

A multidimensional analysis of design ethics: from anti-consumerism to emerging technologies

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ABSTRACT

This paper discusses the development lineage of design ethics and its performance and evolution in different historical periods. Design ethics as an important part of design, design ethics as an important part of design, while the social development of the issue of the same frequency resonance, as early as the 18th century has been concerned, such as John Ruskin and William Morris and other designers in the industrial revolution period emphasized the moral responsibility of design and social value. Nowadays, emerging technologies such as artificial intelligence and big data are also included in the scope of design ethics. Therefore, this paper aims to sort out the historical and developmental status of design ethics, and then play the role of theoretical guidance of design ethics, so as to provide innovative models and references for current design practice with ethical considerations.

KEYWORDS

Design ethics; anti-consumerism; anti-colonialism; ethics of technology

1 Introduction

The word “ethics” was first used in the famous ancient Chinese book, “The Book of Rites and Records of Music”, which reads: “Music is harmony; and harmony is the way of the gentleman. Therefore, when music is practiced and ethics are clear, the ears and eyes will be wise, the blood will be peaceful, the customs will be changed, and the world will be peaceful.” From the etymological point of view, “ethics” reflects both the individual's code of conduct in society and the moral requirements of society for individuals. The same is true for design ethics, which not only reflects the social responsibility and ethical considerations that designers should have in design, but also reflects the principles and practical requirements of society for designers to constantly reflect on and update design ethics. And when it comes to design ethics today, how many of the assertions start from the point of time of World War II to discuss the significant changes in design ethics, especially with Papanek's “Design for the Real World”. Design ethics, as a derivative of design, began to flourish long before the word “design” became a separate discipline, revealing the ethical philosophy of the era in which the product was created, along with the product's appearance. Ruskin suggested the importance of ethics in design. ^[1]Rather than criticizing the conformist nature of design at the time, the author was essentially expressing his insight that design should be based on the medieval craftsman's ethic of solidarity, cooperation, and excellence in design. The reference to the over-refined industrial production line, which made the worker an accessory to the industrial production line, also laid the relevant foundation for the later philosophy of technology. William Morris (1834-1896), too, pursued the Gothic and medieval styles, but also explored the understanding of order in design. ^[2]Designers such as Christopher Dreiser, Siegfried Bean and Adolf Loos more or less traced the origin of design from products or buildings, analyzing the design ethics through the artifacts of the time, so as to find the direction of development of the design ethics with “design” as the axis, and to solve the problems of the times.

Today's exponential growth in technology is encountering problems that are similar to social issues of the past. Since the Second World War, design ethics have been viewed in a more systematic and scientific way. In clarifying the lineage of design ethics, we are in fact returning to the origin of design, answering Plato's three classic questions, and thinking about the responsibilities and duties of designers in the context of the issues of the time. “What is design? Where does design come from? Where does design go?” has become the core content of design ethics, and is also the basic question that designers have repeatedly scrutinized their own design output in design practice. In this paper, the development of design ethics in the post-World War II era is described according to three clues: from anti-consumerism to ecological multidimensional design, from anti-colonialism to pluralistic design, and from critical design under the wave of emerging technologies.

2 Anti-Consumerism to Eco-Multidimensional Design Thinking

After the end of World War II, the global economy rebounded and the wave of American consumerism represented by Coca-Cola rapidly swept the world, and design under capitalism became a tool to stimulate consumption. The then British Prime Minister Margaret Thatcher proposed that design become the dominant force in the new politics of consumption,

and “designed products” became a cultural phenomenon under the capitalist society.^[3] In the commercial society, people establish their identity through the consumption of things that conform to the designers' design, and create identity by design. Design has become a kind of identity. People buy corresponding products to show off their taste and status.^[4]

