



The Coexistence of Opposites in Contemporary Architecture

Ghusoon Najm Abdulzahra*^{id}, Abbas Ali Hamza Al Greiza^{id}

Department of Architecture, College of Engineering, University of Technology, Baghdad 10066, Iraq

Corresponding Author Email: ae.20.04@grad.uotechnology.edu.iq

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<https://doi.org/10.18280/ijdne.190221>

ABSTRACT

Received: 24 December 2023

Revised: 25 January 2024

Accepted: 2 February 2024

Available online: 25 April 2024

Keywords:

contemporary architectural practice, architectural text, opposites, dialectics, coexistence

Critical and rhetorical studies that dealt with the concept of opposites have always dealt with the language of architecture and its texts in analysis and theorizing, as the texts multiplied and accumulated and their qualities changed and contradicted each other. Some of them were distinct, and others were complicated in their meaning. The study aims to understand the nature of opposites in architectural practice at the level of text production and reading by Shedding light on employing the concept of coexistence as a consensual strategy that can formulate and read contemporary architectural text based on a system of intellectual and formal perceptions (opposites) and pairing them to create a multi-level architectural text that is understandable, and conceptual and semantic systems governed by previous perceptions (collective memory), to preserve what is Inherited and allowing for what is contemporary. The research reached the importance of developing a conceptual or semantic model that facilitates the process of dialectical thinking, represented by knowing the levels and formulas for achieving coexistence between opposites at the level of text production and reading, and thus the immunity of architectural texts from unstudied contradictions. The study conducted in the research adopted a qualitative, descriptive and analytical approach, represented by collecting and analyzing data from previous studies to build a theoretical framework and apply it to the (Central Bank Tower) project in the city of Baghdad. A group of architectural designers surveyed it to arrive at results, conclusions and then recommendations.

1. INTRODUCTION

Architecture is a complex text, and the text is a self-contained written language system consisting of vocabulary that can be called text units linked to each other through multiple relationships, and the architectural text is mainly for the production of architectural formations consisting of material elements (the actual image and presence) and non-material elements (the hidden side of the text that it reflects the idea of the text and its creative importance) [1], as there are many aspects of reading and conflicting interpretations over endless texts of opposites in the horizon of that creative text besieged by issues of reading and interpretation according to creative, cultural and intellectual values that are synergistic, corresponding, different and harmonious in every field of knowledge [2]. Therefore, the research seeks to build a comprehensive theoretical framework for indicators of coexistence as a consensual strategy between these opposites at the level of text production and reading, and to achieve the goal of the research, the following steps were adopted:

- Revealing the concept of opposites, their types, the relationships governing them, and their contribution to finding a multi-level architectural text that can be understood according to conceptual and semantic systems governed by previous perceptions (collective memory).

- Constructing the concept of coexistence of opposites (levels of achieving coexistence, formulas for achieving

coexistence) at the level of text production and reading.

- Applying the theoretical framework indicators on local projects in Iraq, leading to results, conclusions, and recommendations.

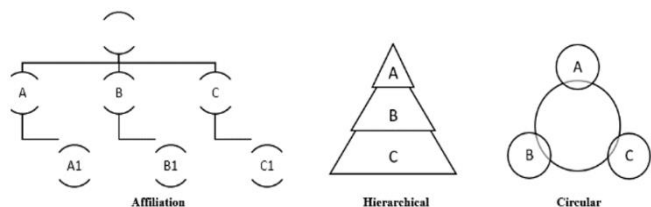
2. THE CONCEPT OF OPPOSITES

Opposites are among the topics that aroused human astonishment in the history of human thought. Its basis is a philosophical phenomenon drawn on literary criticism and first applied by structuralists, as some see that these opposites search for one side of it for the other side to unite together, forming a unity. Others believe these opposites are based on Eternal struggle with each other and represent the source of creation and generation for the continuation of life [3]. It is a fundamental organizing principle of the human mind that applies to language, cognition, and relational thinking [4]. One of the reasons for the occurrence of these opposites is the association of meanings and their accompanying mind. That is, the evocation of one of the concerned in mind usually entails the evocation of the other, classified as [5]:

