

Benefit from modern textile programs to innovate new decorative textile effects Inspired by animal skins

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Abstract: The decorative elements inspired by animal skins are considered from the most decorative elements which have great and fine value, Continuous thinking in processing shapes in different fabric weaves and to create innovative configurations from these treatments Is one of the most important axes of development in the textile field which allows the development of the appropriate executive specifications for its production as fabrics suitable for furniture and curtains. **Research importance:** Enriching textile applications with innovative decorative textile effects inspired by animal skins. Promotes the general taste of the consumer and increases the artistic taste and sense of the aesthetic value of the product. **Research goals:** Innovate new textile decorative effects suitable for implementation as design units inspired by animal skins. (1) In this research, some decorative elements were taken from some animals skins, and many substitutions were made from the textile weaves of each form and transformed into design units with an innovative decorative effect that conforms to the textile and textile applications and characterized by being atypical and its artistic and aesthetic high value. (2) The decorative effects inspired from 5 deferent animals skin as (giraffe – leopard – snake – peacock – zebra). (3) It was implemented using modern textile and design techniques (Penelope textile – Nedgraphic – Atrezzo 3D). (4) After the implementation, a group of 10 faculty members evaluated the decorative weaves using a questionnaire form for evaluation. The results were analyzed to show the extent of the success of the creative and aesthetic decorative texture as furnishing fabrics. (5) The inspired decorative weaves achieved the degree of satisfaction between the arbitrators. The decorative weaves inspired by the (Giraffe – snake) has achieved the highest agreement among the arbitrators. The Coefficient of agreement reached between the arbitrators of the faculty members 90% while the decorative weaves inspired by the zebra reached the lowest agreement between the arbitrators as the coefficient of the agreement arbitrators of the faculty members 60%.

[Nancy Abdelmaboad Elsaywy. **Benefit from modern textile programs to innovate new decorative textile effects Inspired by animal skins.** *Life Sci J* 2017;14(4):129-136]. ISSN: 1097-8135 (Print) / ISSN: 2372-613X (Online). <http://www.lifesciencesite.com>. 17. doi:[10.7537/marslsj140417.17](https://doi.org/10.7537/marslsj140417.17).

Key words: Modern textile programs – inspired weaves – animals skins

1. Introduction

The science and engineering of textiles and clothing have played an important role in one of the major technological transformations known to mankind: the computer revolution. For example, the Jacquard principle of weaving shares its basis with the binary system in the computer. Textile manufacture, particularly the woven fabric computer-aided design (CAD) system. (1).

There are many experienced designers who posses abundant stores of material- illustrated art works, scraps of fabrics, wallpaper, Christmas cards, and such like helps of artistic merit which have been gathered together at various times. These are intended to assist the imagination, the fertility of which is often a matter of surprise to the outsider (2).

Previous studies:

- Study of Said al - Otiri and Tariq Abdul – Rahman (3)

The aim of this study is to take some geometric ornamental elements such as circle, square and appointed. Many alternatives have been developed for each shape and converted into decorative shapes and

units that we can use in the production of upholstery fabrics and curtains, but in a different artistic form of the decorative units. Consistent with the theory of weaving is the new and applied to other engineering units and the work of experiments emerged through each experiment after the steps used to produce and inspire the decorative unit of the origin of the geometric form - the element used and inspired by the original units and forms generated from it.

- Study of sabah el kasaby (4)

This study aims to obtain innovative design designs with high values through the use of the basic design elements. The study also aims at developing the creative aspect of the designer through the experimental stage of the designer through which the artist can discover himself.

- Study of ragab salama (5)

This study aims to

Presenting the aesthetics of textile structures and their impact on textile design, and clarifying the role of textile structures in the development of innovative abilities for students of art education, and understanding the artistic and aesthetic vision of

textile structures and their impact in the development of creative abilities of students of art education.

- Study of eman ayob (6)

The objective of this study is to: - Produce a new type of fabric of national designs, inspired by the decorative patterns of South Sinai with a new visual vision, producing new types of fabrics to serve the tourist field, achieving innovative technology in this type of textile, And closed in the applied product by processing.

