

## EXPLORING THE IMPACT OF MINIMALIST DESIGN ON ENVIRONMENTAL PROTECTION

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Contemporary social environmental protection is an important topic that people pay attention to. This paper explores the positive impact and application of minimalist design in environmental protection from the perspective of design. The minimalist design follows the design concept of simplicity, nature, simplicity and people-oriented.

This design concept can not only keep the original natural beauty of the product but also reduce the waste of resources, which is very in line with the environmental protection issues that the society attaches great importance to. Based on this article Starting from the connotation of minimalist design, combined with the field of packaging design, we use work analysis, dialectics, and example methods to explore the positive impact of minimalist design in environmental protection.

The purpose of this work is to study the positive impact of minimalist design on environmental protection.

**Material and methods.** Theoretical science sources and graphic images and foto were used as a material for the study. The following methods were used in the work: general scientific methods, such as theoretical comparative analysis, classification, synthesis; a retrospective analysis; grapho-analytical methods.

**Findings and their discussion.** Minimalist design presents limited resources in a high-quality way, which has a positive impact on environmental protection. Through minimalist design, people are encouraged to inject the concept of environmental protection into their designs to avoid unnecessary waste of resources and environmental pollution.

With the development of science, technology and economy, traditional handicraft production is gradually replaced by mechanical industrial production. People's pursuit of products is no longer limited to the value of the product itself. Therefore, many brands hope to add ancillary value to their products through beautiful packaging, and attract consumers' attention through complex and exaggerated product packaging.

This brand design concept has led to problems such as misuse of materials, excessive processing, and excessive packaging of products in the era of convenient production, which not only covers up the natural beauty of the product itself, but also aggravates the pollution of the social environment, which seriously damages the design and the environment. Coordination between protections. In order to improve this phenomenon, it is necessary to inject environmental protection concepts into the design. Environmental protection design can avoid waste of resources from the beginning of production, and control the procedures to reduce pollution to the environment.

Artistic features of minimalist design. The minimalist design style abandons complicated and gorgeous elements, follows the idea of "nothing is what, less is more", and pays attention to the "pure" beauty of things themselves. Use simple design elements to present works through design concepts, and communicate information about the works efficiently and quickly, so that the simple elements present a strong expressive force and resonate with the audience. Compared with the use of multi-element and complex designs, minimalist design tests the expressiveness of designers. The most notable feature of minimalist design is extreme simplicity, scientific and rational use of resources to reduce production procedures, and to retain the texture and beauty of natural objects. This unique artistic style and people-oriented philosophy have a positive impact on environmental protection.

The relevance of minimalist design to environmental protection. Many products are over-packaged, and resources are wasted due to too many consumables in packaging, too

many packaging procedures, and too many decorations. At present, the phenomenon of excessive packaging of commodities is becoming more and more serious. The main purpose is to sell and sell. Many packagings have deviated from their proper functions, resulting in corresponding environmental pollution [1]. Taking tea packaging as an example, many tea brands currently hope to add added value to their products through gorgeous packaging to attract consumers attention. For example, tea is packaged in multiple sealed bags, clay pots, and large cartons.

Take China's packaging pollution data as an example: the data shows that China's annual consumption of packaging materials can reach more than 30 million tons, and the resulting packaging waste is about 16 million tons, which is increasing year by year [2]. Therefore, it is very urgent to rationally use materials, simplify packaging, reduce production processes to protect the environment, and correctly handle the relationship between design and production.

Practical application of minimalist design. Products with minimalist design style are also known as a "design without design", which simplifies the production process of the product, eliminates unnecessary production and processing procedures to the greatest extent, and maintains the original texture and natural beauty of the product with a simple design. This design concept makes the relationship between the product and the environment harmonious.

Taking the Swedish home furnishing brand IKEA as an example, IKEA has always adhered to the line of ecological environmental protection and controlled production costs with minimalist design concepts, making IKEA products more accessible to the people.

IKEA uses corrugated paper, cardboard and other packaging products. These paper materials can be recycled and reused, and are easily degraded into no pollutants. In addition, there is little outside the packaging, decoration, so as to maximize the environmental protection of packaging [3]. IKEA's simple design style and environmentally friendly packaging not only have a positive impact on environmental protection, but are also deeply loved by people.

**Conclusion.** Environmental issues are closely related to human beings, and minimalist design injects environmental protection concepts into design is a necessary trend in the development of design in the current era. Design should not only meet functional requirements, but also have a positive orientation. Excessive design leads consumers to pursue the consumer psychology of "not seeking the most practical, but only the most gorgeous" and "not the best, but the most expensive", which not only causes waste of resources and runs counter to environmental protection, but also destroys design and environmental protection.

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3. Zheng Xiaojing. The importance of regaining the concept of environmental protection in art design under the smog climate [J]. Art Education Research, 2014(08):31.

## **ПОСТОБРАБОТКА ИЗДЕЛИЙ, ВЫПОЛНЕННЫХ С ПОМОЩЬЮ ТЕХНОЛОГИИ FDM 3D-ПЕЧАТИ**

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Основной целью постобработки 3D-печатных изделий является приведение их к идеальному внешнему виду, однако те технологии, которые доступны основному количеству пользователей, характеризуются заметным расслоением поверхности даже при выполнении печати в высоком качестве. В изделиях технической области это часто не играет роли, чего нельзя сказать о декоративных предметах. Это отражает актуальность выполнения постобработки 3D-печати.