



The Invasion of Commercial Use of Residential Streets and Its Impact on the Cohesion of the Urban Fabric (The Left Side of Mosul City as an Example)

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ABSTRACT

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Iraqi cities in general, and the city of Mosul in particular, face a major problem represented by the ill-considered changes occurring in the urban fabric and residential neighborhoods as a result of the invasion of commercial shops into these areas, which has led to the creation of social problems that have affected the social behavior of residential neighborhoods. The Al-Muthanna area was chosen on the left side of Mosul to study the impact of the development of Al-Muthanna Commercial Street on the urban fabric of the residential area. The research relied on a descriptive analysis of the area and a study of sites of change, and graphic analysis was also adopted. The practical study showed a significant weakness in the relationship that achieve the comprehensive unity of the urban scene, which indicates the absence of a unified language in designing the components of the urban street. The results also showed a significant weakness in visual gradation and visual continuity, while there was a clear presence of the concepts of inconsistency and contrast. The results indicate the presence of a state of disintegration and incoherence in the urban scene of the studied street, in addition to the great dissonance between its compositional components. This is due to the failure to use a pre-planned and structured design language when converting functional use from one function to another, which negatively affects urban structures and formations. When changing the functional use of a particular urban scene, it is essential to do so carefully and in accordance with design criteria that ensure visual compatibility and cohesion.

1. INTRODUCTION

Many streets suffer from unplanned urban expansion and change, which has caused them to lose many of the elements of their aesthetic luster due to the presence of blocks of varying styles, colors and shapes that do not match their signature, which has robbed them of their visual and sensory impact as aesthetic focal points that contribute to enhancing the image of the city. The urban street scene is suffering from extinction, due to the inadequacy of regulations and legislation of the regulations and legislation controlling the development process and neighborhoods, as well as neglect for many decades. The urban scene has lost the element of excitement and drama, which has led to the disintegration of the urban image of the streets. Whereas cohesion is one of the characteristics of these streets and has a role and importance in achieving visual cohesion. The research gap is the study of cohesion as one of the characteristics of the urban fabric and it has a role and importance in achieving visual cohesion within the streets that have changed their use from residential to commercial, which has led to visual disintegration due to the commercial invasion of these streets. The aim of the research is to reach the variables that affect the visual cohesion of the streets within the urban fabric that have changed from residential to commercial due to the commercial invasion of

these streets.

Most studies have not addressed how commercial invasion of residential streets affects the visual cohesion of the urban fabric and the achievement of a sustainable urban landscape, which is what this research will address to achieve a cohesive urban fabric.

2. INVASION

Invasion means the penetration of a group of people or a particular use in an adjacent area characterized by groups or uses that are socially or economically different from the invasive group or uses. It represents the movement of people from the countryside to the city, while the second represents (invasion of land uses) each other [1]. Where the ecological invasion contributed in the early 20th and 21st centuries, rural migration to the city has led to the settlement of the immigrant population from the outskirts of the city, thus contributing to the growth and expansion of the city and the invasion of urban land and empty land, and the second type (invasion of land use). Some areas have been subject to invasion by commercial and industrial land uses and services because of the accessibility of this area or because of the country's special political circumstances [1]. This resulted in a mix of work

areas and residential areas, the commercialization of vehicles used to transport raw materials, and the marketing of manufactured materials, which increased the stress on the urban fabric and contributed to its incoherence [2], the invasion is offset by the retreat process, which is meant to gradually displace the use from its original location due to the invasion. This is what happened to the residential function as a result of the invasion of the commercial use of the residential area and the total of these changes came in accordance with the factors of invasion and retreat, which contributed in varying degrees to the urbanization of agricultural land in the cities.

The problems arising from the commercial invasion of residential areas are:

- Physical Pollution: They are the result of several factors, including. This crawl led to the formation of styles and models characterized by poor design, implementation, lack of belonging, and lack of continuity and communication with the characteristics and identity of the site.

- Visual Pollution: Resulting from misuse of mechanical services and advertisements in the building fronts.

- Traffic & Service: Pollution problems that result from the specified understanding of the axes.

