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CULUTURAL IDENTITY AS A DETERMINANT OF PUBLIC SPACES DESIGN (An applied Methodology to Enhance Identity of Place)

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ABSTRACT: Showing and highlighting the identity of the community in designing the external environment, such as squares and public spaces, are firmly associated with how much of reflection the cultural and social characteristics of the community cause on those squares and public spaces. Hence, the research aims to “present an applied approach to redesign public squares in Egyptian cities to enhance and support the local cultural identity. The international, regional and local requirements and standards that support the highlighting of cultural identity in designing public squares. The analytical part deals with the role of the urban and architectural design dimensions of cultural identity, both material and moral, as a determinant of the design of public squares and analysing that in global experiences and examples. The proposed approach is drawn to enhance the identity of public squares. The practical part depends on the application of the proposed approach to the plaza of the Fayoum Culture Palace (Al-Sawaqi Square), and the research ends with presenting the results and recommendations that can help in designing public squares in Egypt to achieve and highlight its cultural and civilizational identity.

KEYWORDS: Identity, Cultural identity, Place identity, Open spaces, Public squares.

I. INTRODUCTION

Man was created and he is constantly searching for his being and learning to belong to an identity through which he feels distinguished and different, enabling him to deal with others. Without a clear identity, individuals experience a state of alienation and isolation from their social and cultural environments, and even from themselves completely, and without a clear identification of the other, they cannot identify those identities.

The cultural identity began as something tangible and intangible. These characteristics are determined and shaped according to the different surrounding factors that make them distinct from other cultural identities. And we hand over those cultural traits inherited from our ancestors, mixed with experiences, sincerely, to our children so that they can develop them according to the data of the current era.

Therefore, the design and coordination of public squares with a cultural identity within the city depends primarily on a deep sense that is felt by the designer towards the urban space, including the different design dimensions that can form the features, shape, character and identity of the squares, which are represented in: The role of the physical dimensions of cultural identity as a determinant of the design of public squares, In addition to the dimensions, The moral effect on the perception of the arena, whether at the sensory or cultural level, in addition to the needs and activity requirements inside the space, helping individuals interact with the space of the arena and realize its meanings and cultural content imprinted with the architectural and urban heritage and symbols.

This part will deal with theoretical studies to present the concept of public squares and analyze the design dimensions on which the public squares were based in the previous periods, which led to their success, survival and continuity.

II. RELATED WORK

The important of using an applied approach to redesigning public squares in Egyptian cities to enhance and strengthen the local cultural identity: This is done by reaching the architectural values learned from theoretical studies and using them as foundations and standards that can be applied to improve the urban environment of the squares within the city as an authentic architectural reference that can be referenced and taken as a basis for searching for a distinctive identity for public squares that depends on continuity unique locally and globally and environmentally compatible in the design of new buildings and how to place them in the existing urban fabric in a way that enables to achieve a balance between the new and existing elements by creating a homogeneous (intimate) community environment similar in style and with clear boundaries, in the sense of creating an environment saturated with a symbolic significance for its users to be aware of the history of the surrounding physical environment to preserve the personal, individual identity of the community, which affects the character of and identity places to feel pride and satisfaction in living in their community and a sense of differentiation and difference.

III. METHODOLOGY

The research deals with one of the urban components of the city, which determines its shape, character and personality, as the open spaces are an essential part of the urban inheritance, and it is a strong element that complements the architectural and aesthetic form of the city. The cultural and social characteristics of the community on these squares and public spaces, where the identity of the local community is one of the most important determinants of design for these squares, but rather it is the basis and basis for their development and improvement. Hence, the research aims to “present an applied approach to redesigning public squares in Egyptian cities to enhance and strengthen the local cultural identity.” The importance of research is due to the principles, foundations and design criteria of open spaces that would provide safety and comforts for citizens and reflect the extent of urbanization and sophistication.

The method used in this research is based on three main parts:

Theoretical part: depends on getting to know the theoretical and philosophical literature related to the research topic and its aspects.

1-1 Concepts and Definitions:

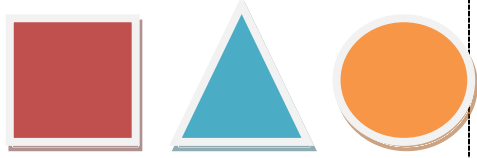
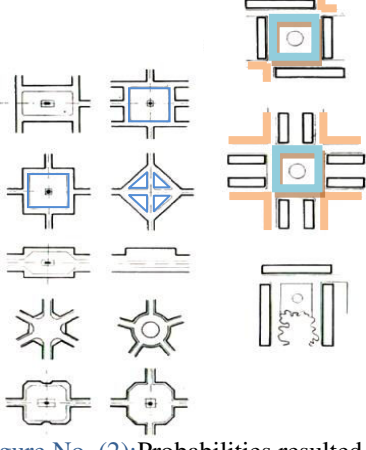
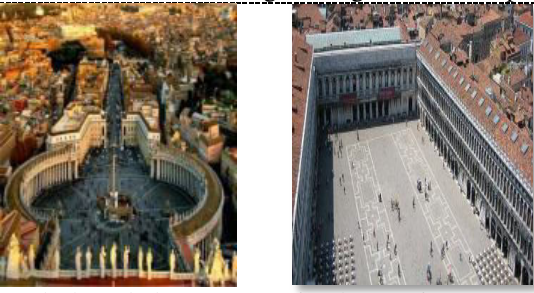

1-1-1 Identity of the place: The uniqueness of the place with certain characteristics and features, whether in buildings, streets or spaces stems from the culture and traditions of the community (cultural features), which gives individuals a certain feeling and awareness towards this place and this uniqueness comes from the factors surrounding this community from political, economic, environmental, social and cultural factors, and the identity of the place It consists of two types, a physical identity (based on the events of the place) and a moral identity (visual) .

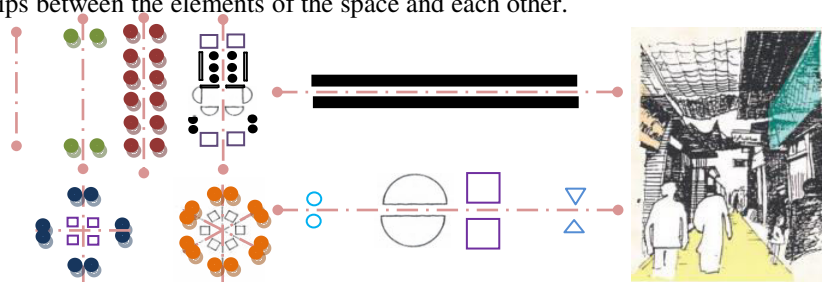
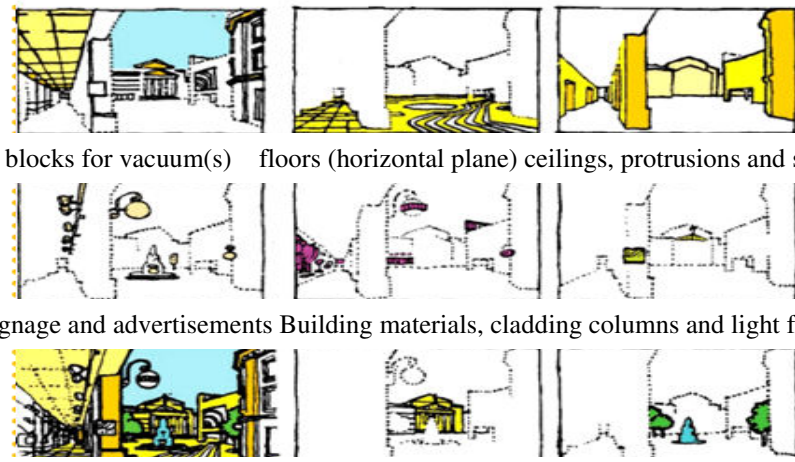
1-2-1 space: It is the product of the gathering of the **walls of the space of the square:** (which are the facades of important buildings, whether cultural, social, religious, administrative... etc) **and the elements of the design of the space of the square:** (which is the furnishing of the space , its landscaping , the associated foundations for coordinating those walls around an open space , the way to arrange those walls ,and the elements of the design of the space around **the floor of the void:** (which are the roads and the elements of movement) that allow a high degree of control over the internal space of the public square functionally and control the degree of its closure and its openness . They vary among themselves in the degree of privacy they need in line with the nature of the various activities that will be practiced within the space and the ability of this assembly to express the local community in terms of social, cultural and civilizational terms so that it is clear and readable to the observer through its distinction in the surrounding fabric.

1-2 Design dimensions of public spaces:

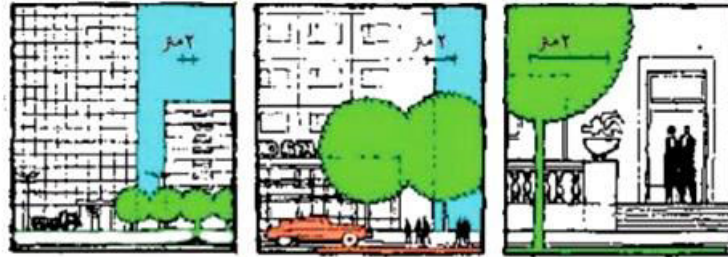
The importance of the physical and moral design dimensions specific to the squares through the role they play in providing the special needs of the individual and the group, which would enhance the human relationship with the place and enhance the cultural identity of the place. The urban design of cities throughout the ages has been associated with urban spaces for open spaces, especially squares and process her design different its shapes different functions, system formation Urban in City Associated system design urban spaces and for its design Dimensions material and moral Among them:

Table (1) The design dimensions of the public squares:

Physical design dimensions of cultural identity		
1-2-1 dimension Fine:		
Affected formation for the urban space of the squares in structure City by several factors material , moral and interactions common Between them, to paint a picture Alf Rag the year of the square in City		
1-2-1-1 format projection Horizontal square:	<p>The shape of the squares is affected by the function that this square performs, and the square takes its shape and importance from the set of relationships that relate to the axes of this square and the surrounding framework, as this square is a set of dimensions in the void that must be integrated to perform its function through the correct proportions.</p>  <p>Figure No. (1): the three basic forms of space</p>	 <p>Figure No. (2): Probabilities resulted from transformations engineering for basic shapes</p>
1-2-1-2 The specific surfaces of the yard from the outside:	<p>1- The floor of the yard: the lower horizontal determinant of the yard: it represents the ground of the yard and the preparation it bears on fixed or varying levels, as the floor can bear different drawings and in multiple colors.</p>	 <p>yard Place de l'Opera – Paris, shpm Saint Peter's Square in the Vatican</p> <p>Figure No. (3): Lower horizontal limiter for public squares</p>
	<p>2- The ceiling of the courtyard (the sky line), the upper horizontal limiter of the square: It is specific, not clear or fixed, because of what is characterized by the space of the square that it is a space in direct contact with the external environment.</p> <p>is represented in the sky line and the end line of the facade in addition to tree branches, the sky line may be variable or fixed.</p>	 <p>Figure No. (4): Skyline Trafalgar Square, London</p> <p>Figure No. (5): The fixed skyline of the Place des Vosges in Paris</p>