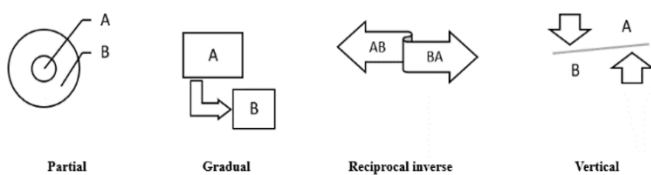
- Dual opposites: Necessitate the existence of two poles that do not accept a third pole, and the relationship is anti-directional (vertical, extensional) or a non-directional relationship (sharp complementary), so each party complements the existence of the other, or an inverse

(reciprocal) relationship between the two parties, or a gradual one that distinguishes the parties from Through a gradual level, or partial means that each party is part of the other party.

- Multiple opposites: Requires the existence of several poles, in which the relationship between the parties is either a circular antagonistic relationship, a hierarchical relationship in which the parties escalate according to a hierarchical order, or an affiliative relationship that includes all parties under one type, as shown in the Figure 1.



(a) The relationship of opposites in multiple opposites



(b) The relationship of opposites in binary opposites

Figure 1. The governing relations of opposites of both types (dual, multiple) / researcher

2.1 Concepts related to opposites

Opposites and Contradiction: Contradiction is a conflict between two things that are never the same, for the two opposites do not meet and do not rise, and it is a relationship based on negation, so the existence of one party denies the existence of the other party, and opposites are a contradiction based on conformity that is governed by an antagonistic relationship (parallelism between several parties), and antagonism is contrast and complete opposition. And against the opposite thing, they do not come together in one thing on one side, but they rise [6], the opposites of a thing may transcend, but it has one opposite.

Opposites and Polarity: Polarity is an expression of the existence of a duality that has two opposite poles in everything, but they are cooperating, and neither of them exists without the other, and their contradiction and cooperation involve the condition of complementarity between the opposites [3].

Opposites and Dialectics: Dialectics is the science of studying opposites in things and trying to understand them and find solutions. Hegel, a philosopher, spoke about dialectics, and Marx took from him what is known as dialectical materialism. Hegel considered thought as prior to matter and considered matter as a reflection of consciousness [3].

Opposites and paradox: The paradox is a statement of what is contradictory to the Muslim opinion leading to an unexpected conclusion that contradicts our empirically obtained beliefs [7], its impact is evident on the recipient when his expectations leave him and express his vision of the world, and it has to do with the game of opposites when the discourse deviates from its path [3]. Figure 2 shows the relationship between two poles, one positive and the other negative, the line of contradiction between the two parties in one thing, and each one means the absence of the other (conflict,

contradiction, imbalance), but the line of opposites equals the meeting of two things in one thing. One but in constant dissonance (coexistence, correspondence, balance).

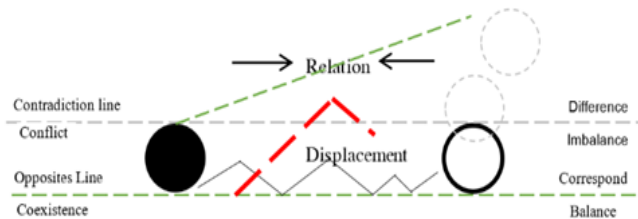
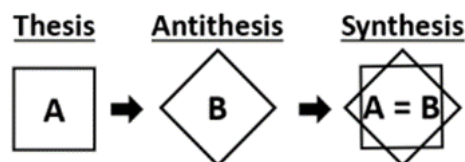


Figure 2. The relationship between two poles (compatible opposites and incompatible, contradictory ones)

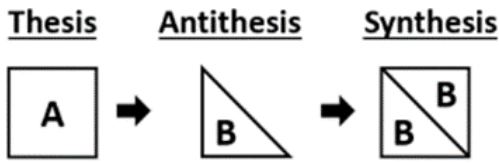
2.2 The law of unity and conflict of opposites

The unity and struggle of opposites is an essential law of dialectics, which means that the phenomenon and its opposite exist in an inseparable unity, so every phenomenon carries its opposite in the same unity [3], McGill and Parry [8] interpreted the unity of opposites as a law that involves perceiving and understanding something by conceiving its opposite and thus understanding the identity of those opposites and what they are. Opposites exist in unity within matter and its parts and struggle with each other in a way that makes it evolve from a simple quality to a complex one to a richer and more complex third.

