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Manifestations of the Presence of Elegance in Architectural Production

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ABSTRACT

This research explores the concept of elegance as a fundamental element shaping architectural discourse, influencing the design process, and affecting our perception of the built environment. Elegance integrates cultural values and aspirations, enhancing human spatial experience by improving the comprehensibility of complex architectural systems. This study addresses the cognitive ambiguity surrounding the nature of elegance and its defining characteristics in architectural production. To achieve this, a descriptive-analytical methodology was employed. The research first establishes a conceptual and theoretical framework for architectural elegance, identifying key indicators, such as the characteristics of elegant architectural production, its underlying principles, and the hierarchical levels at which elegance manifests. This framework is then applied to selected architectural case studies—the Martyr's Monument and the Post and Telecommunications Building—to evaluate how elegance is expressed in architectural form and function. The findings reveal that elegance in architecture emerges from a balance between lightness, fluidity, and complexity management. The study identifies three primary levels of elegance: standard elegance, which focuses on functional and proportional aspects; formal elegance, which emphasizes aesthetics, movement, and spatial harmony; and intellectual elegance, which integrates deeper symbolic and cultural meanings into the architectural work. The research concludes that achieving elegance in architectural production requires a thoughtful interplay between visual refinement, spatial efficiency, and contextual significance.

Keywords: Elegance, Architectural production, Elegant architectural design, Architectural aesthetics.

INTRODUCTION

The rapid advancements in modern life, the emergence of renewable technologies, and the proliferation of complex architectural forms characterized by intricate visual beauty have underscored the necessity of activating a concept that contributes to enhancing architectural discourse. This concept is essential for refining and elevating the processes involved in the creation of architectural form. The notion of elegance, a universal and increasingly

emphasized concept in contemporary architecture, plays a pivotal role in both art and architecture. It significantly contributes to adding layers of aesthetic complexity, reflecting human sensibility, and pursuing high quality in the design and production of architectural forms.

This paper aims to establish a specific framework for measuring the characteristics of elegance in architecture, viewing elegance as a process of selection, shaping, refining, and polishing. Furthermore, it explores the various levels of elegance's presence in architectural works. The study asserts that elegance is a form of

beauty expression, extending beyond mere appearance. It permeates the essence of behavior, actions, and even thoughts, thereby embodying a deeper sense of experience, taste, and cultural sophistication.

In reviewing previous studies, which have linked elegance with certain visible characteristics such as diversity, movement, freedom, ease, fluidity, spiral and curved lines, and continuity (Wahdattalab et al., 2019), it was concluded that elegance is associated with ease of perception and attention. It is more closely related to curved and smooth lines than to straight or broken ones (Bergson, 1917). Elegance is thus defined as the ability to select and integrate elements that are appropriate and harmonious.

Despite its significance, the theoretical analysis of elegance, its nature and existential dimensions, remains under-explored and imprecisely defined. The act of elegance and its role in shaping architectural products have yet to be fully articulated and understood.

The research problem is rooted in the cognitive ambiguity surrounding the nature of elegance and its characteristics in the formation of architectural products. To address this issue, the study was designed as a descriptive-analytical investigation aimed at examining the visual features, foundational principles, and varying levels of elegance within architectural production.

The research process began by constructing a conceptual and cognitive framework around the notion of elegance. This was followed by a review of existing literature that explored the concept of elegance both within the field of architecture and beyond it. The analysis revealed that elegance is a multi-faceted concept, encompassing three primary dimensions: moral, formal, and standard.

The findings were classified and analyzed using a model that was applied to two architectural examples: 1) The Martyr's Monument, which embodies profound human values and visual prominence through its simplicity of form, and 2) The Post and Communications Building, which exemplifies formal relationships marked by maturity and integration with the surrounding environment. Both examples were selected for their significant impact on contemporary Iraqi architecture.

Elegance in Language

In the Arabic language, elegance is defined as the excellence in the selection of words, methods of

expression, and the beauty of appearance (Al-Mukhtar, 2008). It also refers to working with mastery and wisdom (Al-Fayrouzabadi, 1990), suggesting that elegance is the product of well-crafted actions.

In English, the term "elegance" is similarly defined. According to the Merriam-Webster dictionary, synonyms for elegance include terms, such as classy, courtly, fine, graceful, handsome, majestic, refined, stately, and tasteful (Merriam-Webster, n.d.).

Furthermore, the Encyclopedia Britannica (The Encyclopaedia Britannica, 1823) traces the word "elegance" to its Latin origins, deriving from the verb *eligo*, which means the ability to "choose, select, or appoint" (Barnhart, 1988). The Cambridge Dictionary (Cambridge Dictionary, n.d.) defines elegance as charm, attractiveness, and refinement in appearance and style. The Oxford Dictionary (The New Shorter Oxford English Dictionary, 1993) emphasizes elegance as agility, decency, and courtesy.

