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Truth and frankness between architectural thought and construction Case study: Post-modern buildings in Baghdad

Osamah AbdulMunem Al-Tameemi

Department of Architectural Engineering, University of Baghdad, Baghdad, Iraq, eng_usama_oat@yahoo.com.

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Abstract— Truth is the conformity saying of reality; it's the most honorable physiological virtues and moral attribute, because of its venerable characteristics and its important effects on individual life and society. It's also the reason for success of all aspects and humanitarian events, especially those related to architecture and construction. In many literatures, the importance of the aesthetic meanings has emerged, which can be added by structure to general composition, through the truth and frankness resulting from the use of structure in its expressive form, in order to achieve the visual tracking of the correct paths of forces transition in structural form compounds, thus link the character of expressionist truth with the structural truth .Therefore, the research problem focuses in the cognitive deficiencies of studying the aspects of truth and frankness according to their intellectual and applied ideas from the cognitive characteristics and basic elements, as well as the implications thereof on the structural and architectural aspects in general, this emerge weakness in understanding the clear perception of the reciprocal relationship of truth as an intellectual concept and as an applied approach that can affect the reality of architectural construction practice . The research seeks to clarify the interactive relationship between the concept of truth in all its intellectual dimensions and structural applications and what can affect that relationship on the apparent architectural production, especially in the pioneer Iraqi architectural experience during the seventies and eighties of the last century. Where truth embodies an organized model of the provisions through which the features of the relationship between thought on the one hand and practical reality on the other is clarified, which can be called the apparent structural truth.

Keywords— structural truth, Structural Expressionism, Iraqi architecture, aesthetic meanings, Postmodernism.

1. Introduction

All theories and applications have given special attention to truth, most prominent of which are architecture and construction, in all the successive developments in the theoretical and practical aspects, as well as the resultant of the constructive technology which has a great importance in the recognition of the features of the architectural production of societies over the ages, which reflects its influence on architecture with two main aspects: First is the basic function of the structure, while the other is the true expressional function of the structure and its role in deepening the true aesthetic meanings of architecture .

This relationship derives its origins from the idea that architecture belongs to the applied art which supply its plastic side on the one hand, and to a group of sciences that nourish its structural part on the other hand, and strive to achieve a balance between the poles of the equation so that the result is finally true. This variation in dealing with the aspects of structural truth has been witnessed by the products of contemporary Iraqi architecture, especially the products of post-modern architecture (during the seventies and eighties of the last century), and what it witnessed in maximizing the formal aspects of the vocabulary of architectural heritage use, Therefore, there was a high awareness of this dualism in many of the products of 20th century architecture in Iraq, especially in the postmodern era, especially with regard to some of the postmodern architecture trends in employment of the previous architecture symbols at the core of the contemporary formations fabric and the exploitation of structural elements as an expressive part of architectural products.

2. Concept of truth in the intellectual side:

Truth is the conformity of saying to reality; it has an important effect in the life of individual and society .

It's the decoration of speech and its vision, the symbol of integrity and righteousness and the reason of success and survival. Because of that it is glorified by heavenly laws. [12 [

As “Bradly” said: truth is an “ideal” expression of the prevailing system in the universe. The use of “ideal” here is a systematic recruitment and not just for description.

It means that mind contributes to the support of truth when imposes the layout of reasonableness, compatibility and system in the universe by discarding the error and editing the lie.

Thus, the ideal model continues to exist in a way that ensures its survival through realistic embodiment in the world. [8[

“Ideal" also means that the validity of truth is linked to an existing model in the mind and its existence is only achieved by a deliberate implementing in reality. Thus, mind dominates nature and existence by performing the same task that "Kant" has called for, that was followed by Fichte, Schelling and Hegel. This form only accepts the true provisions on which the modifications and rehabilitation decisions were applied.

This decision is an evidence of the ideological continuation of truth, because false provisions do not last in the same condition, as the imposition of modification is an implicit necessity in its nature. Therefore, in order for the provision to achieve its idealism, it must be purified from fault by need of modification .