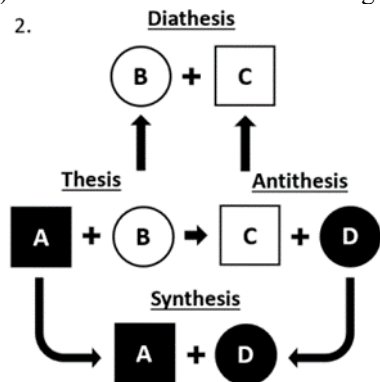
Each product is a compound phenomenon of two opposites, so each of the two opposites must have another composition because each of them is an independent phenomenon on its own, as each phenomenon consists of infinite opposites, which was called the dialectical Hegelian triangle, meaning that everything that happens in nature originates from The change of something into its opposite, then this opposite into its opposite, and the combination takes place in a third stage (the idea of the opposite is a combination between the idea and the opposite) [9]. Samson also referred to a fourth stage represented in forming a second dimension of the idea and its opposite, as shown in Figure 3, Figure 3(a): The thesis "A" is represented by a square, the antithesis "B" is represented by a congruent square with a different orientation, and the combination "A = B" is represented by the overlap of the two congruent squares, Figure 3(b): Thesis "A" is represented by a square, the antithesis "B" is represented by an isosceles right triangle, and the combination "A" is composed of "B" represented by two isosceles right triangles forming a square identical to the thesis square, Figure 3(c): Thesis "B + A" is represented by a black square and a white circle, and its opposite "D + C", represents a white square and a black circle, and the composition "D + A" represents a black square and a black circle, and the other "C + B" is a white circle and a white square. Figure 3(d): Thesis "A + B" is represented by a black square, A white circle, the antithesis "C + D" represented by a white square and a black circle, and the combination "A + D" represented by a black square and a black circle.



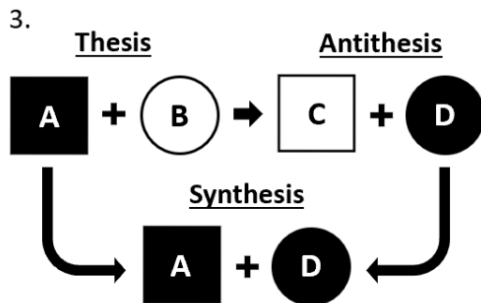
(a) Interpenetration of equal shapes while changing direction



(b) Disassemble and assemble the figure
2.



(c) Union of different forms



(d) Union of different forms & multiple combinations

Figure 3. Synthesis/dialectics [10]

The attempt to understand and anticipate a specific system through an idea presented to two or more parties (problem, inquiry, solutions, prediction) is subject to a set of intellectual or formal perceptions that tend to adopt the principle of consensus in decision-making through this approach it is possible to generate different visions through a system of possibilities that produces a generalizable pattern, as the research focuses on the stage (text production/form, the stage of reading the produced text/meanings).

3. THE COEXISTENCE OF OPPOSITES IN THE CONTEMPORARY ARCHITECTURAL TEXT

3.1 The concept of coexistence and the theory of communicative action

The concept of coexistence refers to existing together or at the same time [11]. Jürgen Habermas, through his theory of communicative action, sees defining the features of peaceful coexistence and recognition of the other based on communicative rationality, which is governed by the ethics of discussion and dialogue, which will lead to laying the practical foundations for the practice of communicative democracy, which is the essential starting point for embodying the concept of coexistence with and recognition of the other. This communication is a free parallel relationship between multiple and disparate groups [12]. Figure 4 shows the similarity of

opposites in the architecture of the game of chess, which is governed by a communicative intellectual system that depends on the skill of the player in dealing with the other.