	<p>3- The walls of the courtyard: the vertical determinants of the space of the square: It extends from the base to the sky, and it is the most visual component of the space that affects the users of the space, as it gives a sense of the scale and proportions of the space. <u>The vertical determinant of the square appears as follows:</u> A sharp line (meaning the walls, fences and buildings surrounding the urban space) Or lane (meaning a fence of dense trees surrounding the urban space)</p>
<p>1-2-1-3 axes</p>	<p>Each square space has a set of axes, which are imaginary lines that determine the direction and paths of movement within the space of the square and give a regular shape to the space, defining these axes helps the designer to form the elements of the square space design in a regular form and to find visual relationships between the elements of the space and each other.</p>  <p>Figure No. (6): Visual Axes Urban Space Figure No. (7): The axes of the void resulting from the organization of the elements of the space of the square</p>
<p>1-2-1-4 Arena composition</p>	<p>It is one of the elements that highlights its importance, and the volumetric composition of the square is determined by its three dimensions (Floor, walls and ceiling of the square) and the way the person perceives within the urban space of the square through the containment resulting from the positioning of the main determinants and how they are relative to one another</p>  <p>Specific blocks for vacuum(s) floors (horizontal plane) ceilings, protrusions and sky line Signage and advertisements Building materials, cladding columns and light firepoints Plants and water elements Architectural details Integrated visual image of space</p> <p>Figure No. (8): Arena composition</p>
	<p>1- Scale: The space scale of the square is created to suit people’s movement and activity, or what is called the functional needs of the space of the square. The scale of space depends on its natural dimensions and the visual capabilities of the human being. Those external spaces do not have to follow the scale of the buildings surrounding the space of the square the same scale and size of the space between them, but they both can vary and confirm each other.</p> <ol style="list-style-type: none"> Friendly measure of public space emptiness: It is a small scale that encourages social harmony and achieves the desired privacy for the human being and helps to sense the details of the surrounding determinants, and its width should not be more than 4.00 meters (strong relationship). The human scale of the public square’s emptiness: Its width should not exceed 35.00 meters, which is the maximum distance to distinguish body movements (weak relationship). It reduces the sense of the details of the determinants with an increase in the sense of masses.

c) **The memorial scale of the emptiness of the public square:** It can be more than 100,000 meters in size, so It can not be possible to see the human being and just see the huge memorial objects (missing relationship).



c b a

Figure No. (9): Types of scale suitable for the space design of the square

2- **Containment:** The spatial containment of the arena creates a sense of emptiness, and the vertical determinants contribute to determining the visual and kinetic manifestations of the emerging containment, and the different sensory manifestations of containment depend on the degree and form of this containment.

A- **The degree of containment in the design of the space of the public square:** It is determined by the ratio between the width of the space of the square and the height of the surrounding parameters

- 1- When the relationship is 1:1 (the angle of view is 45°), the space of the arena is closed and the degree of containment is **severe**
- 2- When the relationship is 2:1 (the angle of view is 30°), the space of the arena is closed and the degree of containment is **medium**
- 3- When the relationship is 3:1 (the angle of view is about 18°), the space of the arena is closed and the degree of containment is **weak**
- 4- When the relation is 4:1 (the angle of view is about 14°) it is considered a loss of closure (no missing enclosure) and takes another designation which is called "place" and not "space"

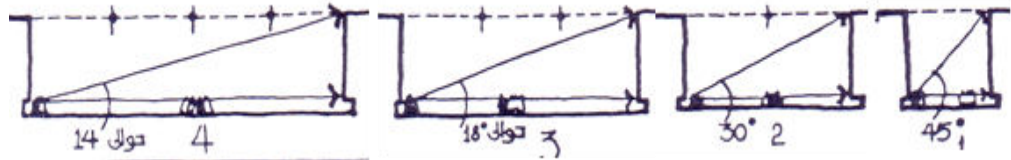


Figure No. (10): The degree of containment in the design of the space of the public square

B- **The shape of containment in the design of the space of the public square :** The shape that the spatial containment of the public square takes is considered a result of the positions of the vertical determinants in relation to each other in the space of the square in terms of the corresponding system of angles between them or the use of continuous curved oppositions as far as the feeling of continuity is achieved in the determinants of the outer space, whether it is a regular or irregular shape to the space of the square :

Regular form of square space: Space containment takes a regular form when one or more principles of equilibrium are applied, as it gives the square, round or regular polygon.

The irregular shape of the space of the square: The spatial containment takes an irregular shape when it does not follow a specific system in its formation, or when the defining elements of the space are free from the regular geometric relationship

C - **The visual sense of the containment's nature in the design of the space of the public square,** the visual sense of the containment's nature depends on the extent of transparency or visual penetration allowed by the vertical determinants of containment. It is possible to visually distinguish between the following manifestations that achieve emerging containment.

a)The space of the public square, the content that extends visually: the vertical determinants of it are represented in nature, such as trees and plants, or light elements such as low-rise fences, and despite the feeling of containment in this case, it is possible to visually extend beyond the boundaries of this space from any location.

b) The space of the public square containing the content that is not visually extended: where the

vertical determinants are represented in the outer wall of the buildings surrounding this space and visual extension is not allowed outside its borders except in the narrowest limits at the distances between these buildings.

c) The space of the public square, the semi-extended content visually: which combines the manifestations of both of the previous types, either by the diversity of the specific elements of the space between the natural elements in some parts of it and the buildings in other parts, or because of the visual extension that the surrounding buildings may allow on the visual level of the human being (such as Raising the surrounding buildings on columns at the ground floor level)

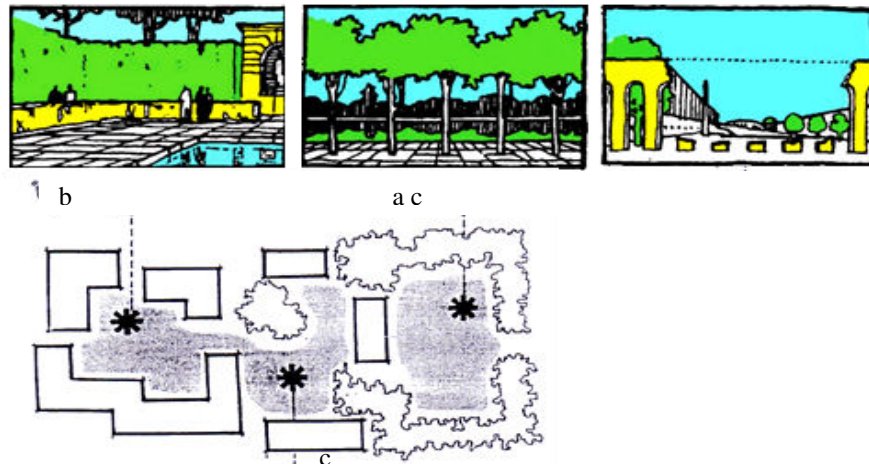


Figure No. (11): The appropriate visual sense for the spatial containment of the arena design

1-2-2 Aesthetic dimension: Beauty is the general form that we perceive through sense or feeling.” Beauty may reach a person through sensations and it is called sensual beauty, which is direct physical sensation through the five senses , or through the inner feelings of man, which is known as emotional beauty , it may reach By thought or logic, and it is known as intellectual beauty, it may be functional or abstract , and the abstract in which the values of beauty lie in the artistic composition of the space of the arena , it is determined by concepts such as proportions, harmony, rhythm, repetition and others . Function and construction materials used

1-2-2-1 -- Colors and their compatibility

The idea of using plants in the urban space in general is to show the color element, and it is preferable to benefit and be guided by nature itself, as the most simulated scenes of nature are what satisfies the soul and relaxes the eye with its beauty.



Figure No. (12): Compatibility of the color element between the elements of the spatial design of the square

1-2-2-2 Lighting and Shadow

Light and shadow are two important elements in coordinating the urban space, as the color, shape and strength of the element are affected by its location in terms of shade or light intensity, and the locations of the design elements used in coordinating the space are taken into account according to their need for light or shade.



Figure No. (13): Lighting and shadows

<p>1 -2-2- 3 Arena site layout elements:</p>	<p>is also known as Landscape Architecture, which aims to: integration urban environment And their interrelationship to serve human needs so that humans interact with the natural and built environment in a balanced manner . .it will be identified as follows: The built environment (complementary determinants): the interior spaces for the design of the space of the square, which are the elements and complements that can be added to the space,and these elements are used to perform a functional or aesthetic role in the space.</p>
	<p>A water basins and fountains The element of water is characterized by the ability to stir human feelings, which are instinctively inclined to nature. Water is in two states as follows:</p> <ul style="list-style-type: none"> • Still water: It is represented in basins water and still ponds, which implies comfort, stillness and stability • Moving water: It is represented in the fountains and it implies movement and joy
	<p>Seats and tables: It is one of the most important elements that help to stabilize the vacuum for long periods of time.</p>
	<p>Light coverings (umbrellas) and booths: and pergolas: These are considered one of the most important structural elements in the open space, which give an aesthetic and artistic view to the space.</p>
<p>Structural models:</p>	<p>Stairs and ramps: they are used to change the levels in the vacuum to give dynamism or to give a certain feeling such as the feeling of stability and stillness resulting from landing.</p> <p>Plants and afforestation: afforestation is one of the basic elements that make up the open spaces and determine their design and coordination, and they are living elements that change with time.</p>



Figure No. (14): Shapes of water elements




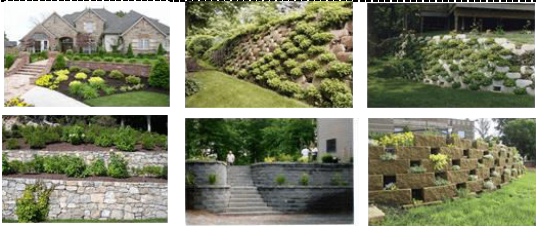

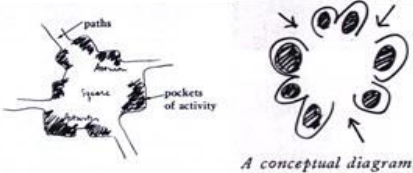

Figure No. (15): Designs used in benches and seating areas in public squares




Figure No. (16): The shapes of pergolas and umbrellas in public squares



Figure No. (17): Types of plants used in coordinating the space of the public square

	<p>The building models are designed and erected in some public spaces and gardens to represent the idea of immortalizing a particular memory, heritage and civilized history of the community. They are usually established in the middle of fountains or in public squares, and some of these models can be water fountains with attractive aesthetic forms.</p>	 <p>Figure No. (18): The use of building models in a public square in Seoul, Korea</p>
	<p>Building basins and retaining walls: The built basins are established on both sides of the entrance to the square and are used for planting flowers there. They work in regular geometric shapes and are compatible with the design of the square and the open space.</p>	 <p>Figure No.(19): The use of building basins and retaining walls in designing the spaces of the public square</p>
<p>1-2-3 The functional dimension: the features, character and characteristics of the space of the arena are determined according to the activity or activities for which it was designed , and the activity includes anything that moves within the space, such as humans or mechanisms , where the human being is considered one of the very important elements in the formation of the external void because it is he who gives the true scale For the formations that were originally established for it , and the void gains life, activity, meaning and great sensory dimensions when it is present in the void or even when it is absent from it .</p>		
<p>1-2-3-1 Distribution of activities and uses in the design of the public square</p>	<p>Christopher Alexander identified it in four determinants that contribute to the success of urban spaces and give them a character of vitality, and he considered that many modern public squares were designed to be a distinguished square with vitality and activity, but they have turned into deserted squares due to their lack of those standards.</p> <p>A-density movement Pedestrians: It is what is known as the density of pedestrian traffic equal to the number of people / m2.</p>	 <p>Figure No. (20): density pedestrians check vitality of the arena space</p>
	<p>b- Areas of concentration of activities (activity pockets):The activities of public squares are concentrated at their edges or borders, and whenever these parties have a successful activity, the space is characterized by vitality. The important paths passing through the space are first identified and what lies between these paths will be a place for activities to be focused on.</p>	 <p>Figure No.(21): pockets of activities and their distribution at the outskirts of the public square</p>
	<p>c:graded sitting places The tiered places that are partially elevated from the floor of the void are considered an attraction point in case that there is an event in the public space.</p>	 <p>Figure No. (22): The listed seats and their direct connection to the general space of the square</p>