However, there is a very important aspect that considered as the cornerstone of truth, which is the need for truth to be united with two basic criteria which are: Coherence and Inclusion. [12[

Thus, truthfulness is a systematic model of judgments and to determine the relationship between thought and reality which represents an area for the exodus of thought to its subject. So, if satisfaction is only with thought, abstraction and unilateralism emerge, and the deal is based on entirely empty perceptions.

Truth from the perspective of “John Luke” is the consensus of mind thoughts about the sensory perceptions, and the consensus among them, so that the true idea is consistent with sensory perception first, and this is the experimental interpretation of the law of identity, which is consistent with itself without contradicting the other ideas of mind, and this is the experimental interpretation of non-contradiction law.

3. Truth and frankness:

Relationship between truth and frankness is closely and internally linked; therefore, there is no way for divergence of truth when it is united with frankness, but it can be considered as frankness already, and by heading to frankness, it eliminates any possibility of contradiction and contrast.

But truth may differ from frankness because of a defect in it, that there is a double negative link between them, but that does not perpetuate the difference because at some cases truth is incomplete, and this makes it unable to express its true nature and unable to achieve frankness. [16]

But in our opinion, this deficiency which is attributed to truth is due to a set of theories in the degrees of truth and frankness. As long as the truth has degrees, it is certainly undergoing less truth, which constantly prompts him to change the aspects of its deficiency and inability as well as requesting its desired idealism in frankness.

According to this, truth is able to determine its identity represented in the pursuit of consistency and to determine its difference in its previous stages and the degree of its development.

The sophisticated debate has been applied to the model of truth, so that truth does not stop at the limits of the deficiency, but rather exceeds it. Thanks to its constant tendency to idealism which exists in the consistent frankness. Therefore, frankness is not outside the boundaries of truthfulness, it is standing as a comprehensive searching for itself in it. [14]

4. Truth and architectural Aesthetic:

Architecture is the art of creating space and a series of spaces that are aware by the users of the building over time. This space and the amount of its architectural beauty were spots of interest to designers, historians, artists, sculptors, builders and others.

According to Vitruvius, Beauty is achieved when the building or parts of the building achieve the function for which it was designed, with clear and frank structural efficiency in the proportions of the building and its parts, whether these parts are load-bearing or structurally portable parts. This truth in structural expression was professed by Ruskin in one of his seven lights of architecture: the beacon of truth.

If we add to this that there is no part without a function or a part needed to be added in order to achieve this truth in expression, then we find that we approach Alberti concept of unity and architectural beauty.

The proponents of this trend in linking beauty and truth are Fisher, Schopenhauer, Sullivan, and St. Augustine.

We found that fisher defines beauty with all that is good and real. In the same vein, St. Augustine defines beauty as the splendor of truth. As for Schopenhauer, he wanted a

sufficient load for each support and a sufficient support for each load. [11]

We would like to point out that if Ruskin, Fisher, Alberti and Vitruvius had depended on the external form and the proportions of its parts only, then -in our opinion- it would be a static view of beauty, not a dynamic, as the building is seen as an independent object in itself.

Classical architecture and Renaissance architecture show clearly the result of this static view of architectural beauty to the extent that laws are formulated for what is considered to be compatible with classical styles. Therefore, Violet La Dock has prompted that truth alone is not enough to ensure beauty, and it is necessary to give a consistent form of what is considered as a sincere expression. [6]

If we look at the aesthetics of modern period, we find that we have moved away from the interactive beauty between the architectural / urban space and its users. The focus has become once again on the building as an object in itself. The horizontal, the vertical straight lines and the element of transparency are essential elements for creating a dynamically connected space based on visual testing only, and on the sense of vision, rather than a complete test of all senses.