It is evident from these definitions that the linguistic meaning of elegance encompasses two main aspects: an aesthetic dimension related to organization and coordination, and a behavioral dimension connected to human values, emotions, and feelings, as illustrated in Figure 1.

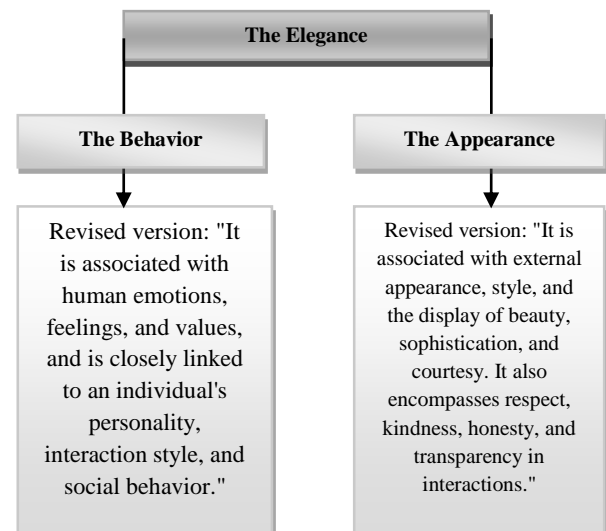


Figure 1. The concept of elegance on both levels (appearance and behaviour). Source: Created by the authors

Definition of Elegance

Elegance is frequently described as an act that harmoniously blends intelligence and beauty, often associated with high quality and perfection (Abu Al-

Saud, n.d.). The concept of "Ihsan" as described by Al-Isfahani reflects two dimensions: doing good for others and performing actions in the most exemplary manner (Al-Raghib, 1412 AH). In the realm of mathematics, elegance is linked to a profound mastery of the subject (Al-Ketbi, n.d.). According to the Merriam-Webster Dictionary, elegance is defined as "tasteful richness of design" or "restrained beauty of style," with an emphasis on precision, simplicity, and explanatory power in scientific contexts (Barnhart, 1988). In the world of fashion, Coco Chanel described elegance as "a refusal," while Fernando J. Corbato connected it to achieving functionality through minimalism and clarity (Chanel, n.d.). Jon Franklin characterized elegance as simplicity taken to its extreme, whereas Karl Lagerfeld asserted that elegance transcends fashion trends (Ibid.).

Elegance is intrinsically associated with movement and continuity, deliberately avoiding monotony or heaviness. Elegant products often exhibit cognitive and formal maturity, removing the superfluous to highlight simplicity and precision. This maturity is manifested not only in the visual appearance but also in the functional behavior of elegant designs.

LITERATURE REVIEW

This section aims to define the research problem by critically examining relevant previous studies. The literature review is categorized into two types of studies:

Studies on Elegance within the Field of Architecture

1. Schlaish (2015): This study explored the concept of "elegance" and investigated whether it constitutes a fundamental component of high-quality architectural structures. It argued that aesthetic quality plays a critical role in engaging our senses, with elegant elements driving sensory experiences through both visual and tactile interactions. The study emphasizes that elegance does not exist in isolation, but emerges from a combination of principles. Schlaish linked elegance to the Vitruvian triad of durability, utility, and beauty, asserting that it contributes to intentional design decisions characterized by simplicity and clarity.

Elegance, according to the study, can be achieved through a conscious design process that considers the local context, including topographical, political, cultural, economic, and sustainability factors. The research underscored the importance of fostering public

awareness regarding the significance of well-designed structures (Schlaish, 2015). Furthermore, the study identified three key aspects of elegance in architectural products: formal aspects (such as lightness and clarity), standard aspects (including quality and durability), and human aspects, which are connected to human perception, sensation, and the movement of the senses and emotions.

2. Schumacher (2007): This study examined how elegance can be expressed through complexity, arguing that true elegance requires refinement during the construction process. He asserted that elegance is not synonymous with minimalisms, but rather thrives on a balance between simplicity and complexity. According to Schumacher, achieving elegance involves reducing unnecessary complexity while preserving essential elements. An elegant solution, he contends, entails an economy of means, effectively managing complexity without descending into disorder. He advocates for transitioning from a state of complexity to one of organized complexity, where elements are simplified, but not entirely eliminated. The study concluded that elegance is a process of managing complexity and integrating various components in a refined and harmonious manner (Schumacher, 2007).

