The Application of Marxist Social Science Methodology in User Experience Design Practice

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Abstract: The methodology of Marxist social sciences provides guiding theories for our practice and has been positively reflected in our daily lives. It is a scientific worldview and methodology that plays a very important role in the discipline of art and design, and can effectively guide the practice of art and design. Art and design are closely related to our lives and are also one of the practical sources of Marxist social science theory. User experience design should be guided by Marxist scientific theory, fully considering aesthetics and practicality, effectively combining "beauty" and "practicality", so that we can apply our own life experience and creativity to design, and further improve the effectiveness of artistic design. This article explores the application of Marxist social science methodology in user experience design practice, hoping to make beneficial contributions to relevant theories and practices. By elaborating on relevant theories and explaining practical paths, we have proposed some possible useful strategies and methods.

1. Introduction

User experience design is an inevitable product of contemporary society's continuous development, combining aesthetics, functionality, and experiential features that deeply influence people's daily lives. However, user experience design is not just a combination of artistry and practicality; it is a multidisciplinary field that places user needs at its core. In this field, Marxist social science methodology offers theoretical guidance, enabling designers to better understand and apply scientifically sound methods. Marxist social science methodology is both scientific and practical, directly impacting the practice of user experience design. This article aims to explore the application of Marxist social science methodology in user experience design, hoping to make positive contributions to market and social development.

2. Definition of User Experience Design

User experience design is a social practice that encompasses aesthetic, functional, and experiential elements and is closely intertwined with human daily life.[1] It is an inevitable outcome of modern social development, perfectly blending material and spiritual aspects within the context of socialist economic and social development. User experience design places humans at its core, considering the comprehensive qualities of designers, interdisciplinary integration, and an

understanding of life. It is user-centered, and the concept of user experience is integrated from the early stages of development. For example, as cities rapidly develop, the number of vehicles on the road increases each year, making them more convenient in our daily lives. However, this also brings safety issues such as pedestrian accidents due to distracted walking. To address these concerns, foreign designers created innovative solutions like ground-level traffic lights, which have improved safety for distracted pedestrians. Similarly, 3D crosswalks were designed to provide enhanced visibility and promote safer driving by visually slowing down approaching vehicles. (as Figure 1)
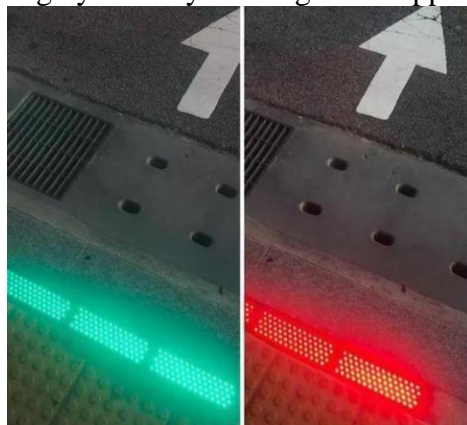

Figure 1: The Gospel of the phubbers

User experience design is a multidisciplinary endeavor, taking into account various factors in people's lives such as services, activities, and environments. Each factor is considered based on the needs, desires, beliefs, knowledge, skills, and experiences of individuals and groups. User involvement in design is crucial to ensure the user-centric approach and meet user demands.

In the design of zebra crossings, it is not just a common simple pattern in daily life. Through the creation of designers, 3D zebra crossings have been created to provide a certain warning effect. Compared to ordinary zebra crossings, this 3D zebra crossing is more eye-catching and easier to attract pedestrians' attention, ensuring pedestrian safety. Secondly, for drivers, 3D zebra crossings can also improve driving safety. When a passing driver sees a zebra crossing, there is a visual sense as if a roadblock has been set up, subconsciously slowing down the speed to avoid braking in a timely manner when dangerous situations occur due to excessive speed. (as Figure 2)
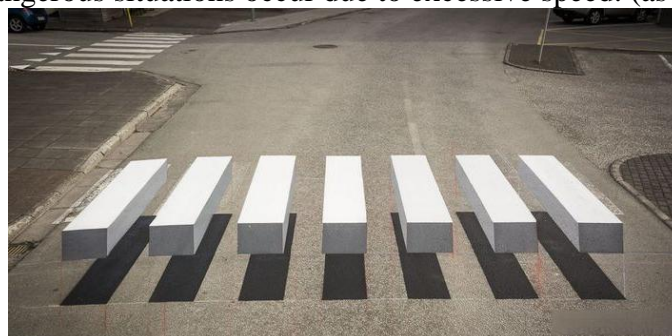

Figure 2: Zebra crossing in Iceland via 3D illusion

3. Definition of Methodology and Its Philosophies

Methodology in social sciences focuses on theoretical directions in related scientific research. Social science methodology is based on sociology and plays a significant role in understanding and transforming the world. Engels pointed out that "Marx's entire worldview is not doctrine, but method. [3]It does not provide ready-made dogmas, but starting points for further research and

methods used in this research." Marxist social science methodology is both a worldview and a methodological approach. It is grounded in the foundational theories of dialectical materialism and historical materialism. It includes research methods centered on practice, methods for analyzing social systems, comprehensive analysis methods, abstract-concrete methods, dialectical methods that unify subject and object, and methods for studying historical forces. This methodology guides human thinking and helps establish the correct worldview and thinking methods.

