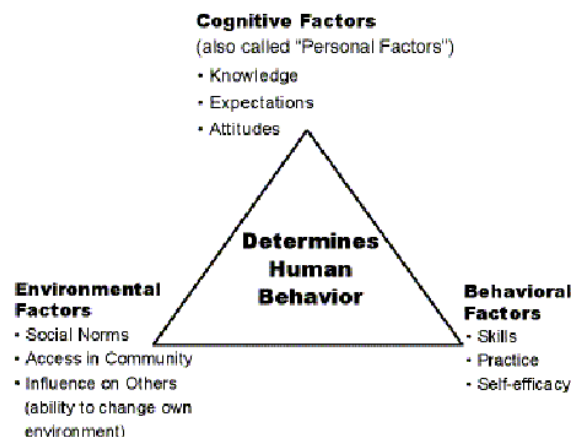


Fig. 2 Types of influences on human behaviour<sup>5</sup>

#### II.II.II. Elements that influence human behaviour in the architectural environment<sup>6</sup>

Some psychological processes and individual characteristics interfere with influencing the design of the built environment. It is clear that there is a group of elements affects human behavior, some related to the individual, his characteristics, his cultural, social background and his experiences, while others are related to all elements of the environment in which he is present, These elements are<sup>7</sup>:

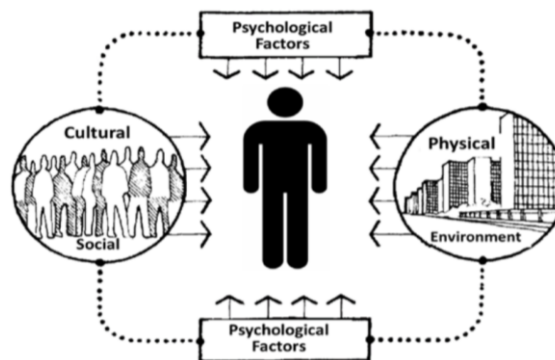


Fig. 3. Factors impacts human behaviours<sup>8</sup>

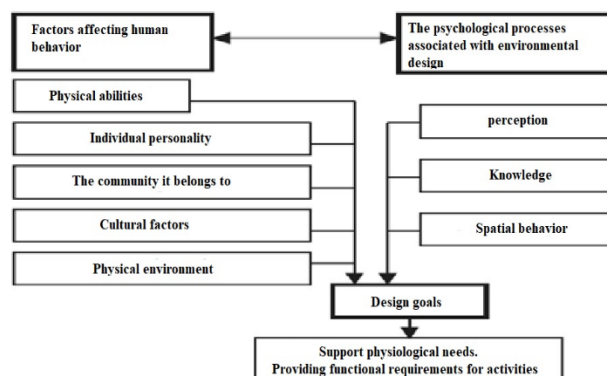


Fig. 4: The relationship between Psychology and Influential factors On human Behaviours leading to achieving functional requirements (Source: The researcher)

### III. THE SURROUNDING ENVIRONMENT IMPACT ON BEHAVIOUR

The global and local intellectual trends in interpreting the relationship between the environment and human behaviour and divided it into three directions<sup>9</sup> :

I.The first direction :The relationship between them is considered an inevitable relationship, as the environment was considered a group of influences that lead directly to specific reactions (behaviour) in similar circumstances. If the effects is known, the resulting behaviour can be expected.

II.The second direction :The relationship between them is a potential relationship and it means that the environment makes there a possibility to practice some behaviour patterns more than others.

III.The third direction :the relationship between them is a potential relationship and this trend assumes that the environment can provide an opportunity for the emergence of some behaviour patterns and prevent the emergence of others <sup>10</sup>.

#### III.I. Entries Researches in studying the human behaviours in the environment

Psychologist interest f focused on studying human Behaviour From Traditional Perspective linked With Individual features And personality Like Intelligence and Psychology processes That occur inside The Human mind, Like thinking, change Feelings, and tendencies.]<sup>11</sup>

Relation between behaviour and environment has been Confirmed which Led a change in Sciences Behavioural field. This the change grew in a Two integrated way ,this integration resulted in finding two directions(Environment Science and psychological Environment Science)]<sup>12</sup> .