Under the dumping of capitalism, design theorists and practitioners first reacted to the irrationality of the “planned obsolescence system”, and Victor Papanek (1923-1998) was the first to raise strong objections to the tendency of designing products for regular obsolescence under the fast-consumption culture, arguing that design should not be held hostage by business, but should serve the real needs of people. Victor Papanek (1923-1998) was the first to raise strong objections to the tendency of product end-of-life design in the FMCG culture, standing against the irretrievability of resources, and arguing that design should be free from being held hostage by business, and should serve the real needs of people. He believes that design must be ecologically responsible. He argued that design should not be “silent” but should be closely linked to social, environmental and ecological consequences. This is an extension of the good design of the time, making the idea of ecological environment scientific. He divided the process of production, use and disposal of products into multiple stages, emphasizing that design should be based on the perspective of the whole life cycle from the selection of raw materials, manufacturing, use to disposal, in order to reduce the negative impact on the environment. This idea laid the foundation for the later Life Cycle Assessment (LCA). In *Design for the Real World*, Papanek first proposed the “3R” principle: Reduce, Reuse and Recycle. This concept aims to reduce resource consumption and environmental damage by reducing, reusing and recycling waste. His design approach also incorporates the natural environment into a “systemic design approach”. The expansion of this design ideology and ethic provided a remedy for the design of the time.

Beginning with the simple consideration of natural resources, the design community was inspired by the ideas of Papanak, and green design began to discrete development to sustainable design, considering the protection of natural ecosystems, while at the same time figuring out the design output with the development of commercial potential. William McDonald and Michael Braungart drew on nature's cyclical system to develop the concept of “Cradle to Cradle”, which advocates that everything is renewable in terms of materials, and that waste should be regarded as “nutrients” that can be reintroduced into the ecosystem. Waste should be regarded as “nutrients” that can be reintroduced into the ecosystem or industrial cycle. It also emphasizes the active use of renewable energy sources, such as solar and wind power, in order to reduce dependence on traditional energy sources.

Under the specification of this design ethic, the existing circular economy and low carbon design began to expand the application of ecological materials and green technology for products. Chinese designer Li Mingliang conducted research on the performance of fungi composite materials and design applications, utilizing the strong decomposition ability of fungi, which can convert carbon sources into different organic materials and can be used for recycling of waste crops and even plastics to make tables and chairs, while he tapped into the fungi's At the same time, he exploits the impact resistance of fungi and the physical properties of the material to propose the broad development space and market prospects of fungal materials.

3 Anti-colonial ideology to pluralistic design thinking

Design is closely related to economics, politics, technology and art, and these forces that determine the cultural structure of mainstream society also influence design.^[5] Therefore, the phenomenon of rapid invasion of design by consumerism also maps the essence of society under the hegemony of Western culture. From the fixed template of internationalism, the phenomenon of elite-led democratism monopolizing design has been broken, and the “user-centered” design trend has emerged.

Papanak's design idea of “design for the underprivileged” to Donald A. Norman's theory of design psychology all reflect the humanistic trend, design back to the “human” issues, according to human behavior, thoughts and issues to design truly in line with human skills. The design is based on human behavior, thoughts, and issues to create a design that truly meets the skills of human beings.

In the context of the grand narrative of humanity, design is no longer based on sound, Western design thinking, and the scope of the design has increased the connotation and definition of human beings, and the slogan “everyone is a designer” has come to the forefront. From the perspective of able-bodied people to “persons with disabilities (PWD)”, to third world countries, to gender issues, the design ethic has progressed and evolved.

Design is no longer a place for elitism, and designers are no longer high up in the hierarchy, but rather “from the crowd, to the crowd”. The definition of accessible design has also shifted from designing for special populations to designing for people in need, or designing for people who find themselves inconvenienced. Designers have moved from designing tools or products for special people to designing products that can be used by both special people and able-bodied people. For example, in the case of the tiltable sink design, the designer designed the tiltable sink for people with lower limb inconvenience or people who are not tall enough, and the tilt of the sink is realized by the slanting surface at

the bottom, so that it is easy to use. This design not only provides convenience for special people, but also provides more flexible solutions for ordinary people in different use scenarios. This design example shows that products designed for special populations often have wider applicability while addressing their specific needs, and may eventually become universal designs that can be used by the general population as well.

