

Conceptual Jewelry Under New Media Art

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ABSTRACT

Digital conceptual jewelry has taken on a significant role in bridging technology, technology, materials, art, and jewelry leadership and innovation in the context of new media art. This paper uses traditional jewelry production processes and materials to collide with modern technology and new materials to explore how concept jewelry can be generated and expressed in a virtual based on traditional production processes and production materials. The researchers have established a strong position for concept jewelry in new media art through a number of procedures, including background research and design concept positioning of design works, collecting of materials, modelling, and optimization of goods, and 3d printing output of actual items. It looks at new trends in jewelry design and broadens the meaning of conceptual jewelry.

Keywords: *New media art, Digital design, Conceptual jewelry.*

1. INTRODUCTION

The rapid growth of new media art has boosted people's acceptance of art design, and jewelry-wearing now demands extra characteristics like emotional resonance, conceptual implication, and aesthetic appeal. The drawbacks of traditional jewelry batching and mechanization are coming to light more and more, and it has been challenging to keep up with the fashion trends of the current digital era. The design research of concept jewelry is an advancement and innovation of conventional jewelry that not only broadens the scope of jewelry design but also innovates novel forms and concepts and unquestionably contributes to the promotion of jewelry design.

2. CONCEPT JEWELRY

As a consequence of the combination of traditional culture with Western art and design ideas, conceptual jewelry is a new force in contemporary jewelry design. It is based on traditional jewelry and is separated into three categories: conception, production, and functionality. Unlike traditional jewelry, which is created by several individuals, the "jewelry artist" frequently completes the entire creation process by themselves, including idea clarity, material gathering, and actual fabrication. The pieces seek to

challenge people's reinterpretation and rethinking of the traditional jewelry concept. They raise issues, highlight potential solutions, and point the way in the direction of future jewelry design. The pieces also explore the concept of time and space, which is challenging to express in traditional jewelry. [1] Also, the creativity and tradition of jewelry are supported by the growing development of digital multimedia technology, which also has a significant effect on the manufacturing of conceptual jewelry. These four characteristics best describe it:

- **Interactivity:** Thanks to the sharing and interoperability of information resources enabled by the Internet, science, and art have begun to complement one another. With the use of jewelry, people can experience both the shocking power of science and technology as well as emotional interaction.
- **Timeliness:** Whether it is the traditional jewelry drawing process or the production process, the designer's output process with the final effect is inevitable to make mistakes and produce unsatisfactory results. The designer will need a lot of time and materials to make the corrections, which reduces the timeliness. The digital software technology can not only quickly establish the virtual concept jewelry digital model, but also can be repeatedly revised and

adjusted to achieve the optimal effect of its artistic presentation, with high timeliness.

- **Comprehensive:** Jewelry is a traditional art form, but the concept of jewelry is modern art. At the design and production levels, however, the concept of jewelry can be integrated with fiber art, glass technology, ceramics, and other traditional craft techniques as well as delve further into the potential of various forms of image art and the plasticity of various materials, before being attached to a variety of high-tech technological tools, electricity, sound, light, and other modern technologies.
- **Virtual:** Designers can create a digital model or a virtual scene using digital software technology. This results in a realistic, three-dimensional visual effect that allows designers to make timely adjustments or add features to enhance the image, dramatically enhancing the design effect.

3. CRAFTSMANSHIP AND MATERIALS OF TRADITIONAL JEWELRY

Traditional and conceptual jewelry design clearly differs from one another in terms of creative methodologies, aesthetic standards, material preferences, and methods of fabrication.

3.1 Traditional Craftsmanship

To present the fine, soft, and other advantages that are specific to precious metals, the traditional jewelry processing process, which is primarily manual processing, requires handcrafting of the required precious metal materials before cutting, pounding, trimming, modeling, welding, grinding, polishing, and electroplating. Another jewelry manufacturing method emerged as a result of mechanized mass production following the industrial revolution, and that procedure is machine processing. Machine processing reveals its benefits of great efficiency and good quality when working with relatively hard materials like platinum or stainless steel.

The traditional jewelry-making process is split into two main categories: one uses mostly cutting, forging, welding, and other processing techniques; the other uses primarily hand-carving wax and casting techniques. The use of craftsmanship has been prevalent in both low-cost everyday jewelry and expensive couture jewelry from ancient times

to the present. While handcrafting has an almost insurmountable position in the world of fine custom jewelry, mechanized mass production is more frequently used in the mid-range commercial jewelry sector.[2]

3.2 Traditional Materials

The use of gold, pearls, jewels, and other high-value materials is one of the main characteristics of traditional jewelry. These materials serve both a value-preservation and high-value function because they are non-renewable resources. Traditional jewelry is limited to gold, platinum, silver, and related alloys in the choice of metal materials, which are high value but easy to process and have high durability, ductility, and luster. There are conventional and stringent requirements for gemstone materials, including the traditional identification labels of diamonds, rubies, emeralds, tourmalines, and cat's eye stones.

