

The aesthetic effect of the surface texture as a formative element and Benefiting from it in enriching Designs suitable for textile hangings

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Abstract:

Textures play an important role in the field of design, by employing them formatively with other technical elements, they give the design richness and richness, as it gives a contrast in the tactile and silhouette degrees of the different spaces within the design.

Surface textures play an important role in the construction of the textile hanging, as they contribute with other elements of artistic formation to the formation and identification of the features of the artwork, and to achieve the visual contrast between the shapes and units, and the use of textures in the textile hanging helps to determine the proximity and distance, and emphasizes the spatial depth.

Through the study of the various surface textures, tremendous aesthetic values appear that can be a new source of inspiration and innovation in the field of arts in general, and the field of designing textile pendants in particular, The current study was concerned with researching the various forms of touches to benefit from their aesthetic and artistic values in creating artistic designs suitable as modern textile hangings, and employing them with functional proposals to enrich the field of designing textile hangings using the semi-hand loom method, and to obtain aesthetic effects through the use of computers in research designs.

Key Words:

The Aesthetic Effect, The Surface Texture, The Textile Hangings.

Introduction:

Texture is an expression that indicates the surface properties of materials, and it is an important element of the artwork. The arts of photography with visual perception resulting from the difference in expression of the required texture, so the type and nature of texture can be identified through the process of visual perception only, Which evokes sensations similar to what we feel when we touch those surfaces with various textures and different in nature, and touches play an important role in the field of design, by employing them formatively with other artistic elements, they give the design richness and richness with the contrast it gives in the tactile and silhouette degrees For different and disparate spaces within the design, and by studying the various surface textures, aesthetic values appear that can be a new source of inspiration and innovation in the field of designing textile hangings.

Research problem: The research problem is to answer the following two questions:

- Can surface touching be used as a design input to create designs suitable for textile hangings?
- Does the use of touches in their various forms lead to the achievement of innovative plastic and aesthetic values?

Research Objectives: The research aims to:

- Recognizing the different types of textures, studying them and emphasizing their importance in the field of textile design.
- Employing the aesthetic values of touches in finding innovative design solutions for textile hanging designs implemented in the style of hand tufting.

The importance of the research: The importance of the research is summarized in:

- Opening new horizons for artistic creativity through the development of textile designs derived from surface textures.
- Enriching designs of textile hanging inspired by touch and executed in the style of hand tufting

The research hypotheses: The research assumes:

- 1- textures are an element of design that enriches the field of designing textile hanging fabrics.
- 2- Employment and experimentation enriches the field of innovation of textile hanging fabrics through innovative design models, as well as employment proposals.

Research Methodology: The research follows:

- Analytical descriptive approach: by studying the textures of different surfaces, and drawing inspiration from artistic designs that can be employed in innovative designs for textile hangings.
- Experimental approach: it appears through technical design experiments, and employment suggestions for textile hangings implemented in the style of Hand Tufting

Theoretical framework of the research:

Texture: Surface texture refers to the physical properties that make up the surfaces of things in terms of their natural composition or texture compared to others.

In the field of plastic arts, the concept of texture combines visual perception and tactile perception, and this concept is limited in the field of two-dimensional arts to visual perception through the sense of sight only, while the visual sense shares with the sense of touch simultaneously in the case of three-dimensional arts, touches are the strongest elements The structural plasticity of the artwork, and one of the effects that raise the visual sense, the tactile sense, memory and imagination at the same time, and it occurs at different levels that may be high or low, dense or weak.

The plastic values of the texture: the surface values play an important role in building the artwork, as they contribute with other artistic elements to the formation of its features and define its personality, and the use of lines, colors and plastic units besides texture, leads to diversity in surface textures, in addition to achieving a kind of movement and dimension Third, it also gives effect and expression by contrasting smooth and rough surfaces.

The texture of the surface is what distinguishes one surface from others and makes it clear, The functions of the textures are no longer related to the amount of light and shadow areas they reflect, but what the artist creates in terms of texture effects takes the place of shades.

