# Quantum Theory as an Introduction to Enriching Designs for printed hanging textiles

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## Abstract:

The twentieth century witnessed the beginning of Revolution in Contemporary Arts. Technological revolution and scientific progress open new horizons by linking Artistic field with technology, and its application in artistic creativity field. So modern scientific revolution in various sciences, especially physics, helped to change the concept of structure according to the emergence of scientific theories that explain it. which is no longer confined to the external manifestations of forms in nature, but expanded to include the internal structural systems of forms and laws according to nature growth; Through simple or complex mathematical relationships that link science and art together in a balanced way through a physical engineering system that allowed the textile printing designer to establish designs with a new, contemporary thought that is out of the ordinary; based on cosmic phenomena patterns, creating such designs has a special artistic, dynamic character. Modern theories like quantum theory study the structure of transformation and the combination of more than one variable of form to express its transformations across time and space.

It presents new design approaches in engineering structure with structural systems that change its (temporal-spatial) structure and its resulting systems, various geometric patterns that vary between flatness, anthropomorphism, breadth and depth, and other patterns of cosmic phenomena resulting from the space; And how to take advantage of that theory in providing printed designs suitable for hanging fabrics and obtaining many different design ideas from the same design based on the quantum theory and its scientific basics to have variables by changing the surrounding conditions.

## Keywords:

Quantum Theory, Designs for Textile Printed, Hanging textiles.

**Research problem:**

Modern scientific theories influenced the contemporary designer's thinking and tendency to create designs beyond the ordinary, away from all standard Textile Printed Designs, so the study went on to experiment with new trends and modern applications based on quantum theory.

– which identified the problem of the research in the following questions:

- How can design formulations be developed based on quantum theory to enrich the field of printed Hanging Textile?
- How it could be useful to use the theory's computer software for non-traditional design solutions?

DOI: 10.21608/jsos.2021.105987.1112

**Research importance:**

- Take advantage of the construction systems of quantum theory in the field of textile printing design.
- Introducing various design alternatives for a single design based on quantum theory in designs for printed hanging textiles, which opening up new horizons for experimental thinking using some specialized computer software.
- Deepen experimental and applied thought and employ them aesthetically as a contemporary entry point to combine quantum theory with textile printing design.

**Research aims:**

The research aims at:

- Achieving a new creative approach by combining quantum theory with structural systems of forms for textile printing design in general and hanging fabrics in particular.
- Improve design thinking by employing the technical capabilities of some specialized computer programs to obtain innovative, non-traditional designs for new and modern hanging textile.
- Support the experimental study by creating a range of designs for hanging textile based on the structural systems of quantum theory with new formative treatments.

**Research Methodology:**

Research depends its procedures on:

- **The elicitation approach**: the study Follows the tools of elicitation approach in monitoring the structural systems of quantum theory and applying them in printed hanging textile.
- **Descriptive analytical approach:** through technical analysis of art works depends on quantitative theory.
- **Experimental approach:**

Depend on it through the self-experience of study.
Experimentation and application.

**Research hypotheses:**

The search assumes:

- An integrative relationship with a positive significance between the application of quantum theory and the design of printing hanging textile.
- Use quantum theory software to create high design formulations that enrich the design of printing hanging textile.

**Research limits:**

The study provides a new formative introduction, taking the integration of the structural systems of quantum theory and the printed surfaces of hanging textile through using the techniques of some specialized programs as a method in which the construction processes and proposed design alternatives are combined to design printing surfaces of hanging textile.

## Procedural steps:

The procedural steps are as follows:

**Theoretical framework:**

- Quantum theory.
- The manifestations of transformation in different systems through quantum theory (morphogenetic system, topological system, quantum foam, spin foam, ring quantum gravity).

**Experimental framework:**

- Technical analysis of the applications of quantum theory in various arts.
- Samples for experimentation.

**Application framework:**

- Designs of fabrics for hanging with different design alternatives of the same design, related to the structural systems of quantum theory.

## Research results:

- Modern theories enrich printed designs as a new creative approach to textile printing design.
- Quantum energy creates a movement that results in a change in the formal structure, which leads to finding many design solutions and alternatives.
- The results of the design experiments (there are ten (10) design experiments for hanging fabrics, consisting of 6 designs, each of them has five design alternatives based on the morphogenetic effect of quantum theory, 2 designs based on quantum foam, and 2 designs based on quantum gravity ring) to search with its objectives, which provides innovative thought.
- Using specialized computer programs that support quantum theory to obtain innovative designs that have a special character for printed textile hangings.
- Linking scientific theories with relevant scientific knowledge skills that develop the mental, cognitive and experiential skills of the textile printing designer.

## Recommendations:

The researcher recommends the following:

- Directing more research into modern and sciences theories such as quantum theory, as a theory closely related to design.
- Interest in studying cosmic and scientific theories and extracting structural systems from them as one of the important entrances to enriching printed designs in general and hanging textile in particular.
- Benefiting from the changes in structural systems in quantum theory and experimenting with them in the field of textile printing design to obtain many new design and alternatives in a way that develops contemporary design thought.
- Paying attention to computer programs that serve modern theories and working to provide them to benefit from them in the field of design and to reach the desired results.

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