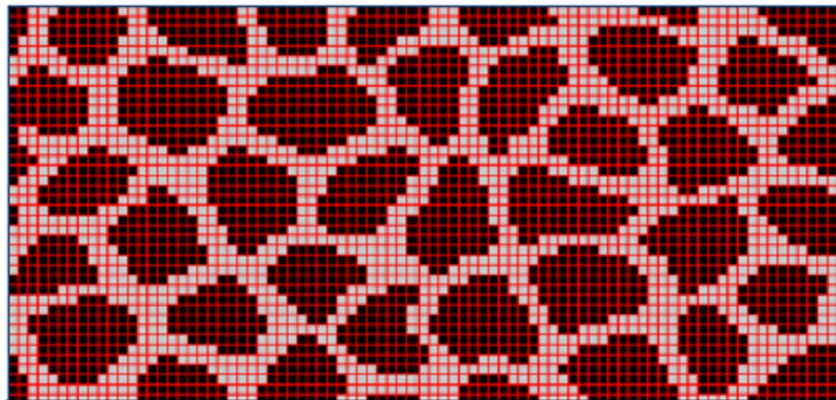
- Study of nora makrash (7)

The aim of this study is to study the marine nature and identify its technical characteristics, and to use them to serve the elements of design in the creation of designs inspired by the marine nature using computer programs.

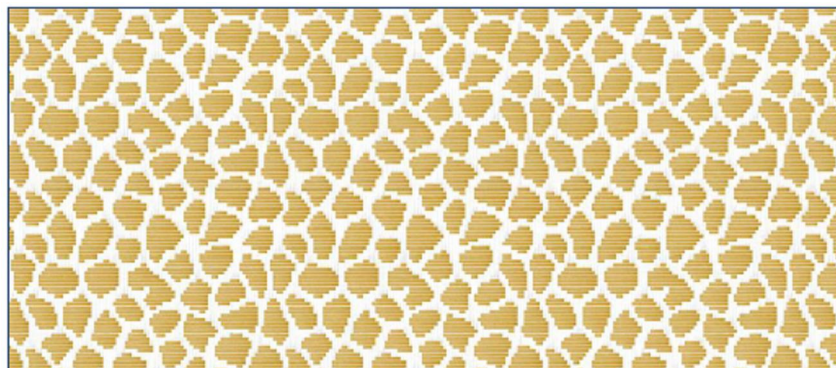
Study of ashraf abdel hakeem (8).

The aim of this study is to enrich the field of design with more sources of technical insights through the study of the engineering systems in the natural elements and to re-formulate and clean them more than a technical vision in the proposed designs.

Giraffe:



Giraffe Weave



Giraffe Simulation

Textile experiments

- The production of a set of samples multiple variables in order to determine the best and most suitable to the subject of the study.

- **It has been produced with the following specifications**

- Loom Type	:	Sulzer
- Jacquard set type	:	Stauble
- Produced cloth width:	:	90 cm
- Warp Density	:	24\CM
- Weft Density\Cm	:	20\cm
- Warp count	:	24/2
- Weft count	:	24/2

- The implementation of the research hypotheses each separately using the following factors: -

- **Notes:** The Textile Weaves Was Created By Penelope Textile.

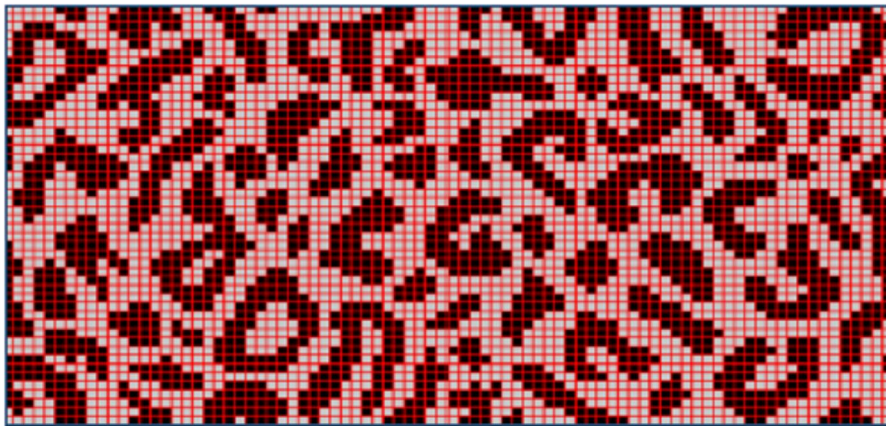
- 3D shapes Created by Atrezzo 3D

- The decorative effects inspired from 5 different animals skin as (giraffe – leopard – snake – peacock – zebra).