	<p>D- Elements of attraction: Public squares show a specific centered space, and this center point, in turn, organizes the surrounding space and makes it visible and clear, and the void remains in a state of stillness until something is placed in the middle of it that adds vitality and activity.</p>	 <p>Figure No. (23): The vital attraction of the public square space</p>
<p>The moral design dimensions of cultural identity</p>		
<p>1-2-4 The social dimension: urban formation only exists in a community that uses this emptiness, lives and interacts inside its yards , its spaces and through his roads, Where the influence is mutual between that community and the formation of the arena spaces.</p>		
<p>1-2-4-1 human needs within arena spaces</p>	<p>They Can be determined in the following stages:</p> <ul style="list-style-type: none"> ● Physio – functional needs: __ For physical and psychological comfort. ● Security And safety needs: to feel safe from harm. ● Affiliation need: for instance,belonging to a community. ● Estimation need: that Feel in value from others. ● Self-worth need: from During expression and achievement Technical. 	
<p>1-2-4-2 Types of activities practiced in the spaces of the square:</p>	<p>Activities are a part and parcel of the formation of the outer space of the square, and they represent a living and moving element compared to the physical elements that exist in the space.</p> <p>activities within the space of the arena vary in nature: as defined by Jan Gel:</p> <ul style="list-style-type: none"> - Necessary activities: they are Activities mandatory Such as going for work or school _ and waiting the bus. This is the event affected by slight shape physicist for emptiness. - Optional activities: mean when time,place and weather are available , like Walking to get some fresh air or stop to get a cup of coffee in the cafe. - Social activities that Depend on the Presence of others in the general void: like discussions and societal activities ,optical and acoustic communication with others. They happen in real-time and as a result of people's moving in the mean place and time. That gives such activities the supply if necessary and gives the optional activities the suitable environment . <p>Although societies differ in their perspective of life, their priorities and requirements, and the type of public places they are attracted to, there are a set of indicators that must be available in public squares to promote social interaction for those indicators can be summarized as follows: Function - character - layout - seating - environmental factors - accessibility and movement - management and supplements.</p> <p>Only perform the necessary activities when the external environment is poor When the arena space quality is high, facultative activities occur at incremental rates. When optional activities increase, social activities increase accordingly</p> <p>A distinction can be made in terms of the diversity of activities between the following spaces:</p> <ul style="list-style-type: none"> ● Spaces with specific activity: They are subject to the nature of the functional role of the vacuum only. without diversity. ● Spaces with a basic activity in addition to some other activities: In this case, there is a basic functional role that leads to the presence of a dominant nature of the activities that occur in the spaces, in addition to the possibility of some other activities. ● Spaces with a variety of activities: These spaces are mixed uses and therefore the nature of the activities that can occur within them varies amongst necessary, optional and other social activities. 	

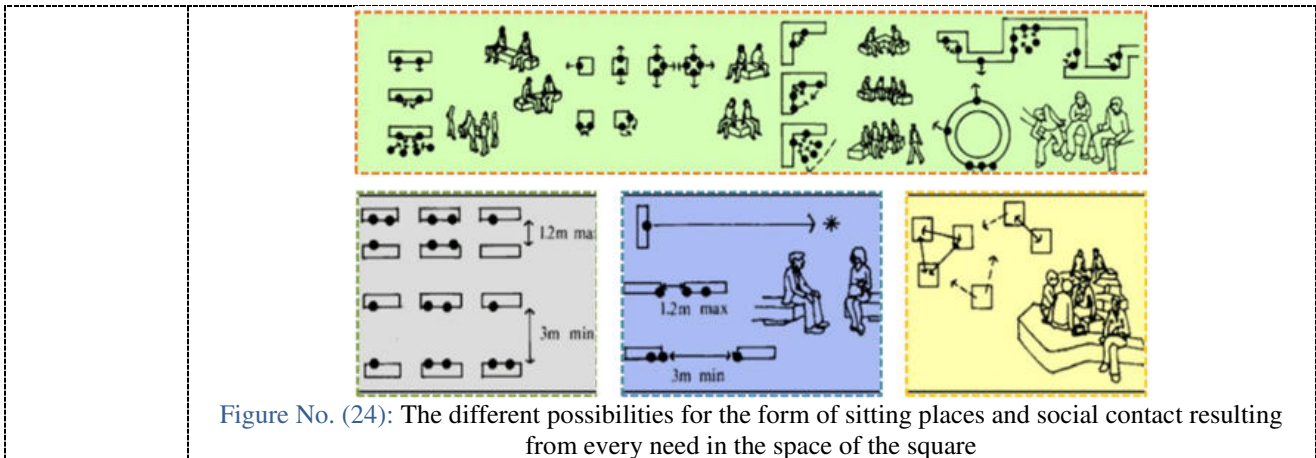


Figure No. (24): The different possibilities for the form of sitting places and social contact resulting from every need in the space of the square

1-2-5 Cognitive Dimension: we affect the Urban space and we are affected by it, and for the interaction between man and his surroundings to happen, we should perceive the urban space using our senses, most importantly sight, hearing, smelling and touching which give Signals on the urban space around us. arena spaces Should provide an environment for cultural and social activities.

1-2-5-1 vital indicators reinforce the void space process

- adding Diversity in basic uses.
- Available arena spaces that enable People to participate in social activities .
- available patterns for mixed uses which help increase self-development.
- Providing a degree of creativity and trust in Architectural engineering which gives diversity a in buildings, systems and different designs .
- A street full of life and pedestrians.

1-2-5-2 blank proportions

The ratio of architectural spaces is defined as the relationship between length, width and height, with no consideration to the size, and this relationship gives different types of spaces.

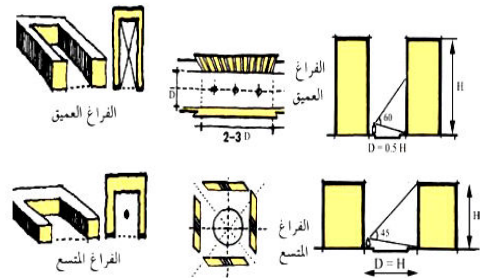


Figure No. (25): The spatial ratios of the public square

1-2-6 The temporal dimension: any architectural design is confined in three dimensions, but it is unforgettable especially in the urban design that there is a fourth dimension that should be taken into consideration, because as time passes, the void places turn into places to be lived in for long periods and that makes such places more meaningful. upon that, a time-passing test is done on architectural environment and is shown up in two ways through rhythmic repetition of activities such as heart beating, day and night passing and the progressive irreversible change such as growing and damage.

empty arena and time are related to one another as they are the great frame through which we get our experience as we live in temporal voids and we think that the city is not just a void place but also a time drama. "lynch".

The historical dimension of the area is an important factor, as it is represented in the long-time dimension during which the different parts of the city witnessed successive changes of cultural thought, which are reflected on the urban formation and its visual pattern through different visual scenes within it.

Analytical part: analyze the role of the urban and architectural design dimensions of cultural identity, both material and moral, as a determinant of the design of public squares.

2-1 The Relationship between cultural identity and the design dimensions of public squares:

The importance of these specific design dimensions of the squares comes through the role they contribute to strengthening the cultural identity through its ability to meet the material and moral needs. The role of these dimensions in enhancing the cultural identity of the squares will be presented below.



2-1-1 The role of the plastic dimension: This dimension has a direct impact on the behavioral manifestations of the human being, with what it provides of material and moral needs that enhance cultural identity:

- **Providing privacy:** through the volumetric configuration of the square.
- **Visual and rich suitability:** so that the arena expresses its personality and function, so that people recognize the space of the arena and realize the activities that are induced in it through the mental image they have.
- **Providing safety:** through secure borders About the streets, the nature of the entrances and the field of vision that the volumetric formation of the square provides.
- **Effectiveness and social stimulation:** through the available corridors and how the plaza connect with the neighborhood, from the possibilities of meeting between the users of the plaza.
- **Volumetric appropriateness:** through the human scale included in the proportions of the square and its relationship with the proportions of the surrounding facades.
- **To give a clear identity:** through the formation of 9- and the formation of the facades.

The role of the plastic dimension in enhancing cultural identity can be clarified as a determinant of the design of public squares, as shown in Table (1).

The physical dimension _	plastic dimension	Effect type
Evidence of cultural identity related to the plastic dimension of the urban environment of the squares	The shape of the facades, elevations and configuration	sense of emptiness
	arena shape	closure and containment
	Entrances and contact methods	Provide security and privacy
	the scale	Suitable for humans and containment
Evidence of cultural identity related to the plastic dimension in the architectural environment of the squares	interface design	Privacy
	safety factors	feel safe
	The shape of the entrances	Identity
	Architectural elements used	sense of place

1-2-2 The role of the aesthetic dimension: The aesthetic aspects are an important element of the design process for the spaces of public squares, as the public space leaves a direct impression on the user through his perception of the senses. Aesthetics means using different site layout elements to make a good impression. The aesthetic aspects of the square and its role in promoting cultural identity as a determinant of the design of public squares:

- The materials used, the safety factor they provide, and their suitability to the environment.
- Urban furnishings for the square and the elements used in it.
- The aesthetic proportions of the square and the existing architectural elements of the square.

The role of the aesthetic dimension in enhancing cultural identity can be clarified as a determinant of the design of public squares, as shown in Table No. (2)

physical dimension	aesthetic dimension	Effect type
Evidence of cultural identity related to the aesthetic dimension of the urban environment of the squares	Materials used for the urban environment	Providing security, safety and suitability for the environment
	Urban furnishing of the square	Provide convenience and requirements
	Aesthetic proportions in relation to the urban surroundings	sense of emptiness
Evidence of cultural identity related to the aesthetic dimension of the architectural environment of the squares	Floor and facade design	Privacy and space awareness
	Artistic and symbolic elements	Friendly to the environment and people
	Architectural aesthetic proportions of the square	sense of emptiness

1-2-3 The role of the functional dimension: of urban spaces, where human activities give the urban space its personality and character and determine its features. The ability of the arena to meet the material and moral needs through the activities it provides and what goes under the framework of the functional dimension of the arena has a major role in promoting belonging and cultural identity by providing material and moral requirements and meeting the basic needs of man such as his social and psychological needs.



The role of the functional dimension in enhancing cultural identity can be clarified as a determinant of the design of public squares, as shown in Table No. (3).

physical dimension	career dimension	Effect type
Evidence of cultural identity related to the functional dimension of the urban environment of the squares	The functional nature of the urban environment	social stimulation
	physical public services	Providing physical activities
	moral services (Various activities)	Providing moral activities
Evidence of cultural identity related to the functional dimension of the architectural environment of the squares	Functional brushes	Providing physical activities
	Arena area (Accommodate different activities)	sense of place
	Management elements, semantics, and accessories	Providing security and safety

2-1-4 The role of the social dimension: The social importance of the squares is summarized by meeting the following set of needs:

- Physiological-functional needs: for physical and psychological well-being.
- Security and safety needs: to feel safe from harm.
- The need to belong: to belong to the community, for example.
- Need for appreciation: to feel valued by others.
- The need for self-realization: through artistic expression and achievement.