Current motion, as well as interference of types of motion, noise, vibrations, environmental pollution and segment. The change in land use is often unintentional (random), that is, spontaneous and unconscious (unconscious), which is produced without any intention or instinctive, and this type of change is not planned (without controls over and controlling it) because it is an individual change [2]. Anyone who follows the invasion of commercial uses into residential areas will notice that as soon as the main streets surrounding an area are built, the process of building buildings begins on the sides of these streets. The ground floors are transformed into shops, and there is a need for someone to serve these shops, such as parking lots. With time, the need increases, the problem worsens, and then another phase of the construction and expansion of these streets begins, and the buildings on the main streets become facades behind which residential areas are hidden.

3. RESIDENTIAL STREETS BECOME COMMERCIAL

In residential areas, privacy and safety play a role in the design process, in addition to being the focus of movement and interaction. The process of changing residential use to mixed use on the street by adding commercial operators requires a thorough understanding of the variables required to achieve a particular scene of the new environment that meets marketing efficiency as well as housing efficiency. Streets with commercial use must have the character of vitality and activity instead of the character of calm and local that the street possesses, which is confined to residential employment. In order to be attractive and effective at the same time, it is necessary to prepare activities and recreational places that make people use not only a passage but also a space for sitting and staying [3]. Each street is also given a distinctive character that helps to make the space formation clear by defining the street's dimensions and segment for a sense of containment and its relationship with the urban fabric of the city, in a way that helps to accommodate the urban structure and integrate with the fabric of buildings surrounding the street's space by treating them as plumbing blocks rather than mere ones. The

most important of these are the following:

- The interference of the formal structure with the functional structure within the street space leads to an increase in the number of people that use the street, so it requires attention to the passages, such as the presence of a wide sidewalk that allows the person who passes through it to see the goods. In addition to their function, they give a sense of human scale by defining the pedestrian space, thus helping to enhance street effectiveness.

- The addition of commercial activities in a residential street will increase the density of automatic traffic there, thus creating traffic hazards that require reducing the intersection between traffic and vehicles, or separating them if necessary.

- The provision of parking spaces along the sidewalks also concretizes the use of the car to perform procurement efficiency without enjoying the efficiency of shopping and creates isolation between the two sides of the street [4].

Creating fun and comfort for street users, giving them privacy, and providing them with points of significance that help to distinguish them and define them with a suitable human standard, all of this makes the commercial street a human space, not just a passage for the transit movement. The street is therefore known as a corridor and space that is not separated from the surrounding buildings with elements that give the basic characteristics of continuity and diversity. The street is also defined as a field of movement between two parallel lines of buildings or residential houses. The term "mixed-use street space" is intended to be the function these streets perform to the city in terms of the range of economic, residential and social activities and functions offered to society. The word "street" is originally derived from the Latin word "sterere", which gives the meaning of "to wave", and relates to the Latin word "axis" that leads to buildings, although the term "street" refers in its apparent meaning to part of the urban form [3]. It is characterized by the fact that it extends longitudinally with buildings on its sides, the interpretation that the street shows in human experiences makes it refer to ideas and patterns of behavior that are much older than city buildings. Therefore, it can be said that the street is an independent urban space or linked to neighboring spaces that can accommodate the hall of "Omra", a part "complementary" to and "integrated" with our movement, and a place where public and private meetings take place and represent the path in which human behavior appears [4].

If social and economic relations change, there will be a need to change activities, that is, to change land uses, in addition to changing demographic factors causing changes in uses. Any change in urban land uses must be planned in advance, taking into account the nature of existing uses and their relationship to modern use, that is, it will cause confusion in land uses [3]. The causes of land-use change in the city may be economically and socially motivated as a result of large-scale shifts in the growth and population of cities, or may be triggered by "internal or external emergency" causes that attack cities and their activities [5]. In addition, planning systems sometimes weakened in adopting basic designs and the efficiency and method of executing them, which affected the functional structure of the city of changing and mixing its uses.

4. COHESION CONCEPT

The origin of the term coherence is Latino and means sticking elements together to be interconnected, stick together,

to be connected with [6]. And it refers to the way of linking that makes us feel that understanding is clear and easy. In terms, cohesion means that the text can be Semantika (meaning word), and in literature, cohesion is the sense of the sequence from old to new by making each sentence linked to its preceding sentences, and it refers to a sense of unified centralization and logical sequence of ideas [6].