3. Ali Rahim and Hina Jamelle (2007): The researchers argued that elegance in architecture is deeply connected to the precise calibration of refined standards. They emphasized the importance of integrating organizational, spatial, and aesthetic elements within physical surfaces to create projects that evolve in response to social interaction. According to Rahim and Jamelle, interior design is a dynamic process, where forms increase in complexity, and shapes are hybridized to foster a continuity that embraces diversity. This process generates a distinctive mood within the interior, which is further enhanced by the synchronization of lighting effects. Elegance, they assert, is found in the subtle work and in the fluidity of organizational, spatial, and aesthetic elements (Rahim & Jamelle, 2007). Their study underscored the significance of refined, high-quality standards and highlighted the need for a responsive interaction between the built environment and its users.

4. David Goldblatt (2007): This study posited that

elegance is a complex and elusive aesthetic quality, transcending other characteristics, and is intimately connected to sensuality. Goldblatt argued that the attributes of elegance are context-dependent, meaning that what is considered elegant in one work may differ from that in another. The study further asserted that the concept of "new elegance" serves as a safeguard for the architectural community, protecting it from mechanical designs, abstract formalism, extreme functionalism, and theoretical detachment. Elegance manifests itself through varying degrees of intensity and subjectivity, often emerging from aesthetic properties, such as lightness and fluidity. According to Goldblatt, architecture can embody elegance by evoking fluidity and dynamism, appearing as though it is a frozen moment while subtly implying continuous movement. The study highlighted external characteristics of elegance, including reduction, abstraction, and lightness, and underscored its connection to sensuality and behavior (Goldblatt, 2007).

5. **Mahmoud A. Ismail and Wael A.E. Abd Elkader (2023):** This study explored the relationship between the design of house facades and the architectural identity of Amman, Jordan. The authors concentrated on how facade design influences the overall impression of the city and its role in expressing the cultural and social values of its residents.

This study demonstrated that residential facades are not merely visual elements, but also symbolic communication tools that represent the spirit of the city and reflect the transformations within the urban society. A field analysis was conducted, comparing various facade styles in different neighborhoods of Amman, and surveys were employed to understand the residents' preferences and aesthetic expectations.

The study concluded that facade design contributes to strengthening the architectural identity of the city and serves as an indicator of "visual elegance" when executed with a balance between authenticity and modernity (Ismail & Abd Elkader, 2023).

Studies on Elegance outside the Field of Architecture

This part of the research presents studies conducted outside the field of architecture, focusing on their perspectives and contributions to the concept of elegance.

1. **Efatmaneshnik and Ryan (2018):** This study explored the development and evaluation of elegant system design, emphasizing that most current definitions of elegance focus on the adequacy of a system as a solution to a problem. The authors differentiated between sufficiency and elegance, noting that sufficiency pertains to the essential and fundamental qualities required in a solution, while elegance refers to a simpler and less complicated solution. Elegance is defined as the sufficient, yet least complex, solution, underscoring that a solution may be sufficient without necessarily being elegant. The study concluded that the key values of elegance are sufficiency, efficiency, and performance (Efatmaneshnik & Ryan, 2018).
2. **Madni (2012):** This study investigated the design of elegant systems and sought to establish metrics for evaluating elegance. It argued that elegance in complex systems embodies expected behavior, strength, and creative functionality. Elegant design distinguishes itself by blending practicality with aesthetic appeal, providing support to both designers and users while fostering creative exploration. The design process is described as iterative and creative, incorporating systemic thinking, investigative questioning, and appropriate measurements to generate innovative solutions. The study highlighted common characteristics of creative designs, including novelty, relevance, and effectiveness. Elegance, in this context, is viewed as a marker of success, creativity, benefit, and an enhanced user experience, encompassing both user satisfaction and system responsiveness (Madni, 2012).
3. **Casadevall and Fang (2018):** This study explored the concept of elegance in science, suggesting that the pursuit of elegance contributes to the enhancement of scientific quality. It highlighted that one of the most valued qualities among scholars is "elegance," which is closely associated with simplicity and interpretive power. Elegance in science encompasses qualities, such as clarity, intelligence, correctness, economy, and beauty. The study raised the question of whether elegance is merely desirable or essential for good science, and whether elegance in scientific work is simply an appealing feature or a fundamental aspect of its quality. If elegance is indeed a core characteristic of good science, then the traits that define elegance

warrant as much attention as scientific accuracy. The study identified key indicators of elegance, which include accuracy, simplicity, and interpretive power (Casadevall & Fang, 2018).

Based on the above discussion, it can be concluded that there is a discrepancy in the existing proposals and a lack of a clear, universally accepted definition of elegance. Consequently, the nature of the research problem has been identified as a "cognitive ambiguity regarding the definition of elegance and its characteristics in the formation of architectural output." The performance of an elegant act can be summarized across three primary levels: the moral level, which addresses human values; the formal level, which focuses on the characteristics of form, including lightness; and the standard level, which pertains to economic considerations, proportions, and measurements.