4. Application of Marxist Social Science Methodology in Exploring User Experience Design

4.1. Combining Theory with Practice

Practical experience is essential for gaining knowledge. Designers must not rely solely on subjective judgments during the design process but should use various methods, including user research, to understand user needs and pain points. Before embarking on user experience design, a feasibility analysis of the design elements must be conducted, including user research. Users play a crucial role in the design and production of products. We must identify user characteristics, including gender, profession, personality, beliefs, knowledge, skills, and experiences. Analyzing their product usage scenarios and environments is also essential. Finally, analyzing their life pain points and needs is a crucial step, as identifying user pain points in a timely manner allows for targeted design.

However, all of this must be achieved through practice. Social science methodology is practice-oriented and believes that practice is the only criterion for testing truth, providing valuable guidance in exploring specific fields.

4.2. Adopting a Systematic and Comprehensive Perspective

Nothing exists in isolation. In design, taking a comprehensive perspective is crucial. Designers must approach problems holistically and avoid single-minded, isolated design. Design works must grasp the overall picture. For instance, color elements must be related to composition and graphics to make the design visually pleasing. Developing a comprehensive perspective requires the accumulation and sedimentation of detailed knowledge in daily life. [4]Designers who can transcend their limited viewpoints and adopt a higher perspective on design problems become outstanding designers.

4.3. Correctly Managing Contradictions and Embracing the Unity of Opposites

To position design works effectively, designers must manage contradictions properly and avoid seeing contradictions as opposition. They should learn to analyze and transform contradictions and, while addressing the main contradictions, not neglect the secondary ones. Design works should have their own personalized ideas while adhering to the public's aesthetic standards. Design should prioritize human-centered principles, considering whether the work meets market and human needs and aligns with market development trends. It is crucial to position and guide the works effectively without being trapped in a dilemma that diminishes their value.

4.4. Accumulation and Reflection are Crucial in Practice

Designing for the sake of design without understanding its essence leads to extremes. As a vital component of the humanities, art design is a multidisciplinary, multifaceted, comprehensive field that creates material and spiritual products for human life, combining culture, art, and technology. It

is an emerging, interdisciplinary, and integrated discipline. In the process of designing, accumulating and reflecting on the experiences gained in practice is essential. [5] Practical experience is a crucial criterion for testing theories and developing them. This is a fundamental principle that social science research should adhere to and is equally important for designers.

4.5. Adopting a Global Perspective

In the field of art and design, a global perspective does not necessarily require extensive exposure but rather broad awareness within the field. Whether it's problem-solving or design concepts, a global perspective should consider the bigger picture and the planning of future scenarios. Intelligent technologies like the Internet of Things, 3D printing, intelligent materials, biometrics, and data collection have transformed creative design. Designers must keep up with evolving user needs and make necessary adjustments while adhering to the user-centric design philosophy. User experience design contributes to human society's development and evolution. With the rapid development of information technology, electronic publications, multimedia, the internet, and other electronic networks have become important channels for design information dissemination.[2] These channels provide the necessary data and information for user experience design, making user information more accurate and richer. This, in turn, facilitates user experience design and enhances its efficiency in marketing. The concept of ecological civilization and sustainable development significantly influences the content of user experience design. A healthy ecological environment is the foundation of design, and addressing users' growing spiritual needs promotes cultural and artistic development, which can contribute to environmental protection and resource conservation. The two are interconnected, and designers must apply these principles in practice. It's crucial for designers to fulfill their social responsibilities by promoting resource conservation and environmental protection in their designs while considering users' physiological and psychological needs.

In 2019, after the Dunhuang Museum launched the "Journey to Dunhuang" mini program, they designed according to the guidelines and generated exclusive design drafts by combining classic pattern elements with millennium old murals. Through Tencent Youtu's image processing and portrait recognition technology, summoners can upload their own photos or have Ouyang Nana, the official creative ambassador of Dunhuang Shijin, try them on to generate a DIY silk scarf trial effect image. Users can place an order with just one click and receive their own designed Dunhuang scarves at home if they are satisfied with their online trial wear. (as Figure 3 and Figure 4)
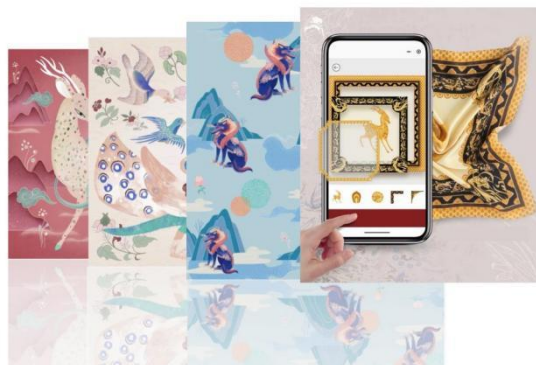

Figure 3: Cloud Tour Dunhuang Mini Program

Figure 4: Dunhuang DIY Scarf

5. Conclusion

User experience design involves liberating one's thinking, breaking conventional concepts, combining theory with practice, prioritizing people, identifying and solving problems. Designers need to analyze and summarize, value others' experiences, and express their own design philosophies to ensure creativity's originality. Discovering problems, proposing questions, and solving them in practice, summarizing and theorizing the experiences gained in practice, and testing theories through practice are fundamental principles that both social science research and designers should follow. Furthermore, the designer's perspective and ideas are essential. A comprehensive understanding of the global perspective is crucial, avoiding the limitation of narrow design knowledge. The continuous expansion of knowledge is crucial for anticipating design behavior and outcomes, as well as contributing to the field of art and design.

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