5. URBAN COHESION

The geometric assembly of elements to achieve cohesion is produced in urban, identity morphology, which is evident in all traditional cities [7]. The rejection or denial of urban cohesion of systems cannot achieve a viable city; for example, in urban planning laws, grouping nodes that do not interact with each other prevents urban models from forming [8]. This is related to the structure of the corridors and the formation of urban spaces. Since interconnectivity on all scales leads to urban cohesion in living cities, each element is formed by grouping the subelements defined hierarchically and on different scales, since the success of any urban cohesion is linked to engineering cohesion and the transport network that defines the shape of the city [7].

The urban design must be space and visually coherent, as space cohesion requires definition of the large scales resulting from the size of the region as a whole, and space cohesion needs distinct measures to create a hierarchical link [9]. Visual cohesion requires complex formatting and organization on various scales, and visual cohesion requires the connection of separate or isolated units by distance, scale, texture, color, or shape [10].

6. URBAN FABRIC

The urban fabric (as formation) consists of a group of (Urban formation), which in turn consists of a group of building blocks (Masses) and (voids). The pattern of relationship between them indicates that of the relationship between man and society, where the material side of urban fabric represents the physical side, and the spiritual and moral aspect (Immaterial side) of space, while society represents the moral composition of the individual [3]. Fabric is the interaction of a number of economic, urban and social systems to form an interconnected structure [11]. The urban fabric reflects the shape of the city through its environment consisting of various land uses in its architectural units, including open areas and squares. It represents the architectural building that includes architectural units and unbuilt spaces and enables the city to perform its local and regional functions. Architecture cannot be viewed as independent structural units in isolation from the urban fabric of the city in all its meanings, either at the level of a residential municipality or at the level of a full city [12]. So space cannot count the content or the hardened blocks around it, (or contained therein) separate urban elements that can be studied individually, but are components of a particular urban fabric whose physical qualities, forms and moral and value characteristics depend on the argumentative relationship between the components and the nature of their spatial organization and the patterns of their repetition and rhythms, and the distinctive identity of urban composition depends primarily on the nature of the urban fabric's visual personality

and its relationship to its existential surroundings [13].

7. THE FACTORS AFFECTING THE COHERENCE OF THE URBAN TOWNSCAPE

Cullen indicated that there are two types of factors affecting the coherence of the urban townscape, which are the physical factors and the human factors, whose integration achieves formal unity. The compactness of the buildings and not leaving the interstitial spaces between the blocks, the volumetric dealing with the neighborhoods in order to determine the urban scale of the street, the organization of the skyline, the organization of the building line, the proportional relations between the height of the building and the width of the street in a way that contributes to achieving cases of spatial containment of the urban townscape, the directionality of the urban townscape that It is determined by the flexibility of shapes and the way they are formed and arranged in the scene, in addition to the relationship of a part with a part within a single figure and its visual relationship with the parts of neighboring shapes. These elements are openings, the volume of a single building, and architectural details [14]. While Lynch [15] asserted that the clarity of the structure of the city depends on the mental image carried in the minds of its inhabitants and related to the visual value that shows the extent of clarity in the urban structure of the city, which indicates the ease of distinguishing its parts and organizing them into a coherent structure. He identified a set of characteristics that must be taken into account in urban design in order to create a coherent and unified physical personality, which are [15]:

(1) Singularity of Figure - Background Clarity: the external borders of the figure, the contrast with the background, the shape, the density, the complexity, the size, the use, the location and the distinction of the element.

(2) Feeling the external form, the boundaries of the parts, i.e., the general form of the external form.

(3) Continuity: the continuity of edges or surfaces, the convergence of parts (such as combined buildings), similarity, homogeneity of surfaces, shape, materials, organization of window openings.

(4) Dominance: The dominance of one part over the other parts, in terms of meaning, size, or density, and is produced by reading the continuous whole visually.

(5) Clarity of Joint.

(6) Directional Differentiation.

(7) Visual Scope: Characteristics that increase the visual field, such as giving transparency, overlay, and scenes.

(8) Names and meanings that give the identity of the place (Names and Meanings).

As for Worskett [16], he identified a set of formal characteristics that achieve visual continuity and visual cohesion of the urban townscape:

The building line: The organization of the building line is the basis for the visual continuity of a group of buildings, and the facade lines along the street affect the way the buildings are seen and their relationships with each other, and the unification of the building line affects the personality and identity of the street and strengthens the sense of place, thus showing the importance of regulating the setback distance buildings and their impact on visual cohesion [16].