5. Truth in architecture and construction:

Structural technology has a great importance in establishing architectural features throughout the ages, because of the structure multiple possibilities which are embodied in two main aspects, first is **the basic practical function of the structure.** The other characteristic that many researchers have asserted its possession of truth is the **expressional function of structure**. Despite the purely practical function of the structure, this does not preclude its role in deepening the aesthetic meanings. Torroja also pointed to the importance of aesthetic meanings that can be added by the structure to the general formation through frankness and truth resulting from the use of exposed structure in order to achieve the visual tracking of the correct paths of the forces transmission in the structural form compounds, thus linking the attribute of expressionist honesty with the structural truth. [5]

6. Truth as an expressive concept of architecture:

The famous statement by the architect Louis Sullivan (Form follows the function) is considered as a practical and influential attempt to determine the source of the architectural form, especially during the modern architecture, whose forms were determined by absolute dependence on functions, so that the overall shape of the building depends on the total number of functions.

In this regard, Sullivan said: "The new exterior of the office buildings must reflect its structural system and its interior function and derives its ornament from nature." This paved the way to the establishment of what is known as (Functionalism) that is based on the basis of logic and analysis through which the truth in the expression is achieved.

Another point of view is that functional architecture is based on three axes: function, structural aspect, and architectural form. When the structural aspect takes its natural course without any modification to obtain a particular form, then the form follows the principle of truth in expression whether it was for the function or for the structural aspect. [1].

7. Architectural form is a product of power:

In his interpretation of structural formation, Nervi argued that the designed form means clarity and beauty when these buildings reflect the path of forces transmission in their units or structural compounds. He called this trend “Forms follow forces”. He has emphasized here on the liberation from the embellished forms which are far from truth, that understanding the correct structural rules to form the patterns of structural systems helps to understand the beauty of the forms achieved in accordance with this truth, thus the expressional truth. As shown in the figure 1. [2]

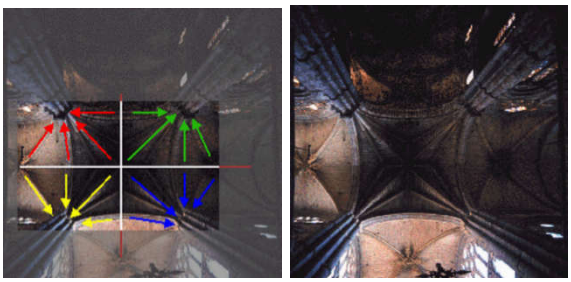


Figure 1: shows the operation of force transmission and its effect

Nervi defines creation in structure as "True structure" which is characterized by the aesthetic satisfaction. As it’s mentioned that recipients accept these forms instinctively, although they cannot fully understand the complex laws of structural mechanics.

Nervi has called this creative product "The true style" whose essential characteristics are as follows:

- **Structural Essence.**
- **Necessary absence of decoration and ornament.**
- **Purity of line and shape. "All the true solutions ... are of the utmost efficiency."**

On this basis, Nervi divides the creative process into two stages:

First: represents the objective appropriation and achieving of the technical requirements. While the second is characterized by being very personal and cannot be under the control of rules, laws or absolute objective causality. He sees as a result that the possibility of creativity lies in

the rotation of these two phases consistently in the mind of the designer or during the discussion between the structural engineer and the architect. [3]

8. Some applications of architecture in aspects of structural frankness:

8.1 *Tectonic System*

Is the unity of the structural aspects with the architectural and aesthetic nature so that the structural and technical thought cannot be distinguished from artistic and creative talents, so the construction systems that are the first pillar to achieve high-level aesthetic results must be understood. The concept was defined by theorists and architects in multiple formulations and for different periods of time. [4]

The development of architecture reflects growing in the expressive capacities of ideas, elements and structural systems, these elements acquire aesthetic properties as a result of this development.

Structural thought is transformed from a structural system into a technical construction system as a result of accumulation of experience, that the technical construction is closely related to the concept of the structure and structural system that the permanence of structure in a fixed state and its interconnection must be based on clear structural ideas and a specific structural system. [11]

The structural system is the sum of the structural elements bearing the building, including the principles and methods in which these elements are interrelated. When an idea and a design of the structure find a way to be implemented on the ground, the visual result will affect us through certain expressive features represented by the transfer of power to the parts of the structure that It cannot be described individually within the term "Structure" because these qualities express the relationship between the strong form and the forces which are interrelated and integrated. [4]

Therefore, Tectonic is the regulator that determines the unity of the structural and technical aspect of one hand, and the beauty of the architectural form on the other.