Figure 4. Employs the principle of the game of opposites and their coexistence in architecture [13]

3.2 The coexistence of opposites in architecture and urban design

In Rowe and Koetter's [14] book (Collage City), they referred to the concept of coexistence as a strategy to collect and form opposites with each other as posters for each one with his identity that distinguishes him from the component of the whole (old and new - local and global - private and public) according to the principle of equivalence that allows for multiple readings, and simulating previous symbolic references, as shown in the Figure 5.



(a) The multiplicity of opposites in context and their coexistence



(b) Contexts and their opposites between the old and new

Figure 5. Collage city concept [14]

Jacoby [15] also referred to the dialectics of architecture through the synchronization and coexistence of opposites, as the past shares with the present in a new synthesis that produces architecture with a new transformed identity. The synthesis is a formula that guarantees the preservation of the chain of interrelationships between the past and the future through the present and aims to achieve permanence and communication with history [16]. Al-Shammari and Farhan [17] indicated that Coexistence is a concept built on the intersection of intellectual and physical systems in the city, followed by a series of cognitive perceptions that reveal reality

and are capable of generating multi-layered semantic texts.

In Venturi's [18] book (Complexity and Contradiction in Architecture), he referred to the idea of coexistence between opposites implicitly by adopting the principle of grouping things instead of dealing with the idea of differentiation between them. Al-Dujaili [19] also indicated the importance of the presence of opposites in the visual environment according to design principles. Moreover, organizational deals with the context at the level of the whole and the part through the adoption of the law of symmetry in creating a holistic composition of the architecture from a group of parts and separate elements depending on the properties of the elements, their location, and their numbers in order to achieve the harmony and integration of the parts.

Postmodern architecture indicates the semantic link between the different texts according to multiple opposites that bring them together with common characteristics that evoke the past in the present according to communication and interaction [20], Smith and Guitart [21] also classified the architectural texts according to the dialectical theory to the original text, the initial idea that architecture begins with and that is formed over time (style or model). Moreover, in Reflective Text against the first text, his ideas are liberal and strange, trying to get out of context and create new ideas. Moreover, Philosophical Texts tried to reconcile the two ideas and merge ideas until a hybrid architecture appeared.



(a) Barjeel Museum for modern Arab art in Sharjah [22]



(b) The Dancing House in Prague, Czech Republic [23]



(c) The Pyramid Project in the Louvre Museum, Paris [24]

Figure 6. The coexistence of ancient and contemporary architectural text

Figure 6 shows the coexistence of ancient and contemporary architectural text, (a) indicates the evocation of collective

memory and its use in contemporary texts based on diversity and coexistence with acceptance of others, (b) opposite texts based on a mutually complementary, (c) opposite texts based on a partial relationship (one side is part of the other side).

4. COEXISTENCE OF OPPOSITES AT THE LEVEL OF TEXT PRODUCTION AND ITS MAKING

Julia Christivia indicated that the text is a productive process through a creative process in which both the author and the recipient participate. Each text that enters into an interactive conflict with other contemporary texts has its synchronization or precedent [25], Hamza [26] indicates that the production of the architectural text depends on the semantic and intellectual level as a design methodology based on reading the capabilities of the project and the nature of its determinants and is formulated in light of that design idea to be expressed in the mind of the designer through a dialogue system, as shown in the Figure 7.

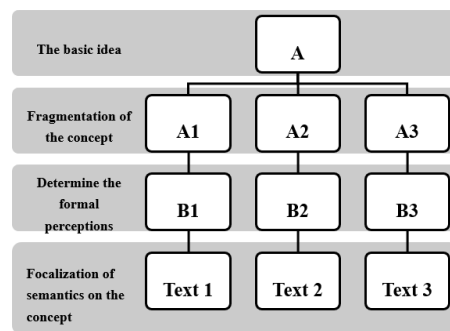


Figure 7. Producing the architectural text according to Hamza [26]'s proposals /researcher

- Defining the basic idea and defining its references and the opposite of it, let it be (A), as it is determined according to the influence of significant determinants such as location, job, and the requests of the beneficiary, which have an impact in drawing the lines of the idea (A) and determining its intellectual references.