The height of the buildings and the skyline: The issue of the height of the buildings and its relationship to the skyline is

one of the most prominent formal problems for a group of buildings.

The width of the unit: Unifying the width of the building units contributes to the cohesion and harmony of the buildings.

The quality of details and materials: The use of prevailing local materials gives a strong sense of the visual unity of the city, and their use in new buildings contributes to ensuring visual continuity.

The proportions of window openings to the wall: the regularity of the openings for a group of adjacent buildings contributes to achieving the formal continuity of the urban townscape and the contrast in the openings leads to breaking the continuity of the urban townscape [16].

Space containment: In order to achieve coherence, attention must be paid to the formal characteristics surrounding the buildings to avoid obtaining buildings with weak characteristics and visual cohesion [16].

Broadbent [17] confirmed that the urban townscape consists of two important elements:

- Physical components, which are two parts as well:

A) Urban physical components include: signature, spatial relations, prominence, focus, activity, landmarks, signs and functions.

B) Urban Appearance components include: Age, Size, Color, Design, Shape, Construction Materials, Condition, General Physical Components, and Other Related Factors.

- Cultural components. These components are concerned with meanings and connotations.

The constituent elements of the urban townscape can be divided into two parts: building facade elements, and other complementary elements.

Ching [18] classified the elements of building facades depending on the effectiveness of the element and their ability to attract attention, as he classified the elements according to the relationship (form-background) to:

A. Positive elements: They are perceived and understood as figures or shapes.

B. Negative elements: They act as the background for these shapes.

Antoniades indicated that the elements of the facades are represented by walls, windows, doors, vertical and horizontal items, and added items (such as chanchals) [19]. Norberg-Schulz classified the facade into: aesthetic elements such as columns, and perforated elements such as windows and doors [20]. Abu-Obeid [21] reviewed a set of relevant elements in evaluating building facades: blocks, windows, doors, details,

and the shed above the entrance. Herzog [22] classified the elements of the facades of the buildings into: the wall parapet, the marquee or advertising sign, the canopy above the entrance, and the cornice. The research finds that the elements of the facades of the buildings consist of (walls, openings, including: windows, doors, and other openings, in addition to the elements protruding from the wall, including: columns, shutters, curtains, frames, prominent sheds, cornices, balconies, and others, indication signs and advertising). They are delusional and that the building alone and Carmona alone does not mean anything to us, while the building with the context achieves coherence and visual pleasure. In order to create integration and visual cohesion with the existing context, three methods must be available. The first method is the unified formal style, which uses simulation of local architectural features; the second, compare or contrast and include new designs; the third, continuity which includes new formal characteristics. Al-Mubarak [4] defined the urban townscape of the city as the image that the city draws in the mind of the viewer, which comes from the method of organizing its physical components and their interdependence with its public spaces, and the extent of the impact of this townscape on human behavior in his urban life. He identified the most important characteristics and relationships affecting the achievement of a state of visual continuity and homogeneity between the commercial street buildings and the rest of the elements that make up the overall image of the urban townscape and classified it into two categories:

The first: It represents the relationships and controls that contribute to creating homogeneity and visual continuity in the context of buildings and adjacent blocks.

The second: It represents formal relations and aesthetic complements that achieve aesthetic satisfaction and visual and psychological pleasure. While Al-Kara Gholly [23] proposed the concept of "formal unity in architecture as a system" based on various propositions of a number of architects, and three terms were presented around that concept, which are (elements of the formal unit - manifestations of the formal unit - cases of achieving the formal unit). The elements of the formal unit included each of "shape, direction, size, material, touch, light and color." As for the manifestations of the formal unit, they are mutually related requirements that contribute in general to reach each convincing and influential visual. Based on the previous proposals, the factors influencing urban cohesion can be identified, as outlined in Table 1.