This democratic nature of design also continues to expand its connotations. In the context of Western design hegemony and cultural colonization, Edward Wadie Said's (1935-2003) *Orientalism* tore the veil of Western hegemony and colonialism by arguing that the West, through forms of academia, literature, and art, portrayed the East as a mysterious, backward, and passive "Other", thereby consolidating its own superiority. Not unlike Tony Fry's *Politics of Design*, design is not only an activity of creating form and function, but also a profoundly political practice. Design in Third World countries should be "self-reliant", not relying on the international community's "pity" for "designing for underdeveloped regions", but striving to develop design education and training for local designers to solve local problems. Instead of relying on the international community's "pity" for "designing for underdeveloped regions", we should strive to develop design education and train local designers to solve local problems. Chinese-American Shi Dayu has designed bamboo chairs "Chair Junzi", "Chair Qin Jian" and the exhibition installation "Bamboo Project" based on the traditional culture of bamboo, which is unique to China. From the local Chinese designer Zhou Zishu's Groundnut Community, all of them reflect the application of traditional Chinese moral qualities in design. Chinese design is no longer labeled as "wooden" or "symmetrical," nor is it synonymous with "Peking Opera faces" or "Tai Chi. Chinese design is no longer labeled as "wooden" or "symmetrical", nor is it synonymous with "Peking Opera face" or "Tai Chi", but rather develops its own vitality.

Democracy in design ethics has also been extended to gender issues along with feminist thinking, and design for women is no longer a stereotype of "pink" and "lace" tones, breaking the original "women's taste is completely contrary to 'good design' based on functionality and mass production. The decline of taste is not only due to the manufacturing industry's unfaithfulness to raw materials, but also to the aesthetic interests of women that are not based on realism." The design world has misdefined good design. On the one hand, some female designers such as Charlotte Perriand and Eileen Gray have embraced modernism to create designs that show that women's aesthetics are more than just "flamboyant," while on the other hand, design theorist Penny Sparke, in her book "Only the Flamboyant," has shown that women's aesthetics are more than just flamboyant. On the other hand, design theorist Penny Sparke, in *As Long As Its Pink-The Sexual Politics of Taste*, points out that women played an important role in the beautification of the home in the late nineteenth and early twentieth centuries, noting that the absence of curtains in a room meant the loss of a valued, valuable, and important part of the home.^[6] meant the loss of a valuable, exclusively feminine expression of material culture. The postmodern design output re-embraced the female culture that was rejected by modernism, which was a change in design style, but also a shift in society's perception of gender roles.^[7] The design products under the guidance of this design ethic have broken the status quo of the original gendered design language, and started to pay attention to the needs and experience of female users, such as Oral B's electric toothbrush design, which has developed a soft brush head and a gentle mode for female users. There are also design approaches that open up the idea of gender-neutral design, such as LEGO's new line of toys with gender-inclusive designs.

In short, design is no longer a product of labeling, but in the post-modern development of today's gradually flattened connotation of vulnerable groups to expand the connotation of rich characters. The rise of individual design ethics for vulnerable groups, oriental cultures, or gender issues represents the designers' return of "design dominance" to the users themselves, who are no longer the "second sex" but the main body of design.

4 Critical Design Thinking in the Wave of Emerging Technologies

Today the world is in the midst of the fourth industrial revolution, and the organic integration of digital technology, physical technology and biotechnology has broadened the connotation of design, and the fields involved in design ethics have also been gradually broadened. Under the impact of new technologies, how to develop design ethics becomes more important. Since J.C.R. Licklider put forward the concept of "Man-Machine Symbiosis" in the 1960s, people with insight have found that the relationship between technology and human beings in the future has become an important issue of design ethics in the current era.^[8]

