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A glimpse into Victor Papanek's "critical design theory" and its contemporary applications

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Abstract: Victor Papanek is a famous American designer, design educator and design theorist after the war. Among them, his "critical design theory" plays a crucial role in the formation of sustainable development and environmental protection concepts. In his controversial Designing for the Real World, he called on the American industrial design community to oppose commercial profit-oriented design and focus on the real needs of those ignored by designers. This article explains Papanek's "critical design theory" and his "three principles" of environmental protection, and then explains some of his own insights into this view, and finally constructs Papanek's responsibility framework for designers.

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1. Introduction to Victor Papanek

Victor Papanek is one of the important design theorists in the Western world after World War II. He was born in Vienna, Austria, and immigrated to the United States after completing his secondary education in the UK. He studied architecture under the renowned American modern design master, Frank Lloyd Wright, and worked at his studios, "Taliesin" and "Taliesin West." After completing his undergraduate studies at Cooper Union in New York in 1950, he continued his graduate studies at the Massachusetts Institute of Technology (M.A. 1955). Following his graduation, Papanek primarily taught at universities and art colleges, covering areas such as architecture, product design, and graphic design. He published numerous works throughout his life, including "Creative Engineering" (Hamilton, 1961), "Big Character Poster No.1: Work Chart for Designers" (Copenhagen, 1973), and the internationally acclaimed "Designing for the Real World." Papanek co-authored "Nomadic Furniture" (1973), "Nomadic Furniture 2" (1974), and " How Things DonotWork " (1977) with James Hennessey. [2]

In 1983, he independently published "Viewing the World Whole" (Lawrence, 1983) and "Design for Human Scale" (New York, 1983). These works continued his critique of consumer-oriented design, emphasizing the neglect of genuine human needs. Papanek's design ethics revolve around the common interests of society, users, and the environment. In his later years, he published "Green Imperatives: Ecology and Ethics in Design and Architecture," which introduced the concept of "limited resources" and summarized his design practices and refined design philosophy. This book elevated the importance of ecological and sustainable design to new heights. [1] Papanek's extensive body of work has had a profound impact on the development of modern design, particularly in the field of architecture.

2. Victor Papanek's "Critical Design Theory"

Victor Papanek's "Critical Design Theory" presents a new perspective on the purpose of design with sharp language, insightful criticism, and rigorous analysis. The starting point of design must consider the short-term or long-term impact on people. Papanek's theoretical viewpoint emphasizes the promotion of ecological balance, protection of natural resources, and the utilization of local resources to serve the local population. Throughout Papanek's theoretical perspective, our design activities are deeply embedded in social life, silently influencing various aspects of "clothing, food, shelter, and transportation," satisfying the daily needs of people while profoundly shaping our accustomed "lifestyle inertia."

2.1. Design should serve the general population, not just a few wealthy nations.

Design should serve the general population, not just a few wealthy nations, particularly focusing on serving the people of the third world. Furthermore, it is necessary to utilize the power of design to stimulate local education and economic development, empowering individuals with the ability to learn self-reliance and self-sufficiency. By passing on the social benefits created by design like a spark, it can bring about sustainable improvements to society. Examples include:

1. The Guggenheim Museum, which, as an architectural marvel, revitalized the once-dull and cold image of the Bilbao town in Spain, becoming a world-renowned tourist destination and stimulating the vigorous growth of the town's tertiary industry, creating numerous job opportunities.

2. The 2022 Pritzker Prize laureate, Francis Kéré, not only built distinctive educational institutions, housing, and hospitals for the people in Burkina Faso but also inspired neighboring African countries such as Kenya, Mozambique, and Uganda to follow and adopt Kéré's designs.

The success achieved by Kéré on the African continent, through these buildings, not only provided education for children and healthcare for patients but also enabled local residents to learn new skills through house construction, vocational training, and job creation, similar to the concept of "work relief" in the New Deal by Roosevelt. This approach drove the overall development of the hometown from infrastructure to people's livelihoods. With the Ganndou Primary School, built in his hometown as a starting point, Francis Kéré enhanced his international reputation and influence through successful cases and stories, raising more funds for his foundation and forming a virtuous cycle to achieve long-term, sustainable improvements in people's lives.

3. "With profit, there is utility; without it, there is use" - Chile's Quinta Monroy housing project by architect Alejandro Aravena.

The design of the Quinta Monroy housing project, located in Chile, is a solution that falls between an apartment building and individual houses. As a building, it can afford the high land prices of city centers, and as a house, it can be expanded. People can modify their housing according to their needs, but within a certain framework. When the housing budget cannot cover all families, architect Alejandro Aravena decided to build "half a house" for each family, providing the basic need for shelter and leaving the other half of the space for residents to complete according to their own living needs and economic abilities. It also motivates residents to maintain a more positive attitude towards life and to personally improve their home environment with their own hard-working hands.

This model of "user-generated economic construction" has been widely promoted and popularized in economically impoverished Latin American and third-world countries, becoming a feasible solution for ensuring basic housing for residents in poverty-stricken areas.