The role of the social dimension in promoting cultural identity can be clarified as a determinant of the design of public squares, as shown in Table (4).

The moral dimension	social dimension	Effect type
Evidence of cultural identity related to the social dimension of the urban environment of the squares	Securing visual and acoustic communication	Social interaction
	Accessibility and mobility	social stimulation
	Functionality (social activities)	social stimulation (community affiliation)
	Surrounding urban environment (function and character)	Encouraging and developing social relationships
Evidence of cultural identity related to the social dimension of the architectural environment of the squares	audiovisual communication	Social interaction (community affiliation)
	Architectural character	relationship to place
	Functionality (seating places + accessories)	social stimulation
	Surrounding architecture (function and character)	Encouraging and developing social relationships

2-1-5 The role of the perceptual dimension:, as the process of interaction takes place through a mechanism of perception. the following:

Effect of color: Color has its effect on the perception of volumes and sense of emptiness through spatial surroundings, psychological influence, connotations, symbols and colors.

Effect of texture: Texture has two plastic values that work together, visual and sensory, which are reflected on the generated meaning, which affects the choice of places in which a person can practice his activities, in addition to its effect on shade and light and a means of suggesting feelings of strength and discipline and formality.

Smell Effect: One of the features that distinguishes space is the smell that comes from plants used in space coordination, which plays an important psychological role in shaping spatial and temporal perception across seasons.

The role of the cognitive dimension in enhancing cultural identity can be clarified as a determinant of the design of public squares, as shown in Table (5).

The moral dimension	perceptual dimension	Effect type
Evidence of cultural identity related to the perceptual dimension of the urban environment of the squares	Diversity of use and services	Enhance the perception of space and environmental interaction
	The constituent urban elements and surroundings of the square	Identity and distinctiveness of the place



	Color, texture and smell (for urban surroundings)	sense of place
Evidence of cultural identity related to the perceptual dimension of the architectural environment of the squares	Use of color, texture and scent	sense of place
	Architectural elements that make up and surround the square	Identity and distinctiveness of the place
	The presence of various activities and social activity	Enhancing the awareness of the empty socially

2-1-6 The role of the time dimension: The temporal dimension is the fourth dimension in urban design so that it must be taken into consideration, as the time passes, the spaces become possible to live in for longer periods, and make them more meaningful with the passage of time and the accumulation of time on them, which in turn enhances the human connection with his environment and his belonging to it.

The role of the time dimension in enhancing cultural identity can be clarified as a determinant of the design of public squares, as shown in Table (6)

The moral dimension	time dimension	Effect type
Evidence of cultural identity related to the temporal dimension of the urban environment of the squares	Historical events	temporal affiliation (affiliation to history)
	historical landmarks	Providing a distinctive character and identity for the place
	The character of the urban environment	Feeling connected to the built environment
Evidence of cultural identity related to the temporal dimension of the architectural environment of the squares	Seasonal and perennial plants	Sense of time and environment
	Architectural surroundings	Identity and distinctiveness of the place
	Architectural elements (Mass, decorations, ...)	Identity and distinctiveness of the place

In addition to the previous set of dimensions, there is the dimension of protection and safety, which has a significant role and impact on reinforcing cultural identity as a determinant of the design of public squares.

2-1-7 The role of protection and safety in promoting cultural identity as a determinant of the design of public squares:

A person's sense of protection increases psychological comfort during the practice of various activities and contributes to strengthening cultural identity. The following are a set of indicators and factors indicating the importance of the factor of protection and safety:

- The coordination of the public spaces of the square with good chandeliers is one of the reasons for a feeling of protection and safety.
- Permanent occupancy of the square.
- To be within a direct field of view of the largest number of buildings.
- Choosing the appropriate and appropriate items to provide comfort and safety.

2-2 Aspects of belonging to public squares as a result of the clarity of cultural identity:

The manifestations of affiliation are indicators indicative of the role of the arena in promoting cultural identity, and can be limited to the sum of the reactions and behavior of individuals about this environment. These manifestations are related to the material and moral components of the arena on the one hand, and the feelings, feelings and behavior of individuals that provoke it on the other hand. These manifestations are determined through the link between the concept of cultural identity and its mechanism with the design dimensions of the squares, and according to the above:

2-2-1 Aspects of the built environment:

- The feeling of satisfaction when the surrounding environment fulfills the greatest percentage of his material and moral needs.
- Feeling of privacy and security.
- Feeling connected to it and not moving from it as a result of a sense of distinction.
- Following the human scale in designing and planning the square and its urban surroundings to achieve an appropriate sense of containment.
- The ability of the environment to encourage and social interaction.
- Defining and allocating urban spaces and achieving their functional hierarchy.



2-2-2 Specific aspects of the architectural environment:

- The ability of the architectural environmental elements (mass, color, texture...) to carry symbols with meanings consistent with the cultural and civilizational background of the users of the environment on the one hand and in keeping with their cultural and civilizational development on the other hand, because if these meanings are understandable to these users, the physical elements of the environment call for expected behaviors that express from During which users express their affiliation with the environment.
- A sense of privacy, safety, satisfaction and comfort inside the arena and as soon as you see it from the outside.
- A sense of the distinctiveness of the square as a result of the availability of material needs inside it.

The identity of space, public squares and the design dimensions of cultural identity as a determinant of the design of public squares and the role and impact of each dimension separately. Design public squares with cultural identity that enhance community identity and spatial affiliation, and the applied case study will be presented and evaluated according to the conclusions of the theoretical study.

Applied part: This part depends on the application of the architectural and urban design dimensions of the cultural identity to the square of the Fayoum Culture Palace (Al-Sawaqi Square).

The research ends with a presentation of the results and recommendations that can help design open spaces in Egypt.

2-3 Applied Case Study: Fayoum Culture Palace Square:

Public squares, despite their **urban and vital importance for societies, especially in the third world countries, they are not formulated in a way that highlights** and enhances the identity of the community surrounding those squares. The design of public squares and spaces did not receive the necessary attention from the executive authorities.

problem of the research lies in **ignoring the principle of meaning and the intellectual and symbolic significance of the functional historical value** For public squares in the fields of design, attention is paid to the physical and formal aspects of the lack of a clear conception of the physical and moral design dimensions at the urban and architectural levels that can form a general base of design foundations that help architects **create a distinctive urban and architectural identity** bearing clear features of public squares in harmony with the environment and society for which it was created .

Therefore, this part will include a study of the current status of public squares of greater importance in the city of Fayoum, which has been neglected by the architectural and urban elements constituting it with the same meaning and the intellectual and symbolic significance of the historical functional value as an applied example of the research problem to analyze and extract the current perceptions and the extent of achieving the dimensions affecting the formation and support of the cultural identity of those The squares and the application of the final matrix that was deduced from the theoretical study on the public square in Fayoum because of its importance and greater impact on the residents of the city of Fayoum and the study of the impact of the urban and architectural design dimensions, both material and moral, on the cultural identity as a determinant of the design of public squares.

2-3-1 Introduction to the arena:

The fame of Fayoum is gained from the water fountains as one of the most important historical landmarks of the governorate, and that is why Al-Sawai Square is one of the most important public squares in the city of Fayoum. **Its age is more than 2000 years, specifically it was invented in the Ptolemaic era, after the ancient Egyptian turned to agriculture in Fayoum, and because it has a different character from the rest of the governorates, it is the only governorate that is considered low**

- General location : The public square of the city of Fayoum is the central square consisting of two blocks in the center of the city of Fayoum, which is located on the northern side of Bahr Youssef Canal, the western side of the Fayoum Culture Palace and the southern side of the Fayoum main railway station, and it is still today an integral part of the city center, centered on an area of about 6,600 m² (1.6 acres) at the intersection of Jamal Abdel Nasser Street and Al Khalifa Al Maamoun Street. As shown in Figure 26



Figure No. (26): The location and urban surroundings of the Fayoum Culture Palace square

Fayoum Culture Palace Square is one of the most famous squares in Fayoum overlooking the “Roaring Waterwheels” square. Despite the splendor of the landscape in the square, the stagnation of the tourist movement turned it into a semi-random market where sellers of “wicker products” took it as a place to display their goods, and the square turned into a meeting place for sellers only without Visitors, where they sleep on the ground and set fire to the logs, for the purpose of heating, after waiting for long hours in vain. As shown in Figure 27



Figure No. (27): The location and urban surroundings of the Fayoum Culture Palace Square in Egypt in 2005 and before and after the January 25 revolution

2-3-2 Reasons for choosing the case study:

- a) The square contains a distinctive urban environment (built elements + natural elements spanning more than 500 years) in which the surrounding area is unique with a distinctive planning and a unique urban fabric that has a historical depth that deserves to be preserved.
- b) The square has a functional importance (a distinct geographical location within the city - a functional area suitable for performing activities)
- c) Existence of urban activities (social - commercial - religious - economic ... etc.).
- d) Easy access to it from all sides of the city.
- e) The square contains a number of buildings of functional architectural value (Fayoum Culture Palace) and historical architecture (monument) that have continuity and cultural influence.
- f) The arena contains cultural and patriotic activities rather than just social activities.
- g) A development has been done in the spatial design of the square in the recent period
- h) Despite all these features, they have been neglected and the development of a proposal that is not suitable for the local culture of the people of Fayoum city has been neglected and will be discussed extensively.

2-3-3 The first stage:

current situation of the Fayoum Culture Palace square will be analyzed and the impact of the urban and architectural design dimensions shall be studied including their physical and moral aspects of cultural identity as a determinant of the design of public squares as follows:

The following table No. (7) shows the impact of the dimensions of the physical urban design of cultural identity as a determinant of the design of the Sawai plaza in front of the Fayoum Culture Palace: It is related to the material needs and is represented in the impact of the plastic, aesthetic and functional dimension of cultural identity on the urban side of the square:





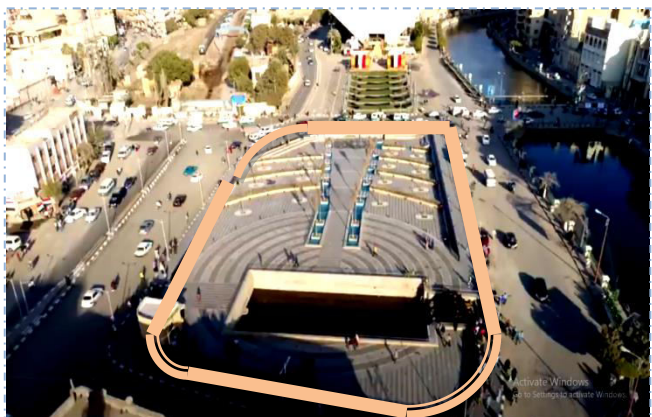





Dimensions of the urban design of cultural identity as a determinant of the design of Al-Sawai Square in front of the Fayoum Culture Palace								
Design dimensions Urban	Physical dimensions (related to physical needs)							
	plastic dimension			aesthetic dimension		career dimension		
	The specific surfaces of the yard from the outside			The shape and scale of the arena		Urban furnishing of the square	Surrounding building facades	
Manifestations of clarity and presence of identity	vertical limiter (walls)	lower horizontal selector	top horizontal selector	closure and containment (Human fit and containment)	1- Seating, benches and tables		The surrounding facades came without a distinctive architectural character	
	<p>The heights of the surrounding buildings</p> <p>The heights of the buildings ranged from 4 to 14 floors</p> <p>Their types and their position in relation to the square</p> <ul style="list-style-type: none"> Bahr Youssef waterfront Nasiriyah Preparatory School for Girls Fayoum train station Fayoum Culture Palace  <p>The square is bordered from the north by Al-Khalifa Al-Mamoun Street, connected to Gamal Abdel Nasser Street, and to the south by Bahr Youssef (Pedestrian movement to and from the square)</p>  <p>-- The pedestrian path around the square to protect pedestrians and maintain the movement of buses and places to sit and wait, which allows easy handling of the site of the square from there and to it</p> <p>Providing security and privacy</p> <p>So, the square was surrounded (by vertical walls) with commercial, educational and service buildings facades without a specific identity for each building separately according to its development from the beginning of its construction until now, with a negative impact to attract the public to the square</p>	<p>Commercial centers and banks</p> <p>Waqif Building</p>  <p>Fayoum Culture Palace</p> <p>The heights of the buildings surrounding the square</p> 	<p>(Roads, corridors, entrances and communication methods) surrounding the square</p> <p>(Sky - trees.) surrounding the square</p> <p>Where the sky line came predominant It is fixed except for the part of the monument and the Palace of Culture. It does not enjoy the traditional old Fayoum city character on the buildings surrounding the square space, which is a weak relationship between the architectural buildings and the sky</p> <p>But the problem is separating the garages area from the square and thus separating it from the Palace of Culture, which weakens the site of the square</p> 	<p>The design of the arena is dominant and characterized by massiveness Because of its location in the center of Fayoum city, it is a source of attraction for people</p> <p>It consists of two separate yards, one of which has been developed to park buses and carriages, and the other has driveways, as it is a content space that extends visually from all sides (a closed space with medium containment walls with a ratio of 2:1 with a viewing angle of 30 °) with a positive visual effect for a sense of the nature of containment within the yard</p> <p>The arena came together with a human scale</p> <p>As a result of the heights of the buildings surrounding the square compared to the formative size of the slab, but the spaces internally are of a friendly scale suitable for humans</p>	<p>There are only parking spaces around the square on one side, and the internal seats are made of plastic with variable motions, which are not suitable for the local character of the city of Fayoum, and they should have been of wood or wicker</p>  <p>2- Entrances, gates and fences</p> <p>One clear entrance to the square</p> <p>3- Plants, landscaping and banners</p> <p>Very few and the old trees were removed in the square for more than 500 years</p>  <p>4- Water basins and fountains: fixed and turbulent</p> <p>It exists, but it does not have a specific identity in its design</p>  <p>The arrangement of the urban furniture came with a boring and negative visual effect to link between the square and outside, as it did not provide comfort and needs</p>	<p>The surrounding facades came without a distinctive architectural character</p> <p>The sky line came predominant It is fixed except for the part of the memorial and the Palace of Culture. It does not have the traditional character of the old Fayoum city on the buildings surrounding the space of the square, which is a weak relationship between the architectural buildings and the sky, which makes it difficult for the observer to create a wonderful mental image of the site of the square</p>  	<p>The functional nature of the urban environment</p> <p>Material and moral public services moral services</p> <p>Social stimulation as a result of the difference and number of activities in relation to the buildings surrounding the square, the general nature of the administrative, commercial, cultural and recreational surroundings came, which provides greater opportunities to attract the largest number of people to use the square.</p> <p>Provide material requirements</p> <p>It provides public services such as small-scale entrepreneurship - economic development - higher real estate values - more desirable jobs meet the moral requirements</p> <p>There is no result of the lack of different activities</p> <p>For children, women, men and the elderly, which reduces the chances of forming social networks from cultural pluralism and different ethnic</p>	

Table No. (8) the following shows the impact of the urban design moral dimensions of cultural identity as a determinant of the design of Al- Sawaqi Square in front of the Fayoum Culture Palace: They are related to psychological and social needs and are represented in the impact of the social, perceptual and temporal dimension of cultural identity on the urban side of the square:

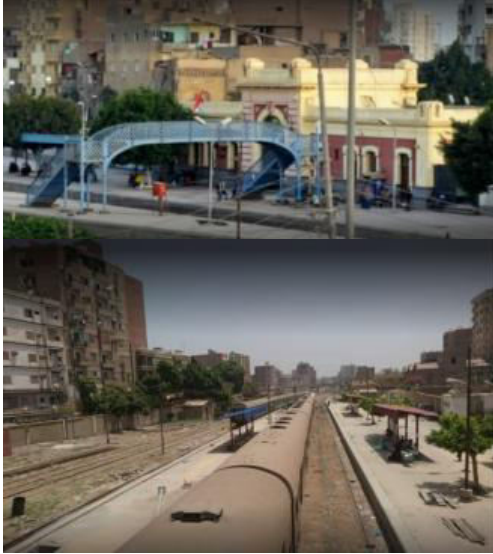
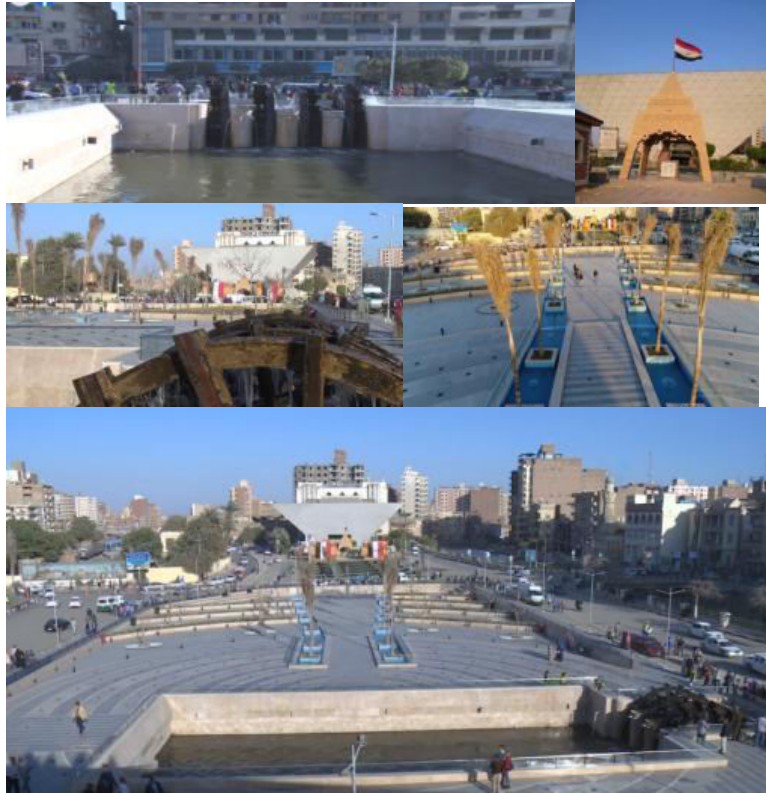
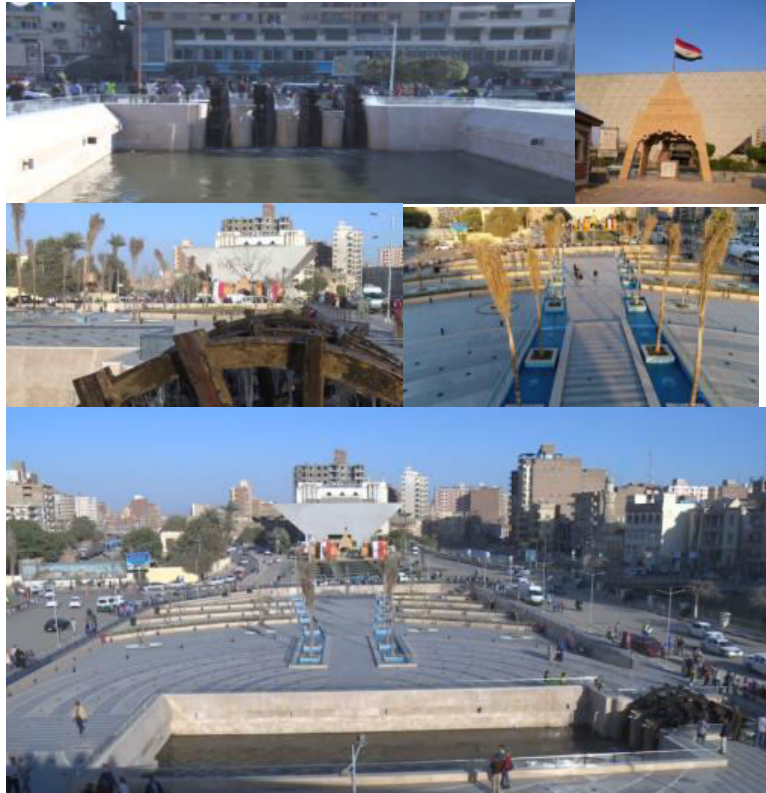
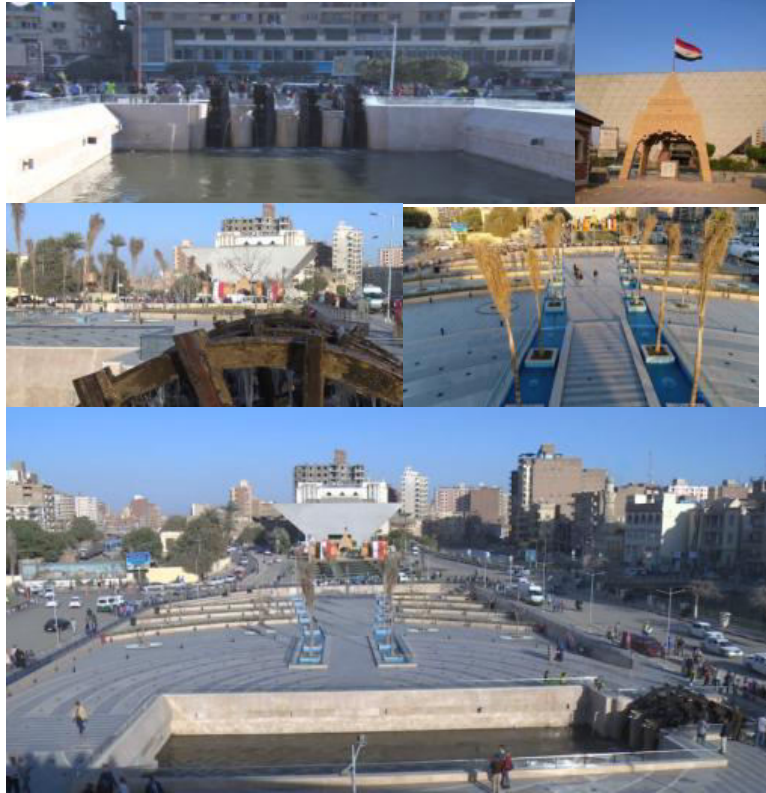
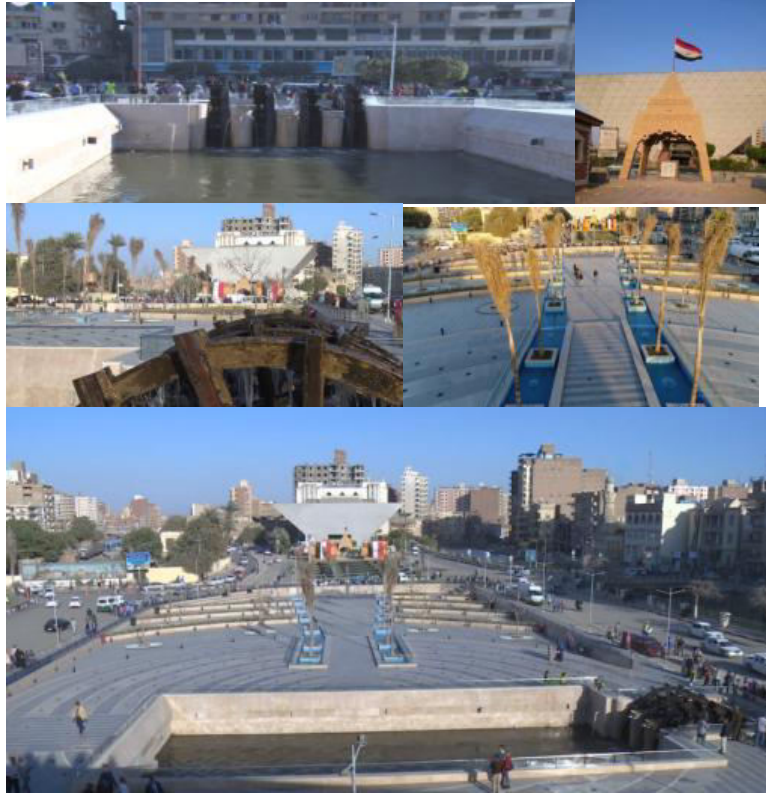

