

## THE ROLE OF PRINCIPLES OF DESIGN IN THE AESTHETICS OF LINEAR FORMATIONS IN THE KISWAH OF KAABA

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**Abstract:** The linear formations in the Kaaba's covering are characterized by several design principles that have effectively contributed to giving the Holy Kaaba's covering an aesthetic appearance. Therefore, this study aims to reveal the technical design foundations of the covering of the Kaaba, according to a methodological and analytical perspective. The method used in this study is the descriptive-analytical method. This study is classified under applied field studies. The study concluded that the linear formations present in the covering of the Holy Kaaba enjoy several design foundations of an artistic and aesthetic nature. These foundations are balance, supremacy, rhythm, unity, contrast, coordination, proportionality, symmetry, and sequence. The study also concluded that artistic design principles had been applied to the highest degree to achieve the aesthetic goal of designing the linear formations in the cladding and to enhance the artistic dimensions through a functional and aesthetic rhythm.

**Keywords:** Artistic design, design principles, calligraphy formations, Islamic art, covering of the Kaaba.

**Abstrak:** Formasi linier pada penutup Ka'bah dicirikan oleh sejumlah prinsip desain yang telah secara efektif memberikan kontribusi untuk memberikan penutup Ka'bah Suci penampilan estetika yang dimilikinya. Oleh karena itu, penelitian ini bertujuan untuk mengungkap dasar-dasar desain teknis penutup Ka'bah, menurut perspektif metodologis dan analitis. Metode yang digunakan dalam penelitian ini adalah metode deskriptif analitis. Studi ini diklasifikasikan di bawah studi lapangan terapan. Kajian menyimpulkan bahwa formasi linier yang ada pada penutup Ka'bah memiliki sejumlah fondasi desain yang bersifat artistik dan estetis. Fondasi tersebut adalah keseimbangan, supremasi, ritme, kesatuan, kontras, koordinasi, proporsionalitas, simetri, dan urutan. Kajian ini juga menyimpulkan bahwa prinsip dan prinsip desain artistik telah diterapkan semaksimal mungkin untuk mencapai tujuan estetika dalam merancang formasi linier di kelongsong dan untuk meningkatkan dimensi artistik melalui ritme fungsional dan estetika.

**Kata kunci:** Desain artistik, prinsip desain, formasi kaligrafi, seni Islam, penutup Ka'ba

### 1. Introduction

The art of Arabic calligraphy has a key role in highlighting the aesthetics of the covering of the Kaaba, in addition to all the design principles of proportionality, unity, balance and rhythm embodied within the structure of the linear formations resulting from the organization of linear relations on the surface of the covering fabric, which are intertwined and intertwined in all formations and linear structures in the dress of the Kaaba. Supervisor. Uday Farman asserts that "Arabic calligraphy approaches, in many aspects, music and mathematics through geometrical formulas that depend on repetition and balance in creating spaces between letters and another, a word and another according to a well-studied arithmetic rule called "textualization." The movement of the calligraphy in space generates rhythm. Then It is music that depends on harmony, harmony and repetition, determined by exact mathematical proportions. In the end, the Arabic letter is governed by the mathematical laws of rhythm, those laws that are the basic essence of musical rhythms" (Farman, 2004).

### 2. Methodology

The practical aspect of the current study focuses on analyzing the design foundations of an aesthetic and artistic nature embodied in the linear formations in the covering of the Kaaba. The

study also seeks to present a purely technical analytical study on the Kaaba dress in terms of in-depth structural design foundations that led to the process of attraction and creation of dimensions and aesthetic values of the kiswa. Arabic calligraphy meets plastic and design arts because Arabic calligraphy is based on the beauty of letters derived from natural expressions, in addition to the principles and foundations of Arabic calligraphy shared with other plastic arts.

