Employing recent scientific developments as an input to enrich the field of woodworks

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Research problem:

Art and science are among the concerns and achievements of human beings. There are many disputes about this relationship between art and science divided into two streams. While the trends made their way by denying the existence of any relationship between art and science, artistic trends have emerged in the context of deepening the scientific meaning trying to emphasize the strength of this relationship. Employing science in artistic work is a major focus in the vision and analysis of the role of science in art, rather than limiting itself to rejecting its role categorically, as science may provide diversity and richness in the various forms and methods of art.

The field of woodworking arts is one of the fields of plastic art, where it is possible through the aesthetics of the material to impart many aesthetic values to the workpiece, and it can also be employed in a contemporary manner linked to the aesthetic foundations of fine art, which satisfies many of his aesthetic and technical aspects, as it is a basis for choosing wood without others, in the interest of the work, and then the creation of woodwork depends on several methods, as each artist has his own way in which he expresses his ideas and imaginations.

The sources of inspiration in the field of woodworking art varied between nature, heritage and others, but the reality of the scientific and technological boom always requires the artist to take advantage of the requirements of the times, and in order to be contemporary, he/she may resort to relying on modern ideas and the scientific development of his time, and the resulting artistic perceptions which result in multiple forms that the artist can draw in his plastic formulations, so the artist draws his/her ideas, vocabularies and systems through them.

Relying on modern sciences in art enables the artist to continue to reveal the secrets of the world, through a new art that differs in a small way from the previous arts, as art will transform from an individual subjective activity to a scientific objective reading of life, and the invisible, hidden atomic reality of the world will turn into a visible vision." And art will become a means of knowledge in addition to sensual pleasure, and it will become a non-self and scientifically accurate activity in line with the spirit of the age.

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Questions of the Research problem:

1- How can modern scientific developments be employed as an input to enrich the field of woodwork?

2- What is the extent of the possibility of benefiting from the findings of modern science and its variables in enriching the shape of contemporary woodwork?

The research aims:

1- Shedding light on the importance of modern scientific developments in influencing art in general and the field of woodwork.

2- Getting to know the new forms of art that were based on modern sciences.

3- Introducing new approaches based on modern scientific developments to enrich contemporary woodwork.

The research importance:

1- Opening new horizons for innovation and linking science with art by offering new approaches based on modern scientific developments that enrich the field of woodwork.

2- Benefiting from recent scientific developments in highlighting the artistic form of woodwork in a modern formulation.

3- The research is interested in shedding light on modern science and its role in developing and changing the concept of plastic art.

Research hypotheses:

1- It is possible to find ways to enrich contemporary woodwork through modern scientific developments.

One of the most important goals of art education is experimentation with different materials, and the field of woodwork is one of the important fields in art education, where the artist interacts with the material in the field of woodworking arts according to several stages. The source of inspiration in the woodwork that provided the artist with a fertile and rich field in which many concepts and dimensions are available.

The concept of woodwork has developed greatly, as the field of woodwork, including its types with plastic and aesthetic characteristics, contributed to enriching the creative vision. Modern science is modern and based on contemporary plastic solutions. There are many attempts based on innovative ideas and materials related to the requirements of the age, examples of which are the following:

A- The use of epoxy in woodwork:

Artwork by the artist (Yurii Myketka) using oak wood and epoxy

B-Creating anti-gravity wooden crafts:

Artworks by the artist (Marcelo Pars) using wooden sticks and threads,

C- The use of mechanical engines in woodwork:

Artwork by Derek Hugger, Hummingbird Colibri

D- The use of magnetic suspension in woodwork

Artist's Wooden Table: Rock Paper Robot

E – The use of lighting through the possibilities of the material:

Lighting unit using wood veneer by the artist: Pask Makes.

It is clear that it is difficult to predict what this development in the field of arts and its relation to sciences and its various developments, and over time the creators present creative images by taking advantage of the data of the times, and this confirms what the researcher aims at from the importance of modern science as it is a source and a basic entry for several arts that have grown and flourished through it, as science gave the opportunity for creative abilities to be evident in the field of plastic art.