Previous Studies

This paragraph focuses on extracting the vocabulary for the theoretical framework, building upon the concepts discussed earlier. It highlights that the act of elegance encompasses three main aspects: ethical, formal, and standard. Consequently, the studies have been categorized into these three dimensions to identify potential values relevant to the research.

The Ethical Level

This sub-section presents studies that address the ethical dimension of the act of elegance, as outlined below:

1. **Salman (2008):** This study emphasized the strong connection between ethics and architecture, proposing that ethics serve as a guiding principle for human behavior, encouraging individuals to pursue noble goals through rational actions. The study identified four key moral virtues—wisdom, chastity, courage, and justice—that govern human behavior. In architectural practice, these ethical values significantly influence design decisions. Architects are encouraged to make intentional, ethical, and virtuous choices in their designs. The study argued that architectural elegance is intrinsically linked to these ethical virtues, particularly in the selection of design elements that embody charity and goodwill (Al-Mamouri, 2008).
2. **Ibrahim (2019):** This study examined the inter-connection between creativity, charity, and

sincerity, proposing that creativity fosters charity, which in turn elevates the quality of work. The study asserted that architecture, when grounded in creativity and charity, reaches its fullest potential, promoting excellence through a holistic approach that integrates various aspects of life. Internal human virtues, such as charity and sincerity, are considered essential for producing elegant and meaningful architectural designs. The study conceptualized the relationship between perfection, creativity, quality, and charity as a gradual process, where each element contributes to the overall elegance and integrity of the final design (Ibrahim, 2019).

The Formal Level

This sub-section presents studies that focus on the formal aspect of the act of elegance, as detailed below:

1. **Mashal (2013):** This study investigated how Islamic architecture achieves rhetorical effects through its formal structural systems, with a particular focus on redundancy, defined as the quantitative increase in form. The study argued that this rhetorical structure is realized by balancing simplicity and complexity, managing the relationships between elements, and increasing their quantity through formal composition mechanisms. The attention to detail and the connection between architectural elements contribute to the emergence of elegance in Islamic architecture, with redundancy being highlighted as a key characteristic of its formal structure (Mashal, 2013).
2. **Schlotz et al. (2008):** Schlotz's study explored the subtle features that contribute to a beautiful and elegant appearance, with a particular emphasis on elegance as a cultural dimension of beauty. The study connected elegance to fluency, lightness, simplicity, and grace, while challenging the constraints of gravity and mental complexity. It highlighted the external characteristics of elegance—such as lightness, grace, and smoothness—arguing that these qualities define elegance in both architectural and aesthetic terms (Schlotz et al., 2008).
3. **Stevanov (2013):** This study discussed the concept of simplification, or minimalism, as a response to chaos and consumer society. It is part of a broader movement aimed at curbing excessive

artistic practices. The study suggests that minimalism represents a rigorous formal simplification and reduction to the bare essentials. It is a continuation of modernist style, rejecting the excesses of post-modernism and its formal complexities. Minimalism and post-modernity are framed as binary opposites, contrasting in terms of space, opulence, silence, semantic clarity, and speed of use. The study also positioned minimalism as a revival of clear, undecorated spaces. The principle of "less is more" serves as the fundamental approach to this aesthetic (Stevanov, 2013). The study highlights the characteristics of minimalism; namely, simplicity, reduction, and absence of unnecessary details.

The Standard Level

This sub-section presents studies that address the standard aspect of the act of elegance, as outlined below:

1. Issawi (2017): This study explored the aesthetic philosophy and timeless quality standards in architecture, emphasizing the relationship between form, humanity, and nature. It identified key characteristics that contribute to strength, respect, and elegance, including directionality (top vs. bottom), centrality, symmetry, and a clear structure that avoids chaos. The study also connects the elegance of a design to its function, size, shape, and balance. Strength is highlighted as a crucial visual characteristic of elegant architecture, alongside the

standards of economy, proportion, and symmetry (Issawi, 2017).

2. Al-Khafaji and Al-Muqarram (2010): This study examined the concept of sublimity in architecture, which is closely associated with majesty and elevation. Sublimity can be seen as an extreme form of beauty, yet it encompasses elegance as part of a balanced and harmonious experience. The study suggested that elegance involves calm, balanced beauty and alignment with the surrounding environment, ultimately creating a sense of prestige (Al-Khafaji & Al-Muqarram, 2010).

