

Integration of Aesthetics and Creative Design: Influence of traditional Ru Porcelain on product design

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Abstract

This study reviews the historical background of Ru porcelain aesthetics, emphasizing its natural and minimalist qualities. It proposes the application of Ru porcelain aesthetics to modern product design, focusing on material selection, craftsmanship, incorporation of natural elements, and combining cultural heritage with innovation. The research deepens the understanding of the value of Ru porcelain aesthetics and its role in product integration and innovation, providing practical guidance and methodologies for its application in contemporary design practices.

Keywords: Ru porcelain aesthetics; Cultural integration; Innovative design

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1.0 Introduction

With the rapid development of global design, traditional cultural aesthetics are being applied in modern product innovation design. Bridging the gap between historical aesthetic traditions and modern creative practices is crucial for achieving culturally resonant and sustainable design outcomes. With its profound aesthetic value and exquisite craftsmanship, Chinese Song Dynasty Ru porcelain provides a unique design vocabulary that can be transformed into modern product design strategies. This study aims to incorporate these aesthetic systems into design thinking can promote deeper user emotional interaction, cultural heritage, and innovation, to establish a model for the innovation of cultural heritage by combining the aesthetics of Song Dynasty Ru porcelain with modern product design.

2.0 Literature Review

2.1 Origin and Development of Song Dynasty Ru Porcelain

The history of Ru porcelain can be traced back to the Song Dynasty, especially the Northern Song Dynasty (10th to 11th century AD). Ru porcelain originated from Qingliang Temple, Baofeng County, Pingdingshan City, Henan Province, an area famous for its rich clay resources and convenient transportation conditions (Wang, 2024). During the Northern Song Dynasty, political stability and economic prosperity provided favorable conditions for the development of ceramic craftsmanship. The demand for ceramic products from the court

and social elites also stimulated the prosperity of the ceramic industry. Ma (2022) mentioned that even if you have a fortune of millions, it is not as good as a piece of Ru porcelain." This shows the critical position of Ru porcelain in the history of Chinese ceramics. The reason why Ru porcelain is so famous among the royal family is inseparable from its unique glaze color, which is green and full of natural style; the glaze crackles with distinctive artistic aesthetics, and the shape of the utensils is full of proportional beauty.

Initially, Ru porcelain was mainly celadon, with a light grey-green glaze and a jade-like smooth surface. Li (2022) described in detail that Ru porcelain in the Song Dynasty had a concise shape and smooth lines and was mainly rounded, reflecting a natural and elegant aesthetic style. Guo (2022) also emphasized the exquisite firing technology of Ru porcelain, which is famous for its simple, elegant, pure, and natural style. It was the upper class's first choice for collection and practical use. The research of Ouyang (2023) showed that exploring the rich historical context behind Ru porcelain highlights the complex relationship between culture, craftsmanship, and material innovation during the Song Dynasty. These studies help researchers understand the historical development of Ru porcelain and develop modern Ru porcelain product design. This valuable information on Ru porcelain culture and technical elements further enriches the connection between traditional Ru porcelain and innovative product design.

2.2 Characteristics of Ru Porcelain

2.2.1 Simplicity and Natural Beauty

The aesthetic characteristics of Ru porcelain are simplicity, naturalness, elegance, and elementary geometry, which are the main characteristics of such a shape. Xiong (2024) mentioned that the shapes of Ru porcelain are mainly round, square, and oval. The design of these shapes reflects the understanding and respect of the porcelain makers for the laws of nature. In addition, He (2021) pointed out that the shape and line design of special-shaped objects also reflect the simple and elegant aesthetic style.

Xu (2021) pointed out that the geometric beauty of Ru porcelain is reflected not only in the shape of Ru porcelain but also in the design and decoration of details. For example, the surface of Ru porcelain is often decorated with simple convex and concave lines, and these line decorations and compositions usually follow the design principles of symmetry and balance, enhancing the shape's geometric beauty. This simple geometric beauty reflects porcelain artisans' understanding and pursuit of natural laws and the aesthetic concept of ancient Chinese Taoist thought (Ma, 2022).

2.2.2 Elegant Beauty

The glaze color of Ru porcelain is mainly green, giving people an elegant and natural feeling. This color comes from the glaze mined from nature and the exquisite firing technology of ceramic artisans. The glaze color of Ru porcelain complements its aesthetic characteristics, presenting a warm and elegant beauty that reflects the Chinese implicit aesthetic concept (Ping, 2019).