4. MULTIMEDIA TECHNOLOGIES AND MATERIALS FOR CONCEPTUAL JEWELRY

The relationship between process and material innovation is embodied in conceptual jewelry design in two main ways: first, process innovation is brought by the development of new technologies, and second, material innovation is brought by the use of new materials in a non-traditional way under a new creative concept.

4.1 New Multimedia Technology of Concept Jewelry

Contemporary jewelry designers are committed to breaking through the limitations of traditional jewelry in terms of practicality, ornamentation, and value retention. Multimedia technology and 3D printing technology are two examples of how contemporary designers adapt new technology to fit the ideal modeling language and the pursuit of artistic expression.

4.1.1 Digital Multimedia Technology

With regard to designing the shape, material, color, wear mode, and other jewelry digital models, the term "digital multimedia technology" refers to the designer using the graphics processing technology specific to the computer virtual modeling software, such as common computer-aided software jewel cad, rhino, 3D design, etc. By

using computer 3D scanning technology, it is also feasible to reverse the jewelry product into a digital model. The digital model of the jewelry can be made in kind using 3D printing technology with the right tools.

4.1.2 3D Printing Technology

Technology for 3D printing is widely employed in the jewelry industry as well as in other sectors, including those that produce clothing, artwork, and other essentials. 3D printing in the jewelry industry is mainly divided into two parts, one 3D printing resin, and wax film, and the second is 3D printing metal, but because of the material, technology, and other restrictions, temporarily in the trial run stage, By overcoming the limitations of conventional jewelry made using conventional methods, 3D printing liberates creators from creative restraint and unleashes their creative potential. [3]

4.2 New Materials for Concept Jewelry

In terms of materials, Designers of conceptual jewelry generally emphasize conceptual and

narrative features and the use of everyday materials, rarely using precious metals and conventional gemstones as materials. Conceptual jewelry continues to explore new material manifestations thanks to the development of parametric design techniques like 3D printing and digital media art, and many low-cost materials including plastic, silicone, textile products, and stainless steel shine in jewelry design.

Silicone, for example, was not initially used in the jewelry design field but was primarily used for industrial purposes as a mold. Since jewelry artists learned that silicone could be freely shaped, dyed, and durable at room temperature, it has joined the ranks of the preferred materials for contemporary conceptual art jewelry artists.

The use of weaving and stacking to create a wide variety of conceptual jewelry highlights the distinctive textures and textures of fabric materials. Contemporary conceptual jewelry will be led by the use of non-traditional jewelry materials, new structural materials, and a combination of installation techniques. These interactions will include rotation and folding. (“Table 1”)

Table 1. Differences between conceptual jewelry and traditional jewelry in terms of craftsmanship and materials

	Craftsmanship	Materials
Traditional Jewelry	Forging Process Casting Process Enamel Craft Inlay Craft Jade Carving Craft Carved lacquer work Filigree process	Gold, platinum, silver, and other related alloys Pearls, diamonds, jade, tourmaline, rubies, emeralds, ivory, and other natural stones
Concept Jewelry	Rhino 3D Printing Z-BRUSH Jewel-cad	Plastic Ceramics Silicone Resin Leather Cloth products, etc.

5. CONCEPTUAL JEWELRY MAKING THAT BLENDS TRADITIONAL CRAFTS AND MATERIALS

The designers displayed their various creative traits when traditional handicraft and digital multimedia technology clashed. Some people looked at the various aesthetic possibilities of digital technology in art jewelry; others decided to completely replace traditional craftsmanship with it; still, others decided to combine the two to create conceptual jewelry, to expand the idea and impact of jewelry art creation. [4]

By extending traditional craftsmanship into the digital virtual realm, it can now reflect the human environment, social context, technological capabilities, and other significant factors affecting the creation of jewelry. Rather than simply copying the original restoration, this new "digital craftsmanship" should be adjusted and improved in accordance with the logic of digital software generation and parametric production. The goal of fusing tradition with technology is to show how well they can coexist from a cultural and historical perspective.[5] A thorough and reasonable procedure is required to make it go steadily because in order to achieve this creative notion, the designer not only needs to be proficient in digital multimedia technology but also needs to be familiar with the conventional jewelry creation technique:

- Background research and conceptual positioning of the work
- Collection of materials
- Preliminary modeling of works
- Product Effect Optimization
- 3D Printing Technology Export

The use of digital multimedia modeling takes many hours and days, which not only requires high computer performance but also requires a great deal of skill and patience from the designer to grasp the software. 3D printing is convenient and fast compared to traditional production processes, and the modeling language is versatile and symmetrical, but there are still shortcomings, such as the difficulty of expressing a complex sense of space, curved surfaces, and the natural organic forms of plants and animals, while using traditional jewelry. With the traditional jewelry making process, an experienced jewelry carver can complete the carving in just a few hours. Jewelry design and

creation, as an art closely related to human life and social activities, the selection of materials can not only guide the trend of art creation, but also the trend of art creation guides the selection of materials. From the materials of jewelry works, it is possible to interpret the ideals of the creator's life, and aesthetic preferences, as well as information about the time, origin, and social background of creation. The information on the origin of the materials can be researched through the characteristics of the materials, so the selection of localized materials to create conceptual jewelry can reflect the local cultural attributes and characteristics.

Based on the benefits and drawbacks of traditional jewelry-making technology and 3D printing technology, we can utilize multimedia technology to create a virtual digital model, and then 3D printing technology combined with the traditional production process of forging, welding, and other processing methods to present the concept of jewelry. Finally, with localized production materials, a localized humanistic atmosphere, and a localized design concept, we can break the traditional jewelry manufacturing cycle. As a result, it may innovate the jewelry expression form while also realizing the inheritance and advancement of traditional jewelry-making craft. It can also disrupt the conventional jewelry-creating mode by integrating and promoting both traditional and modern art.[6]

6. FUSION OF TRADITIONAL CRAFTSMANSHIP AND MATERIALS ON CONCEPTUAL JEWELRY

The conversion of traditional jewelry production techniques into conceptual jewelry can help to develop the process of jewelry design in the direction of good posture, improve the connotation, and encourage the conversion of design techniques and modes of modern art.

6.1 Cultural Value

The process of making jewelry has developed distinctive cultural characteristics based on its historical environment, regional culture, and ethnic influence. Applying this process to conceptual jewelry design can raise people's awareness of the preservation and inheritance of traditional culture and enhance conceptual jewelry's cultural and symbolic meaning.

6.2 Practical Value

The essence of people's practice, traditional jewelry-making methods are the product of numerous trials, designs, and improvements made by people of various races. Through exploration and comprehension of the traditional jewelry-making process, the creator is better able to select the method that is most appropriate for the design concept, toss ideas around during the practice of creating with the traditional method to spark inspiration, and to better incorporate it into their design works to demonstrate the regional design aesthetic.

6.3 Ecological Value

The traditional method of creating jewelry is an artistic expression created by the demands of contemporary aesthetics and ecological coexistence with nature. The creators can appreciate the fine craftsmanship of traditional jewelers who respect nature and ecology by incorporating traditional jewelry-making methods into conceptual jewelry design. This is done using ecological design thinking and throughout the human-centered thought process, highlighting the ecological value and enhancing the artistic value of the jewelry.

7. CONCLUSION

In the long timeline of jewelry development, digitalization and intelligence started to permeate the field of jewelry art in the last two decades, which is how concept jewelry started to develop quickly. New concept jewelry will continue to emerge as a result of the updating and iteration of new materials and new media technology, as well as changes in consumer lifestyles, aesthetic standards, and consumption paradigms. These developments will alter the form, concept, and wearing style of existing jewelry and provide consumers with fresh artistic aesthetics and viewing and wearing experiences. To enhance the artistic expression of jewelry, a jewelry designer must not only seek new techniques and materials but also investigate how traditional jewelry techniques and materials have been innovated and passed down in conceptual jewelry. It is anticipated that in the not-too-distant future, as the technological society intensifies, concept jewelry will, using new media art as its medium carrier, not only inherit the exquisite elegance of traditional jewelry but also combine the intelligence of contemporary technology, meet the needs of multifunctional

consumers, enhance their quality of life, and realize the integration of jewelry art and technology.

As a multi-art fusion, conceptual jewelry's design thinking, artistic language, and innovative concept are what matter most. However, to improve the design effectiveness and value concept, the creative process must be based on localization, a localized jewelry production process, and local production materials. Second, even though using digital software in jewelry design has become more and more popular, there are still some issues that need to be researched regarding the design and display of traditional jewelry processes. Only when the concept of using new media technology to demonstrate traditional jewelry processes and materials will jewelry design be able to a broader platform.

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