3. Al-Halawani (2019): This study explored the concepts of quality, creativity, mastery, and economy in interior architecture. It linked elegance to design elements (such as materials and lighting) and the designer's expertise. Elegance is achieved when a design preserves its functional value while also offering aesthetic appeal. The study emphasized that the designer's awareness and creativity are crucial for producing an elegant and sustainable architectural product (Al-Halawani, 2019).

Since elegance involves the careful selection of what is appropriate, it necessitates that the designer's approach to transforming intellectual concepts aligns with the building's requirements, context, and purpose. Table 1 outlines the characteristics of each approach, while Figure 2 illustrates the integration of elegant architectural form across different levels.

Table 1. Standard elegance and luxury elegance. Source: Created by the authors

Standard elegance	Luxurious elegance
<ul style="list-style-type: none"> It is linked to intellectual logic, drawing inspiration from stereotypical geometric shapes, most of which have sharp angles based on the human scale. Its objective outcomes are rigor, proportion and proportionality. It focuses on functional aspects, sustainability and performance standards, and is characterized by simplicity of problem. 	<ul style="list-style-type: none"> It is linked to poetry and art. Its inspiration is drawn from organic natural elements, and it provides a deep experience with a sense of privacy and the beauty of its surroundings. It sometimes adopts the literal scale. It is characterized by freedom of flow and harmony with the surroundings. It focuses on the formal aspects through creative interaction between humans and nature, working to create unique and distinctive spaces and life experiences.

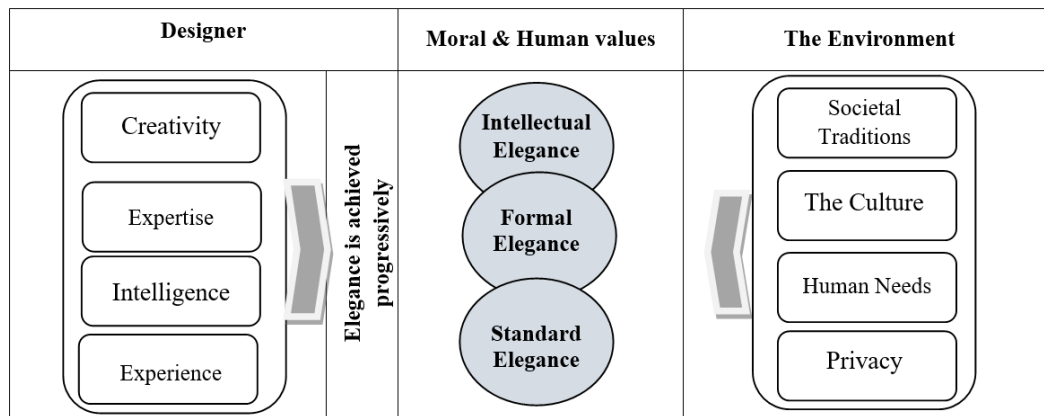


Figure 2. Integration of elegant architectural products. Source: Created by the authors

Building the Theoretical Framework

Through the previous proposal, key vocabulary was gathered and reformulated to construct a comprehensive theoretical framework for the indicators of elegant architectural output. This framework is outlined as

follows: Figure 2 presents the integration of elegant architectural products, while Table 2 lists the vocabulary that forms the foundation of the theoretical framework and the corresponding possible values.

Table 2. Vocabulary of the theoretical framework. Source: Created by the authors

Main vocabulary	Secondary vocabulary	Possible values
1. Features of elegant architectural products	Lightness	Using of white and light colors
		Adoption of lightweight structures
		Mass discharge
	Curve	Curved expressive power
		Curve ratio
2. Pillars of elegant architectural production	Creative thinking	Creativity, excellence, efficiency
	Human values	Privacy, respect, nobility
	Animated beauty	Attractiveness, being subtle and simple, calmness, being away from burdened beauty
	Interoperability	Harmony, convenience, interaction, flexibility, continuity
	Management of complex structures	Sense of order, refinement, coordination, self-organization
3. Levels of elegant architectural production	Level of standard elegance	Utilitarianism
		Humanitarian scale
		Convenience
		Economy
	Level of formal elegance	Bending
		Sarhiya
		Highness
	Level of intellectual elegance	Expressive power
		Formal rhetoric
		Innovation and creativity
		Eternity

Based on the above, several key terms will be emphasized during the measurement process, which include the following:

1. **Characteristics of elegant architectural production:** lightness, cues.
2. **Foundations of elegant architectural production:** creativity, compatibility, dynamic beauty, complex management.
3. **Levels of elegant architectural production:** standard elegance, formal elegance, intellectual elegance.

METHODOLOGY

The application aims to assess the reliability and validity of the theoretical framework by applying it to selected case studies, ensuring its practical relevance and effectiveness in evaluating elegant architectural design.