Functional values of the contact: The functional values and the plastic roles of surface contacts have been numerous, which contribute to eliciting various responses by the viewer to the artwork. The following is a presentation of the most important functional values of surface contact variables:

- Achieving the interrelationships between the shape and the floor, where the tactile contrast plays an important role in the sensory perception of the positive elements (shapes) and the

negative ones (ground), so the artist seeks to provide appropriate technical solutions to achieve a good and innovative relationship in their exchange between design elements.

- Arousing a sense of spatial dimensions through the use of textured surfaces to achieve many effects that suggest the delusional spatial dimension.
- Achieving a sense of movement, stillness and dynamism within the design space, resulting from the visual effects of the various tactile trends within the design, and the kinetic effect depends on several factors such as the structural systems of the tactile elements and their directions, the location of tactile spaces, the effect of color characteristics and their role in achieving the kinetic values of the phantom texture.

Texture Types: Contacts can be divided in terms of:

- 1- Its composition or source.
- 2- Realizing it.
- 3- Its degree.
- 4- Its structural system.

1- Divide the textures according to their composition:

A- Natural textures: they mean the surface effects that God Almighty created in the nature of things, and man has nothing to do with their creation or the nature of their composition. Natural touches can be divided into (animal - vegetable - inanimate) such as rocky surfaces, sandy flats, tree trunks, animal skins, and others.

Natural textures are a source of inspiration for the artist's designs and artistic creations in various art disciplines, and the artist chooses what suits him of textures in order to employ them in form, and (Figure-1) shows a group of real natural textures.

(Figure-1) shows a set of
real natural texture

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B- Industrial textures: They are similar to real textures, but they are superficial manifestations produced by humans, and the development in the discovery of tools and equipment leads to the development in the discovery of various types of industrial texture.

Artificial textures man directly intervene in formulating their shape and composition, and the material may be natural and the touches created in it by the action of man, and often he takes inspiration from natural textures, but when a person is inspired by those natural textures, he takes into account that he distorts them, adds to them, or deletes them, including He sees fit for the field in which he is employed.

Most of the industrial materials are of natural origin, which have gone through processing stages until they become in their new form, such as manufactured wood, carpets, and ornaments, as well as artificial fibers, artificial leather, fabric, threads, ropes, and others.

(Fig.2) shows a group of different synthetic textures for fabrics, leather, stones and wood.

(Figure-2) shows a group of
different synthetic materials

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2- Dividing the textures according to their perception:

A- Real textures: They are called actual or real textures, which are three-dimensional and can be perceived through the senses of sight and touch. The texture used may be natural, industrial, or natural processed by industrial methods and materials, and it can be perceived in the artwork as an actual texture.

B-Illusory textures: They are two-dimensional textures that do not have anthropomorphism, and these textures are known as two-dimensional textures, as they suggest tactile sensations only, and are perceived visually, and cannot be recognized by the sense of touch. It elicits in the viewer responses equivalent or similar to the responses produced by real tactile surfaces, and (Figure -3) shows a group of different illusory textures.

(Figure-3) shows a group of
Different delusional textures
<https://www.pinterest.com/>



The difference in the visual sense of texture is due to several factors:

- **Light:** The amount of light that is reflected or absorbed varies when it falls on the surfaces of different materials.

Color: Texture is an important element of the basic elements that affect color.

- **Transparency:** depends on the visual sense of surface contact, as clear glass is visually different from frosted glass.

- **The size of the surface grains of the material:** where their size, the amount of their regularity and the way they are arranged differ according to the nature of the surface of the material.

3- Dividing the touches according to their degree:

A- Soft textures: its component parts are homogeneous, located in one plane, and often these surfaces are polished.

B- Rough textures: its constituent parts are not homogeneous, do not lie in one plane, and are characterized by great diversity.

4- Dividing the contacts according to their structural system:

A- Simple textures structures: they are textures whose molecular bodies are easy to identify, and their structural system can be understood, and their repetitive distribution patterns can be described.

B- Complicated textures: they are the textures whose systems are difficult to describe as a result of construction, writing with complexity in their composition, and the great diversity in the overlapping of their molecules and their cohesive texture.

The relationship between light and texture: Light conditions strongly affects the appearance of the visual touches of things. Different parts of the same thing can appear to be in different touches, due to their location of the light source. The light is reflected on smooth surfaces of shiny metal, absorbed by dark and matte rough surfaces, and refracts. When it penetrates a material with different properties from the surrounding medium, the texture of the surface appears as a result of the interaction between light and the nature of the surface in terms of smoothness, roughness and degrees of polishing.