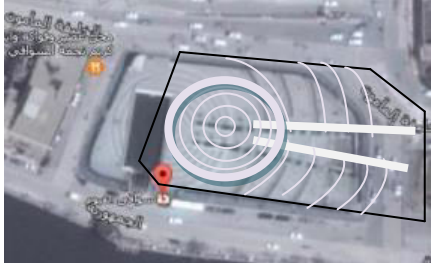







Dimensions of the urban design of cultural identity as a determinant of the design of Al-Sawaqi Square in front of the Fayoum Culture Palace						
urban design factors	Moral dimensions (related to psychological and social needs)					
	The social dimension		The cognitive dimension			The time dimension
	Securing visual and acoustic communication	Accessibility and mobility	Diversity of use and services	The constituent urban elements surrounding the square	Color, texture and smell (for urban surroundings)	It is one of the most important design determinants, as it is an important part of the city's popular memory
					Historical events	historical landmarks
Manifestation of clarity and presence of identity	<p>For the sake of the small size of the square, it allows you to look in and out of the square and outside it. Where visual and acoustic communication has been secured between users, but social communication is lacking because there are no activities that help social communication between different groups and different ages.</p>	<p>1- For external traffic from the city to the square</p> <p>There are four ways to connect to the city, as the nearest Fayoum train station and a bus station connect it with other governorates</p> <p>Thus, it allows linking between the city and easy access to it.</p> <p>2- For connection and access around the arena:</p> <p>More walkable - safe for pedestrians and cyclists - compatible with public transport</p>	<p>Promotes awareness of space and environmental interaction</p> <p>Clarifies the identity and distinctiveness of the place</p> <p>It helps to feel the place</p>	<p>Where the square is characterized by the presence of the monument marks, the Fayoum Culture Palace, the existing trees, fountains and waterways on the site, in addition to the buildings surrounding the square are fixed determinants that enable the person to perceive the void clearly and give him a sense of containment</p>	<ul style="list-style-type: none"> Fayoum Square was characterized by political gatherings during the revolutions and most recently the January 25 revolution and the July 30 revolution Characterized by social and recreational gatherings Witnessed the opening of the Fayoum Culture Palace The National Day celebrations in Fayoum city witnessed each year, including seasonal and annual cultural and recreational celebrations 	<p>The monument in front of the Fayoum Culture Palace</p> <p>It was deformed after adding public baths in front of it</p>
						



table No. (9) shows the effect of the dimensions of the physical architectural design of the squares for the cultural identity as a determinant of the design of the Sawaqi Square in front of the Fayoum Culture Palace: it is related to the material needs and is represented in the impact of the plastic dimension of the cultural identity on the architectural side of the square:

The dimensions of the architectural design of cultural identity as a determinant of the design of Al-Sawaqi Square in front of the Fayoum Culture Palace						
Dimensions of the architectural design	Physical dimensions (related to physical needs)					
	plastic dimension					
	void axes	horizontal projection shape	The specific surfaces of the yard from the outside			safety factors
		vertical limiter (walls)	lower horizontal selector	top horizontal selector		
<p>Manifestations of clarity and presence of identity</p> <p>1- The visual axes of the urban space </p> <p>2- The axes of the void resulting from the organization of design elements </p> <p>The axes came to specify the direction and paths of movement within the space and give an orderly form to the space and the identification of those axes helped in the formation of the elements of the design of the space in a regular form and to create visual relationships between the elements of the interior space and each other So, there is a positive effect in determining the direction and paths of movement within the space and in regulating the shape of the space <u>But the execution did not match the design</u></p>	<p>The design of the shape of the horizontal projection void came with the expanding void, which is a central void, the ratio between its length to its width being close (2:1), which is a good ratio It is a space that calls for activities inside it, as it encourages movement. Therefore, the Palace of Culture was placed on its axis, and it calls for gathering inside it, for stillness, rest, and the practice of various activities. Therefore, the design of the horizontal plane of the square came to enhance belonging to the community.</p> <p>A positive effect on enhancing spatial affiliation as a result of good design of the arena space <u>But the execution did not match the design</u></p>	<p>The upper determinants of trees came to the design of the square with a positive effect Suitable for visibility inside and outside the arena <u>But the execution did not match the design</u> the design:</p>   	<p>Sharp level and intended for floors Acquire several regular geometric shapes through flat laying on the floors All floors were treated to suit the pedestrian movement in terms of color, texture and formation</p> <p>Not caring about the skinny and therefore can't do its job in cooling the air temperature</p>   <p>Swimming T... is fountains, where the flow of water works to moisten the air and has a sound effect that suggests movement and joy in the spaces.</p> 	<p>Heaven came as an upper limiter for the space of the square to be in direct contact with the external surroundings</p>	<p>Availability of an important element of safety inside and outside the arena, whether in the design of its spaces and furniture to preserve people during activities of various kinds or the presence of the police inside and outside the arena</p>	<p>Gradient: The implementation came with no gradation, whether at the level of floors, trees or any other coordination elements in the site, in contrast to the intended design, which implies the chaos of the void, which causes psychological discomfort.</p> <p>control: The monument came as a dominant element in the empty space of the square to have a strong positive effect in attracting attention, but the separation of the two squares led to neglect. As a result, the placement of public baths in front of it led to the disappearance of its meaning.</p> 

The following table No. (10) shows the impact of the physical architectural design dimensions of cultural identity as a determinant of the design of Al- Sawaqi Square in front of the Fayoum Culture Palace: They are related to the material needs and are represented in the impact of the aesthetic and functional dimension of cultural identity on the architectural side of the square:










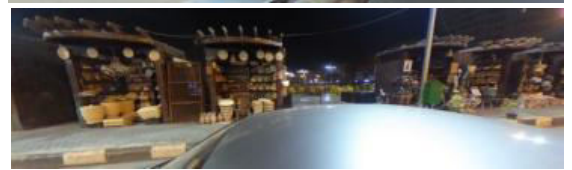

The dimensions of the architectural design of cultural identity as a determinant of the design of Al-Sawaqi Square in front of the Fayoum Culture Palace						
Dimensions of the architectural design	Physical dimensions (related to physical needs)					
	aesthetic dimension			career dimension		
	Design of floors and facades for the space of the square	Artistic elements and cultural symbolism	Architectural aesthetic proportions of the square	Functional brushes	Arena area (accommodating different activities) Functionality Types of activities cultural	
Manifestations of clarity and presence of identity	<ul style="list-style-type: none"> Lack of interest in paving and leveling roads, in addition to not taking into account the zigzag streets to increase shading   <ul style="list-style-type: none"> The lines were used in the design of the floors to direct the movement of pedestrians, where the person is heading in the comfortable direction due to the influence of these lines and came to achieve the interconnection between the elements of the space and some of them. <p>However, the implementation did not match the design, as previously explained</p>  	<p>There is a dominant monument on the square, as well as the building of the Palace of Culture, which has a historical and cultural dimension that affects the cultural meaning of the square and how to perceive its historical contents.</p>	<p>The ratios of the wide space forming the square, its length to its width (4:1) to the proportions of the buildings in the square site, which leads to the solar radiation reaching the entire space to the ground A negative effect on enhancing spatial affiliation as a result of poor design of the space of the square, as (The degree of containment is weak) The specific surfaces of the yard are constantly increasing and there are no large separations between the facades</p> 	<p>The mattresses are very simple and there are no places to sit and rest, where the natural use of the grass and sidewalks to sit on, and there are no activities to practice, and the mattresses were reduced in an unnatural way until the seats were not suitable for sitting on them, a <u>negative impact on the psyche of the user</u> <u>Unused units</u></p>   	<p>It was very spacious, but it did not accommodate the largest number of activities, as its area was 1.6 acres, and it did not accommodate all the possible activities of optional and social activities, as the mattresses were not designed in a way that suits the activities.</p>	<p>Optional Activities Mobility – Sitting - Lunch - Sunbathing - Enjoying and buying from the cultivated gardens - Buying from local stalls Optional Activities The parking area has been transformed into an amusement park that has nothing to do with the park, identity and local character</p>   <p>of the city of Fayoum</p>  <p>negative influence that does not know a sense of belonging and does not take care of the social organization of society, where the sense of pride, voluntariness and preservation of values and integrity has been lost.</p>

Table No. (11) the following shows the impact of the architectural design’s moral dimensions of cultural identity as a determinant of the design of the Sawaqi Square in front of the Fayoum Culture Palace: It is related to psychological and social needs and

is represented in the impact of the social, perceptual and temporal dimension on the architectural aspect of the square:

The dimensions of the architectural design of cultural identity as a determinant of the design of Al-Sawaqi Square in front of the Fayoum Culture Palace							
Moral dimensions (related to psychological and social needs)							
Design dimensions	The social dimension		The cognitive dimension			The time dimension	
	Architectural	Securing visual and acoustic communication	Architectural character	The architectural components surrounding the square:	Lighting and shadows	Color, texture and smell (for urban surroundings)	Existence of activities and social activity
Manifestations of clarity and presence of identity	<ul style="list-style-type: none"> Positive effect in securing visual communication from and to the square due to its small size and as a result of reducing the planted trees Audio communication was not secured due to the movement of vehicles and buses on the roads surrounding the square 	The site does not include a set of characteristics that characterize the character of the buildings, architectural elements, site features, climate and activities, nor does it include the cultural, social and human dimensions of the city of Fayoum	Helps understand the content of the arena and its activities	Clarifies the identity and distinctiveness of the place	It helps to feel the place		Simple trees and shrubs, and their number and types were reduced for simplicity and unity of the components of the yard to use the largest area of the yard to accommodate the largest number of activities. Trees that had a history with the yard were removed
			Where the square is characterized by the presence of distinctive signs such as the memorial and the trees on the site, in addition to the fact that the internal facades of the square are not fixed determinants that enable the person to perceive the space clearly and give it a sense of containment as a result of the poor visual image of the facades of the surrounding buildings				

2-3-3 Phase Two: A survey of the opinion of architects and residents in the city of Fayoum about the inevitability of change and how to develop public squares in the city of Fayoum. Where a list of questionnaires was designed and distributed to various samples of architects and residents in Fayoum city, where the results of the questionnaire were analyzed in order to draw the most important conclusions and recommendations that contribute to highlighting the cultural identity as a determinant of the design of public squares

2-3-4-1 Objective of the questionnaire: The research in this part aims to survey the opinion of the users of the square in the role of the design dimensions in both their physical parts, which is related to the material needs and represented in the role of the plastic, aesthetic, functional and moral dimension, which is related to psychological and social needs, represented in the role of the social dimension Perceptual and temporal on the urban and architectural aspect in the clarity and strengthening of the cultural identity of the users As a design determinant for the plaza of the Fayoum Culture Palace

2-3-4-2 Analysis of the questionnaire results:

• **Arena site for users:** -

- It was noted that the arena site is suitable for users, as the ratio of (87%) of users are located in the vicinity of their work

• **Number of space entries:** -

- The answer rate with the presence of one entrance reached (70%), while there is more than one entrance to the void. **The reason for this is that** the other entrances to the void that the user did not mention were not sufficiently clear as they were not confirmed through paving, shrubs or umbrellas. There are no ground or guiding signs that show these entrances.