The Martyr's Monument, designed by architect Saman Asaad Kamal and visual artist Ismail Fattah Turk (Sample A), is an iconic architectural landmark in Baghdad that holds significant symbolic meaning.

The Martyr's Monument is one of the most iconic architectural landmarks in Baghdad, carrying profound symbolic meaning. Standing at 40 meters, the monument features a distinctive split dome at its core. This dome, a powerful symbol of Islamic architecture, is divided into two halves, representing movement and transformation. The separation evokes the image of a gate opening to release the soul of the martyr ascending to heaven. Beneath the monument, a flowing fountain symbolizes the immortality of the martyrs, further deepening the monument's symbolic significance, as shown in Figure 3. The flag is an essential design element, representing the identity of the Iraqi martyr and enhancing the monument's importance. The bluish-green color of the design contributes to its sacred aura. The design achieves a harmonious balance between the upper and lower parts, with the dome and the human-scale museum embodying an inverse proportionality that upholds an ethical aesthetic in the architectural form

(Alameed, 2009).

The Post and Telecommunications Building, designed by architect Rifaat Chadirji (Sample B), is a notable example of modern architecture that reflects both functional and aesthetic considerations in its design.

The Post and Telecommunications Building, exemplifies a sophisticated approach to challenging architectural conventions. The design emphasizes diversification, with varying façade divisions and different height levels, effectively avoiding the monotony typically found in high-rise buildings. In response to the limited site space, the building rises vertically, adhering to urban planning regulations while preserving privacy and a sense of spirituality. The structure consists of two blocks: one is a three-story section adjacent to the street, and the other is a taller block positioned further back, visible from a distance. Despite their distinct placements, the two blocks achieve visual unity through consistent design elements, such as repeating cement blocks, gypsum bricks, and arches. This cohesive design approach enhances the monumentality of the building, as shown in Figure 4 (Al-Dorar Al-Sunniah, n.d.).

Based on our findings, we identified the key vocabulary through which the effect of elegance is achieved in the architectural product form. In Table 3, the discussion and analysis of the two projects—the Martyr's Monument (Sample A) and the Post and Communications Building (Sample B)—are provided, along with the explanation of these key vocabulary elements.

Quantitative Comparison of Elegance in the Selected Projects

To strengthen the applied part of this research, a quantitative comparison between the Martyr's Monument and the Post and Telecommunications Building was conducted. This comparison aims to provide measurable criteria for assessing elegance in architectural production, making the analysis more objective and precise.



Figure 3. The Iraqi Martyrs' Memorial, showcasing its symbolic architectural features and national significance, with a focus on the intellectual and aesthetic elegance embedded in its design. Source: Alhariri, Sara Raed Majeed. "Title of the Image." 2019, www.arch.com



Figure 4. The Post and Telecommunications Building, designed by architect Rifaat al-Jaderji in Batlat, showcasing both innovative and elegant architectural features

Table 3. Discussion and analysis of the two projects (the Martyr's Monument, Sample A, and the Post and Communications Building, Sample B. Source: Created by the authors

1. Features of elegant architectural production		
Lightness	A	The splitting and displacement reduced the weight of the huge dome in addition to emptying the dome
	B	Vertical concrete partitions and block discharge softened the building's rigidity
Curve	A	Despite the size of the dome and the visual weight it gives, we find its curves very graceful and smooth
	B	We find that the quality of the arches in the exterior facades of the building is also in the architectural details such as windows or doors
2. The foundations of the elegant architectural product		
Innovative thinking	A	We find the designer's intelligence in using architectural and artistic elements that express the values of martyrdom and sacrifice, his choice of the dome, its high symbolism in the Islamic community and its reflected strength and pride in honor of the status of the martyr
	B	We find the intelligence and genius of the designer through his integration with the surrounding environment and his ability to integrate traditional elements with modernity, and to design a building that is in harmony with its environment and highlights its uniqueness
Animated Beauty	A	We find the beauty of movement in the removal of the dome, the rise of the martyr's spirit to the top, and the spring of water that gives a vivid picture of the status of the martyr and the abandonment of his pure spirit
	B	Redundancy, mass gradient gave a characteristic The designer worked to break the usual pattern in the placement of repeated floors and adopted repeated concrete surfaces to give lightness to the building
Compatibility	A	The interaction of the building with the surrounding urban environment, making it part of the architectural fabric of the city, contributed to enhancing the aesthetic and appearance of the area
	B	We find compatibility with the general context of Al-Rasheed Street, in addition to achieving an ideal match between the practical function of the building as a post and communications center and the artistic aesthetic that makes it a piece of art
Complex Compositions Management	A	Formally, we find that the designer has managed successfully in terms of selecting the elements and how to add them. He has provided a vivid picture of sacrifice and martyrdom
	B	Despite the diversity of surfaces and shapes, we find successful management in the organization and selection of materials