Research results:

1- Science is a tributary of art as through it, work acquires an artistic and aesthetic values.
2- All kinds of science are inevitable, data of the age available in the artist's life throughout the ages, and he must keep up with them in order to be in line with the requirements of his time.
3- Science develops curiosity and discovery of the universe with a deeper analytical vision, it helps the artist in research and exploration.
4- Science provides technical work with the accuracy of engineering and plastic construction through its role in the development of perspective theories.
5- Science works to fertilize the imagination, to deal with science with an imaginative creative vision, based on discoveries that expand its cognitive skill dimensions.
6- Science works to confirm logic in artistic works.
7- Science stimulates experimentation in mixing imagination with scientific rules, ideas and theories.
8- Science gives freedom and flexibility in realizing new and unfamiliar relationships and formulations according to the direction of scientific thought.
9- Science helps in finding new approaches to works of art, as it opens new ways for the artist in the field of artistic creativity, whether in the formal form or the expressive content of the work.
10- Scientific thinking removes the barriers between art and science and helps the artist engage with an object in sympathy, harmony and harmony by delving into its details to reach an understanding of its essence.
11- Art also helps science to perceive the large or infinitesimal field of the surrounding world through the creations of art.
12- The possibility of benefiting from the capabilities of raw materials in developing the shape of contemporary woodwork.
13- The possibility of relying on the results of science to create non-traditional artifacts, by relying on original intellectual sources.
14- Addressing the mutual and close relationship between art and science may contribute to opening new horizons for creative visions.
15- The research was able to clarify the impact of scientific developments in putting forward many creative ideas.

Recommendations:

1- The research recommends the necessity of promoting modern sciences in the field of woodwork.
2- Benefiting from researches related to the growth of bacteria on different surfaces and studying the possibility of employing them on wooden surfaces or on wood veneer and treating them technically to reach innovative colors and textures that enrich the woodwork.
3- The possibility of making use of light differently with woodwork and studying the possibility of combining it with photography to reach many solutions that could enrich the surfaces of woodwork.
4- Studying the possibility of communication between genetic scientists and woodworking artists to reach different solutions that can be applied to wood to show it in radiant colors, or

any of the modern scientific solutions that show wood in different forms and represent a new attraction for the viewer.

5- Searching for different ways to combine glass and wood and conducting multiple experiments to treat wood in cooperation with specialists in the field of chemistry to withstand high temperatures in order to combine it with colored glass to reach different artistic formations that enrich wood forms or polish wood surfaces.

6- The necessity of tasting, understanding and perceiving works of art based on modern sciences in order to know how they deal with aesthetic and artistic relations in the field of woodwork.

7- The necessity of informing the artist with all that is new in his age, of modern sciences because of their deep philosophies that enrich the works of art.

8- Interest in developing awareness among art practitioners of the importance of the relationship between art and science because of its importance in enriching contemporary art and developing the shape of woodwork.

Refrences:

1. Algazaere Mohamed : Nazaeat Wakeeat Al Kam Lel Fanan Mahmoud Sabre , Makal B Megalat Aklam (Megala Fekreea Ama Tasdereha Wezaret Al Elam – Bagdad) Adad 7 Lel Sana El Sabeaa , Wezaret Althakafa Wa Elershad Alerakeya 1971.