### 3. Result and Discussion

The linear formations in the Kaaba's covering are characterized by several design principles that have effectively contributed to giving the covering the aesthetic appearance of the linear formations. These foundations are represented in several basic points: balance, sovereignty, rhythm, unity, contrast and contrast, coordination and proportionality, symmetry, and sequence. The researcher will briefly analyze each character in terms of the comprehensiveness of the concept and function. Perhaps it is appropriate to refer to the concept of linear composition so that the vision becomes clear, and Nassif Jassim defines it as "a process of formal organization that depends on the letter or textual material and takes a specific geometric or non-geometric cover and results in the design of the design foundations for the written construction and the written construction, especially unity, balance and flexibility The reading sequence according to the directionality that was determined, and it can be based in its creation of several methods, including symmetry, symmetry, or linear horizontal extension" (Daley, 2013). As for Abd al-Ridha Daoud Qafd, he defined the linear composition as "a linear structure based on a literal textual pattern that aims through which to show a linear aesthetic design, and it is subject to a system classified by the designer or calligrapher for a specific goal" (Dali, 2013). On the other hand, artistic design is defined as distributing lines and colors in a certain way within a form that includes a certain degree of regularity and delicate balance to express ideas aesthetically and functionally (Galeb, 1988). Which decides how the elements must be combined to produce a certain effect (Nobler, 1987) and the researcher defines her idiomatic definition in the light of the objectives of her research for the term linear formations "as a design and organization process that depends primarily on Arabic calligraphy in terms of its letters and textual structure and takes place in light of the principles and rules of writing. Arabic in terms of reading sequence, unity and balance in the composition structure so that the final design of the linear composition is embodied in an aesthetic integrated and harmonious way among its structural elements.

#### The Principles of design in the linear formations in the covering of the Kaaba:

These foundations are represented in several basic points: balance, sovereignty, rhythm, unity, contrast and contrast, coordination and proportionality, and symmetry and sequence.

- a. **Balance:** is one of the basic foundations for bringing psychological comfort to contemplate the linear formations embodied in the design of the covering of the Kaaba, and also one of the general foundations for the aesthetic organization of building the linear composition and the feature of balance includes many meanings that result in stability in the structure of the linear composition, as Its absence causes an imbalance in the composition system, in other words, the feature of balance is a condition that must be provided for any design process, whether it is a calligraphic painting or plastic art, as it is a general principle in building the system for design work. The concept of balance moved to the art of Arabic calligraphy and became a necessity required in Any building for a linear work, as the balance is one of the most important basic relationships for creating aesthetic organization between the structure of the elements of linear composition and achieving the aesthetic goal of the artwork. There are two types of

balance: First, symmetrical balance: Is the simplest, clearest, and least diverse type of balance, and it can be achieved in the simplest form of The path of symmetry. Second: Asymmetric equilibrium: In this type of equilibrium, the opposing gravity is distributed on both sides of the axis with its asymmetry, and this type of equilibrium is more vibrant and attractive because it bears the characteristics of diversity and change between the different shapes and their weights" (Al-Husseini, 2003). An example of this is evident from Image (1) of the door of the Kaaba curtain that the feature of balance was provided in the overall design process of the curtain in terms of balance in the arrangement and distribution of forms of linear formations and plant decorative units between the right and left side of the curtain to create a state of aesthetic organization.



Image 1. A detailed picture of the curtain of the door of the Kaaba, through which it becomes clear the aesthetic relationship of the feature of balance within the overall design structure of the curtain (<http://www.emadphoto.com/#/makkah>)

- b. **Dominance:** It is the nucleus on which the technical design process for the covering of the Kaaba is built, and in general, in the artwork, the embodiment of the feature of sovereignty is the first thing that draws attention to it. The concept of sovereignty appears mainly in distinguishing a particular element over a group of surrounding elements. In the design of linear work, sovereignty generally means the dominance of one design element in a way that dominates the rest of the other parts. Dominance is either through the contrast in color, degree, size or texture, and sovereignty is through the different types of lines or the shape of the elements of composition. Sovereignty is achieved either by employing a specific type of Arabic calligraphy or by predominating one color over the other within the calligraphic work. In light of this, the characteristic of sovereignty is a necessity that must be provided for the work, organization and leadership of the subordinate technical elements (Riyad, 1974). The complex clear third in the total of linear formations present in the covering of the Kaaba generated a strong point of polarization with an artistic and aesthetic nature; in addition, the technical aspect in designing the covering of the Kaaba took into account, in particular, the importance of the character of sovereignty in terms of being the point Focal in the overall design and the coordination of the linear compositional construction.



Image 2. A picture of the ribbon belt from the covering of the Holy Kaaba showing the supremacy of the complex clear thuluth line in the construction of the linear composition and the predominance of the golden color (<http://www.emadphoto.com/#/makkah/>)

An example of this is evident from Image (2) the predominance of the clear thuluth line, which is installed in the total linear formations in the ribbon belt in the Kaaba covering and the golden color, created a strong polarizing point for the design process of the *kiswa*.