The structural and technical developments have brought about significant changes in the design forms and the architectural character of many modern works, and are characterized by deepening the aesthetic approach. [4]

Thus, the concept of tectonism can be "the expression of the aesthetic function of its balance to the forces of action and reaction and the ability of the human being to establish the suggestive relationship between these powers and form that includes a constructional idea, with the intuition and experience of discovering the type of structural system, as well as the expressive properties represented by the transfer of forces and reactions in each part of the form, either by estimating loads and their paths, the sensitivity of materials and their ability to withstand those weights.

8.2 *High-tech architecture:*

Is also known as late modernism or structural expressionism, which has been emerged in the late seventies and considered as a kind of renovation in modernism. This architecture has incorporated elements of the advanced technological industry into the design of buildings.

The structure was expressively shown outside the building as well as inside it (the HSBC building in Hong Kong by British architect Norman Foster). [13]

In buildings such as the Pompidou Cultural Center in Paris, this idea has taken on extreme proportions. Some elements that appear to have structural functions, have a purely aesthetic function, as well as showing the "components" of the building (e.g. ventilation and cooling pipes) and their use as aesthetic elements. As shown in the figure 2.

High-Tech is characterized by its eagerness to highlight the advanced technical feature in which the functional uses of the structures and the engineering services system are transformed into expressive elements, with exaggeration in their importance and size. [High -Tech] also aims to realize and understand the aesthetic of metal structures (iron) with glass panels, in addition to introducing elements of engineering services such as ventilation pipes and sewerage services in an effective way in the design treatments of the buildings carried out according to their proposals. [13]

(Centre Pompidou/ Renzo Piano)

(HSBC Building / Foster)

Figure 2: High-tech architecture

Among the most important architects of this model are: British Richard Rogers and Norman Foster, Italians Renzo

Piano and Gianfranco Franchini and the Colombian Bruce Graham.

8.3 *Constructivism architecture*

Structural architecture is a contemporary architectural movement and a form of Modernism, which has appeared in the Soviet Union in the 1920s and 1930s. Constructivist architecture combines between advanced technology and engineering. Although it was divided into several different trends, the movement produced many pioneering projects and buildings, before its decline in 1932. Its influence was evident in many subsequent movements. [13]. Constructivists believe that measured structural production, which is a logical consequence of the rationalization of the creative process, should be the basis of wholesale manufacturing procedures for architectural and structural elements, and these proponents have linked the justification of the technical composition of the building in direct correlation with its functional and constructional structures. [15]. The constructivist characteristics, especially from the functional aspect, were clearly represented in the complex of the Palace of Culture buildings of the Likhachev Motor Factory in Moscow (designed by Vesnin brothers) in 1931. The pioneers of this movement have employed rational design techniques such as the repetition of architectural elements, their standardization and the use of standard modules, As well as the emphasis on economic solutions design and the effectiveness of technological solutions