Textile hanging: The design of textile hanging is very similar to the design of artistic paintings, except that it differs from paintings in its plastic construction, It also reflects his freedom to deal with the threads, to produce pendants that are far from the traditional form, and surface touches play an important role in building the textile suspension, as they contribute with other elements of artistic formation in the formation of the features of the artwork, and the use of touchers in the suspension leads to identifying Proximity and distance, confirmation of spatial depth, and by adding the stage of drilling using the drilling machine at the end of the implementation stages of the textile suspension, it helps to make an anthropomorphism of some units, and to show the prominent and the recesses to become stereoscopic and three dimensional.

The executive technique used is the hand tufting method: There are many attempts in the world that have developed technical and applied methods for textile hangings, and one of the modern methods used in the implementation of textile hangings is the hand tufting method, which requires a certain quality of fabric for the texture of the floor, and the pile surface is added to it until we get the required hanging.

Stages of execution of the hanging in the style of hand tufting:

1- The stage of preparing the loom: The floor fabric is tightened on the frame in the execution device, and the tension must be strong enough to facilitate needle stitching, bearing in mind that the fabric used is made of cotton, jute or polyester.

2- The stage of transferring the design on the floor canvas: the design is enlarged to the required size, and according to the designer's desire on the floor canvas, using the optical magnifier in reverse.

3- The stage of stitching the pile: the worker stitches the pile surface on the floor cloth according to the required pile length, as well as the type of each color in the space designated for it according to the design, and this is done using the hand tufting pistol.

4- Inspection stage: the process of controlling the quality of the hanging in the spaces that were filled with stitches by the pistol, by examining every part of the face of the hanging.

5- The stage of final preparation: After the completion of the implementation, the hanging is affixed by adding an adhesive substance from the back of the hanging, and then the adhesive layer is covered with a layer of cloth, to give a good appearance to the back.

6- The stage of shaving the pile: in which the pile is cut and leveled at the required heights, using the shaving of pile machine.

7- Drilling stage: in which the tissue hanging is drilled to show the sunken and prominent areas, highlight the design elements used, and define the lines of separation, to become stereoscopic and three-dimensional, using a drilling machine or scissors.

Experimental study: The researcher made a number of design ideas, which numbered (10) designs, which were inspired by touching the surfaces to create designs for textile hangings, and she also presented some suggested employment experiments for these designs, using the capabilities of the computer in the field of design.

Design No. (5):

Artistic Analysis: The design idea was based on the integration of geometric shapes (square and rectangle) of various sizes, colors and directions with curved lines, where the design space was divided into squares and rectangles, and a variety of illusory textures were used within the geometric shapes, Through the contrast in the tactile effects used within the geometric shapes and the diversity in their directions and organization,



as well as the varying tactile specific density distributions, the shapes of squares and rectangles vary, as well as their areas, and curved lines have been added in the design with a free moving rhythm over the geometric shapes, Evoking intense vivid sensations and reflecting dynamic sensations, the design is rich and varied in texture along with the gradation of color values used, which creates a gradual atmosphere between light and shadow and emphasizes spatial depth and anthropomorphism, as well as attracting the viewer's attention.

Design No. (9):

Artistic Analysis: The design relied in its construction on the character of depth through the use of the curved line as one of the types of simple lines, in addition to the color, which is one of the elements with a deep impact on the sense of texture, Through mixing and overlapping the curved lines in the floor, which help to transfer the



viewer's eye from one place to another, in addition to the use of shadows and color gradations of the lines, a sense of depth and different dimensions of the levels resulted, and this feeling confirmed the use of different illusory textures with high intensity within all parts of the design, which helped to feel the prominent and sublime in some areas depending on the shades and color gradients of the textures, so the design looks like an artistic painting that contains many textures that created a kind of artistic balance, and the overlap between the elements and some of them in the design resulted in a sense of movement, and plastic relations arose New curved the feeling of monotony and boredom.