- c. **Rhythm:** is one of the aesthetic foundations that express several expressive and artistic concepts of linear composition, and the characteristic of rhythm is defined as "the process of repeating the elements or one of them in the artwork, according to a certain frequency that raises the feeling of the sequence of melodies at specific times." The rhythm characteristic in the art of design is "the time intervals that the eye needs to move from one form to another." We mean by employing the rhythm feature in the design by repetition of blocks or spaces, and the repetition may be completely identical or different, convergent or divergent. In general, rhythm is achieved only by the repetition of technical units. Rhythm also has two basic elements: Units are the shapes of the drawn elements and are the positive side. Second: Times: They are the spaces between these elements and are the negative side. Whatever the shape of the rhythm, it must fall into one of the following rhythmic levels: Monotonous rhythm: In it, units and times are completely similar in all respects, such as shape, size and location, except for color. Or a non-monotonous rhythm: in which all units are similar, just as the times are similar (Myers, 1996). Based on the preceding, the rhythm property is an organizational process for separating the artwork elements. The rhythm occurs from the repetition of the artistic element and its regular spread on the artwork's surface, and this repeated image generates a special kind of rhythm between the elements of the linear work. One of the features of the rhythm property is that They add visual appeal and stimulate the aesthetic dimension through a rhythmic sequence of elements (Al-Saifi, 1992). An example of this can be seen in Image (3), where the repetition of the same formative linear form was embodied in a rectangular, and rhythmic manner on the rest of the covering of the Kaaba, and this repetition established the foundations of the artwork.



Image 3. A partial picture of a linear formation of the covering of the Holy Kaaba, showing the characteristic of rhythm through repetition of the same linear structural form in a rectangular shape on the rest of the covering of the Kaaba  
(<http://www.emadphoto.com/#/makkah/>)

- d. **Unity:** The property of unity is considered one of the essential issues in the design process, and the concept of unity can be defined as the process of combining the elements of the artwork in an identically homogeneous internal connection to create a kind of unity between the elements of the artwork (Al-Husseini, 2003). Abdel-Fattah Riad (1974) sees "unity as the process of organizing a group that is interconnected in relations with each other and expresses a balanced and harmonious arrangement." In the sense that the unit is the main factor that sends the organization among all the units within the structure of the linear configuration. The concept of unity in the art of Arabic calligraphy is represented through the unity of the idea and the unity of the goal in expressing a coherent subject of a text that interacts with the form (Farman, 2004). Unity is an essential factor in the technical design process, as the specialized units in the design must be linked with each other, and the whole design to be a coherent unit based on a specific system of relationships. The property of unity is based on two considerations: First: the relationship of the part to the part: it means the method in which each part of the design is composed of the other part to create a sense of coherence and cohesion between the different parts, and here we mean the parts; Shapes, colors, lines and surface values. Second: The relationship of the part to the whole: This relationship means the method in which the design achieves the relationship of the parts with each other and with the design whole; The relationships between the parts of the design with each other are of no value if they are not consistent with the design whole (Daoud, 1997). As an example, we note from Image (4) the unity of design for Arabic calligraphy within the structure of the linear formations in the covering of the Kaaba, where the unity was embodied in the type of executed calligraphy; It is the complex clear third line, and also the unit in the subject; Where the Qur'anic verses were written with different contents, and also the unity embodied in the color of the script executed in it; It is golden color.