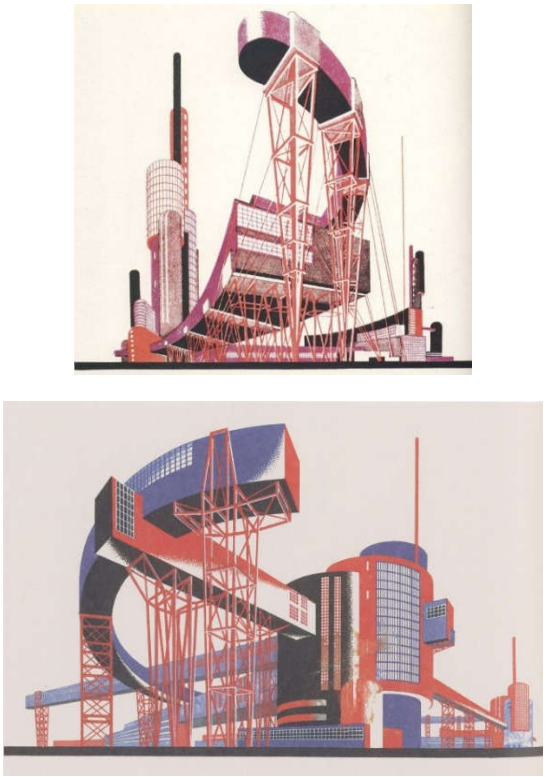


Figure 3: some of Constructivist architecture thoughts

The residential complex in Novgorod, Moscow 1928 - 1930, by Ginzburg 1892-1946 is a pioneering experience in this field. [15].

8.4 *Brutalist architecture*

This architectural trend emerged in the second half of the 1950s, starting from England out of the work of Alison and Peter Smithson.

The beginning of brutalism is attributed to Le Corbusier through the character of the famous residential building in Marseilles by the use of visible concrete and the repetition of vertical elements, as well as the change of the scale of openings in the facades of the building.

Among the most important architects whose brutalist opinions were reliable are: Auguste Perret, Adolf Los, Eric Mendelsohn, Walter Gropius and Peter Odd. [6].

The most important features of this architectural trend are: - Formulation of the basic structure of the building from a number of interconnected and overlapping architectural sizes - showing the material of the basic construction in the external appearance and interior spaces of the building explicitly, as well as showing the reinforced concrete structure, with the use of bare brick and concrete walls to get a deliberate roughness in the architectural character of the building for an intended purpose of structural frankness of the structure and to reach out architectural volumes that show the weight of the building. The external and inner walls of the building often form different angles, "edgy, sharp, existing" in order to Stay away from traditional shapes [11].

In many of the brutalist architectural monuments, architectural solutions and methods have been adopted which are close to the foundations of expressive architecture and the features of modern art. As well as the use of aesthetic and sensory effects which are caused by the repetition of the structural elements which has a large square or circular section. Their architecture is also characterized by single or double structural columns that are in front of the surfaces of the facades and the contrast between the small compact scale and the huge large scale of the main and secondary building facade elements. [9].
The most important architects and architecture of this trend are: Norfolk school in England in 1954 and the apartment building in Watford in 1956 by Lyson and Peter Smithton, Robin Hood gardens, London “1966-1972” by Alison and Peter Smithson - Finnish Alfar Alto, which was somewhat affected by brutalism but he has remained faithful to the ideas he has formulated for himself. This influence is reflected in the vuoksenniska church in Finland. - Petlach Catholic Church in Germany 1964-1968 designed by the German Walter Federer.- Torre velasca building in Milano, Italy, designed by Arnesto.R and a group of designers.

Figure 4: Boston City Hall, Boston
Gerhard Kallmann and Michael McKinnnell, 1968

Figure 5: Paul Rudolph Hall, New Haven, Connecticut
Paul Rudolph, 1963

9. Postmodern Architecture in Baghdad:

This stage is characterized by the existence of the great architectural plan, in addition to the desire and the urgent need to establish various projects, with the presence of number of Iraqi architects graduated of the three departments of architecture (Baghdad, technology and Mosul, as well as the third generation of those who worked in the offices of the second-generation pioneers, but those projects have exceeded the local capabilities with the desire to speed up the completion and to raise accuracy of implementation. Therefore, large number of consultants and foreign companies from outside the country has been invited to design or implement projects, in addition to consulting offices and global executive institutions to complete these projects.

9.1 *Characteristics of the products of this stage / Designed and executed buildings:*

this stage is characterized by being empathized with the heritage in a contemporary technological way, so that it attempts to inspire the heritage as a cultural or physiological presence, transforms or dismantling it in accordance with the current technological and structural trends " to develop an architecture that bears the spirit of the old and the traditional in a contemporary technological manner. " especially in the 1970s. [10].