Papanek's viewpoint that "design should serve the general population, not just a few wealthy nations, especially the people of the third world" has deeply resonated with people and permeates every aspect of life with this caring and people-oriented "friendly design." [6] This is also true for Professor Zhou Zishu's social design practice. His "Sweet Potato Community" project not only involves the transformation of underground living spaces for young migrants in Beijing but also utilizes the beauty of space to attract more people to visit, creating opportunities for communication between individuals and generating more valuable stories. In this way, society can hear the voices of vulnerable groups, and mobilize the collective wisdom of various professions to brainstorm and work together, bringing life-changing opportunities to individuals in disadvantaged groups. [3]

2.2. Design not only serves healthy individuals but also needs to consider serving special populations.

Accessible design and universal design considerations, combined with the gradual aging of our country, have increasingly become hot topics in the field of design.

Care for the elderly is a major focus in aging-friendly design. As the heart rate slows down and the amount of blood pumped by the heart decreases in the elderly, the blood volume in organ tissues

decreases, resulting in reduced oxygen supply. This can lead to insufficient blood supply to the myocardium, causing conditions such as angina and arrhythmia. [7] Additionally, due to the declining ability of the lungs to oxygenate the blood, elderly individuals easily experience fatigue when under pressure. Moreover, the elderly often suffer from chronic illnesses such as rheumatism, arthritis, heart disease, and hypertension, which limit their participation in activities. At the same time, from the perspective of geropsychology, as time passes, the physiological and brain functions of the elderly begin to deteriorate. Therefore, the psychological aspects of the elderly are bound to exhibit different characteristics. Furthermore, their feelings of irritability, loneliness, and depression become increasingly severe. Designing for the elderly, both in terms of physiology and psychology, is crucial, aligning with Papineau's concept. [5]

2.3. Design should seriously consider the use of Earth's limited resources and should serve to protect the finite resources of the planet we inhabit. [4]

① The current trend of the sharing economy serves as a feasible path and successful paradigm for implementing sustainable design concepts into real-life.

The sharing economy replaces private ownership with shared services, allowing idle resources to flow freely, benefiting the daily lives of the general public. [8] In today's consumer society, it also helps to counteract the "planned obsolescence" and "consumer habits of constantly seeking novelty."

In the future, with the widespread adoption and reasonable pricing of 5G networks, the barrier of "high latency" will be eliminated, making "computing power" a resource that can be accessed and utilized on-demand, similar to electricity and water. Electronic entertainment devices will no longer require excessive built-in hardware but only need to fulfill the functions of displaying images and collecting information (such as through cameras and sensors). This eliminates the need for frequent updates due to the hardware's inability to keep up with software requirements, thereby greatly reducing the generation of electronic waste, which poses significant environmental pollution and resource waste concerns. [9]

② Sustainable design is not only about material resource sustainability but also about sustainability at the level of spirit and culture.

As the only ancient civilization in the world that has continued uninterrupted, with the previous generation planting trees for the benefit of the next, contemporary designers should root themselves in the cultural fertile soil accumulated over five thousand years in our country. [6] We should learn to innovate while inheriting, allowing the old tree to sprout new shoots, so as to live up to the achievements of our predecessors and meet the demands of the present.

We should not merely superficially imitate the grandeur of ancient architectural achievements without innovation. This would be a disguised form of "forgetting our roots" behavior. Instead, we should learn from the ancient wisdom of observing the essence through phenomena and adopt a pragmatic attitude towards applying knowledge to the world. [10]

For instance, the Peak company has revived the "silk weaving" craftsmanship popular during the Song Dynasty by combining it with contemporary material "Pebax nylon elastomer." They have created the "Life Silk" fabric, which features "zero water absorption, high elasticity, lightweight, and breathability." This fabric is widely used in products such as sun-protective clothing, quick-drying garments, and professional marathon running shoes. This exploration of technology and design that

applies ancient techniques to modern applications has brought Peak company a highly recognizable "national brand" reputation and showcased the "Chinese manufacturing paradigm" that combines ancient wisdom with contemporary technology. [11]

3. Conclusion

In conclusion, reviewing Victor Papanek's design theory from thirty years ago and applying it to today's social context, we still find a significant amount of design that remains relevant. Design allows people to understand both the object and themselves. Papanek's human-centered design approach points towards the path of design ethics. He reexamined the relationship between humans, nature, society, and design [1]. Therefore, designers and design educators should consider the broader social background and contribute to the contemporary design journey by studying the relationship between design and ethics, the meaning and value judgment of design, the responsibilities and moral qualities of designers, and the positioning of design.

The social responsibility of designers is often inseparable from the era we live in and the technological context. Design, as the creation of material objects by humans, explains the meaning of existence and the vision of life. Just as Mr. Liu Guanzhong candidly put it, artists see themselves, scientists see the world, and designers need to see the people. As future-oriented designers, we should face the most authentic life and create honest and universally applicable designs that meet the daily needs of the masses.

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