Hans Achterhuis, a Dutch philosopher of technology, first proposed the concepts of "morality of artifacts" and "ethics of objectification", which were further developed by Peter-Paul Verbeek, who proposed the theoretical framework of "moral objectification" - designers embed moral concepts in technological artifacts through technological design, so that their use will have an impact on human behavior.^[9] Peter-Paul Verbeek, a Dutch scholar, further developed this idea and put forward the theoretical framework of "moral objectification" - designers embed moral concepts into technological artifacts through technical design, so that their use in the process of human behavior will produce moral guidance. The practice of designing with morality in mind produces public designs such as speed bumps. Not coincidentally, Tristan

Harris's ethical view of technology also demonstrates the same design thinking, but expands it in the realm of digital products. Harris finds that many technological products (e.g., social media and apps) are designed to manipulate user behavior through "hijacking" tactics that take advantage of human psychological weaknesses, resulting in technological addiction. He points out that technology design should follow ethical principles to avoid manipulating users' attention and behavior, and thus he advocates a more humane and ethically conscious path of technology development. From the perspective of existing technology development, Cathy O'Neil further emphasizes the importance of ethical responsibility in technology design based on the fact that existing mathematical models and algorithms may make decisions based on certain biases, such as zip code, race, or gender.^[10]

In the field of technology, Jacques Ellul held a pessimistic view of technological development, believing that it led to the alienation of the individual in society, with people becoming subordinate to the technological system and losing their autonomy and creativity.^[11] Although technological development has become a major driver of social change, such change is uncontrollable and even leads to the instability of social structure and the confusion of values. Thus, Ellul emphasizes the need for designers to take the initiative to assume moral responsibility in technological development, to consider the long-term impact of technology on society and the environment, and to find more sustainable technological solutions. In contrast, Kevin Kelly argues that technology itself is evolutionary in nature and that it is capable of self-correction and improvement.^[12] Over time, technology will naturally generate new solutions to the challenges it poses. This optimism also predicted the emergence of modern artificial intelligence, and expressed the author's idea of pushing technology forward, with "technological solutions to technological problems" becoming the foundation of modern development.

How can we incorporate a commitment to human services into our designs, focusing on user needs and emotions, while utilizing technology to drive design innovation? It is this dynamic and critical design thinking, which is constantly thinking, that motivates designers to create new technologies not only in pursuit of innovation and efficiency, but also in consideration of the far-reaching impacts of technology on society, culture, the economy and the environment. This mindset enhances designers' sense of social responsibility and promotes the incorporation of ethical awareness into the design process, focusing on key issues such as privacy protection, data security and social justice, and minimizing the impact of the Colin Grech Paradox.

At the same time, critical design thinking encourages and pushes designers to think more about how technology can serve the overall interests of society while pursuing commercial value. It promotes the depth and breadth of innovation, and by critically examining existing problems and needs, designers are able to develop more effective and humane technological solutions. In addition, critical design thinking often advocates public participation to ensure that technologies are developed to better meet public interests and needs, thereby addressing technological uncertainties and potential risks.

In terms of shaping the future, these critical design ideas can break down the limitations of time, enabling designers to actively participate in the process of technological development, and finding better items to help traverse the cycle towards true long-termism through design. In short, critical design thinking provides us with an important tool to help us design and apply new technologies more responsibly and thoughtfully to meet the challenges of the future and to ensure that technological development truly serves the long-term interests of humanity.

5 Conclusion

To summarize, as an important guideline for design practice, the connotation and practice of design ethics have been evolving in the long course of history. From the early discussions on the moral responsibility of design to the modern profound reflection on consumerism, environmental issues, cultural diversity and technological ethics, design ethics has always emphasized the social responsibility of designers. In today's era of globalization and rapid technological development, design ethics is not only the pursuit of function and aesthetics, but also a profound response to human well-being, social equity and environmental sustainability. Designers should be user-centered, respect cultural diversity, promote sustainable development, and ensure that technological advances are in the interest of humanity. The practice of design ethics is not only the self-improvement of the design field, but also a key force in promoting social progress and harmonious development. In the future, design ethics will continue to guide designers to create a more diverse world in a more responsible and empathetic way in a complex and changing social environment.

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