1980s were complementary to the earlier ones in this field, as we notice the affixing of some of the heritage details on the facades of the buildings, which can be clearly observed in the facades of the buildings executed at that time. In addition to this, the emergence of local tendency and the addition of some heritage values, as well as the procedure of some adaptations to the general composition of the buildings which were produced and implemented due to the impact traditional touches and the general wave encouraged by official motivations, and called for by many architects and intellectuals who considered it an urgent historical and national necessity towards creating a national Iraqi personality in architecture. [7]

The human scale that prevailed in the buildings of the previous stage also began to decline, and was replaced by a large-scale, in both public and private buildings, following the large implemented buildings and the enormous financial resources. In addition to all this, it is interesting to notice how high the level of implementation and appearance methods has reached. [10]. This level is the result of many reasons represented by providing the tools of expression that can be easily possessed through the provision of financial resources, and the improvement of the economic level of the country, in addition to the existence of an experienced executive staff represented in foreign companies that contributed to the implementation of many buildings of this stage which are characterized by accuracy and speed in achievement, especially in the treatment of its structural joints.

9.2 *Technological features of the production of this stage according to structure:*

This stage represents a comprehensive renaissance in all construction process fields, especially the construction field, that it can be considered as a review of the technical development in the field of structure even if it is not observable.

Functional elements, clarity of spaces positions and the logical and easy movement are all factors contributed by the modern uses and the great exploitation of the structural vocabulary possibilities with the prospect of being detected as an additional influential element in the formal aspect of the building. Taking into consideration the fundamentals of local reality according to selected forms and details. As the structure, with its flexibility, formal simplicity, and great supporting potential, has contributed greatly to the intellectual flexibility and to free thinking of shapes and compositions that were not previously familiar, by employing the principle of "skin and bone" to create a kind of skin hanging on a simple high efficiency structure (bone), This would not have happened without the great increase in potential and structural efficiency. [10]

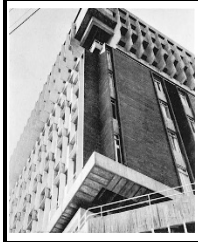
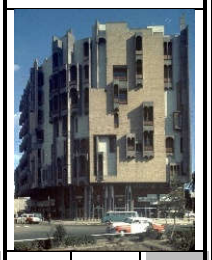
This, in turn, is a key tool that the designer genuinely employs in buildings for which he feels with a great design flexibility.

Projects in its architectural and artistic formation have embodied the modernity of the designed form which is resulted from designer's proven ability (Including the available design and construction tools) in the distribution of the structure and its body in accordance with the logic of the function of the building and in the context of the privacy of the subject in spite of the subjective privacy

imposed by the trends of the designer. For example, in the works of " Rifa'at Al Chaderchi", such as the architectural form, a state of implicit separation between the apparent form and the content of origin, because the external shape of the building doesn't have to reverse the content of the building and its function as much as being a prior confirmation of the separation so that its projects were characterized by contrast in the treatments of the facades that were unusually complex, and the clarity and simplicity of the plans and the structure system behind them. So the structural system contributed to the creation of a structure on which the screen is attached, which constitutes the general composition of the façade of the building. [9] The construction of buildings with previously unknown architectural standards in the local arena is commensurate with the new educational, economic, and even intellectual potentials such as (hospitals, universities, large capacity centers, administrative centers, ministries, recreational and industrial buildings and residential complexes)

Attempts are aimed at shaping the local Iraqi architecture and to find a new design language which combines elements and the creation of a new language that combines elements and traditional relations with modern construction techniques and their requirements (Especially postmodern approaches) as in the works of Muhammad Makiya, Rifa'at Al Chaderchi, Qahtan Awni and others, despite exaggeration in this trend sometimes.