Table 1. The factors affecting the cohesion of the urban landscape

	Vocabulary	Relations
Coherence	Diversity in inclusive unity	Mass Unit and Parts Diversity
		Repetition of building facade elements and various models
		Repetition in the diversity of the height of buildings to keep boredom out
		Unit level in texture, building material characteristics, finish and color for building blocks
		Achieving unity by dominating the horizontal extension of building facades
		Organization and consolidation of buildings' presentation
		Standardization of the design model of blocks
		Degree of interdependence or organization between elements
		Verify the unit by installing contradictory elements
		Use diversity in horizontal and vertical lines
	Visual gradient	Consolidation and repetition of the decorative details of buildings and a harmonious rhythmic variety
		Repetition and standardization of materials such as the use of local construction materials
		Grading the height of buildings to meet the functional requirements (skyline)
		Graduation of the size of the blocks used
		Graduation of detail level (elements)

	Graduation in the general form of composition
	Volumetric continuity of building blocks
	Continuity and harmony of use of building blocks, building materials and texture (nature of materials)
Visual continuity	Continuity in style
	Continuity of mass fit with human scale
	Continuity of the skyline
	Continuity of the construction line
	Continuity of surface regulation (horizontal and vertical lines)
	Continuity of openings with the same ratios and dimensions
Contrast	Incompatibility with texture, color and materials
	Scale and size difference
	Direction (vertical and horizontal elements)
	Contrast in shadow and light
Containment	Alienation in form
	adjacent buildings
	The convergence between the heights of the buildings
	Level of affiliation and accommodation when the ratio of height of surrounding buildings to horizontal street dimensions varies between 3:1 down to 1:1 > 45-180

8. METHOD

The urban townscape of Al-Muthanna Street was chosen for its importance within the streets of the city of Mosul, where many modern buildings were built overlooking it now, as the residential street turned into commercial buildings after 2003. It became a matter of special concern for citizens in Mosul in general, due to its commercial and urban importance.

The research adopted the analytical method in studying cohesion within the urban fabric of Al-Muthanna Street, and that the scale adopted by the study by the researchers is measuring the scene by presenting photographs and building a semantic scale to evaluate it to reach the goal of the research, which is measuring cohesion in the urban fabric and its impact on the recipient. A group of images were taken for the purpose of testing to achieve coherence in the urban townscape of the street, and they are shown as in the following images in the end of the research.

Al-Muthanna Street was chosen for several reasons, including that it is a residential street built since 1970 and its use was changed to commercial after 2003 after the American invasion of Iraq and the events that the city of Mosul went through, and commercial buildings of more than 3 floors were built in it and modern building materials were used, and it became one of the important commercial streets that are crowded and congested throughout the year.



Figure 1. A satellite image of Al-Muthanna

Al-Muthanna Street was divided into 5 parts, each part contains a group of commercial buildings separated by secondary streets entering the residential area, and where the parts (samples) were taken on both sides of the street.

As for collecting data aerial photograph of the street was taken as a whole and divided into 5 parts as show in Figure 1, with them being drawn manually (Figure 2) and an site photographs were taken of the facades of the five parts on both sides of the street (Figure 3).

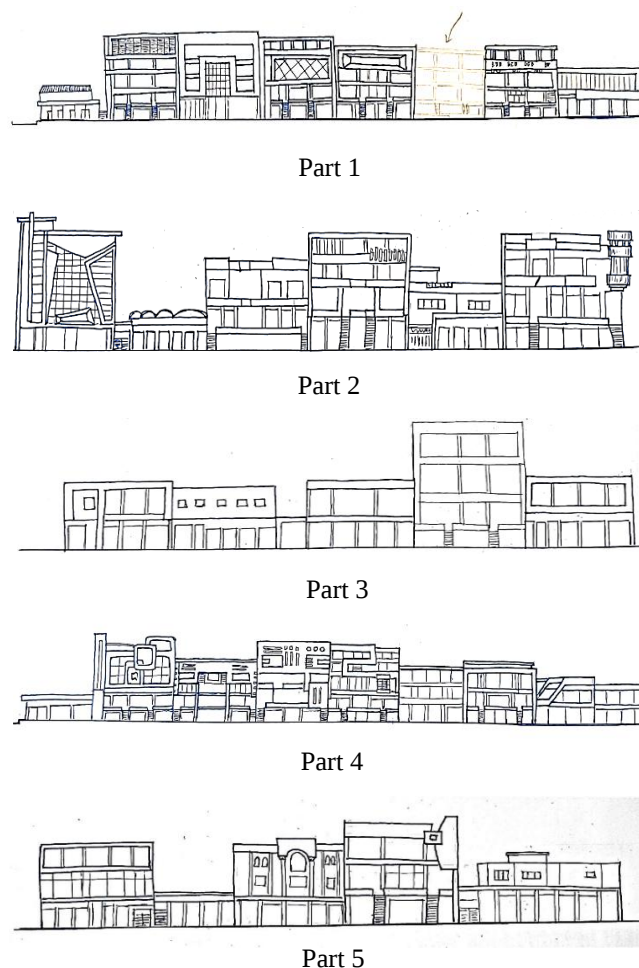


Figure 2. The facades of the five parts on both sides of the street (Freehand sketch by researchers)