- Fragmentation of the concept through a system of semantic and intellectual concepts, let it be (A1, A2, A3...), which has formal embodiments to express the concept, which in turn adopts several intellectual concepts that refer in part to the concept (A) agreed upon collectively.

- Identifying the formal concepts (B1, B2, B3...), which express the intellectual concepts, after dividing them into the second level. Each formal concept within this level is displaced towards another new context.

- Focalization of semantics on the concept and hiding it within the deep semantic structure of the architectural text. This structure occasionally differs from one designer to another and for the same designer and is based on the designer's previous experience and intellectual positions.

The making of contemporary architectural text adopted a process of synthesis of a group of opposites based on a system of formal perceptions intended by the designer according to the capabilities of the text and its determinants. It is read and interpreted by the recipient depending on the communication process built on a semantic intellectual system governed by collective memory and determines the extent of the recipient's acceptability of that text.

5. THE COEXISTENCE OF OPPOSITES AT THE LEVEL OF READING AND INTERPRETING THE TEXT

In order for the text to achieve effective communication with the recipient, it must meet seven criteria set by (debeaugrande) and (Dressler), which are (consistency, harmony, intent, situational, acceptability, intertextuality, and informativeness). Which is based on the criteria of intent and acceptance and what is related to the external context of the text, which is based on the standards of caring for the situation, intertextuality, and media [27], as indicated by Abd Gani and Ali [27] that the architectural text consists of three coordinates (Reference, philosophical and structural vision). The reference is the basis of the text. It contributes to codifying a set of concepts, social, behavioral and psychological relationships, and all the values and vocabulary from which the cognitive background of the text is formed. It includes material references from within the field of architecture, such as local and international models and previous classical styles, and non-material references from outside architecture, such as natural, industrial, and artistic references, customs, and legends. The philosophical vision is the second coordination of the text, which is its relationship to the process of critical reading, as the architectural text can be expressed through its content and vision, which reflects Creative vision. By combining them, integration is achieved between them and thus coexistence is achieved in a modern way through the production of architectural texts characterized by creativity that achieve communication and interconnection with place

and time [1]. Reading is an intellectual system based on evoking conceptual vocabulary linked to the collective memory that expresses the philosophical vision according to a relational approach between that vocabulary and through material re-reading of various perceptions that reflect traditions and customs towards producing an image indicative of its founding thought for postmodern architectures (hybrid thought that generates various images with different references to the times elected as references) [28, 29].

6. THE GENERAL FRAMEWORK OF THE APPLICATION

6.1 Research methodology

The study conducted in this research relied on the qualitative approach due to its exploratory nature, which is based on describing and analyzing some previous studies and extracting indicators of the theoretical framework, leading to Paradigm building.

6.2 Theoretical framework

The theoretical framework of the research was formulated from the indicators derived from previous studies and classified into levels that achieve the coexistence of opposites and their formulas at the level of text production and manufacture and the level of text reading and interpretation, as shown in Table 1.

Table 1. The coexistence of opposites in the contemporary architectural text

Main Item	Sub-Item	Code
Levels of coexistence of opposites achieved	Define the main idea X1.1	Text capabilities and the nature of its contextual determinants (symbols, references) X1.1.1
	Identifying intellectual perceptions X1.2	Combining ideas and opposites and pairing them X1.2.1
	defining formal perceptions X1.3	Producing an architectural text through its physical components (actual image and presence) and non-physical components (the hidden side of the text that reflects the idea of the text and its creative importance) X1.3.1
	Focalization semantic X1.4	The designer's experience and intellectual positions X1.4.1
level of text reading and interpretation X2	the whole level X2.1	The relationship of the text to the context and the extent of community acceptance X2.1.1
	Part level X2.2	The relationship of the text with itself and its reference X2.2.1
Formulas that achieve coexistence between opposites	The level of text production and its making X3	Merging between a previous text and another that follows it to form a contemporary text that bears the characteristics of the past and accepts the other X3.1.1
		Merging text from outside the field of architecture with text from within the architecture X3.1.2
	Semantics governed by previous perceptions (collective memory) X3.1.3	
level of text reading and interpretation X4	Communication X4.1	Text recipient The intention and acceptance of the other X4.1.1
		Text context Opposites overlap and coincide X4.1.2