Table 1: The application of theoretical framework items on selected samples of postmodern architecture in Baghdad

theoretical framework main items	Possible values of theoretical framework items			Sample 1			Sample 2			Sample 3			Sample 4			Sample 5			Sample 6		
				The Iraqi insurance company 1976 by Hisham Munir			Water liquefaction 1979 by Mahmoud Al-Ali			Iraqi Industries union 1966 by Rifa'at AlChaderchi			Ministry of Industry and Minerals 1978 by Fadhil Ajina			Communication 1971Building by Rifa'at AlChaderchi			Baghdad Municipality 1978 by Hisham Munir Nasir ALasady		
																					
Degree of achievement of brutalism	little	Medium	High	little	Medium	High	little	Medium	High	little	Medium	High	little	Medium	High	little	Medium	High	little	Medium	High
Degree of Structural Tectonic	little	Medium	High	little	Medium	High	little	Medium	High	little	Medium	High	little	Medium	High	little	Medium	High	little	Medium	High
Structural Expression	hiding	Medium	High	hiding	Medium	High	hiding	Medium	High	hiding	Medium	High	hiding	Medium	High	hiding	Medium	High	hiding	Medium	High
Degree of structural truth	completely hiding	partial hiding	structural frankness	completely hiding	partial hiding	structural frankness	completely hiding	partial hiding	structural frankness	completely hiding	partial hiding	structural frankness	completely hiding	partial hiding	structural frankness	completely hiding	partial hiding	structural frankness	completely hiding	partial hiding	structural frankness
Structural materials Expression	little	Medium	High	little	Medium	High	little	Medium	High	little	Medium	High	little	Medium	High	little	Medium	High	little	Medium	High

Relationship between Structure and form	Only means	Integration	Unity	Only means	Integration	Unity	Only means	Integration	Unity	Only means	Integration	Unity	Only means	Integration	Unity	Only means	Integration	Unity							
Multiplicity of structural patterns and systems	Multi structures		One structure	Multi structures		One structure	Multi structures		One structure	Multi structures		One structure	Multi structures		One structure										
Degree of structural technology	Traditional Technique		High Technique	Traditional Technique		High Technique	Traditional Technique		High Technique	Traditional Technique		High Technique	Traditional Technique		High Technique										
Variety of elements and materials	One material	medium variety	High variety	One material	medium variety	High variety	One material	medium variety	High variety	One material	medium variety	High variety	One material	medium variety	High variety										

10. Extraction of the most prominent elements of the implementation of theoretical framework indicators:

As in the application (table 1), we can extract many aspects:

• Some architectural forms was a case of implicit separation between the apparent form and the content of structure. The exterior shape of the building task is not to reflect the contents of the building and its function, as much as it is a prior confirmation of the separation so that the projects were characterized by contradiction in the interfaces of interfaces that were unusually complex and simplicity of the plans and the structure behind them. The structural system contributed to the creation of a structure based on or attached to the curtain, which constitutes the general configuration of the façade of the building.

The degree of achievement of brutalism between the samples is mostly medium with a clear desire to invest in brutalism as a direction that helps to invest the structural material in architectural expression .

• Emergence of structural tectonic phenomenon in most samples in case study, especially related to the structural material itself as a design element in the facades and formations.

• There has been a clear exploitation of the structure as an important element in the expressive aspects, especially in the public buildings that the large scale in that period through the exploitation of structure based on the elements and materials.

•The aspects of structural frankness and truth ranged from the partial appearance and concealment of the structural elements، but this indicates a clear exploitation of these elements in the architectural form، regardless of the degree of such representation.

• The reciprocal relationship between structure and architectural form has achieved a clear integration in aspects of influence at the form and support.

• There is no variety in the use of structural systems, because there is always one structural system for the building and often the skeleton structural concrete system. With the use of the same traditional techniques in construction, except for attempts to invest in imported modern technologies in some buildings at the time.
• We notice that there is a clear variety of structural materials, especially at the level of facades. This is what postmodern effect on the integration of local materials (bricks) with the traditional structural materials such as concrete, as well as the presence of wood as a local finishing material in the facades.

11. General Conclusions:

• The development of architecture is a result of the growing expressive capacities of ideas and structural systems.

As a result of the experience accumulation, structural thought is transformed from a purely structural system characterized by structural frankness resulting from the congruence of structural and aesthetic function to a tectonic construction system closely related to the concept of structural system.