Li (2019) pointed out that the glaze color of Ru porcelain presents a warm and jade-like characteristic, giving people a sense of elegance. Under the sun, Ru porcelain's glaze color sometimes changes from light to dark. These color changes increase the three-dimensional sense of Ru porcelain shape and decoration. Meanwhile, it enhances the artistry and visual impact of the work (Wang, 2023; Li, 2020; Chen, 2022).

2.2.3 Natural and Vivid Beauty

The cracks of Ru porcelain are unique characteristics of Ru porcelain in the Song Dynasty. The cracks of Ru porcelain are a unique artistic decoration formed during the firing process. The principle is that the irregular crack characteristics are formed due to the glaze and body shrinkage ratios. The crackle of Ru porcelain mainly includes the cicada wing pattern, fish scale pattern, crab claw pattern, etc. These crackle patterns give Ru porcelain a unique texture and aesthetic value (Zeng, 2024).

The crackle of Ru porcelain not only plays a decorative role but is also a symbol of Ru porcelain aesthetics. Zeng (2024) mentioned that glaze cracks tend to change over time. These changes reflect the passage of time and the accumulation of years. Therefore, glaze cracks not only give the works an ancient and mysterious atmosphere but also give them deeper cultural and historical significance (Wang, 2018).

2.3 The Influence of Daoist Culture on the Aesthetics of Ru Porcelain

The aesthetic characteristics of Song Dynasty Ru porcelain reflect the ingenious combination of craftsmanship and materials and the profound culture. Taoism is an essential philosophical school in Chinese traditional culture. Taoist thought has profoundly influenced the aesthetics of Song Dynasty Ru porcelain, which is mainly reflected in the simple shape, restrained color, and natural decoration of Ru porcelain.

2.3.1 The Influence of Taoist Thought on The Aesthetics of Ru Porcelain

Taoist thought emphasizes nature, simplicity, and emptiness, crucial to forming and developing Ru porcelain aesthetics (Li, 2022). Taoism advocates following nature, influencing Ru porcelain regarding material selection and craftsmanship, and pursuing natural, simple, and plain aesthetic effects. Ru porcelain is not only a form of ceramic art but also a materialized expression of Chinese traditional culture and philosophical spirit. By integrating Taoist thought, Ru porcelain has become a medium with conventional ideas and aesthetic characteristics.

2.3.2 The Influence of Taoist Thought on the Design Concept of Ru Porcelain

Taoism has had a significant impact on the formation and development of the design concept of Ru porcelain. Taoist thought's influence on Ru porcelain aesthetics is mainly reflected in the awe of nature and following the laws of natural development (Xiong, 2019)—Taoist philosophy of minimalism and avoidance of excess. The soft, muted tones and fluid shapes of Ru porcelain symbolize an appreciation of the simple beauty of the natural elements and resonate with the belief in simplicity and nature promoted by Taoism. The combination

of Taoist **thought**, and Ru porcelain aesthetics not only formed the unique artistic style of Song Dynasty Ru porcelain but also endowed it with profound cultural connotations (Hong, 2012).

In summary, although there is a wealth of literature on the aesthetic characteristics and historical significance of Ru porcelain, most existing studies focus on its cultural symbolism, glaze color, and craftsmanship in historical or artistic contexts (Li, 2022; Guo, 2023; Zeng, 2024). However, there is still a gap in translating **this traditional aesthetics** into a practical framework for modern product design. Few studies can provide practical design models that combine the intangible cultural knowledge of Ru porcelain with contemporary design methods.

3.0 Methodology

To address the gap between the aesthetics of traditional Ru porcelain and its application in modern product design, this study adopts a qualitative research method that combines cultural analysis with innovation in applied design practice. The method incorporates visual analysis, historical interpretation, and experimental design prototypes to explore how classical aesthetic elements transform into modern creative outcomes, thereby connecting traditional craftsmanship with contemporary design strategies. Figure 1 shows the relationship between the two aspects.