**Fig. 5 . Relationship between behaviour and the environment (Source: The researcher)**

### IV. BEHAVIOURS THEORIES AND PHYSICAL ENVIRONMENT

Behaviour is the process of adapting to conditions. These concept confirm the relationship between individual behaviour, social systems, cultural values and the physical environment, which leads to overlap and integration of studies in multiple

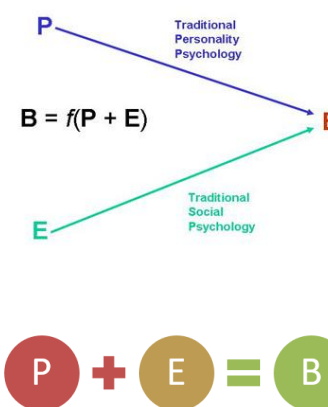
fields, including design, social sciences and environmental psychology "Moore" 1979 <sup>13</sup>.

Three theories in this field have evolved through numerous studies and these theories are:

#### IV.I. Theory of behaviour "Kurt Lewin"

Kurt Lewin is one of the first psychologists to adopt ecological concepts and principles in the study of human behaviour. He determined that the first step to understanding the individual or group behaviour of a person is achieved by identifying the circumstances and situations surrounding him. He has expressed the relationship between human behaviour and the environment, which includes three components. The surrounding Bf (PE) through the equation elements are:

#### Independence of Personal and Environmental Factors



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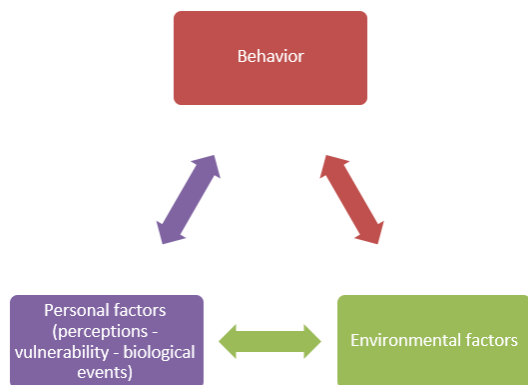
**Fig. 6. Theory of behaviour "Kurt Lewin" <sup>14</sup>**

B: Behaviour  
 P:Persons  
 E :Environment

The equation indicates the importance of the two sides being equal on the right side, namely the individuals and the environment in which they are present. The equation shows that the integration between man and the environment is the main factor in finding the left side of it, which is behaviour.

#### IV.II. Theory Roger Parker for the Behaviourals Domain<sup>15</sup>

Both (Wicker 1979, Parker 1968) developed some concepts of the relationship between behaviour and the environment and they concluded that a more accurate picture of human behaviour can be achieved by knowing the position in which it exists and that is better than knowing only individual characteristics.

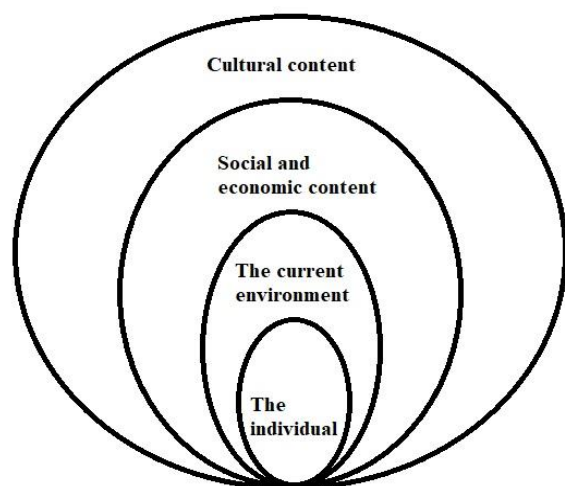


**Fig. 7.** The relation between behaviour, environmental factors, and individual factors (source : The researcher)

The results of their study have shown that the behaviour of each person varies throughout the day according to the different situations he exposed to, and that the similarity between situations, events and environmental conditions achieves great similarities in the behaviour of a different group of users and accordingly it has been confirmed that the individual tends to adapt his behaviour to the situation that exists.