3.Elegant architectural product levels		
Standard Elegance	A	The shape is based on the concept of inverse proportion, balanced between the symbolic dome and the human scale of the museum
	B	Size gradation in the blocks to allow them to be viewed from afar and able to be understood
Formal Elegance	A	Adopting the dome, which often symbolizes power, awe, and greatness in relation to the strength and stability of its structure, gives a feeling of a balanced experience, lightness, and ease of digestion
	B	The design is characterized by optical illusions across the two halves of the dome, as it appears closed to the eye and then gradually is divided, depending on the location and angle of the viewer, creating an interaction between the monument and the viewer
Intellectual Elegance	A	The designer is motivated to create the project to honor the memory of the martyr who gave his life in defense of his country and his beliefs
	B	The use of historical elements, such as the shapes of the arches and the Jifqim brick material, considering the spirit of the place, and this is what gave the building its privacy and spirit, which was linked to the spirit and memory of the place

Establishing Key Elegance Indicators

Elegance is often perceived as a subjective quality; however, it can be evaluated using measurable architectural characteristics. The following indicators were selected to quantify the presence of elegance in the two case studies:

- **Curved vs. Straight Lines Ratio:** Curvature contributes to fluidity, lightness, and a sense of movement, which are key aspects of elegance, measured by analyzing the dominance of curved and linear elements in the architectural composition of each building.

- **Mass Reduction Percentage (%):** The degree of voids and openings within a structure influences visual lightness and spatial fluidity, estimated by assessing voids, openings, and spatial transparency within the structural form.

- **Light and Shadow Interaction:** The way natural light interacts with the form affects the perception of elegance, highlighting surfaces and enhancing depth, evaluated through architectural renderings and site observations, focusing on the dynamic contrast between light and shadow.

- **User Movement and Perception:** Elegance is not only visual, but also experiential; the way users move through and around a building impacts how elegance is perceived, assessed through spatial analysis, considering how users experience and interact with each structure.

These indicators were used to systematically quantify elegance-related attributes, ensuring an objective assessment of both projects.

Quantitative Comparison Table

As listed in Table 4, the quantitative comparison for each elegance indicator, with its application to the two projects previously mentioned is shown (the Martyr's Monument, Sample A, and the Post and Communications Building, Sample B).

To ensure a measurable evaluation of elegance, four key architectural attributes were analyzed and quantified. The percentages in Table 4 were determined based on visual and spatial assessments of the selected case studies. These values represent the proportion of specific design elements that contribute to the perception of elegance. The methodology behind each percentage is as follows:

Table 4. Quantitative comparison of each elegance indicator with application to the two projects.

Source: Created by the authors

Elegance Indicator	Sample(A)	Sample(B)
Curved vs. Straight Lines Ratio	~80% Curved Forms (split dome, flowing lines)	30% Curved Forms (arches, façade details)
Mass Reduction Percentage (%)	~50% (voids created by dome separation)	~20% (vertical openings in façade)
Light and Shadow Interaction	Strong dynamic shadows on the dome throughout the day	Even light distribution, minimal shadow effect
User Movement and Perception	Dynamic experience; changing views depending on the angle	Static perception with gradual vertical variations

Findings and Analysis

The quantitative comparison reveals the following key observations:

1. **Curvature and Elegance:** Higher curvature ratios enhance the perception of elegance. The Martyr's Monument, with its fluid, curvilinear form, evokes a greater sense of movement and fluidity compared to the more rigid structure of the Post and Telecommunications Building.
2. **Mass Reduction:** Reducing mass contributes to a sense of lightness and spatial depth. The Martyr's Monument effectively uses voids to appear ethereal, whereas the Post and Telecommunications Building maintains a solid, heavy presence.
3. **Light and Shadow:** The dynamic interaction of light and shadow reinforces elegance. The dome of the Martyr's Monument creates varied shadow effects, enhancing its sculptural quality. In contrast, the Post and Telecommunications Building has a uniform façade, limiting the interplay of light.
4. **User Perception:** Spatial interaction influences perception. The Martyr's Monument offers a dynamic experience, with shifting views that enhance its elegance, while the Post and Telecommunications Building provides a more repetitive and static visual experience.

Implications for Architectural Elegance

The findings emphasize that curvature, mass reduction, light manipulation, and spatial interaction are critical elements in achieving architectural elegance. These factors can serve as guiding principles for enhancing elegance in future architectural designs.

The Conclusions of the Theoretical Side

The theoretical analysis of architectural elegance has

led to several key conclusions that define its role in shaping architectural production. These findings emphasize the multi-dimensional nature of elegance, highlighting its presence at different levels of architectural expression.