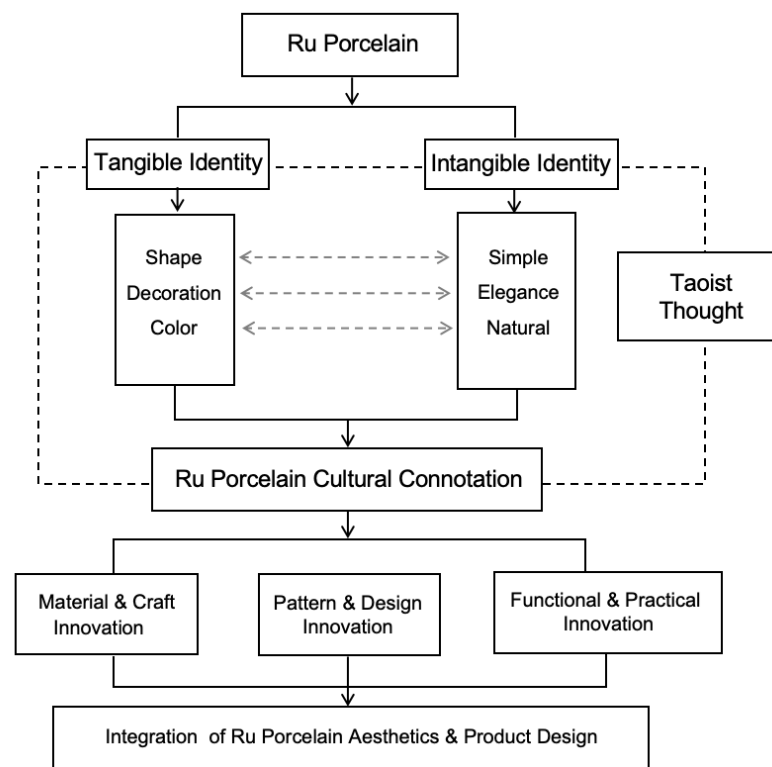


Fig.1: The Process of Integration Ru Porcelain Aesthetics & Product Design
(Source: Made by Author)

3.1 Relevance of Ru Porcelain Aesthetics in Modern Product Design

3.1.1 Aesthetic Style

Ru porcelain has a simple, elegant shape, natural, harmonious glaze color, and delicate and elegant decoration. This aesthetic feature is prevalent in modern product design and is used in contemporary product design. Ru porcelain's shape, decoration, and glaze mainly come from imitations of nature. In contemporary product design, designers often imitate nature's shape, color, and texture to carry out artistic design and then create more natural and aesthetic products to meet people's needs.

3.1.2 Integration of Cultural Heritage and Artistic Innovation

Modern product design is mainly about cultural inheritance and design innovation. Song Dynasty Ru porcelain's explicit and implicit characteristics meet modern product design's needs. Modern designers skillfully combine traditional culture with contemporary aesthetics for product design (Fig.2).

Therefore, combining Ru porcelain aesthetics and modern product design can help the design and aesthetics of modern Ru porcelain products meet people's needs. The aesthetic characteristics of Ru porcelain, which are simple, elegant, and natural, provide rich inspiration and enlightenment for modern product design and offer a solid cultural accumulation for modern Ru porcelain product design.

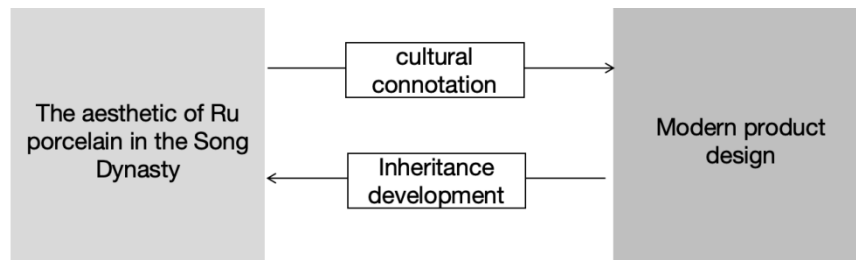


Fig. 2: The Relationship Between the Aesthetics of Song Dynasty Ru Porcelain and Modern Product Design
(Source: Made by Author)

4.0 Findings

The aesthetics of Song Dynasty Ru porcelain provide rich inspiration for modern product design. People meet and use tableware daily, an essential manifestation of traditional Chinese dining culture. Chinese tableware usually reflects a simple and elegant style. Modern product designers, influenced by Song Dynasty Ru porcelain's modeling design and aesthetic culture, incorporate Ru porcelain's simple modeling and exquisite decorative beauty into modern tableware design.

4.1 Styling Design

The simplicity of Song Dynasty Ru porcelain provides rich design inspiration for modern tableware design. Designers pursue simplicity, smooth lines, and full shapes, and emphasize smooth lines and harmonious proportions in tableware design, which is more ergonomic. For example, the designs of bowls, plates, and cups in modern Chinese tableware often employ simple curves and rounded edges, reflecting a similar sense of elegant beauty as seen in Ru porcelain.

4.1.1 Patterns and Decorations

The carved decorations on Ru porcelain surfaces have inspired the decorative elements of modern tableware. Designers apply similar decorations to tableware surfaces, employing artistic processes to transform Ru porcelain's intricate patterns into simple band decorations, creating unique visual effects for tableware (Fig.3).