#### IV.III. Theory " Profenbrenner " ecological theory <sup>16</sup>

"Yuri Profenbrenner" 1979 created a new concept for human growth and behaviour in the environment, especially the interaction between them. It dealt with human growth from a different perspective, as the focus of the theory did not focus on the psychological processes of the growth process, but human growth was addressed as a process of change of materials that the individual perceives from the surrounding environment. With it, and this is in contrast to Loyne's ideas of perception, the Uri Provenbrenner theory deals with the actual characteristics that a person realizes and which appear in his behaviour, his interaction with him and his association with it.



**Fig. 8:** The effect of the environment on the growth and behaviour of the human being, as the cultural content affects the social and economic content on the current environment, which in turn affects the individual<sup>17</sup>

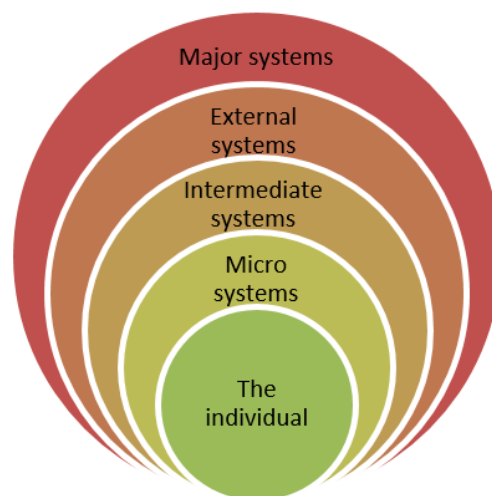
Accordingly, to understand human behaviour, it is necessary to analyze a group of systems that together constitute the ecological environment surrounding it, and this environment consists of four basic systems <sup>18</sup>:

**I. Micro-systems:** which is the system of the situation that directly surrounds the human being and is a tissue of activities that a person engages in in a house space that has specific material characteristics. The tissue forms three basic components, which are activities, revolve in the house space and the social roles and responsibilities of the individuals who are in this house space and the individual characteristics and tendencies Personality for everyone in this position.

**II. Meso-systems:** The relationship system links small systems with the group of environments or external systems affecting human behaviour.

**III. Exo-system:** The system for the external environments surrounding a person's position.

Major Systems: Microsystem, which is the system for the general framework and cultural context of a person's position. It is noted that the environment was approached from a social perspective without regard to the role of the physical environment. "Provenbener" explained that a person's ability to acquire certain skills in a specific house space or space does not depend only on the characteristics of this house space from the materials or method of brushing "micro systems", but rather depends on the nature The relationship between housing and location also extends to the social conditions of a person and the social environment surrounding him . Consequently, individuals are also directly affected by the events takes house space in the situations ,in which they are present and which are represented in other individuals present in the house space and their relationship to each other. In addition, the role of each of them, they are affected by the events that take house space in the situations in which they are not.



**Fig. 9 :** The environment Ecological Surrounding B man And this The environment Made up Out of four Organized Basically ,each of them affects the other, starting from the outside with the major systems, then the external systems, then the intermediate systems ,then the small systems, reaching the individual<sup>19</sup>



## V. HOUSING RELATED NEEDS

Which are the essential needs of the human being including physical basic needs and there are intangible basic needs.

**Basic Needs:** Physical basic needs are those related to the physical and specific aspects of human comfort and therefore do not differ substantially from person to person.

It must be provided to all segments of the population at all levels of living, including (physiological needs) intangible basic needs include the natural need for shelter

I .Basic physical needs (physiological needs).