6.3 Practical framework

The extracted indicators were measured on the Central Bank Tower building in the Jadiriya District of Baghdad, Iraq, as a practical study in the research.

6.3.1 Central Bank Tower in Iraq/Zaha Hadid



(a) Location map of Central Bank Tower, Iraq (Google Earth)



(b) Central Bank Tower in urban context [30]



(c) Details of the structure of the Central Bank Tower

Figure 8. Central Bank Tower [30]

The Commercial Bank Tower represents an innovative text that sparked widespread controversy in the architectural sphere locally. It was associated with the nature of the designer and her international fame (the late Zaha Hadid)—a new phase for the growth and development of the city of Baghdad. The building area is 20,000 square meters, with a building area of 90,000 square meters, consisting of 37 floors and a height of 170 meters, with five entrances [29], as shown in the Figure 8.

7. RESULTS AND DISCUSSION

7.1 Detailed analysis

A questionnaire form was adopted for some architects to evaluate the indicators of the theoretical framework of the case study, according to Table 2, the results were reached.

7.1.1 The first main term (Levels of coexistence of opposites achieved)

(1) The level of text production and its making

a) The first sub-item (define the main idea)

The results showed that the percentage of defining the basic idea of the text by the designer amounted to (75%), depending on the capabilities of the text and the nature of its contextual determinants (symbols, references). The designer, borrowing the coin and combining it with the idea of river waves, borrowed from the context surrounding the Tigris River.

b) The second sub-item (identifying intellectual perceptions)

The results showed that the rate of identifying the intellectual perceptions of the text by the designer amounted to (75%), by combining ideas and opposites and pairing them at the level of formal and contextual detail.

c) The third sub-item (defining formal perceptions)

The results showed that the percentage of determining the formal perceptions of the text by the designer amounted to (75%), as the designer relied on perceptions from outside the field of architecture, such as river waves and coins, which were employed by introducing modern technology such as parametric patterns.

d) Fourth sub-item (focalization semantic)

The results showed that the percentage of semantic focalization adopted by the designer amounted to (75%), as the designer's experience and intellectual ability in terms of simulation, metaphor, and compatibility with the context confirmed the importance of the semantic content of the text.

(2) The level of text reading and interpretation

a) The first sub-item (the whole level)

The results showed that the possible values were achieved by (50%) by emphasizing the relationship of the text to the context and the extent of community acceptability, as the text emerged as a dominant icon in the city and a rise that contradicts its context, as it sparked widespread controversy in multiple circles.

b) The second sub-item (the part level)

The results showed that the possible values were achieved by (75%) by emphasizing the relationship of the text with itself and its reference. The text stressed the borrowing of references from outside the architecture, such as the use of monetary currency and the introduction of high technology in the details with the borrowing of the idea of waves.

7.1.2 The second main term (formulas that achieve coexistence between opposites)

(1) The level of text production and its making

a) The first sub-item (synthesis)

The results showed that the percentage of achieving a synthesis between texts from outside or within the field of architecture at the formal and detailed level amounted to (58%), as the text relied on formations borrowed from outside the field of architecture and an attempt to combine them according to the unity of opposites and their coexistence, such as the use of strength and hardness versus the flexibility of waves borrowed from the river. And the flow despite the geometric surfaces and the vertical height versus the horizontal.