4.1.2 Cultural Connotations

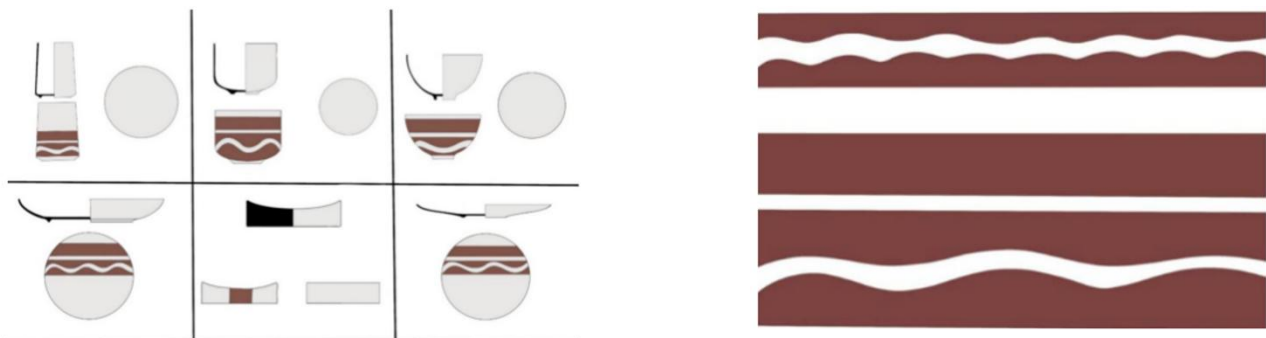


Fig.3: Ceramic Surface Decoration
(Source: Made by Author)



ig.4: Ceramic Tableware Set
(Source: Made by Author)

The philosophical thoughts and aesthetic concepts embodied in Ru porcelain culture profoundly influence modern Chinese tableware design. Designers emphasize the external beauty in the design process and focus on expressing cultural connotations, conveying the essence of Chinese traditional culture through their designs. For example, some designers incorporate Taoist philosophies such as "unity of man and nature" and "harmony with the Dao" into tableware design, transforming tableware into not only practical utensils but also carriers of culture and embodiments of art (Fig.4).

Therefore, Ru porcelain culture has profoundly influenced the design of modern Chinese tableware with its unique aesthetic principles and artistic characteristics. From applying glaze color to shape design to pattern and decoration, the essence of Ru porcelain culture has been inherited and innovated in modern tableware. Combining Ru porcelain culture with contemporary design enriches Chinese tableware's artistic expression and enhances its cultural connotation and market value.

4.1.3 A Brief Analysis of The Integration of Ru Porcelain Aesthetics and Contemporary Design Practice

Contemporary designers can choose materials and processes like Ru porcelain, such as ceramics, glass, traditional crafts, etc. These materials and processes often have the characteristics of simplicity, naturalness, and purity consistent with Ru porcelain aesthetics, thus reflecting a sense of simplicity and elegance.

4.2.1 Selection of Materials and Craftsmanship

By understanding the characteristics of materials, designers can better grasp how to choose materials. Clay is one of the primary materials used to make Ru porcelain. The designers use their craftsmanship to create simple and low-key products, such as tableware, vases, and other household items, showing the simplicity and beauty of ceramics.

The aesthetics of Song Dynasty Ru porcelain mainly emphasize the inheritance of traditional culture. Modern designers retain the aesthetic characteristics of Song Dynasty Ru porcelain from its explicit and implicit characteristics and use them in the design of contemporary products, reflecting the profound cultural connotation of Song Dynasty classic Ru porcelain.

4.2.2 Integration of Cultural Heritage and Innovation

First, designers should conduct in-depth research on Song Dynasty Ru porcelain's aesthetics and traditional culture, including its historical background, production process, aesthetic connotation, etc. By learning and understanding the knowledge of conventional culture and Song Dynasty Ru porcelain, designers can obtain rich design inspiration and apply it to modern product design. Secondly, designers should be familiar with the aesthetic needs of contemporary society, combine traditional cultural characteristics with modern innovative design, and build relevance and identity between consumers and designers. Finally, through the design concept of combining conventional cultural inheritance with innovative design while inheriting traditional culture, we should combine the needs of the times, promote the inheritance of traditional culture, and innovate modern product design to achieve the coexistence of the two.