II. Intangible basic needs (containment).

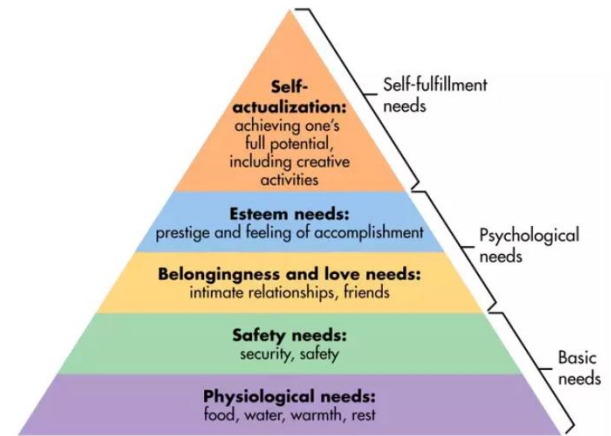


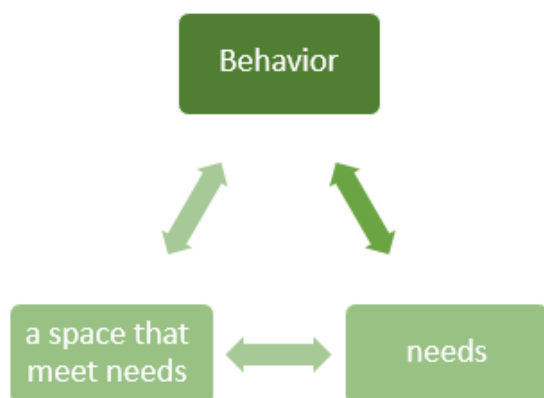
Fig. 10 . Maslow's hierarchy of needs <sup>20</sup>

Table 1. Initial human physical needs (The researcher)

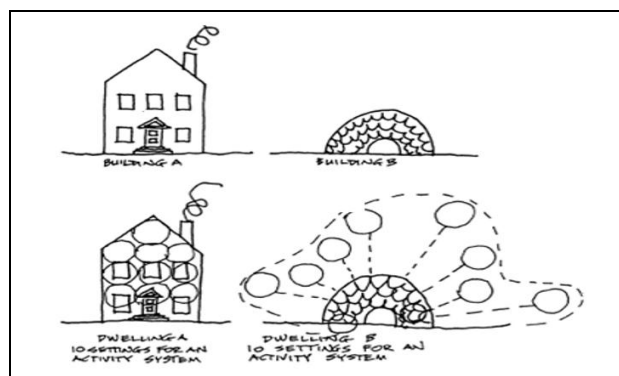
Initial human physical needs	
Physiology and Biology	<ol style="list-style-type: none"> <li>1. The need for major components of life such as shelter, food, drink, air, light, protection, comfort, social gathering, mating, sex, and privacy.</li> <li>2. Optical requirements such as optical compatibility, visual convenience, visual privacy.</li> <li>3. Audio needs such as noise protection and good audio performance provide audio privacy</li> <li>4. Physical needs such as ease of movement, comfortable access, and thermal comfort house spaces for activities.</li> <li>5. Needs associated with the sense of touch such as achieving a suitable texture for the surfaces that deal with the human.</li> <li>6. Needs associated with the sense of smell, such as the provision of an <u>aerial</u> medium with a suitable smell at the level of internal and external space.</li> </ol>
Functional	Suitable housing design for the size of the family and space gradient and employment of urban spaces suitable sites for elements of land use and appropriate means of transport.
Technological	Energy Supply, Water Supply, Disposal of Sewage Waste Properly Assembling, Recycling and Disposal of Garbage.
Religious	The need for a motivate environment is a moral obligation to observe the religious needs of society
Social	<ol style="list-style-type: none"> <li>1. Need to live in group to develop experience</li> <li>2. The need for privacy such as visual privacy, internally and externally auditory privacy, internally and externally social privacy, personal space.</li> <li>3. The need for self-realization, such as interactivity, impact, property and boundaries, self-manifestation, the creation of a particular environment, and the need for shelter.</li> </ol>
Behavioural	Providing a behaviourally compatible environment, Knowing rights and duties, Observing behavioural norms and traditions, Providing socially compatible behavioural policies.
Psychological	The need for comfort and psychological acceptance, The need for human relations together, The need for awareness and aesthetic sensations, Need for entertainment.
Political	The need for an acceptable political system, The need for laws and legislation compatible with humanitarian needs.