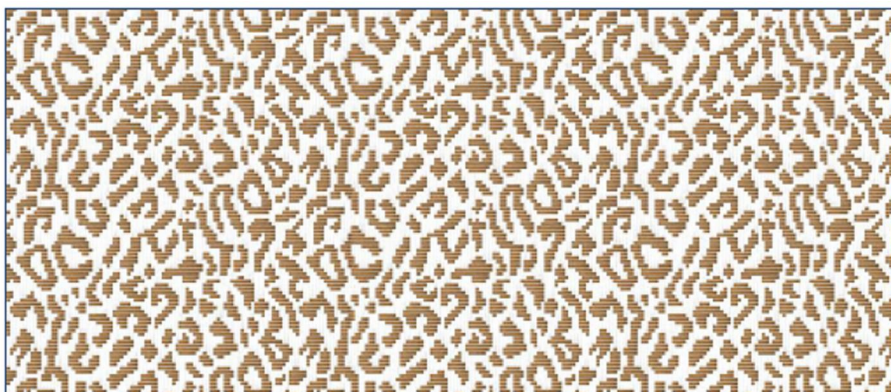


Giraffe 3D Sample

Leopard:



Leopard Weave

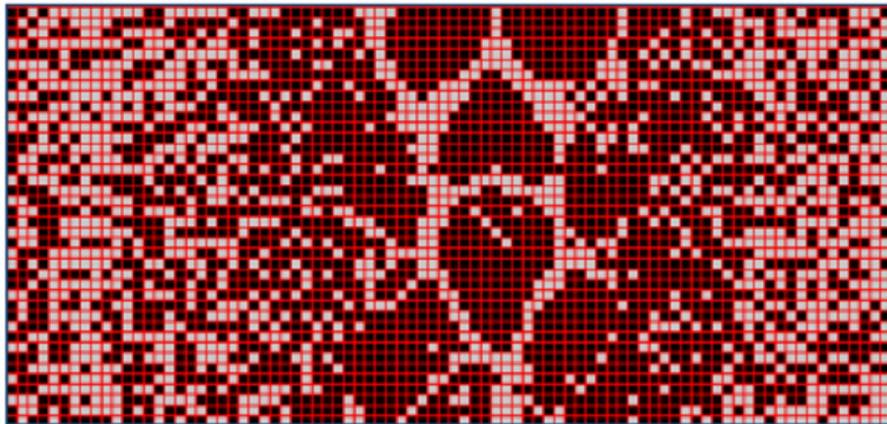


Leopard Simulation

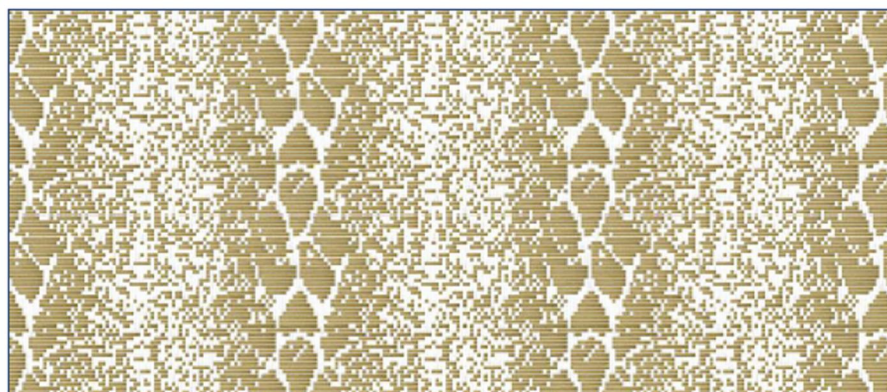


Leopard 3D Sample

Snake:



SnakeWeave

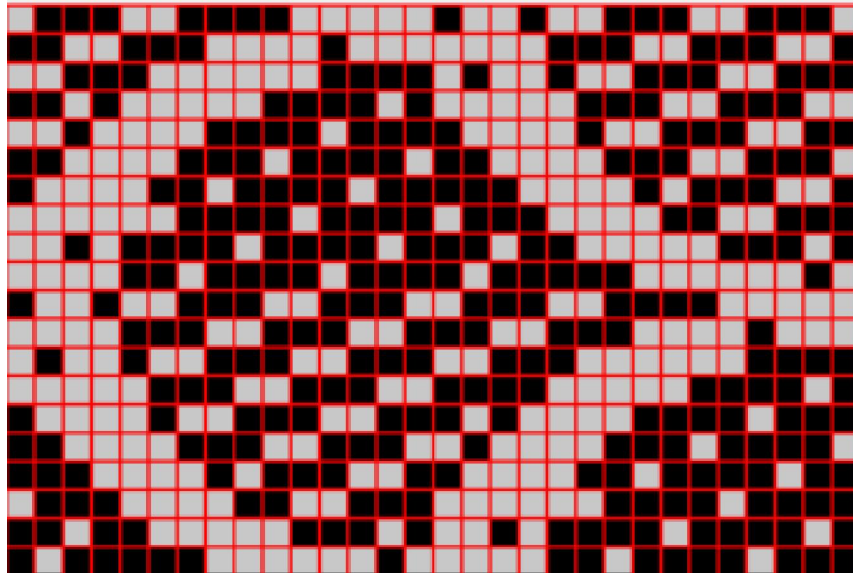


Snake Simulation



Snake3D Sample

Peacock:



Peacock Weave:



Peacock Simulation



Peacock3D Sample

Zebra:



ZebraWeave



ZebraSimulation



Zebra3D Sample

Zebra 3D Sample

Arbitration research variables form

Serial	Phrase	appropriate	Some extent	Inappropriate
1	Effect of density of textile composition on the functional performance of the sample			
2	The durability of the textile structure			
3	Fit the sample as bedding fabrics			
4	Product can be used for more than one purpose			
5	The effect of the textile structure used on the functional purpose			
6	Fit the sample in terms of appearance			
7	The availability of linear rhythms (straight - curved - broken)			
8	Availability of color tones (one color - more color)			
9	Availability of symmetry (symmetric - asymmetric)			
10	Availability of palpitations (Aramaic - real)			

3. Results and Discussion

The impact of differing compositions incorporating aesthetic properties on textile fabrics methods: -

And through the evaluation of the results of the questionnaires and to find the mean scores for each variable separately and also the relationship between the percentage of arbitrators and their opinions for the terms of aesthetic and to be able to statistical analysis it was necessary to convert the descriptive estimated numerical estimates using a weighted arithmetic mean of each assessment and fined separately:

- Estimate the descriptive appropriate given him three degrees.
- Appreciation appropriate descriptive somewhat given him two degrees.
- Estimate the descriptive inappropriate given him one degree.

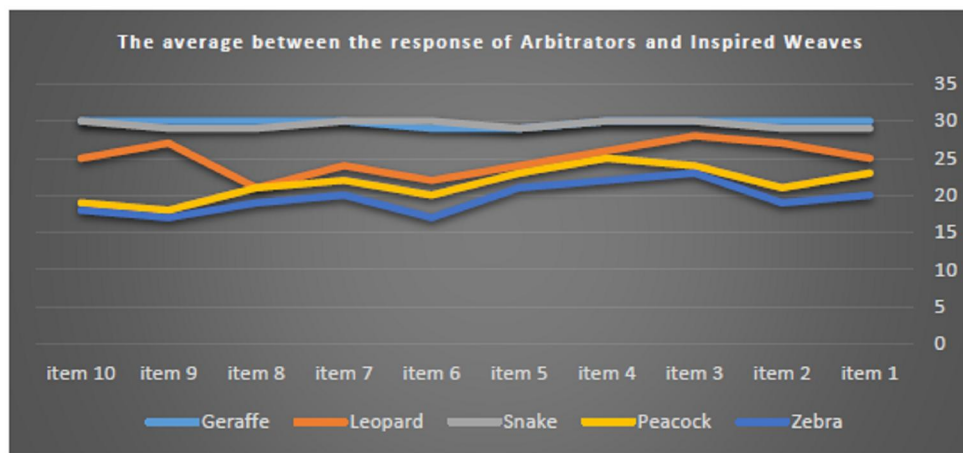
• Test Percentage:

It is used to indicate the percentages of the views of the arbitrators in the various elements of each design in terms of being appropriate or not appropriate and it gives us a more complete description of the views of the arbitrators in the designs and are calculated according to the equation:

$$\text{Percentage} = (\text{number of views} / \text{total number of arbitrators}) \times 100$$

• Agreement coefficient:

Gives us a general perception of the views of the arbitrators in different elements and shows how the arbitrators agree on the fact that this item is appropriate or not, and is calculated by the ratio between the divergent views of the arbitrators in the various elements of each axis range from the value of the agreement coefficient between zero and correct one Whenever approached the right one indicates that the arbitrators agreement in their views on this element.



After the implementation, a group of 10 faculty members evaluated the decorative weaves using a questionnaire form for evaluation. The results were analyzed to show the extent of the success of the creative and aesthetic decorative texture as furnishing fabrics.

Summary of Results

- The inspired decorative weaves achieved the degree of satisfaction between the arbitrators. The decorative weaves inspired by the (Giraffe – snake) has achieved the highest agreement among the arbitrators. The Coefficient of agreement reached between the arbitrators of the faculty members more than 90% while the decorative weaves inspired by the zebra reached the lowest agreement between the arbitrators as the coefficient of the agreement arbitrators of the faculty members among 60%.

-The designer has the innovative ability to produce innovative designs by giving continuous and giving freedom to the mind and access to new ideas that add to the design process.

-The development and innovation of designs that are implemented and offered as textile products increase the sales and profitability of the product, and the diversity of designs in the markets is working to increase the artistic taste and sense of aesthetic value, which works to improve the general taste of the community.

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4/25/2017