5.0 Discussion

5.1 Connecting Traditional Aesthetics with Modern Product Design

This study confirms that the aesthetics of Ru porcelain—characterized by innovations in materials and craftsmanship, patterns and design, and functionality and utility—can be effectively translated into contemporary product design through a structured integration process. Although previous studies have emphasized the historical and artistic value of Ru porcelain (Li, 2022; Guo, 2023), this study shows that its morphology and cultural elements can serve as an innovative design language. Design experiments show that the explicit and implicit qualities of Ru porcelain are broken and reorganized through innovative design, combining traditional Ru porcelain craftsmanship with modern technology. This unique aesthetic feature and cultural connotation provide a solid foundation for innovation in contemporary product design. Applying the rounded shape, soft celadon glaze, and simple decoration of Ru porcelain to modern objects can not only promote visual harmony but also deepen the cultural resonance in the user's perception.

5.1.1 Material and Craft Innovation

Combining modern technology and traditional Ru porcelain craftsmanship requires designers to be familiar with new materials and processes. For example, combining 3D printing and advanced ceramic production technology can help designers conveniently make exquisite Ru porcelain products. This innovation in materials and technology improves product quality and functionality and expands the expression of Ru porcelain aesthetics.

5.1.2 Pattern and Design

Designers make innovative designs based on the traditional patterns of Song Dynasty Ru porcelain and give new artistic expressions through the aesthetic characteristics of Song Dynasty Ru porcelain. For example, designers use digital art and graphic design technology to innovate the patterns of Song Dynasty Ru porcelain, creating patterns and patterns with Song Dynasty Ru porcelain style and further expanding the expression of the cultural connotation of Ru porcelain aesthetics.

5.1.3 Functional and Practical Innovation

Combining the aesthetic characteristics of Song Dynasty Ru porcelain and modern functional needs requires designers to create practical and aesthetically valuable products. For example, the design of ceramic tableware or ceramic flower vases combines the aesthetic characteristics of traditional Song Dynasty Ru porcelain with modern home functions, which not only meets the needs of contemporary life but also retains the unique charm of Ru porcelain aesthetics and is an innovative expression of product functions and design styles.

5.2 Practical Implications for Designers

This study provides a framework that designers can apply in real-world scenarios, especially in consumer product categories such as tableware, interior decoration, and living accessories. The Confucian elements are transformed into modern design prototypes through proportional balance, pattern abstraction, and surface treatment, demonstrating the feasibility of a design approach rooted in cultural heritage. This approach can guide design education, material selection, and visual development processes in industrial environments.

5.3 Cultural identity is a driving force for design innovation

The findings reinforce the view that cultural identity, when incorporated into the material and visual qualities of a product, can enhance emotional attachment and narrative value. By incorporating Taoist aesthetics such as “harmony with nature” and “ethereal” into design form and composition, designers can create works that are not only functional but also culturally expressive. This confirms the view of Zhao and Chen (2021) that cultural continuity in design can enhance brand storytelling and user engagement. Ru porcelain has thus become a medium for the rejuvenation of intangible cultural heritage in the contemporary market.

5.4 Contribution to design theory and heritage studies

From a theoretical perspective, this study contributes to the emerging field of heritage-based design by proposing a method for translating cultural aesthetics into design variables. This framework can also be applied to other cultural art forms besides Ru porcelain, thus expanding its influence in cross-cultural and interdisciplinary design research.

Finally, through the comprehensive application of the above methods, we can have a deeper understanding and exploration of the relationship between Ru porcelain aesthetics and product design, further promote the inheritance and innovation of Ru porcelain aesthetics and promote the development and upgrading of product design.

6.0 Conclusion& Recommendations

This study explores the influence of Ru porcelain aesthetics and emphasizes its significance in the context of globalization. The study proposes suggestions for incorporating Ru porcelain aesthetics into modern product design. These suggestions are intended to guide designers, manufacturers, and decision-makers to apply the aesthetic principles of Ru porcelain to create products that are not only contemporary but also reflect cultural depth.

However, limitations of this study include its narrow selection of historical artifacts, small-scale user evaluation, and focus on aesthetic rather than commercial factors. These limitations highlight the need for future research to adopt more interdisciplinary, cross-regional, and user-centered approaches, integrate advanced manufacturing technologies, and incorporate a wider range of cultural elements to further enhance the relevance and impact of designs inspired by cultural heritage. In addition, future research can also explore comparative interpretations from an international design or cross-cultural aesthetics perspective.

In summary, this study provides a model for the innovation of cultural heritage by combining the aesthetics of Song Dynasty Ru porcelain with modern product design. This is not only a boost to Chinese ceramic culture but also a contribution to the global design field, further promoting the progress and development of human civilization in art, culture, and technology.

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Paper Contribution to Related Field of Study

The contribution of this paper concerns the field of design and creative arts.

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