• **Vacuum utilization ratio:** -

The space of the square achieved good use, as the utilization rate reached (70%), and the reason for this is due to the proximity of the void to the Fayoum Culture Palace, administrative and commercial buildings, and vital areas such as schools and banks.

• **The most common spaces used:**

The most frequently used space is on both sides of the space, where the percentage of its use reached (61%) compared to the rest of the space. Where the elements of the design and furnishings of the vacuum play an important role in encouraging users to go to the void, as this element achieved a percentage (5%) of the rest of the elements.

• **Feelings of the user inside the space:**

The vacuum achieved the lowest percentage of feeling comfortable inside it, reaching (62%). **The reason for this is due to the** narrowness of the spaces, the lack of green areas and the lack of coordination of the seating places that provide them with comfort, which encourages aversion to the square.

• **most common behaviors used in the blank:**

- It was noticed that the " sitting " behavior recorded the highest percentage of motor behavior that is practiced in the vacuum in summer and winter, compared to the rest of the other types of motor behavior, where it reached (82%).

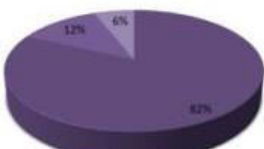
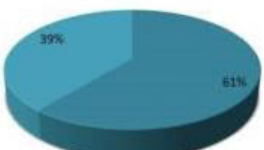
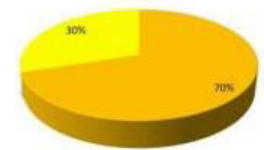
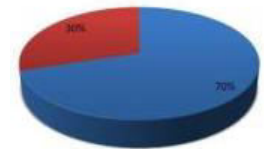
• **Less frequently used behaviors:**

It is also noted that the percentage of users of the "standing" behavior decreased. With this void in winter, where the percentage reached (6%) in winter, **and the reason for this is** that the design of the void did not suit the users in terms of designing the shape of the sitting places, as it is difficult to stand in the middle of the empty square and the places around them are watching them. It is also difficult to stand in the corridors.

• **The ratio of overlap of sitting behavior with walking:**

- It was noted that the percentage of non-overlap of sitting and walking behavior is high, as the percentage reached (60%) in a vacuum, **and the reason for this is** that the pedestrian area is separate from the yard's empty space from the movement of cars.

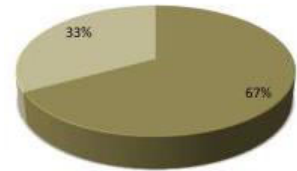
It was noted that the users who indicated that there was interference **due to the lack** of seating places, which led to the use of fences to sit on them, as well as sitting on the ground and staircases, as well as cars.



• **Users are satisfied with sitting and walking places: -**

It was noted that users' satisfaction with sitting and walking places was moderate, as the percentage of those who were not satisfied with them reached (67%), which is the highest percentage achieved in the empty arena.

It was also noted that the percentage of users who expressed satisfaction with the current situation of sitting and walking places was the lowest, reaching the lowest percentage (33%).

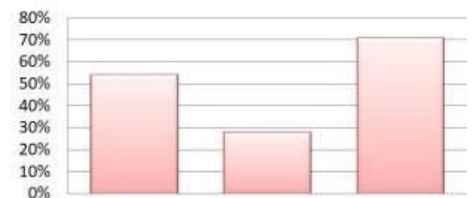


• **Disadvantages of the behavioral overlap of walking and sitting in a vacuum:**

- It was noted that the problem of feeling crowded and not achieving privacy is the most defective overlap of sitting and walking behavior, as both of them recorded high rates (54%) for the first, (28%) for the second inside the space.

• **Activities that are practiced with walking activity:**

- It was noted that the highest percentage of activity that is practiced with the behavior of walking in the void is the activity (passing through the void and talking), where the percentage reached (71%) of the users who practice the behavior of walking by passing only through the void.



• **Least Frequency Used: -**

The morning period achieved the lowest attendance rate, which amounted to (3%), and the reason for this is that the presence in that type of space during that period is limited to users of Fayoum city residents.

• **of those wishing to develop a vacuum:**

It was noticed that the percentage of those wishing to modify the space increased to reach (93%), with a higher rate. This is because of this the space lacks the most important human considerations in designing the space to meet the human needs of the users inside it, such as (designing shaded seating areas in a way that achieves privacy and physical comfort, adding aesthetic elements to the space that encourage users to go to it and rest in it, providing service places near the space... etc.).

The users tried to provide amenities for themselves in the void, which are the considerations that were missing from the design of those spaces, as there were no places to sit in their places and designed in a way that suits the users in order to be close to the cafeteria where they eat and drink

It can also be concluded from this that the space of the Palace of Culture Square needs a lot of development in the six design elements referred to, and this was confirmed by the percentage of users who actually modified the space.

• **Elements that need to be developed in a vacuum: -**

- It was noted that the percentage of users wishing to increase the number of safer and more comfortable seating places reached (20%), compared to the rest of the elements.

2-3-4-3 Questionnaire Outputs

It shows that 35% of the study sample reflects the role of physical design factors, achieved by 23%, and moral factors by 12%, in highlighting the cultural identity of the Fayoum Culture Palace square.

And that 65% of the study sample reflects the role of physical design factors that have not been achieved by 29% and moral factors by 36% in highlighting the cultural identity of the Fayoum Culture Palace square

This coincides with the applied study in ignoring the principle of meaning and the intellectual and symbolic significance of the functional historical value of public squares in the areas of design, and attention is paid to the formal physical aspects only.

IV. EXPERIMENTAL RESULTS

Through the applied study, we find that the Fayoum Culture Palace Square enjoys a set of positive factors that support the square's role in promoting cultural identity and corresponds to negative factors according to the analysis table that shows a set of points related to the square's role in promoting cultural identity:

- In ignoring the principle of meaning and the intellectual and symbolic significance of the functional historical value of public squares in the areas of design, and attention is paid to the physical and formal aspects. The absence of a clear vision of the indicators that would form a general rule of design foundations that help architects create a distinctive urban and architectural identity bearing clear features of public squares that are consistent with the environment and society for which they were created.

- The dry desert environment and the extension of large open spaces affect the social activity of the Palace of Culture Square and thus affect the spatial containment in an environmentally disproportionate manner with the nature of the place and the prevailing climate
- The shape of the space and the interfaces that determine the size of the square negatively affect the perception of the space and the messages transmitted to the user so that it does not achieve rapid absorption of the space, which is weak due to the different heights and the non-uniform nature of the area
- The safety factor is one of the positive factors in promoting cultural identity as a result of the separation of pedestrian movement and the movement of machines away from the empty arena.
- The material and moral factor of the square in terms of the physical condition of the surrounding buildings and facades does not enhance the identity and distinction of the square, including the aesthetic proportions of the square that are visually and functionally disproportionate

Results of analyzing the current situation of the Palace of Culture Square in Fayoum City:

We find that the Fayoum Culture Palace Square enjoys a set of positive factors that support the square's role in promoting cultural identity and corresponds to negative factors according to the analysis table that shows a set of points related to the square's role in promoting cultural identity:

- In ignoring the principle of meaning and the intellectual and symbolic significance of the functional historical value of the **public squares in the city of Fayoum, and attention is paid to** the formal physical aspects. The absence of a clear vision of the indicators that would form a general rule of design foundations that help architects **create a distinctive urban and architectural identity that** bears clear features of public squares in harmony with the environment and society for which it was created, as follows:
- The dry desert environment and the extension of large open spaces affect the social activity of the Palace of Culture Square and thus affect the spatial containment in an environmentally disproportionate manner with the nature of the place and the prevailing climate
- The shape of the space and the interfaces that determine the size of the square negatively affect the perception of the space and the messages transmitted to the user so that it does not achieve rapid absorption of the space, which is weak due to the different heights and the non-uniform nature of the area
- The safety factor is one of the positive factors in strengthening cultural identity as a result of the separation of pedestrian movement and the movement of the ATK away from the vacuum of the arena.
- The physical and moral dimensions of the square in terms of the physical condition of the surrounding buildings and facades do not enhance the identity and distinction of the square, including the aesthetic proportions of the square that are visually and functionally disproportionate
- The square must be redesigned in line with the identity and culture of the people of Fayoum and to spread more awareness of the importance of cultural identity
- There must be a cultural dimension represented in increasing the awareness of individuals about the importance of designing squares as a reflection of urbanism and architectural and historical styles in the Fayoum area

Physical Dimensions Level: Which do not enhance the physical dimensions of the role of the arena so that:

1- Fine Dimension:

- The square was surrounded (by vertical walls) with commercial, educational and service buildings facades without a specific identity for each building separately according to its development from the beginning of its construction until now with a negative impact to attract the public to the square
- The sky line is mostly fixed, except for the part of the monument and the Palace of Culture. It does not have the traditional character of the old Fayoum city on the buildings surrounding the space of the square, which is a weak relationship between the architectural buildings and the sky, but the problem is in separating the garages area from the square and thus separating it from the Palace of Culture, which weakens the location of the square
- The shape of the space and the facades that determine the size of the square negatively affect the perception of the space and the messages transmitted to the user due to the lack of proportionality in the heights and the lack of a unified character of the area

- 2- **Aesthetic dimension:** The plastic and aesthetic dimension of the square in terms of the physical condition of the surrounding buildings and facades does not enhance the identity of the square, including the aesthetic proportions of the square that are visually and functionally disproportionate.
- 3- **Functional dimension:**
- The set of physical indications at the urban and architectural level negatively affect the role of the square in accommodating various activities, providing security for users and the ability to perceive the spaces of the square
 - The functional factor has vanished due to the lack of activities to be practiced at the architectural and urban levels, and consequently the cognitive factor as a result of the lack of a clear visual image of the scene.

The level of the significant dimensions: Which does not enhance the non-material dimensions of the role of the arena so that:

- 4- **social dimension:**
- The safety factor is one of the negative factors as a result of not separating the places of pedestrian activity from the movement of machines adjacent to the square
 - The physical and moral dimensions of the square, such as the weakness of the urban character, which enhances the identity of the place, as well as the semi-degraded history of the region, constitute the most negatively affecting factor on the role of the square in strengthening its affiliation and cultural identity.
- 5- **The perceptual dimension:** the non-material factors do not enhance the role of the arena, **so that the** internal facades of the arena are not fixed determinants that enable the person to perceive the space clearly and do not give him a sense of containment as a result of the poor visual image of the facades of the surrounding buildings
- 6- **The temporal dimension:** The temporal factor constitutes a negative role in what is characterized by the square on the historical level and the popular memory of the users in the region, as the size of the memorial and its distance from the main square and the placement of public toilets in front of it, which are the most important architectural elements in it, is an area for the masses of pedestrians.