2. Ellethie Mamdoh Abd Elfadl : Tatawor Tasmemat El Mosarahat Al Khshbeya Al Kaema Ala Asas Albenaa Wefk El Nasareya Algeshtalt Lledrak El Basary Derasa Tagrebeya Ala Ayenat Men Tolab Koleyat El Tarbea Al Naweia , Koleyat El Tarbea Al Naweya , Gameea El Kahera 2002

3. Almoqree Ahmed Ali El Fayoumi – Abo El Abbas : Al Mosbah El Moneir Fe Qareb El Sharhh Al Kober Lelrafee , Almaktaba Alelmia , Bairout , Elgoze El Tany 1987

4. Hassan Mohammed - :Mazaheb El Fan El Moaser Wa El Roya El Tashkeleua Lel Karn El Eshreen , Dar El Ketab El Hadeet Lel Tabe Wel Nashr We El Tawzee El Kwait 1997

5. Hammad , El Nour Tagayorat El Ottor Wa Eadet Tareef El Door , Bahth Manshour , Mokadam F El Nadwa El Dawleya Al Ola L Kesm El Tarbea El Fanea (Benwan Al Tarbea Al Faneea W El Tanmea Al Shmla) Al Fatrrah 11/13abrel Gameea Al Soltan Kabos , Saltanat Amman 2010

6. Rasad , Amal Mohammed Tasmem Bernameg L Tawzef El Harf Al Aabi Kamofrada Tashkelea Fe Benaa Mashgola Khshabia Moasra Resale Doctorah Ger Monshora ,Koleat El Tarbea El Faneia Gamea Helwan 2002

7. Amer , Magdy Mohammed Mohammed Atahr Moktadayat Al Handasa Al Mekanekeya Lmakenat Al Tashgeel Ala Tatawor Nosom Alsenaat El Khashbeya , Mogalat Koleyat El Tarbea Gameaa Helaan (Drasat Tarbaweya Egtmaiia) Al Mogalad Al Hadi Wa El Ishroon , Aladda Al Awal , Yanayyer ,2015

8. Abdelasdek , Mohammed Khairy : Altoknologia Al Rakomiia K Badeel Ebdaii L Fnoon Ma Baad El Hadatha Fe Fan Elgrafek , Motamar El Fan Al Arabi El Moasser Al Thammen (Al Fan Fe Zaman Motagayer) Al Meghwar Al Khammes Teknologia Wa Al Wasaeet El Motaadeda Fe Al Fan Wa Al Emarra 2013

9. Asfor Mizzen : Enakasat Al Elm Ala Al Fan Mn Fesagors Ela Al Thawra Al Roqamia , Drassa Zaheratia , Magallet Drasat Al Olom Al Ensaneya Wa Al Egtmaiia , Al Mogallad 46 Molha 2 Adda 1 Al Gamea Al Ordonia 2019

10. Kabil, Tarek : Al Fan Al Haiawe Tazawog Al Fan W Olom El Haya , Magalet Al Arabi Lelkwaitia Mares 2017

11. Mohammed Allam Mahomod Allam : Alelaka El Tabadolia Bayna El Tashkel El Mosatah Wel Mogasam W Atharoha Fe Estehdath Bnaeyat Madaneyya Mobtakara , Resale Doctorah Ger Monshora Koleyat El Tarbea El Noweya Gameea El Kahera 2006

12. Mohammed , Mohammed Hesen Masood : Al Keam Al Gamaleya W El Tabereya F El Mosgola El Kasabeyya Bmadakel Tagrebia W Teqaneta Gadeda Ll Keshra El Khshabia El Mosanaa (Drassa Tatbekya) Mgallah El Emara Wa El Fnoon W El Ollom El Ensaneyya , Al Mogalad El Sades Al Adda Alsades Wa El Eshroon 2021

13. Yaqoob , Mohammed El Baker Hag , Altasawor El Eslami Llelm Wa Atharoh Fe Edrak Al Marefa , Magalleh Al Eslam Fe Asia , Aladda El Khas El Rabee , Decamber Al Gameea Al Eslamia Al Alamiia Bmalisia 2011

14-Inês Albuquerque, Teresa Almeida: Rethinking the relationship between Art & Science in Contemporary Art, practice & theory in the Portuguese context, Universidade de Aveiro, Faculdade de Belas Artes, Universidade do Porto, Porto, Portugal, 2012.

15-Uta Laurén: Suomen lasimuseo – toimintakertomus, Valon ja värin vuoropuhelua – Teresa Almeida, Portugali, 2017.