(As a result of Post-Modernism), Architectural practice was characterized by formal and structural simplicity exaggeration in terms of the use of architectural heritage items in the formations of implemented buildings and their

employment in the modern structure with all its enormous technologies in construction and materials. Although first of these attempts didn't get the attention required, due to the importance and magnitude of the progress that was made in the nature of the constructive materials and modern structures. The importance of creativity and efficiency as elements that affect and being affected by the structural truth .their existence does not lie in being design factors or elements that represent and embody the design result ,but in being a cause of architectural and structural forms together, if not being a single entity. Attempts have been made to create a local Iraqi architecture and to create a new language that combines elements and traditional relationships with modern construction techniques and their requirements (especially post-modernism approaches). Such as in the works of Muhammad Makiya , Rifa'at Al Chaderchi ,Qahtan Awni and others, despite exaggeration in this direction sometimes.

Tectonicity and Brutalism had a clear appearance at the stage of studying ,which caused a high expression of structural elements and a clear effect on the resulting architectural formations of this stage at the level of structure and materials.

The level of Postmodern Architecture is the result of many reasons represented by providing the tools of expression that can be easily possessed through the provision of financial resources

Technological features of the production of Postmodern Architecture in Baghdad are distinguished by the construction of buildings with previously unknown architectural standards in the local arena is commensurate with the new educational, economic, and even intellectual potentials.

The improvement of the economic level of the country, in addition to the existence of an experienced executive staff represented in foreign companies are contributed to the implementation of many buildings of this stage which are characterized by accuracy and speed in achievement, especially in the treatment of its structural joints.

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الصدق والصراحة بين الفكر والإنشاء المعماري... أبنية ما بعد الحداثة في بغداد إنموذجاً

د. أسامة عبد المنعم التميمي

كلية الهندسة - جامعة بغداد - قسم هندسة العمارة، بغداد، العراق eng_usama_oat@yahoo.com

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الخلاصة – يعد الصدق مطابقة القول للواقع، وهو أشرف الفضائل النفسية، والمزايا الخلقية، لخصائصه الجليلة، وآثاره المهمة في حياة الفرد والمجتمع، وسبب نجاح كل الجوانب والفعاليات الإنسانية، وخصوصاً ما يرتبط منها بالعمارة والإنشاء، حيث برزت في الكثير من الأدبيات أهمية المعاني الجمالية التي يمكن ان يضيفها المنشأ للتشكيل العام من خلال الصراحة والصدق الناتجين من استعمال المنشأ بهيئته الظاهرة التعبيرية بغية تحقيق التتبع البصري للمسارات الصحيحة لانتقال القوى في مركبات الشكل الإنشائي. بالتالي ربط صفة الصدق التعبيري بالصدق الانشائي. بالتالي تكمن المشكلة البحثية في القصور المعرفي في دراسة جوانب الصدق والصراحة وفق طروحاتها الفكرية والتطبيقية من نواحي السمات المعرفية والمرتكزات الأساسية وما يترتب عليها من انعكاساتها على الجوانب الإنشائية والمعمارية بشكل عام. وهذا يبرز ضعف في فهم التصور الواضح لطبيعة العلاقة التبادلية للصدق كمفهوم فكري وكمنهج تطبيقي يمكن أن يؤثر في واقع الممارسة الإنشائية المعمارية. حيث يسعى البحث إلى توضيح العلاقة المتفاعلة بين مفهوم الصدق بكل أبعاده الفكرية وبين التطبيقات الإنشائية وما يمكن أن تؤثر به تلك العلاقة على النتاج المعماري الظاهر، وخصوصا في التجربة العراقية المعمارية الرائدة خلال فترة السبعينات والثمانينات من القرن الماضي، حيث يجسد الصدق نموذجاً منظماً للأحكام تتوضح من خلاله ملامح العلاقة بين الفكر من جهة والواقع التطبيقي من جهة أخرى، وبما يمكن تسميته بالصدق الإنشائي الظاهر.

الكلمات الرئيسية – "الصدق الإنشائي"، "التعبيرية الإنشائية"، "العمارة العراقية"، "المعاني الجمالية"، "بعد الحداثة".