(2) The level of text reading and interpretation

a) The first sub-item (communication)

The results showed that the percentage of achieving communication between the text and its recipient, on the one hand, and between the text and its relationship with the context, on the other hand, amounted to (37%). It coincides and overlaps later with other opposites that harmonize with it in the future.

Table 2. Application in research samples (prepared by the researchers)

Main Item	Sub-Item	Code	The Weight Assigned to the Impact of Each Variable
X1	X1.1	X1.1.1	3
		(1*4=4)	3
			75%
	X1.2	X1.2.1	3
		(1*4=4)	3
			75%
	X1.3	X1.3.1	3
		(1*4=4)	3
			75%
	X1.4	X1.4.1	3
	(1*4=4)	3	
		75%	
Secondary Singular effect value (4*4=16)			12
			75%
X2	X2.1	X2.2.1	2
		(1*4=4)	2
			50%
	X2.2	X2.2.1	3
		(1*4=4)	3
			75%
Secondary Singular effect value (2*4=8)			5
			63%
X3	X3.1	X3.1.1	2
		X3.1.2	4
		X3.1.3	1
		(3*4=12)	7
			58%
Secondary Singular effect value (3*4=12)			7
			58%
X4	X4.1	X4.1.1	1
		X4.1.2	2
		(2*4=8)	3
			37%
Secondary Singular effect value (2*4=8)			2
			37%

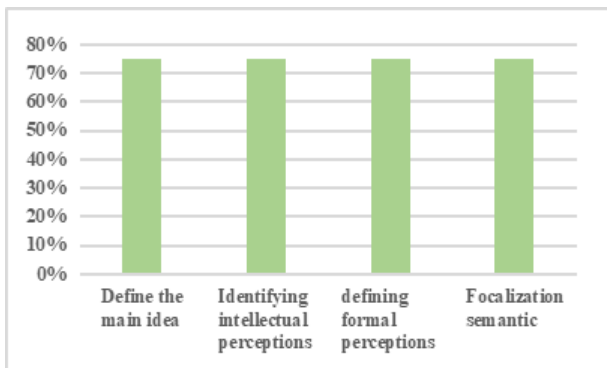
Note: The weight assigned to the impact of each variable in the analysis is as follows: 1= weak impact, 2= medium impact, 3+ good impact, and 4+ strong impact.
 Note: The statistical equation to standardize the values of the indicators (percentage relative frequency)

7.2 General analysis

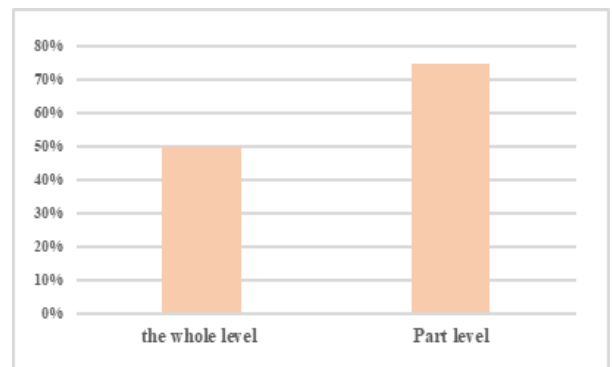
In general, and based on the above theoretical framework, the results of the analysis showed the proportions of adopting the strategy of coexistence between opposites in the Central Bank Tower, as shown in the Figure 9, which are:

- Levels of coexistence of opposites achieved (The level of text production and its making) (75%), (The level of text reading and interpretation) (63%).

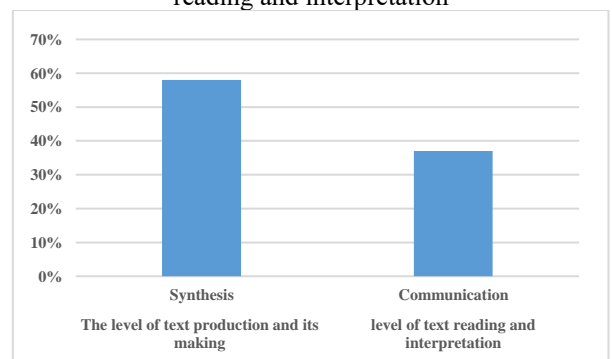
- Formulas that achieve coexistence between opposites (The level of text production and its making) (58%), (The level of text reading and interpretation) (37%).