After extracting the variables from previous studies and placing them in a table showing how each main variable was achieved through secondary variables, arriving at a formal analysis of each part of the study area and the extent to which these variables were achieved within each part of Al-Muthanna Street (Table 2).

The most important elements of coherence in the urban townscape affecting the urban fabric (Al-Muthanna Street) were identified, in addition to determining the visual

characteristics at the level of the urban townscape of Al-Muthanna Street.

- Visual relationships (visual continuity, diversity in inclusive unit, visual gradient).

- Visual characteristics at the level of the urban townscape (the human scale of the scene, the skyline of the scene, the building line of the scene, the cohesion of the blocks, the repetition of the elements and details of the scene, building and finishing materials, the style of the buildings, the color of the blocks). It is explained according to the following Table 2.

Table 2. The Visual characteristics at the level of the urban townscape

		Achieved Relationships	A	B	C	D	E
Harmonic diversity and comprehensive unity	X1	The unity of masses and the diversity of their parts	√				
	X2	Repetition of elements in the facades in various styles			√		
	X3	Repetition in the diversity of building heights		√			
	X4	Comprehensive & balanced repetition of structural elements					
	X5	Unity in the properties of building materials & finishes	√			√	
	X6	Unity in color and visual stability					
	X7	Unity in the organization and arrangement of buildings					
	X8	Unity in the architectural style of the general composition of the buildings			√		
	X9	Interconnection & achieving the formal system of elements					
	X10	The rhythmic interconnection of architectural elements within the overall form					
	X11	Interconnection with size and scale of structural elements					
	X12	Formative interconnection of the horizontal and vertical lines of the general form			√		
Visual gradient	Y1	Gradient vertical heights of buildings				√	
	Y2	Gradation in the mass sizes of buildings in general		√			
	Y3	Gradation at the level of the overall formation of buildings		√			
	Y4	Gradation at the level of detailed parts (elements)					
	Y5	Balanced and morphologically stable gradient					
	Y6	Formally rhythmic dynamic gradient		√			
	Y7	Visual gradation of structural parts					
	Y8	Harmonious gradation with building materials					
Visual continuity	N1	Block continuity of buildings in general	√				
	N2	Continuity of building materials, color and texture					
	N3	Continuity of proportion and human scale of buildings					
	N4	Formally continuity of architectural elements					
	N5	Continuity of the skyline for buildings in general	√				
	N6	Continuity of the building line horizontally and vertically					
	N7	Continuity of visual compatibility of building blocks					
	N8	Continuity of associative relationships of structural parts					
Contradiction and contrast	M1	Contrasts with the general color of the buildings	√	√		√	
	M2	conflicts with the structural material of finishes in general	√	√		√	√
	M3	Contrasts with the form and mass of the buildings	√	√		√	
	M4	Contrasts the architectural details of the overall formation	√	√		√	
	M5	Variation in size and proportion for buildings in general	√	√		√	
	M6	Variation in direction (vertical and horizontal elements)	√	√		√	√
	M7	Variation in shadow and light throughout the building	√			√	
	M8	Formative variation to the buildings general composition	√	√		√	
Contextual containment	H1	Harmonic juxtaposition between buildings					
	H2	Convergence in heights for buildings in general	√				
	H3	Harmonic convergence of architectural elements		√			
	H4	The rhythmic juxtaposition of buildings with each other	√				
	H5	Containing the urban space (street) with building heights perception					
	H6	Containing through the relationship of street space with buildings					
	H7	Shelter and stability of urban space with building mass					
	H8	Alienation and contextual dissonance of urban space and building mass	√	√		√	√



Figure 3. Photographs of buildings at the five sections (by researchers)

9. RESULTS

- With regard to (harmonic diversity and comprehensive unity), the results of the practical study showed that there is a very weak presence of the achieved relationships, and this in turn indicates a lack of great clarity in the relationships that achieve unity as a whole for the study sample, which is represented by the harmonic diversity in the vocabulary of the urban street scene.