Design No. (10):

Artistic Analysis: This design is one of the examples that illustrate the diversity and contrast in the tactile characteristics, as it used two types of real textures representing leopard skin and zebra skin, and the two textures were combined within the design space in the form of overlaps characterized by a free moving



rhythm, on a floor with spiral circular lines, and a movement begins The lines are from the center of the design and continue to reach the ends, In this design, the elements of the composition emerged through the real touches of various shapes, sizes, colors and directions, and the diversity in the density of the distribution of the textures and the spread of the

components of the artwork (shape and floor), the directions of movement of each of them, and their different rhythms, Diverse visual effects closely related to multi-directionality, which evokes various sensations ranging from intense vivid, to dynamic, and attracts the viewer's attention thanks to the abundance and diversity of texture, as well as stimulating the sense of touch.

Results and discussion:

The designs and the proposed employment (10 designs) were presented to the study community of specialists, through a questionnaire prepared for this, and the sample size was (27) faculty members and employers in the field of textiles, and the questionnaire included (10) distributed phrases, measuring the aspect The design, aesthetic and functional designs of the proposed designs of textile hangings executed in the style of hand tuft, and answering the paragraphs of the questionnaire by choosing one of the three alternatives according to the triple Leikerth scale, and the questionnaire was prepared and applied electronically through Google Drive, and sending The electronic link to the target group and the data were analyzed statistically using Excel. The arbitrators agreed on the validity of the questionnaire for the application, with some suggestions, and some modifications were made based on their suggestions, and thus the questionnaire was subject to the validity of the content.

The questionnaire criteria (evaluation items) included the following:

Design and aesthetic aspect: 1. Diversity and contrast between surface contacts are achieved within the design space.

2. Balance is achieved between textures, color spaces, shape and space in the design.

3. The interconnectedness of the elements of the artwork within the design is achieved.

4. Realization of movement and the third dimension resulting from the diversity of textures, lines, colors and plastic units.

5. The use of contacts as a formative element contributes to the development of the textile design of the pendants.

Functional aspect: 1. The suitability of the proposed design as a textile suspension.

2. The textured suspension, inspired by the touch of surfaces, was distinguished by modernity.

3. Various texture effects can be obtained by using the hand tuft method.

4. The colors used fit the general taste.

5. Take advantage of the tactile values resulting from the diversity of lines, areas and colors to show the aesthetics of the textile pendants.

- The result of the survey of specialists about the design and aesthetic aspects of the executed designs as follows: 1- 81% fully agree that all the implemented research designs met the criteria of the design and aesthetic aspect.

2- 16.3% agree to some extent that all the implemented research designs met the criteria of the design and aesthetic aspect.

3- 2.7 percent disagree that all the implemented research designs met the criteria of the design and aesthetic aspect.

The result of the survey of specialists about the functional aspect of the executed designs is as follows: 1- 82.8% fully agree that all the implemented research designs met the criteria of the functional aspect.

2- 14.4% agree to some extent that all the implemented research designs met the criteria of the functional aspect.

3-2.8% disagree that all the implemented research designs met the criteria of the functional aspect

Research Results:

1. It became clear through the statistical study that there is a positive significance in favor of the design experiments that were judged, which indicates the validity of the first and second hypotheses.

2. The possibility of benefiting from the study of surface textures in creating innovative designs with aesthetic values in the field of designing textile pendants.

3. The feature of contemporary and modernity has been achieved in creating design ideas, as well as executive proposals, and obtaining aesthetic effects through the use of computers in research designs.

4. The possibility of employing surface touches with other elements of artistic formation in new ways in the design, to evoke a sense of spatial dimensions, in addition to achieving a sense of movement and stillness.

5. The use of the hand tufting method in the executive style of the designs, the possibility of making the deep and prominent method of anthropomorphism, and emphasizing the idea of research in terms of diversity in textures.

Search Recommendations:

1. Interest in linking the textile designer to nature and its sources, which represent plastic creativity and achieve many aesthetic values.

2. Deepening the study of the structural and tactile systems of multiple surfaces, natural or artificial, real or imaginary, which can enrich designs in the field of textiles with more artistic and aesthetic values.

3. Conducting many researches and studies, to reveal a variety of sources of different touches.

4. Paying attention to scientific research concerned with the art of textile design.

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