V. CONCLUSION AND RECOMMENDATIONS:

The research deals with one of the urban components of the city, which determines its shape, character and personality, as the open spaces are an essential part of the urban inheritance, and it is a strong element that complements the architectural and aesthetic form of the city, and plays an important educational role, and has its environmental importance, and in supporting community development and is supportive of goals and activities It helps in alleviating tension and conflict in the deprived parts of urban spaces, and it has an important role in filling the recreational needs for leisure in society, and it has an economic value in the field of concern for the environment.

The importance of research in the principles, foundations and design criteria for open spaces is that they would provide safety and comfort for citizens and reflect the extent of urbanization and sophistication.

By following the proposed methodology in the future to enhance and develop the cultural identity of the squares in general or at the level of the squares in Egypt, which is as follows:

- The design code must be adhered to. It is a set of rules, laws and technical requirements that determine the nature of the development process for a site or place:
- Determinants of the character and personality of the area and the quality of the design to be achieved in the general site, the architectural aspect, and the coordination of the site within the borders of the neighborhood or neighborhood.
- Determinants of shapes, dimensions, location and orientation of buildings and streets.
- The general plan of the road network and how it accommodates pedestrians, cars, public transportation, services, landscaping, etc.
- Designing open spaces and public places, including gardens, squares, and roads, as well as how to maintain them, and to be in conformity with standards and safe for use, especially identifying gardens of private and public ownership.
- Overlap in land use, distribution and intensity of public services at the neighborhood level.

- Determinants of the design quality of privately owned buildings and residential blocks, including architectural elements, building materials, exterior finishes, open spaces, and detailed design requirements for the dimensions and quantity of openings in buildings.
- The requirements for continuity and maintenance in accordance with the design standards, as well as building materials and their implementation methods

REFERENCES

[1] Arabic references:

Books:

- 1- Mohamed Emar: "**The dangers of globalization on cultural identity.**" The series "On Islamic Enlightenment" p. 32, Cairo, Nahdet Misr House, Dr. T., p. 6
- 2- Burhan Ghalioun, "**The Assassination of the Mind**" Cairo : Madbouly Library, 2006, p. 32 .
- 3- The Arabic Language Academy (General Administration of Lexicons and Heritage Revival): Intermediate Lexicon, "Id" and "Identity".
- 4- Alex Michaeli, "**The Identity** ", translated by Ali Watfa, Al-Waseem House for Printing Services, Damascus, 2005, p. 15.
- 5- Yan Asman , **Urban Memory** , translated by Abdel Halim Abdel Ghani Ragab , The Supreme Council of Culture , Cairo , 2002
- 6- Mahmoud Amin Al-Alam: **Arab Thought between Privacy and Universality**, Cairo: Dar Al-Mustaqbal Al-Arabi, 2006, p. 19
- 7- a B C D **An informative description of Fayoum Governorate** , 2005 edition, 17 pages. Center for Information and Decision Support

Seminars and Conferences :

- 1- Suhail Salem Salman Al-Harbi: **The Role of Art Education Curricula in the Kingdom of Saudi Arabia in Enhancing Values and Highlighting Cultural Identity** , Conference "Education Curricula and Cultural Identity, " p. 531.
- 2- Symposium on "**Arab Identity through the Eras of History** ", Scientific Academy, Baghdad, opening speech of the symposium, p. 7.
- 3- Muhammad Abbas, "**The Role of Modern Communication Technology in Shaping Contemporary Arab Identity** ", Symposium "Towards a Civilized Framework for Arab Society in the Twenty-first Century", Dubai, 1993, p. 34.
- 4- Mahmoud Abdel-Hadi El-Ekiabi - "**Functional and Aesthetic Values of Plants in Urban Spaces** " Cairo and its Aesthetic and Architectural Problems , First Scientific Conference , Faculty of Fine Arts in Cairo - May 14, 1991 (p. 112)
- 5- Dr. Sayed El-Tuni "**On the Architectural and Urban Characteristics**" - The Regional Conference for Ma'arien, Cairo - December 1983, on Housing and Urbanism - Part (1) - The Arab Publishing and Distribution - Cairo - Egypt - (1992)

magazines and scientific publications :

- 1- Mohamed Ahmed Mohamed Ismail: **A proposed program to activate the role of the activities of the Child Club to consolidate cultural identity** , Journal of the College of Education, Ain Shams University , p. 30, vol. 3, 2006, p. 391
- 2- Khaled Abdullah Al-Qassem, "**Globalization and its Impact on Identity** ", a study published and submitted to the College of Education, King Saud University, <http://www.alukah.net/Web/kassem/10214/> , May 2006
- 3- Hamad Sabeel, " Al- **Hawiya** ", Al-Riyadh Newspaper, No. 11049, (4/6/1419 AH)
- 4- Dr. Muhammad Ibrahim Gabr, **Architecture after Culture** , a dialectical vision of the future of the self in the present of the other, October, 2006
- 5- Ahmed Helal Mohamed, "**The Identity Crisis of Contemporary Architecture in the Egyptian City,** " JES Journal of Engineering Sciences , Faculty of Engineering, Assiut University , 2004.
- 6- Ali bin Salem Bahamam, "**The Importance of Urban Identity** ", an article published in <http://www.edlal.com> , May 2011.
- 7- Badr El-Din Zawaqa, "**Identity and Moderation: Interaction and Integration.**" <http://www.veecos.net/portal/index.php> (May 2012)

- 8- Ali Asaad Watfa, “ **Cracks in Contemporary Arab Identity,** ” Al-Nabaa International Network, <http://www.annabaa.org> , March 2012.
- 9- M / Ruby Elias: **Open areas have evolved in the design of urban spaces throughout the ages** . s . 137,225 _
- 10- Hussam Aboul Fotouh, a working paper entitled " **Towards the formulation of the guidelines for the system of protecting the architectural identity of the city of Makkah Al-Mukarramah** ", the Makkah and Holy Sites Development Authority, 2009, p. 12.
- 11- Tariq Jalal, " **Site Analysis and Coordination** ", Urban Planning Department, King Saud University, a lecture published at <http://faculty.ksu.edu.sa> , 2009.
- 12- Ministry of Municipal and Rural Affairs, **Foundations of Design, Implementation and Maintenance of Public Parks** , Kingdom of Saudi Arabia: www.momra.gov.sa , 2002
- 13- Guidelines for the National Organization for Urban Coordination according to the law number 119 for a year 2008 and his list Executive
- 14- Housing and Building Research Center - " **Road Components Coordination Standards Manual**" - Cairo - Egypt 2005, p. 97
- 15- Aladdin Yassin: **Conservation and renewal in historical areas** . s . 108-109
- 16- Rifaat Chadirji : **Heritage is a Necessity** - Saudi Construction Magazine, No. 12. p. 21
- 17- **A B C Faiyum** " . State Information Service . Archived from the origin On August 07, 2018 . Read it on January 25, 2017

Scientific Theses :

- Khaled Ali Al-Hadry, “ **Development in its comprehensive concept and its impact on the local identity in the city of Sana’a as an application to housing** ”, PhD thesis, Faculty of Engineering, Cairo University, 2005, p. 16
- Marwa Hassan Mohamed, “ **The Concept of Identity in Architecture and Urbanism: An Analytical Study of the Elements Affecting the Personality of Place** ,” Ph.D. thesis, Faculty of Engineering, Cairo University, 2003, pp. 15 , 90 , 95.
- Ahed Sobhi Helles , "The **Communication between Architecture and Collective Memory** " , Ph.D. Thesis , Department of Architecture , Faculty of Engineering, Cairo University , 2006 .
- Ihab Hussein Kamel, “ **Architectural Awards and Activating the Role of the Recipient in Consolidating Identity Architecture** ”, Master’s Thesis, Faculty of Engineering, Cairo University, 2004, p. 23.
- Abd al-Rahim al-Otari , "**Cultural Identity in the Desert**" , Master's Thesis, Department of Architecture, Faculty of Engineering, Cairo University, 2004.
- Souad Al-Adel Mustafa Ahmed, **The cultural role as a design approach to improving the functional performance of the yards**, Master’s thesis, Cairo University, 2016 .
- Amr Tarek Mohamed Ahmed Zahran, **Added values and their impact on the main public squares and their impact on the user and urbanization**, Master's thesis, Cairo University, 2014
- Imad Riad Herzallah , **Strategies for Developing Urban Public Spaces, Case Study of Gaza City** , Master's Thesis, Islamic University Azza, 2014 .

[2] English references:

- 1- Howkins, Joyce M. & Allen , Rubert , " **The oxford Encyclopedia** " , English Dictionary , oxford , ALLEN CLAR EUDON PRESS , P 707
- 2- Arbak, A.Sebnem, " **An Analysis on the Transformation of Urban Identity** ", a Thesis Submitted to the Graduate School of Natural and Applied Sciences of Middle East Technical University, 2005, p.iv
- 3- Manentiv, C., 2011 , **International Conference On Green Building And Sustainable Cities Sustainability And Place Identity Procedia Engineering** , (2011). 21, (p. 1104:1109).
- 4- Wester-Herbe, M., Review Underlying concerns in land-use conflicts – "**The role of place identity in** (Wester-Herbe), (2004) (pp.109:116).
- 5- Manentiv, C., 2011, **International Conference On Green Building And Sustainable Cities Sustainability And Place Identity Procedia Engineering** , (2011). 21, (p. 1104:1109).
- 6- Trancik,R. : **Finding Lost Space** . Theories of Urban Design – Van Nostrand, New York, 1986. (p. 2.,63, 112) .
- 7- Ching,F. **Architecture: Form** , Space, and Order. P.114
- 8- Helen Woolley, **Urban Open Spaces** , London: Spon Press, 2003, pp.7-8, 9-10,11-12,36-40, 45-49.
- 9- Krier,R. : **Urban Space** 2007. P.15 , 16, 22
- 10- Ashihara, Y .: **Exterior Design in Architecture** . P.14
- 11- Norberg,C. : **Existence,Space&Arch** P.39



- 12- Bacon, E. : **Design of Cities** . P.23
- 13- Zucker, P. : **Town and Square** . P.1,11,13,14,15,16,17
- 14- Norberg-Schulz, C. "**Intention in Architecture** " - Universitets Forlaget, Oslo -2010. (p.62,63,142)
- 15- Fredric R. Steiner and Kent Bulter, **Planning and Urban Design Standards** , New Jersey: John Wiley and Sons Inc., 2007, p.114,270
- 16- Correa, Charles, **The New Landscape** , London: Butterworth Architecture, 2015, pp.33-46.
- 17- Galibourg et autres , 2001, p26
- 18- " **Public Square** " . **The Encyclopedia of Cleveland History** . Case Western Reserve University . July 30, 1999 . Retrieved November 8, 2012 .
- 19- **of Commerce Building** . Encyclopedia of Cleveland History. Case Western Reserve University . Retrieved 2007-01-06 .
- 20- *Bullard, Stan (November 17, 2008)*. "Huntington moving to 200 Public Square" . Crane Communications . Retrieved June 1, 2010
- 21- **Terminal Tower**" . Forest City Enterprises . Archived from the original on 2015-09-12 . Retrieved 2010-09-29 .

[3] **INTRNET SITES: The International Information Network**

- 1- <http://www.oman0.net/showthread.php?t>
- 2- <http://en.wikipedia.org/wiki> , (November 2012).
- 3- <http://buildingonthemountain.blogspot.com/2009/02/retaining-wall.html> .
- 4- <http://www.versa-lok.com/versa-green/>.
- 5- <http://teachingcleveland.org/12-most-significant-events-in-cleveland-history/>.
- 6- <https://case.edu/ech/articles/p/public-square>.
- 7- <https://case.edu/ech/timeline>.



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