1. **Elegance as a Multi-dimensional Concept.**
 - Elegance in architecture is not confined to aesthetic appeal, but operates on three inter-related levels: standard elegance, which focuses on functional and proportional aspects; formal elegance, which emphasizes fluidity, movement, and aesthetic refinement; and intellectual elegance, which integrates symbolic and cultural significance.
 - These levels interact dynamically to shape the perception of elegance, as illustrated in Figure 5, which depicts the integration of elegant architectural production.
2. **The Role of Proportionality and Economy in Standard Elegance**
 - At the standard level, elegance is achieved through harmonized proportions, structural efficiency, and economic rationality. Elegant architectural compositions maintain a balance between form and function, ensuring that the design meets both aesthetic and utilitarian requirements without excess or unnecessary complexity.
3. **Fluidity and Movement as Defining Aspects of Formal Elegance.**
 - The presence of curvature, lightness, and spatial continuity is a key characteristic of formal elegance. Theoretical studies suggest that curved forms and seamless transitions create a sense of gracefulness and refinement, reinforcing the perception of elegance in architectural works.

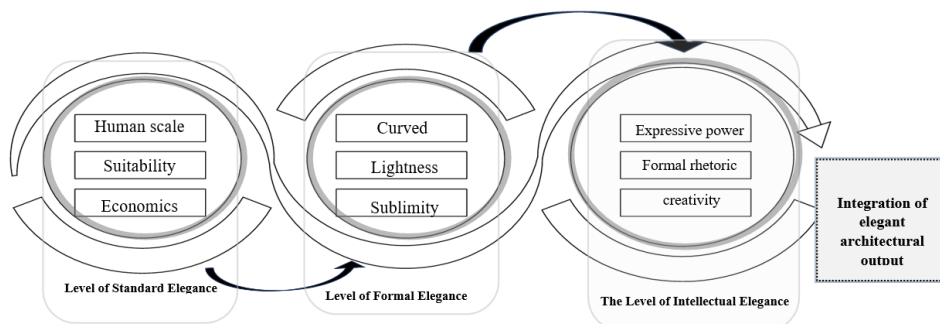


Figure 5. Levels of elegant architectural production. Source: Created by the authors

4. The Intellectual Dimension of Elegance and Its Cultural Significance

- Beyond physical attributes, elegance is deeply connected to symbolism, cultural narratives, and human perception. Architectural elegance at this level is expressed through the integration of meaningful references, spatial storytelling, and emotional resonance, allowing buildings to convey deeper philosophical and artistic values.

5. Synthesis of Theoretical Insights

These findings confirm that elegance in architecture is a holistic and layered phenomenon, requiring a deliberate balance between form, function, and meaning. The integration of these dimensions fosters a refined architectural experience that resonates on both visual and intellectual levels, reinforcing the role of elegance as a fundamental principle in architectural design.

Conclusions of the Practical Side

Based on the applied analysis of the Martyr's Monument and the Post and Telecommunications Building, several key conclusions were drawn regarding how elegance manifests in architectural production. These conclusions highlight the role of formal characteristics, spatial composition, and complexity management in achieving elegance.

1. The Relationship between Lightness and Architectural Composition.

Lightness in design is achieved through mass reduction and a balance between solid and void elements. This is evident in the Martyr's Monument, where the dome is split into two halves, creating a sense of movement and visual transparency, enhancing the

perception of elegance.

In contrast, the Post and Telecommunications Building employs rigid vertical divisions with limited openings, reducing the effect of lightness and resulting in a visually heavier and more solid architectural mass.

2. The Role of Fluidity in Achieving Elegance.

Curved lines play a fundamental role in enhancing the sense of fluidity and movement within a design. In the Martyr's Monument, curved forms dominate the structure, making it appear more dynamic and harmonized with its surroundings.

Meanwhile, the Post and Telecommunications Building incorporates fewer curved elements, primarily in its façade arches and decorative details, making its overall form more rigid and static.

3. Managing Shadows and Light to Enhance Elegance.

The interplay between light and shadow significantly affects the perception of elegance. The Martyr's Monument generates strong, dynamic shadows throughout the day, emphasizing its sculptural form and reinforcing its visual appeal.

In contrast, the Post and Telecommunications Building features a uniform light distribution, which minimizes dramatic contrasts and reduces its expressive depth.

4. User Perception and Spatial Experience.

The Martyr's Monument provides a highly interactive experience, where changing viewpoints continuously alter the perception of form, creating a dynamic engagement between the user and the structure.

On the other hand, the Post and Telecommunications Building offers a static and repetitive spatial experience, where movement does not significantly affect the user's perception of the building's composition.

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