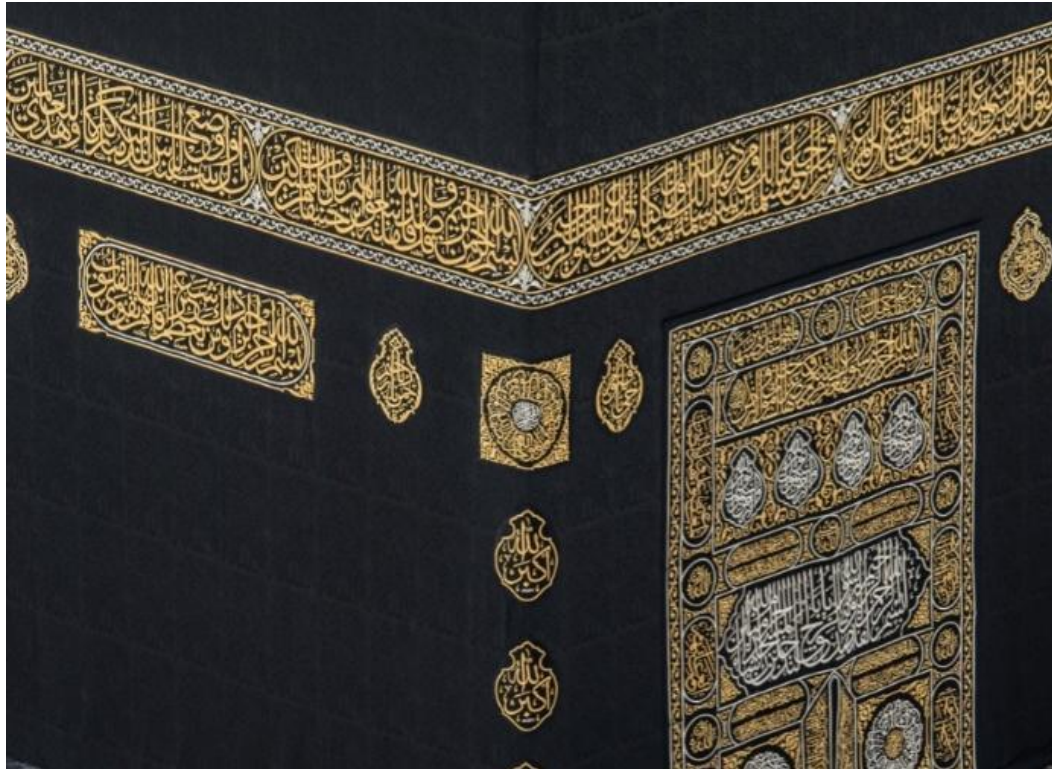


Image 4. A cross-sectional image of the Arabic calligraphy and the linear formations in the covering of the Kaaba embodies the unity in the type of executed font and the color of the writing font. (<http://www.emadphoto.com/#/makkah>)

- e. **Layout and Proportionality:** The feature of layout and proportion is one of the corporate aesthetic relations of the structure of linear formations. The layout is the sequence of letters and words within the semantics of the textual structure in the linear structure. One of its features is to achieve the functional and aesthetic aspect of the linear work; then, the layout is a path of compatibility, Aligning adjacent units with each other. All linear vocabulary of a letter and a word must specify the direction of its movement in a certain pattern and proportion (Daoud, 1997). On the other hand, the proportionality property means the proportionality of each part of the work with the other part and its relationship with the design whole. The proportionality occurs between sizes, areas, lengths, measures and quantities, and all linear work components. In addition, the concept of proportionality refers to a relationship between two or more things, such as the relationship in size, area, quantity and degree between one thing and another, and proportionality is the design relations of measurements (Al-Husseini, 2003). An example of this is evident from Image (5) of the covering of the Kaaba, which embodies the use of the feature of coordination and proportionality between the sizes, areas, lengths and measures that make up the total of structures and linear formations.



Image 5. A picture of the geometric and iconic linear formations in the covering of the Kaaba that embodies the character of harmony and proportionality between the design of sizes, areas, lengths and measures (<http://www.emadphoto.com/#/makkah/>)

- f. **Contrast:** The property of contrast generates a kind of aesthetic relationship in the linear work. Abdel-Fattah Riyad defines the property of antagonism as "the state of collecting opposing or diminishing elements in shape, direction, color, or size, and space plays an essential role in arousing pleasure in design." Contradiction is one of the basic design states and is either in the form of lines or spaces. , blocks, directions, color values, or textures. The contrast is generally used in artistic design to give it movement, diversity and an aesthetic touch (Reed, 1962). Through this feature, the calligrapher can display the written vocabulary and what it contains in a way that makes the important elements capable of emergence and crystallization. In every calligraphic work, there is a process of contradiction and contrast between the elements of shape, color and size, which creates an important attraction factor (Al-Jubouri, 1998). An example of this is evident from Image (6) of the curtain of the door of the Holy Kaaba, whereby this Model embodies the contrast between the color values on the one hand and the other hand between the forms of the iconic linear formations and the decorative plant units, and this, in turn, is considered an important source that inspires diversification and vitality. It achieves more visual pleasure with an aesthetic dimension to contemplate the structure of the linear and decorative composition.