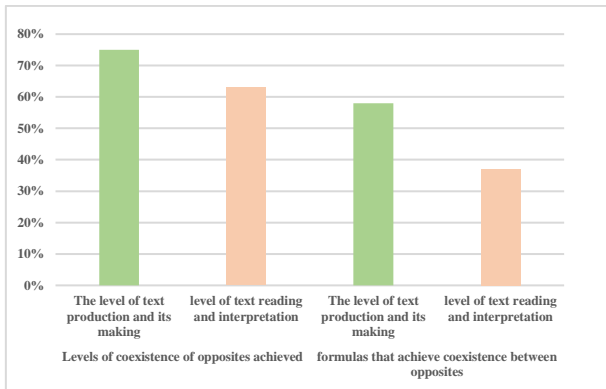
(a) Coexistence levels realization ratios at the level of text production and making



(b) Coexistence levels realization ratios at the level of text reading and interpretation



(c) Coexistence formulas realization ratios



(d) Percentages of verifying the item of the theoretical framework

Figure 9. Results of the analysis of Central Bank Tower project

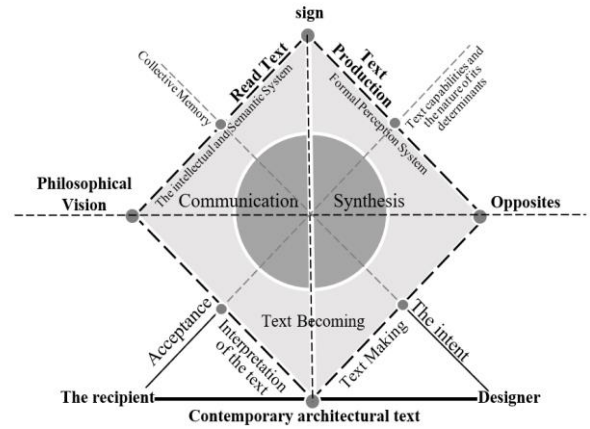


Figure 10. The coexistence of opposites at the level of text production and reading/researcher

8. CONCLUSION AND RECOMMENDATIONS

The research reached the importance of the unity of opposites and their coexistence in contemporary architectural practice, at the level of text production and reading, by shedding light on employing the concept of coexistence as a consensual strategy that can formulate and read contemporary architectural text, based on a system of intellectual and formal perceptions (opposites) and pairing them to create a multiple architectural text. Levels are understandable, conceptual and semantic systems governed by previous perceptions (collective memory), to preserve what is inherited and allow for what is contemporary. It can be absorbed and realized within the context as a whole in harmony and harmony that achieves communication. The research in the presented case study (the Commercial Bank Tower in Iraq) concluded that the designer relied on the productive process of the text represented by the overlapping of a group of opposites and their coexistence together within the text itself and their contradiction with the surrounding context and with a higher percentage of the coexistence of opposites. At the level of its reading as a text and its societal acceptance, it coincides in the future to be a starting point for the birth of multiple opposites that are compatible with it and in line with the context, and will contribute to building a collective memory in a way that strengthens societal identity in the future.

The research recommends adopting effective dialogue and accepting the other at the level of the architectural text and its relationship with other texts, preserving what is inherited and allowing the introduction of what is contemporary, thus protecting architectural texts from unconsidered contradictions, as well as taking into account the limit of the unity of opposites and their coexistence by adopting standards and controls that govern architectural texts. The research also recommends the importance of studying the relationship of opposites with the possibility of architectural text.

Figure 10 shows that the making of contemporary architectural text adopted a process of synthesis of a group of opposites based on a formal perception system of intended by the designer according to the capabilities of the text and its determinants. The recipient reads and interprets it depending on the communication process built on a semantic intellectual system governed by collective memory. It determines the extent of the recipient's acceptability of it.

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