## VI. MONITORING USER BEHAVIOUR IN THE POST-OCCUPANCY RESIDENTIAL ENVIRONMENT

The designer must be aware of the user's needs, especially the changing ones, so studying user behavior and modifications to the built environment, especially after occupancy, contributes to avoiding errors in the future and is an attempt to link the design with practice and reality to reach a more user-friendly housing design

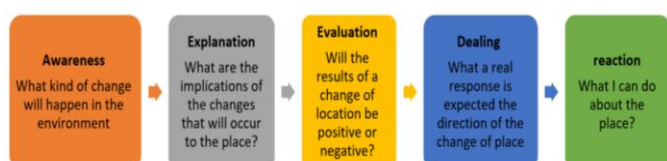


**Fig. 11 .** Relation between Behaviour and space  
 (Source: The Research)



**Fig. 12:** Two different methods of ten systems in two homes, but the method of each is different depending on the prevailing behaviour<sup>21</sup>

## VI. RETHINKING AS A REACTION LINKED TO LOCATION "NYMBISM" RETHINKING AS A REACTION OF HOUSE SPACE ATTACHMENT



**Fig. 13:** Psychological response over time to develop change in the space<sup>22</sup>

## VII. CASE STUDY

Through a questionnaire of 500 users, the sample is divided into 57% males, 43% females, aged between 20 years and above 46 years old, where 20-30 years represented 58%, 31- 45 years 35%, over 46 years 7%. 51% of the users work in private fields, 40% are academic, while 9% are in government.



**Fig. 14 .** Questionnaire sequence (source : The researcher)

### VII.I .Questionnaire Objective

1. Identify the needs of the users.
2. Measure the extent of the user's behavior on the spaces.
3. Measure the achieved degree for the users need through spaces functions.

### VII.II Questions categorizing

#### Part 1: the personal data

Deals with personal data, educational level

**Table 2.** Personal data of the user(Source: The researcher)

Question	categories	Percent %	Chart
Gender	Male	57%	
	Female	43%	
Age	20-30 years	58%	
	31- 45 years	35%	
	over 46 years	7%	
Field of Work	Academic	25%	
	Governmental	16%	
	Private	59%	
Years of Experience	1 to 3	29%	
	3 to 7	22%	
	More than 7	49%	

### Part 2: The house data

Deals with the type of house, the house data, and number of users occupying the house

**Table 3.** The house data (Source: The researcher)

Question	categories	Percent %	Chart
Area of the housing unit	Less than 100 square meters	32%	
	From 100 to 200 square meters	60%	
	Greater than 200 square meters	3%	
	Separate units or villas	5%	
Total Number of Residents in House	Two individuals	20%	
	3 individuals	36%	
	4 individuals	28%	
	More than 4 individuals	16%	

### Part 3: The users need

Including the user belonging to the space, measuring to what extent the house space expresses the user, and measuring some needs of the user achieved in the house space.

**Table 4.** The users need (Source: The researcher)

Question	categories	Percent %	Chart
Care if House represents Personality	Yes	59%	
	No	5%	
	May be	36%	
Sense of Belonging to the House space	May be	54%	
	Yes	29%	
	No	18%	
Persons and Memories increases association with the House space	Yes	91%	
	No	9%	
prefer Traditional Areas	Old Heritage Areas	35%	
Vs. Modern Areas	Modern Areas	65%	
prefer Open Spaces	Open Spaces	59%	
Vs. Closed Spaces	Closed Spaces	41%	
prefer Direct Entrance	Direct Entrance	66%	
Vs. Broken Entrance	Broken Entrance	34%	
prefer Transparent Walls	transparent walls	47%	
Vs. Solid Walls	solid walls	53%	
prefer wide Areas of Window	large areas	79%	
s Vs. Narrow Areas	narrow areas	21%	
House Walls feeling	Safe	66%	
safe or nervous	Nervous	34%	
Negative reaction from unorganized spaces	Yes	90%	
	No	10%	
Traditional Design	Traditional	24%	
Vs. Modern Design	Modern	76%	

### Part 4: Impact of the house space on the users behaviours

Measuring the impact of the house space on the users behaviours like Sense of Belonging to the House space, feeling as a reaction from some spaces

**Table 5.** Impact of the house space on the users behaviours(Source: The researcher)

Question	categories	Percent %	Chart
affected by some house spaces	Affected	62%	
	Not Affected	38%	
Sense of Belonging to the House space	May be	54%	
	Yes	29%	
	No	18%	
House Walls feeling safe or nervous	Safe	66%	
	Nervous	34%	
Negative reaction from unorganized spaces	Yes	90%	
	No	10%	