Image 6. A picture of the iconic linear formations in the curtain of the door of the Kaaba that embodies the property of contrast and contrast between the elements of shape and color (<http://www.emadphoto.com/#/makkah/>)

- g. **Symmetry:** is one of the most important aesthetic and technical foundations on which the design of linear formations in the covering of the Kaaba is based. Riyad defines the symmetry property as "the possibility of drawing an imaginary division line that passes through the center of the composition so that two identical parts can be obtained." From a technical point of view, the presence of symmetry in the artistic design generates a feeling that suggests balance and beauty, and symmetry is of two types: there is half symmetry, and one of the two halves resembles the other half of the composition in the opposite direction. The total symmetry occurs through complete similarity in the form of

the linear or decorative composition, whether in direction or opposite, and the symmetry may be from the four sides. For the vision to become clear, the feature of symmetry is that the elements of the artwork are completely or partially similar. Symmetry is one of the most prominent design principles adopted within Islamic architecture, and Islamic decorative units completely depend on this principle in artistic composition (Al-Husseini, 2003). An example of this is evident from Image (7) includes a picture of two inscription bands for the southern and western sides surrounding the Kaaba. The four sides suggest poise and beauty.

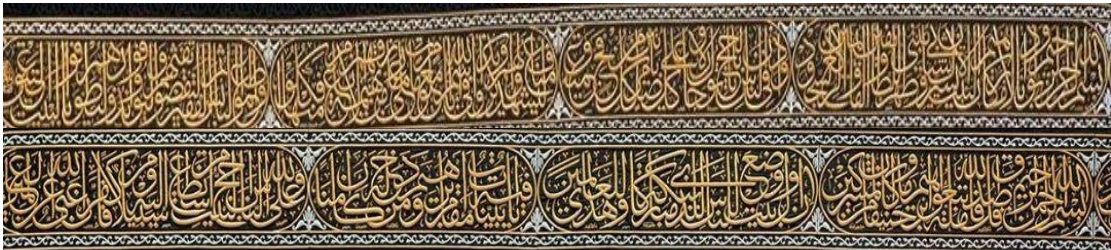


Image 7. A picture of the stripe linear configuration of the southern and western sides in the covering of the Kaaba embodies the characteristic of total symmetry in the output body (<http://www.emadphoto.com/#/makkah/>)

- h. **Sequence:** The sequence characteristic is one of the important foundations applied in the design of the linear formations in the covering of the Kaaba in a prominent way. Jassim Nassif defines this feature as "the process of formation sequence in the visual paths, and it represents the ability of the calligrapher to make the recipient look at a certain starting point and then move from this point to another point, then a third and so on in a sequential manner and the same sequential rhythm that the calligrapher aims at to serve the composition Linear" (Al-Husseini, 2003). An example of this is evident from Image (8) of the covering of the Kaaba, where through this Model, the sequential rhythm of the recitation sequence is embodied sequentially and aesthetically. Also, through this linear Model, the process of organizing words and letters is embodied in a system that depends on reading sequence to reach the aesthetics of organization and readability. In the same context, the calligraphic structures present in the covering of the Holy Kaaba are characterized by the directional organization within the written sequential pattern on the one hand and the other hand, by the rhythmic sequence between letters and words to embody a harmonious rhythmic sequence that shows the basic characteristics of the artistic composition in Arabic calligraphy such as cohesion, balance and stability.



Image 8. A picture of the linear strip formation of the eastern side in the covering of the Kaaba, embodying the character of the sequence of the reading sequence (<http://www.emadphoto.com/#/makkah/>)

#### 4. Conclusion

In light of the previous, it is clear that the employment of the sum of these technical design foundations represented in balance, sovereignty, unity, rhythm, harmony and proportion, contrast and contrast, symmetry, and sequence in the design of the linear formations embodied in the cladding and the curtain of the door of the Kaaba has played the essential role in highlighting the aesthetic values and increasing the attraction of attention, as well as to show the shape of the letter artistically and support the linear formative construction by increasing the visual sense, and each feature among these foundations has an idea that affects the psychology of the recipient and carries a high artistic and aesthetic energy that adds to the overall design of the cladding another aesthetic dimension. The researcher found that the foundations of artistic design and the principles of linear composition have been applied to the highest degree to achieve the aesthetic goal of designing the linear formations in the cladding and to enhance the artistic dimensions through a functional and aesthetic rhythm.

After an extensive study of the artistic composition of Arabic calligraphy, the study concluded that the aesthetic criterion for the linear formations in the covering of the Kaaba lies in the degree of mastery and proficiency in employing the technical design foundations by formulating a studied methodology. The artistic building is the basic structure of the linear composition based on balance, unity, proportionality and rhythm between its linear vocabulary, which is produced by organizing the linear relationships on the surface of the linear composition. The spiritual aspect of the feeling of the greatness of the Ayatollahs in contemplating the Kaaba covering is distinguished by its unique Islamic artistic character.

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