- As for (visual gradient), the same applies to the results of the practical study. It showed a very weak presence through the relationships achieved for the study sample.

- As for the (visual continuity), it was the weakest in its presence and verification, as it registered an almost negligible presence in its relationships within the practical study.

- As for the (contradiction and contrast), it was completely

different, as it had a clear and explicit presence and verification of its relationships in the practical study, and it recorded great and good verification across the entire study sample.

- (Contextual containment), as this had an almost non-existent and very weak presence in all of its achieved relationships, with the exception of (alienation and contextual dissonance), as this relationship had a clear presence in the study sample.

10. CONCLUSIONS

(1) The dominance of contradictory diversity and the lack of clarity of the overall and comprehensive unity of the urban street scene (study sample), which indicates the absence of a

unified language used in designing the vocabulary of the urban street composition, which gives a clear indication of the presence of the concept of (disintegration and incoherence) in the formal and compositional nature of the urban scene. It is a natural result of the formative accumulation of buildings resulting from the invasion and ill-considered functional and formal change of the buildings that make up the urban scene of the street under study.

(2) There was a concept closer to “chaos” than to “organization” with regard to the visual gradation of street formation, where we see formal “imbalance and dispersion” as well as the dispersion of mass harmony and the loss of the language of dynamic stability of the urban scene.

(3) The dominance of the concept of (discontinuity) over the context of the urban scene instead of visual continuity, where we see the interruption of the proportional relationships of the blocks, as well as the lack of clarity of harmony and compatibility in the continuity of the formative elements of the urban scene, with a large and clear weakness of the associative relationships of the structural parts of the blocks, which constitutes a general matter.

(4) The clear presence of the concept of (contradiction and contrast) in realizing its relationships indicates a state of dispersion of the vocabulary of the general urban scene, and this was evident in the conflict of the building material and the finishes, in addition to the contradiction in direction between what is vertical and horizontal. This is also the case. With proportion and scale, they indicated dissonance, contradiction, and disorganization, which is a natural result of the unstudied and unorganized structural accumulation of the building blocks that make up the scene as a whole.

(5) The negative presence of the concept of (contextual containment) in urban formation also appeared clearly through the incompatibility between the building blocks and the absence of the containment perception of space with the clear presence of a state of (alienation) and the dissonance of the relationship between the duality (mass and space). From the above, it is clear that:

There is clear confusion and lack of cohesion in the urban scene of the street under study, in addition to the great dissonance among its formative components, and the presence of a state of incoherence and harmony in the compositional vocabulary as a whole of the urban scene, and all of this is attributed to the failure to use the language of design and deliberate and prior organization in transforming it this was confirmed by some previous studies, especially Al-Asadi's study. One functional use to another use, taking into account what are the contexts of the new functional use, and this indicates the clarity of the concept of use (invasion), which negatively affects urban structures and formations in the event of functional change. It is necessary when changing the functional use of a particular urban scene or formation from one function to another, taking into account that this change be carefully considered and within the design criteria of the new functional style to be changed, and in a unified and gradual language that grows visually from one building to another so that it achieves harmony and compatibility, away from distraction and dissonance, and gives visual cohesion to create a healthy urban scene that maintains privacy and mutual positivity between the architecture of the urban scene and people. One of the most important reasons for the weakness of the existence of harmonious diversity and visual continuity of Al-Muthanna Street is the lack of strict legislation or laws that help control or prevent the occurrence of individual random

construction through the use or addition of harmonious elements placed in a thoughtful rhythmic manner that works to reduce contrast, contradiction and contextual dissonance and achieve the sustainability of the urban townscape of Al-Muthanna Street. One of the most important potential strategies to mitigate the negative effects of commercial invasion on the cohesion of the urban fabric is to establish mechanisms or thoughtful laws that prevent or encourage harmonious collective construction and move away from individual decisions when building commercial buildings by determining the height of floors between (2-3) floors and using similar elements designed in a unified rhythmic manner in addition to unifying the building materials used within the facades and reducing random contradiction to achieve visual continuity and thus obtain visual cohesion within the urban townscape and reduce the effects of commercial invasion on these residential streets.

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