### Part 5: response of the user to the house spaces.

Measuring the response of the user to the house spaces. House like Design Satisfaction, Traditional Design Vs. Modern Design, Space impacts on the user and the user satisfaction towards the house design

**Table 6.** Response of the user to the house spaces. (Source: The researcher)

Question	categories	Percent %	Chart
House Design Satisfaction	Yes	45%	
	No	27%	
	May Be	28%	
Traditional Design	Traditional	24%	
Vs. Modern Design	Modern	76%	
Space impacts on the user	Human	9%	
the user impacts on space	House	11%	
both	Both	80%	
Thinking to change house design or its Spaces	Yes	75%	
	No	25%	
Creation of a place in the house belongs to culture	Yes	75%	
	No	25%	

## VIII. RESULT

- 87% of users are affected by their behavior and performance of activities in the space, while few of them are not affected by the house space.
- More than half of the users are interested in the expression of the housing character, which requires us to examine the cultures of individuals to build appropriate housing for them.
- The organization of activity relations in the housing unit must be taken into consideration as it regulates the behaviour either by increasing or decreasing freedom of movement.
- 71% are satisfied with helping to complete the work in their houses.
- The majority are not able to determine their attitude towards the surrounding environment, only 29% of those who feel affiliated with their environment, while 18% do not feel that belonging, which shows the weakness of the environment in the containment of individuals.
- 78% of users feel nostalgic for their old environments because they are associated with memories.
- 91% of users feel connected to the house space because it contains memories for them.
- 65% of users prefer modern buildings as the advantages of modern buildings provide them with their needs and meet the required spatial functions ,while 35% prefer heritage buildings.
- 65% of users prefer heritage buildings where they provide them with a sense of identity , values , architectural vocabulary, and it also have lower costs.
- 65% of users prefer modern buildings where they provide them with their needs and achieve the desired function, while white prefers both types.
- •More than half of users feel reassured in open spaces.
- 66% of users prefer the broken access because it achieves privacy for them, while the rest of the users prefer direct access.
- More than half of users prefer transparent walls to solid as it achieves aesthetic and transparent side, while the rest of users prefer solid walls because it achieves privacy, and because it maintains the customs and traditions that gives privacy, and finally because it gives reassurance and regulate the boundaries between the spaces.
- 79% of users prefer large areas of windows because it give them a sense of breadth, while 21% prefer narrow areas of it because it achieves privacy.
- In the case of fences 66% of users feel safe, while 34% don't like.
- 90% of the users affected negatively by the disorganization system, while only 10% not affected by this.
- 76% of users prefer a modern design because it is easier to achieve the function, while 24% of users prefer heritage housing because its belonging to the culture and heritage they belong to.
- 80% of users affected and affect the residential environment, while 11% of users affect the residential environment on them, and 9% of users affect the residential environment.
- 89% of users prefer to communicate with others through physical environments, while few users prefer to communicate through the Internet.
- 84% of users prefer to strengthen scientific methods with cultural ones to promote and strengthen our culture, while 16% of them object to it.
- The reaction of the individual to the house space through a typical serial process consisting of awareness and perceptions of the house space followed by the interpretation of what the implications of change in house space, then the evaluation, and then deal with the reaction of the user.
- Increasing the area of (the housing unit) allows the designer opportunity to control privacy.
- 86% of users prefer cool colors, while 14% of users prefer hot colors. Red retains the property that it mimics the desire, so it is useful to use in the dining rooms, while colors likes blue and green, gives users a sense of calm and comfort and

## IX. CONCLUSION

From the study it is concluded that the concepts adopted confirms the existence of a dual relationship between the field of environmental psychology and the field of architectural design. While research on environmental psychology focuses on measuring the perception, behaviour, requirements, needs and experiences of individuals in their relationship to the built environment characteristics .The designers needs such kind of information which validates predictions due to designing housing spaces.

The individual behavior affects the built environment properties, as it is determined and influenced by it. Thus, the rule of the material characteristics of the built environment is not confined only to be a factor affecting the individual's behaviour, but also these physical characteristics itself are a social and cultural product of these individuals behaviours that expresses Their needs, values and beliefs.



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